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THE LEGAL EAGLE

A LEGAL NEWSPAPER FOR KIDS

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SPECIAL CLIMATE CHANGE EDITION

It's a Warming World *What Can Be Done?*

by Jodi L. Miller

There is no question that the Earth is warming. According to the World Meteorological Organization, the warmest seven years on record have all occurred since 2015, with 2016 and 2020 tying for the hottest. According to the National Aeronautics and Space Administration (NASA), 97% of climate scientists agree that the Earth's warming is due to climate change and humans are the cause of it.

To fully understand the debate between climate change policy advocates, who want to see federal legislation on the issue, and those who question the effectiveness–and are concerned about potential cost–of such legislation, you need to first understand what is meant by the term "climate change" and what its long-range effects are.

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Climate Change Litigation Heats Up *as Temperatures Rise*

by Michael Barbella

The mercury's gradual climb over the last four decades has not only made the planet hotter overall, it also has triggered an increase in climate change-related lawsuits. The number of such legal actions rose steadily throughout the late 20th and early 21st centuries but skyrocketed in the latter half of the last decade, according to data from the Sabin Center for Climate Change Law at Columbia University. The 736 complaints filed between 2015 and 2020 accounted for more than half of the total cases lodged since 1986.

More than two dozen climate change lawsuits currently blame oil and gas companies for their role in global warming. The complaints contend these companies purposely downplayed fossil fuels' environmental impacts, "substantially" contributed to global warming, and failed to warn customers and consumers of their products' risks.

Geoffrey Supran, a research fellow in the History of Science Department at Harvard University, along with Professor Naomi Oreskes, published several studies about ExxonMobil's disinformation campaign concerning climate change. The first was published in

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Holding Corporations Accountable *for Climate Change*

by Emily Pecot

Everyone can play a part in combatting climate change. Corporations, however, are uniquely positioned to play an even bigger role and are facing pressure to take meaningful and timely action.

According to a 2021 report, "Taking Stock: A Global Assessment of Net Zero Targets," published by the Energy & Climate Intelligence Unit, a London-based nonprofit, 21% of the world's 2,000 largest public companies agreed to net zero emission targets, but many

of these companies did not include the most substantial and difficult to address Scope 3 emissions.

Net zero means balancing the amount of greenhouse gases entering the Earth's atmosphere with the amount being removed. In other words, not adding to the amount of greenhouse gases already in the atmosphere. Net zero is a target that scientists have said the world needs to reach by 2050 in order to limit global temperature rise

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Garden State Leads the Way *on Climate Change Education*

by Suzi Morales

When Egg Harbor Township High School science teacher Jim House began teaching environmental science 12 years ago, his class was one that students often took just to get another science credit. Today, teaching about environmental issues has become much more important. In 2020, the New Jersey State Board of Education approved first-in-the-nation standards requiring schools to teach climate change in a wide range of subjects in all grades.

In the fall of 2021, schools throughout the state began teaching from the new version of the New Jersey State Learning Standards (NJSLS), which require that the topic of climate change be incorporated into 7 of 9 subjects taught in the state. Those subjects are: Career Readiness, Life Literacies and Key Skills; Comprehensive Health and Physical Education; Computer Science & Design Thinking; Science; Social Studies; Visual and Performing Arts; and World Languages.

The other two subjects—English Language Arts and Mathematics—were not up for review in 2020. Revised standards should be adopted for these subjects in 2022 and will include climate change components.

New Jersey's educational standards are the only ones in the United States to broadly require schools to teach about climate change beginning in kindergarten through 12th grade. Including education about climate change was a cause taken up by Tammy Murphy, New Jersey's First Lady.

"In New Jersey, we have already begun to experience the effects of climate change, from our disappearing shorelines to harmful algae blooms in our lakes, super storms producing torrential rain, and summers that are blazing hot," Murphy said in a statement when the new standards were adopted. "The adoption of these standards is much more than an added educational requirement; it is a symbol of a partnership between generations. This generation of students will feel the effects of climate change more than any other, and it is critical that every student is provided an opportunity to study and understand the climate crisis through a comprehensive, interdisciplinary lens."

