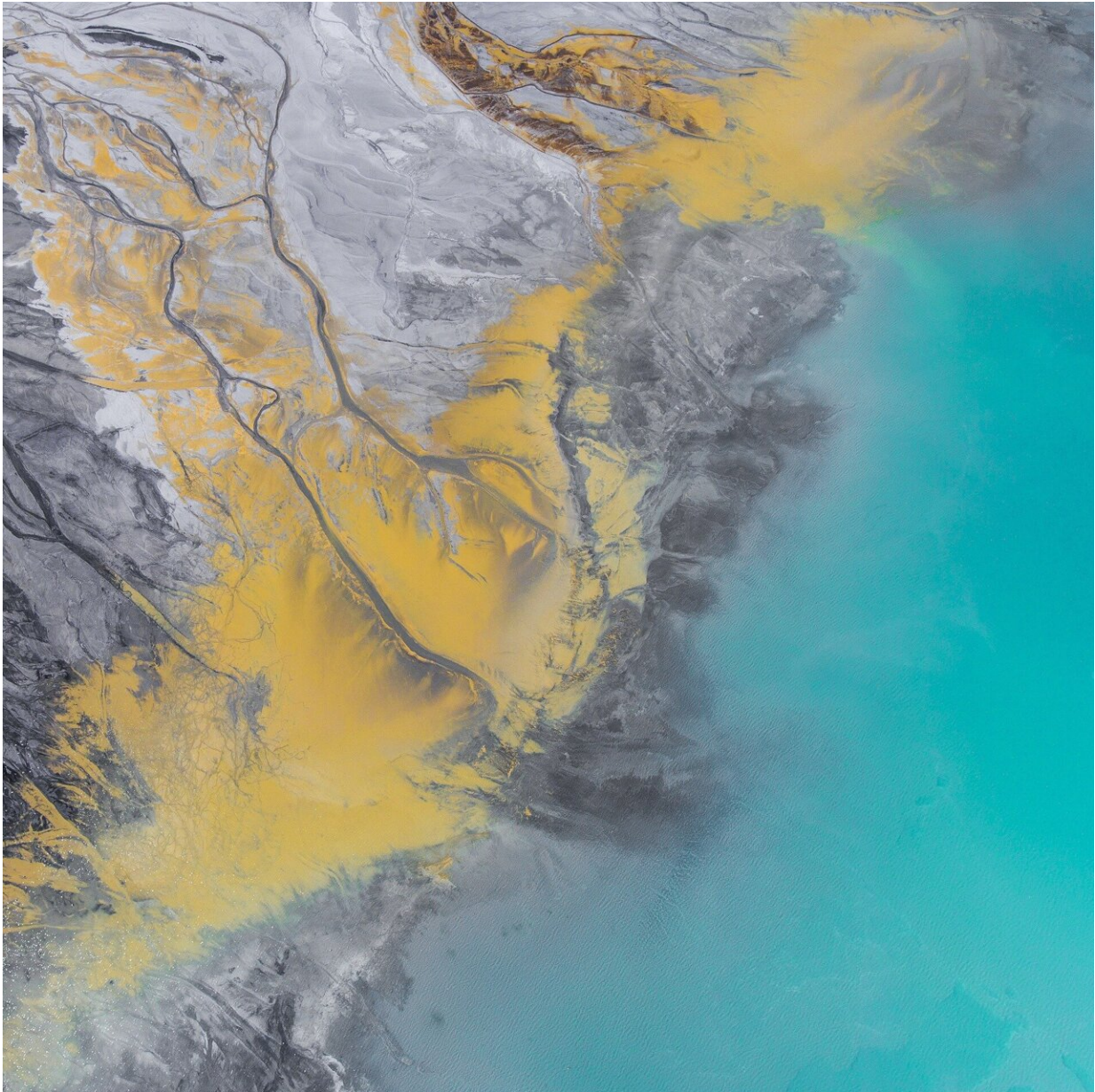


Regulating forever chemicals

October 25 2021, by Steve Cohen



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Climate change policy has finally reached the center of the political agenda as President Biden and other world leaders prepare to discuss how the planet can collectively mitigate this grave threat. There are many other issues of environmental sustainability that receive less attention but also pose substantial threats to human and ecological well-being. While all new drugs are reviewed by medical experts in our Centers for Disease Control and Food and Drug Administration before they are authorized for use, new chemicals face no similar rules and are only regulated after they are proven dangerous. Many dangerous chemicals continue to be unregulated due to the weakness of the rules and the political power exerted by chemical companies. New drugs are subject to rules based on the precautionary principle, while new chemicals are not. Last week, the Biden Administration took a small step toward regulating some of the more persistent and dangerous chemicals in wide use. As Lisa Friedman of the [New York Times](#) reported on October 20:

"The Biden administration on Monday said it would require [chemical](#) manufacturers to test and publicly report the amount of a family of chemicals known as PFAS that is contained in household items like tape, nonstick pans and stain-resistant furniture, the first step toward reducing their presence in drinking water. Perfluoroalkyl and polyfluoroalkyl compounds, or PFAS refers to more than 4,000 man-made chemicals that are often called "forever chemicals" because they don't break down in the environment. Exposure to the chemicals has been linked to certain cancers, weakened immunity, thyroid disease, and other health effects."