Approach to climate education

Kristen Hargis is a doctoral student at the University of Saskatchewan in Canada, as well as a research associate at the Monitoring and Evaluating Climate Communication and Education Project (MECCE). Her work includes a survey of K-12 educational standards from all U.S. states and the District of Columbia by MECCE and the North American Association for Environmental Education (NAAEE). The results of the survey are expected to be published in the next few months.

Hargis' research shows that successful climate change education programs follow what she calls a "whole institution approach." That is, climate change education should include not just teaching standards, but also elements like strategic plans by school leadership and how the community can get involved.

Hargis says research indicates the subject matter of climate change education should go beyond just teaching about environmental issues in science classes and should include social and economic issues as well as other school subjects.

Because of the new requirements to teach climate change across a range of subject areas, Hargis notes, "New Jersey is a bright spot" among otherwise limited climate education in the U.S. She says that even in states that have some sort of environmental component in their educational standards, most of them focus on factual knowledge. New Jersey is unusual in also helping students think about solutions.

Talking about climate change

While science teachers have taught about environmental issues for many years, the New Jersey standards are requiring that educators in other disciplines teach new topics they've never tackled before.

Dennis Dagounis, a Roselle Park science teacher and the 2021-22 Union County Teacher of the Year, says one of the challenges with the new NJSLS has been getting buy-in from teachers of other subjects on how climate change can be included across the board. But

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he says he is seeing teachers in other fields learn about incorporating climate change information into their lessons, including by participating in professional development workshops, learning from research provided by think tanks, and talking to him and other science teachers.

The New Jersey State Board of Education launched a website devoted to resources for climate change education, where teachers and schools can find sample lesson plans, activities, and information about community groups involved in environmental issues.

House, the 2021-22 Atlantic County Teacher of the Year, says he's been speaking with other teachers who hadn't taught about sustainability issues before the new standards took effect.

"It's only a half-step further from what you're teaching," House tells them. For example, math teachers can use climate data in word problems. English teachers can create writing prompts around sustainability issues. When elementary school teachers talk about the life cycle of a butterfly, they can discuss how their migration patterns have changed over time due to environmental changes. He says teachers can also talk about the balance among creating a healthy environment, the social impact of climate change and the financial impact.

Students making connections and a difference

Dagounis recalls that he began seeing an increase in interest in environmental issues by his students about 4 or 5 years ago, when they began making connections between climate change and weather effects like storm surges. Since the new standards were implemented in the fall of 2021, students sometimes mention in his classes that they're learning about the environment in other classes.

"They really are noticing it," Dagounis says.

But while Dagounis is pleased with the new state standards, he is also concerned that all the information about climate change might overwhelm students and cause anxiety about the future.

"One thing I fear is there's a lot of information out there that kind of gives you this bleak future because of climate change," he says. He encourages students to understand that society has overcome negative environmental impacts in the past and can do so now. His life science classes bring problem solving and critical thinking into the picture and try to show the positive impact students can have. "We've got to show them that as long as we work together, we can solve this issue in the future as well," Dagounis says.

It seems Dagounis shouldn't worry, as surveys and studies show that Generation Z—those born in the late 1990s to the early 2010s—are deeply engaged in environmental issues and prioritize climate change as the most important issue facing the world today. In 2021, a Pew Research Center survey found that Gen Z and Millennials—those born between 1981 and 1996—are the most active in addressing climate change.

Student activists, such as Greta Thunberg from Sweden, who founded the organization Fridays for Future at age 18, have been leading the way on climate change awareness, inspiring others her age and keeping the issue in the headlines. Today, Fridays for Future has chapters all over the world. In September 2021, hundreds of thousands of young protesters mobilized to march in over 1,500 demonstrations in more than 90 countries, including 300 demonstrations in the U.S. These young activists made their voices heard and demanded their leaders take action to slow the effects of climate change.

In addition, college administrators are noticing a trend of incoming students pursuing careers in environmental-related fields to address climate change, according to a report in *The Guardian*.

"Once you learn how damaged the world's ecosystems are, it's not really something you can unsee," Rachel Larrivee, a 23-year-old sustainability consultant based in Boston, told *The Guardian*. "To me, there's no point in pursuing a career–or life for that matter–in any other area."

New Jersey leading the way

Dagounis and House both agree that New Jersey being a leader in climate change education makes sense. Dagounis notes that New Jersey has among the highest-rated public schools in the nation and is a natural leader in this area.

"I think it's fantastic," says House about the first-in-the-nation climate change education standards. New Jersey has more shoreline than almost any other state and will continue to be affected by climate change, he notes. The state also is a leader in renewable energy. Programs like solar power and wind turbines bring jobs to the state, House says. "It puts us in a good position."

Dagounis says he's seen many hot-button issues throughout his 21 years as a teacher. He hopes that by providing his students with reliable research and critical thinking skills, they will be able to make informed decisions about environmental issues.

House is excited for a time when the juniors and seniors he teaches will have learned about climate change from the time they're in kindergarten. In the years that he's been teaching environmental science, he has seen it grow from a niche subject to one with real economic impact. "My former

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What is climate change?

To be clear, climate change is not the weather, which is what you experience on any given day when you walk out your door. Climate change refers to changes in long-term weather patterns, including rising temperatures. It is driven by greenhouse gas emissions, which trap heat on the Earth's surface, causing global warming.

According to the U.S. Environmental Protection Agency, there are four main greenhouse gases—carbon dioxide, methane, nitrous oxide and fluorinated gases. The number one contributor to global warming, however, is carbon dioxide, also known as CO_2, which enters the atmosphere through the burning of fossil fuels (coal, natural gas and oil). Using these forms of energy to heat and run factories, homes, and cars is responsible for warming the Earth by 1.1°Celsius or 2°Fahrenheit since 1850, according to the latest report from the Intergovernmental Panel on Climate Change (IPCC), a United Nations group charged with monitoring climate change science and advising of its risks. Over the next 20 years, according to the IPCC, that warming shift is expected to rise another 1.5°Celsius or 2.7°Fahrenheit.

What are the effects of climate change?

You may be thinking that two degrees doesn't sound like a lot. In a *New York Times* piece, Julia Rosen, a journalist with a Ph.D. in geology who has done extensive research in climate change, wrote, "While two degrees Fahrenheit doesn't represent a big change in the weather, it's a huge change in climate. As we've already seen, it's enough to melt ice and raise sea levels, to shift rainfall patterns around the world and to reorganize ecosystems, sending animals scurrying toward cooler habitats and killing trees by the millions."

The documented global temperature rise has resulted in erratic and severe weather patterns around the world. Across the United States the impact of climate change has caused record-high temperatures in the Pacific Northwest, frequent wildfire outbreaks in California and record-setting hurricane seasons along the Atlantic Coast. In 2021 alone, according to data from the National Oceanic and Atmospheric Administration (NOAA), there were 20 separate billion-dollar climate disasters in the U.S., which totaled $145 billion in damage.

The effects of global warming aren't just about weather inconveniences. One study, conducted by researchers at the University of Arizona, estimates as much as a third of the world's animal species could face extinction due to global warming by 2070. In addition to these ecological threats, climate change also affects the world's agricultural supply. Increasingly, farmers are facing the challenge of raising crops and livestock amid new weather patterns bringing record-setting heat or too much–or too little–rainfall. In fact, a 2021 study published in the scientific journal *Nature Climate Change* asserts that global warming has resulted in a 21% decline in global agricultural productivity since 1961.

A report by the World Bank revealed that more than 200 million people around the world may have to leave their homes over the next three decades due to climate change, creating migration hot spots and millions of climate refugees. There are also health issues associated with climate change. The World Health Organization called climate change "the single biggest health threat facing humanity." According to the medical journal, *The Lancet*, rising temperatures increase plant pollen, which can worsen respiratory conditions such as asthma, and extreme flooding can increase the risk of waterborne diseases such as cholera. The study published in *Nature Climate Change* also revealed that more than a third of heat-related deaths worldwide are associated with climate change.