There is disagreement between industry and [environmental activists](#) about the danger posed by these chemicals, and we are hearing the usual debate about how much to regulate and what rules should be employed. Friedman's report included a response from the American Chemistry

Council, which stated that:

"...about 600 chemicals in the PFAS category are used to manufacture products like solar panels and cellphones, and... alternative materials might not be available to replace them. "The American Chemistry Council supports the strong, science-based regulation of chemicals, including PFAS substances. But all PFAS are not the same, and they should not all be regulated the same way," Erich Shea, a spokesman for the organization, said in a statement."

On the other side, as Joseph Winters wrote in Grist, some environmental advocates see EPA's approach as inadequate to the task. In his Grist piece, Winters reports that EPA's strategy is to:

"...invest in research to better understand the compounds, restrict PFAS from contaminating the environment, and work to clean up highly polluted areas. By the end of 2021, he said, chemical manufacturers will be required to [test and report concentrations](#) for 20 subcategories of PFAS in consumer goods. The EPA will also set enforceable drinking water standards for two of the worst PFAS—known as PFOA and PFOS—and finalize its toxicity assessments for six additional compounds. Some activists lauded the roadmap as a win for environmental justice; PFAS tends to contaminate [impoverished neighborhoods and communities of color](#)... But other environmental advocates have said the plan doesn't go far enough."

One advocate quoted by Winters derided EPA's move as a "plan to plan." Others considered the water quality standards inadequate given the toxicity of some of these chemicals. All in all, this is shaping up as a standard industry-environmentalist toxics conflict. EPA's hand in regulating these chemicals is weakened by a statutory framework established in the 1970s and 1980s that has not kept up with the exponential increase and vast complexity of [new chemicals](#). These

chemicals are central to many products in everyday use and industry is correct when they claim that the application of the precautionary principle to chemical introduction would stifle innovation and impair economic growth. Moreover, if the U.S. regulates these substances and other nations do not, the chemical research and manufacturing would simply move to less regulated nations.

Still, we are making a choice to slowly poison the planet. And while the spread is slow, it is picking up speed. The chemicals under question here are designed to be durable. They do not biodegrade. They are called "forever chemicals" for a reason. Like greenhouse gasses that continue to accumulate in the atmosphere, these chemicals continue to contaminate our ecosystems, water, and air. They are transported through the food chain, ultimately ending up in human bodies. The more of this stuff we make, the more of it remains in our biosphere. The issue is not simply its use in products but the effluents and emissions created when these durable chemicals are added to a manufacturing process. The chemicals don't only end up on the frying pans and solar cells, but in the water and air as well.

Despite these issues, the steps taken by EPA are significant and worthy of support. For new rules to survive the inevitable legal challenges brought by chemical manufacturers such as 3M, they need to be carefully developed and based on sound and thorough scientific study. This work takes time, and the half-century-long history of American environmental regulation demonstrates that while the process is slow, it is effective. Requiring industry study and disclosure is an important step. Companies can't contest their own studies in court. Still, environmental regulation is not a rapid process. The slow pace can be frustrating. The long regulatory process is not entirely dysfunctional since it provides industry with time to adapt and innovate. It allows researchers time to fully understand the impact of toxic substances. Some of the toxic policies developed to implement laws enacted in the 1970s were not

formally promulgated as regulations until the 1990s. But industry knew they were coming, substitutes were found, and the economic impact was often slight. Unfortunately, for every toxic chemical that was finally regulated, 1,000 new ones were introduced with unknown levels of environmental impact.

The pace of technological innovation is too rapid for the current regulatory structure to control. Complaining that EPA is not doing enough is attacking the wrong target. The problem is in congress, and we need a more effective form of regulatory control than the one now in place. I would start by revising our toxic substance laws to require industry to study and report (to the public) the environmental and health impacts of new chemicals before they are used. Under the important action announced by EPA Administrator Michael Regan last week, EPA is requiring chemical producers to study and disclose these impacts long after the chemicals have been introduced into widespread use. Even if the [precautionary principle](#) was not utilized, and companies were free to introduce new chemicals at will, at least the cost of research would be shifted to the private sector, and all new chemicals would be covered, not simply those already thought to be dangerous. Public disclosure would then provide the information base for EPA and advocates to focus their attention on the most [dangerous chemicals](#). EPA could build staff to audit industry's environment and health impact studies to reinforce the need for sound science.

Given the current authority and political reality, EPA's actions should be applauded as a long overdue and important step. But many decades after toxics substance, hazardous waste and toxic clean-up legislation was first enacted in the United States, we are long over-due for a major update of those laws. We need to encourage [chemical companies](#) to internalize considerations of environmental impact into their search for new chemical combinations. When energy efficiency standards were added to electrical appliance design, engineers figured out creative ways to make

air conditioners and refrigerators that used less energy. Let's provide similar incentives for those designing new chemicals. The best way to reduce environmental damage is to prevent it from being designed into new products. We are an ingenious species, and properly motivated, we can build an economy that doesn't poison people and the planet.

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