A divide

While most scientists, and 65% of Americans, according to a survey conducted by the United Nations, agree that climate change is real and supported by irrefutable global evidence, some still question whether human activity is to blame. According to the Center for American Progress, a public policy research organization, 139 elected officials in the current U.S. Congress don't acknowledge the human-caused aspect of climate change, arguing that the science supporting humans' role is questionable or that global warming is a naturally occurring cycle. Others don't dispute the validity of global warming but question the merits of increasing the national debt in order to support climate change legislation.

In December 2021, it was those financial concerns that stalled President Joseph Biden's proposed $2.2 trillion Build Back Better Act in the U.S. Senate, despite having passed in the House of Representatives in November 2021. The Act includes provisions for $555 billon to bolster the country's movement away from fossil fuels and toward cleaner energy sources. At press time, negotiations were still ongoing in the Senate to pass parts of the bill as separate measures.

The **partisan** divide across the country and in Washington, DC hinders the passage of wide-reaching climate change legislation. Michael Gerrard, founder and faculty director of the Sabin Center for Climate Change Law at Columbia University Law School, says that all of the major U.S. environmental laws were passed between 1970 and 1990.

"There hasn't been a major new federal environmental law since 1990," notes Professor Gerrard. "There was always some partisan divide, but it could be bridged–and it was many times during that 20-year period. But since then, it has grown wider and wider, and it's become impossible to bridge."

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Warming World CONTINUED FROM PAGE 4

What is being done?

The Biden Administration made four key climate change commitments after taking office in January 2021. Those commitments include developing a clean energy economy, building more resilient communities, re-establishing the United States as a global leader on the issue and working toward environmental justice. President Biden has said that his Administration will take a "whole-of-government" approach to combatting climate change, not just leaving it to the EPA. In October 2021, 23 federal agencies published climate change adaptation plans outlining how each agency would be affected by climate change and how it plans to handle it. President Biden also created a new cabinet-level position–the Special Presidential Envoy for Climate–held by John Kerry, a former Secretary of State under the Obama Administration.

In addition, the U.S. Department of the Interior, the federal agency that manages public lands, announced a plan in 2021 that designates an area of the Atlantic Ocean between Long Island, NY and New Jersey as an offshore wind zone. The Department estimated that 2,000 wind turbines could be installed in the Atlantic by 2030.

The extent of a federal agency's power to set climate policy under existing laws, however, has been called into question. *West Virginia v. Environmental Protection Agency*, for example, challenges the extent of the EPA's authority to set greenhouse gas emissions standards through the Clean Air Act.

"The Clean Air Act of 1970 has been used successfully, together with some other related laws, to reduce greenhouse gas emissions from motor vehicles. It has also been used with very limited success to control emissions from stationary sources like power plants," says Professor Gerrard. "The Obama Administration adopted some regulations [on power plant emissions], but they were mostly put on hold by the U.S. Supreme Court in 2016, and then revoked by the Trump Administration."

In February 2022, the U.S. Supreme Court heard oral arguments in *West Virginia v. Environmental Protection Agency*. A ruling is expected in June 2022.

Approaching it state-by-state

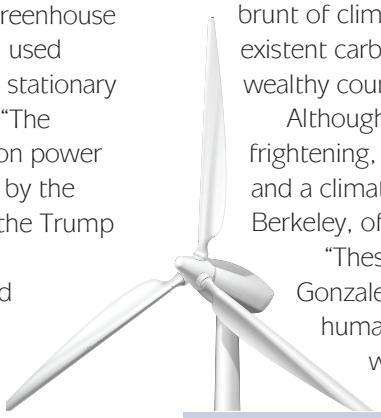
In the absence of new, sweeping federal climate change laws and regulations, many states have developed their own climate change directives. Currently, 24 states, plus Washington, D.C., have adopted specific targets to reduce greenhouse gas emissions, and 33 states have released a climate action plan or are currently developing one, according to the Center for Climate and Energy Solutions, a nonprofit agency that advocates for stronger worldwide climate change policies.

For instance, New Jersey passed legislation that aims by 2050 to reduce carbon pollution by 80% below 2006 levels. The measure was passed in 2019 and strengthens the state's Global Warming Response Act, which passed in 2007. In 2021, New Jersey went even further when Governor Phil Murphy signed an Executive Order that commits the Garden State to reduce greenhouse gas emissions in the state by 2030 to 50% below 2006 levels. According to the New Jersey Department of Environmental Protection, the state so far has achieved a 26% reduction in CO_2 emissions and decreased reliance on coal by nearly 70%.

Many states have followed California, which is considered a leader in climate change policy, passing legislation that places specific caps on greenhouse gas and carbon emissions, while outlining incentives for clean energy development. For example, Colorado's climate plan, passed in 2019, sets a goal of cutting statewide carbon emissions in half by 2030 and 90% by 2050. In 2021, Illinois passed legislation committing to fully transition to clean, non-coal-based energy sources by 2050.

"There is a great deal of activity at the state level," explains Professor Gerrard, noting that, increasingly, states are working to fill in gaps that exist within federal climate change policy.

As for being a global leader, the United States is consistently named as one of the top polluters of CO2 in the world, surpassed only by China. All countries, including non-industrial ones, bear some responsibility for climate change and the environmental decisions they make. However, 10 years ago, according to the IPCC report, wealthy countries, like the U.S. and China, as well as others, pledged $100 billion per year to aid developing and poorer countries who often bear the brunt of climate change, despite having a smaller or non-existent carbon footprint. The report revealed that the wealthy countries have fallen short of their commitment.



Although the IPCC's most recent report was frightening, Patrick Gonzalez, a lead author on the report and a climate scientist at the University of California—Berkeley, offered a bit of hope.

"These are projections, they are not predictions," Gonzalez told *The Washington Post*. "It's all based on humans and our actions. The future is something we can change."

DISCUSSION QUESTIONS

1. Do you think climate change is an important topic? How does it make you feel when you think about it? What questions do you have for adults?
2. What do you think about developing or poorer countries who don't have a large carbon footprint but bear the brunt of climate change? Do industrialized nations, like the U.S. and China, owe something to them? If so, what? Explain your answer.
3. If you could speak to a lawmaker in Washington, DC who is reluctant to invest money in climate change legislation, what would you say to them?

and **mitigate** the worst effects of climate change.

Achieving net zero emissions is an essential yet challenging goal for corporations. To achieve net zero, according to the Natural Resources Defense Council (NRDC), a nonprofit based in New York that advocates for polices supporting the environment, corporations need to include emissions associated with the entire life cycle of a product.

Greenhouse gas emissions consist of three categories or scopes: Scope 1 refers to emissions directly produced by a company or corporation, such as what is used to power a facility or vehicle. Scope 2 emissions are indirect emissions produced by a third-party that the company buys energy from. Scope 3 emissions come from a product's use and eventual disposal.

"Failing to account for or address these [Scope 3] emissions means that the vast majority of greenhouse gases attributable to corporations and their products are falling outside of well-publicized corporate climate commitments," according to the NRDC.

Evaluating corporations

A February 2022 report titled, "Corporate Climate Responsibility Monitor 2022: Assessing the Transparency and Integrity of Companies' Emission Reduction and Net Zero Targets," was published by the NewClimate Institute, a non-profit organization based in Germany that tracks and evaluates corporate climate change mitigation, and Carbon Market Watch, a not-for-profit association that advocates for fair and effective climate protection. The report evaluated the climate pledges of 25 of the largest worldwide companies, including Google, Apple, Amazon, CVS and Nestle. These companies account for 5% of greenhouse gas emissions worldwide.

According to the report, only one company, Maersk, a Danish shipping company, received a "reasonable integrity" evaluation for its net zero pledge. Three other companies, including Apple, received a "moderate" evaluation on integrity, 10 received a "low integrity" rating and the remaining 12 received a "very low integrity" rating.

Nestle, which received a "very low integrity" rating in the report, mainly for the lack of detail in its reduction plan, told *BBCNews*, "We welcome scrutiny of our actions and commitments on climate change.

However, the NewClimate Institute's CCRM report lacks understanding of our approach…" Nestle also contends that the CCRM report contains significant inaccuracies.

The report maintains that successfully mitigating climate change will depend on the innovation of corporations to find solutions.

"The findings of this report indicate that regulators should not rely on consumer and shareholder pressure to drive corporate action," the report states. "Companies must be subject to intense scrutiny to confirm whether their pledges and claims are credible and should be made accountable in the case that they are not."

Lucas Joppa, Microsoft's chief environmental officer, agreed and told *The New York Times*, "If we are going to achieve a net zero carbon economy for real, we will need everyone to act. And that means action can't be voluntary. We need requirements and standards that everyone is expected to meet."

Going 'green' with the Green Monster

While things might seem grim, it's not all bad news on the corporation front. On March 30, 2022, the Boston Red Sox announced that it would be teaming up with Aspiration, a global leader in sustainability, to neutralize the organization's carbon footprint, including by fans who attend the games at Fenway Park.

The Red Sox will donate a portion of the sale of every ticket to the Aspiration Planet Protection Fund to purchase verified carbon credits. These credits, which offset the direct and indirect impacts of Fenway's operations, such as water usage and electricity, also address the ballpark's Scope 3 emissions. The surcharge on the ticket, which the Red Sox say will be absorbed by the club and not passed on to fans, will go to support programs designed to reduce emissions and invest in renewable energy.

This comes on top of a 2007 initiative that the Red Sox executed with NRDC. In that endeavor, the Red Sox installed solar panels and implemented a recycling initiative at Fenway.

"The home of the Green Monster is becoming the home to 'green' progress," said Andrei Cherny, CEO and co-founder of Aspiration. "We're honored to partner with the Red Sox in this effort to bring easy, automated climate impact to every fan that walks into Fenway Park and are excited to set a new standard for climate accountability in sports." Aspiration also works with the Los Angeles Clippers.

SEC promotes transparency

The need for more regulation was one of the key takeaways from the CCRM report. In addition, according to investment firms, investors are interested in a company's ESG (environmental, social and governance) rating, which evaluates how a company stacks up in these areas.

In March 2022, the Securities and Exchange Commission (SEC), a federal agency charged with protecting American investors by enforcing federal securities laws, addressed this issue by approving a proposal requiring all publicly traded companies to disclose their greenhouse gas emissions and the

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risks the company faces due to climate change.

"Shareholders of public companies are increasingly demanding more information about the risks that climate change could pose to their investments, arguing that mounting climate disaster and environmental regulations could limit the growth of businesses that do not prepare for them," *The Washington Post* reported.

For instance, a company that contributes heavily to global warming may be a bad investment bet if it turns off consumers and decreases that company's bottom line. In addition, the forced transparency would hold companies accountable for their contributions to climate change.

"It will make it possible for stakeholders, including shareholders, to then push companies to take real action," Bill Weihl, a former green energy czar at Google, told *The New York Times* about the SEC rule.

The public has 60 days to comment on the proposed rule after the full text is published on the SEC's website. The SEC will take those comments into consideration before issuing a final rule, which, in its current draft, would phase in requirements over a few years, with the largest companies having to make disclosures beginning in 2023. Smaller companies would have until 2024. Larger companies would also be required to divulge their Scope 3 emissions.

There is little doubt among legal scholars that the new rule will likely face legal challenges. A legal battle could postpone the rule's implementation as it winds its way through the court system.

"West Virginia and other states will vigorously participate in the rulemaking process, and, if necessary, go to court to defend against any regulatory overreach by the SEC in the name of climate disclosures," West Virginia Attorney General Patrick Morrisey

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Universities Divest from Fossil Fuel Companies

According to research released in 2017 by the Carbon Disclosure Project (CDP), a not-for-profit charity based in London, 100 fossil fuel companies, including ExxonMobil, Shell and Chevron, have been responsible for 71% of industrial greenhouse gas emissions worldwide since 1988. Thirty-two percent of those emissions come from investor-owned companies.

In the past, many university **endowment** portfolios have included investments in the fossil fuel industry. After ongoing protests from students, faculty and other advocates, many universities have changed course and made a commitment not to invest financially in fossil fuels.

In March 2021, Rutgers University became the first university in New Jersey to **divest** from fossil fuels. Rutgers' $1.6 billion endowment consists of 5% investment in fossil fuels. Under the agreement put forth by the university's Board of Governors, Rutgers will "cease all new investments in fossil fuels, seek investment opportunities in renewable energy and exit all currently held private fossil fuel investments within 10 years."

At Princeton University, the student-led organization Divest Princeton, submitted a divestment proposal to the university's Board of Trustees in February 2020. According to *The Daily Princetonian*, 82% of undergraduates at Princeton voted in favor of divestment. In June 2021, Princeton University announced that it would "conditionally divest from certain elements of the fossil fuel industry."

According to Global Fossil Fuel Divestment Commitment Database, which is maintained by two nonprofit divestiture advocacy groups, more than 60 educational institutions, including Cornell University, Boston University and Columbia University, have either full divested or partially divested from the fossil fuel industry.

Long battle at Harvard

The longest battle to divest has taken place on the Harvard University campus. Activist groups such as Divest Harvard have been pushing for the university to divest the institution's nearly $52 billion endowment, the largest of any university, from the fossil fuel industry for nearly a decade. Students and alumni organized protests on campus, took legal action in the courts and even stormed the field at a Harvard-Yale football game in 2019 to bring attention to the issue.

In March 2021, Divest Harvard filed a complaint with the Massachusetts Attorney General's Office, alleging that Harvard's fossil fuel holdings violated the Massachusetts Uniform Prudent Management of Institutional Funds Act (UPMIFA), which charges not-for-profit institutions with investing responsibly toward societal good and to invest with loyalty.

The student organization's complaint stated: "The final overarching requirement, loyalty, is the legal duty to act in the best interests of the institution as a whole—one undermined by various fossil fuel conflicts of interest. Several of Harvard's trustees have or had significant ties to the industry."

In September 2021, Harvard announced its plans to divest. It is estimated that Harvard's fossil fuel holdings are approximately $838 million. According to the Global Fossil Fuel Divestment Commitment Database, as of October 2021 more than 1500 institutions, including colleges and universities, philanthropies, faith-based organizations and pension funds, had divested $40 trillion from the fossil fuel industry. ■

Corporations CONTINUED FROM PAGE 7

said in a statement after the rule was announced.

Last year Morrisey sent the SEC a letter advising that the rule was unconstitutional and would not hold up to "**strict scrutiny**," which states that laws and regulations must meet a "compelling government interest."

According to reporting by *The Washington Post*, "Business groups may also challenge whether the SEC has the authority to wade into environmental issues." Kathleen Sganna, President of Western Energy Alliance, a trade association for the oil and gas industry, told *The Washington Post* that climate risks are "difficult to predict" so they are not "material concerns for today's investors and therefore not something that the SEC has a mandate to regulate."

Mary Schapiro, a former SEC chair, told *The Washington Post*, "Europe in particular has been far ahead because climate issues there were accepted as real financial risks long before that became really accepted in the U.S."

She also reported that Brazil, Hong Kong, New Zealand, Singapore and Switzerland already require this type of climate risk reporting.

DISCUSSION QUESTIONS

1. How important is a company's carbon footprint or its efforts to mitigate climate change to you? Would it influence your decision as a consumer to buy products from a company? Why or why not?
2. Critics of the SEC's rule requiring companies to divulge environmental data say there is not a "compelling government interest" and that climate risks don't present "material concerns for today's investors." Do you agree or disagree with that statement? Explain your answer.
3. Should action on climate change from corporations be voluntary or mandatory? Explain your answer.
4. Read the sidebar on divestment on page 7. So far, according to the article, $40 trillion has been divested from the fossil fuel industry by 1,500 institutions. Why do you think so many institutions have divested?

Heats Up CONTINUED FROM PAGE 1

2017 and the latest in May 2021.

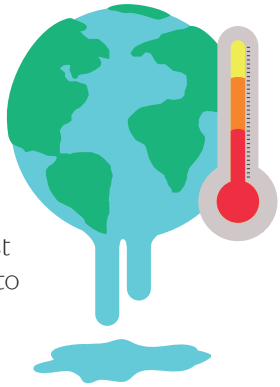
In an interview with *The Harvard Gazette*, Supran talked about the difference between what scientists at ExxonMobil historically said privately about climate change and what they said to the public.

"ExxonMobil misled the public about basic climate science and its implications. They did so by contributing quietly to climate science, and loudly to promoting doubt about that science," Supran said. "Our latest work shows that while their tactics have evolved from outright, blatant climate denial to more subtle forms of lobbying and **propaganda**, their end goal remains the same and that is to stop action on climate change."

According to the peer-reviewed analysis from Supran and Professor Oreskes, Exxon has known about the dangers of global warming, and that its products were causing it, since the 1970s. In addition, they say that the American Petroleum Institute, the trade association for the oil and gas industry, has known since the 1950s.

Suing big oil

Disinformation charges are central to a 2018 lawsuit, *Mayor & City Council of Baltimore v. BP p.l.c.*, filed by Baltimore legislators, which demands compensation from 26 energy firms, including ExxonMobil, for climate change-related injuries to the city, including rising sea levels. The legal action accuses the companies of exploiting new fossil fuel opportunities, undermining public support for greenhouse gas regulation, concealing fossil fuels' ecological dangers, and spearheading "denialist campaigns" to hide or confuse their products' contributing role in climate change. The complaint also contends the firms injected at least 151,000 gigatons of carbon dioxide into the Earth's atmosphere between 1965 and 2015—roughly 15% of the total greenhouse gas emissions released during that period.



"Accordingly, **defendants** are directly responsible for a substantial portion of past and committed sea level rise as well as for a substantial portion of changes to the hydrologic cycle [distribution of water], because of the consumption of their fossil fuel products," Baltimore's lawsuit states. "The City seeks to ensure the parties who have profited from externalizing the responsibility for sea level rise...and associated consequences of those physical and environmental changes, bear the costs of those impacts on the City..."

Baltimore's suit stalled because of a jurisdictional dispute. The energy companies, the defendants, want a federal judge to decide the case, believing that federal law would be more favorable to them, but the city prefers a state venue.

In March 2020, the Fourth Circuit Court of Appeals sided with Baltimore, **remanding** the case to state court. However, an **appeal** to the U.S. Supreme Court in May 2021 resulted in a ruling in favor of the energy companies. The Court decided that the lower court approached the case too narrowly in reviewing only one of the industry's arguments for federal

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jurisdiction.

In its ruling, the Court did not address the merits of the climate change case, saying "...the merits of that claim have nothing to do with this appeal. The only question before us is one of civil procedure."

The case was sent back to the Fourth Circuit Court of Appeals to decide jurisdiction. That court heard oral arguments in January 2022. At press time, no ruling had been released.

Hoboken under water

While the city of Baltimore was among the first to demand restitution from fossil fuel companies, several other cities have followed suit, including, Annapolis, Charleston, Honolulu, New York City, Oakland, and here in the Garden State, Hoboken. Several states—Connecticut, Delaware, Minnesota and Rhode Island—as well specific counties in Maryland, Washington, California and Louisiana, are also pursuing compensation from oil and gas companies.

Hoboken is seeking hundreds of millions of dollars in compensation for climate change-related costs, including a $500 million mitigation plan to address rain and seawater flooding. *City of Hoboken v. Exxon Mobil Corp.* charges six energy companies and the American Petroleum Institute with climate change-related violations of both New Jersey common law and the New Jersey Consumer Fraud Act. Specifically, the complaint charges the defendants with half a century of climate change deception, contending they concealed fossil fuels' harms.

Hoboken blames climate change for the nearly one-foot

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A Problem for Everyone — The World Convenes to Solve Climate Change Issue

Climate change is a worldwide problem since we all live on planet Earth. Countries from all over the world have been meeting regularly to discuss the climate crisis since 1992.

In November 2021, nearly 40,000 participants from 120 countries attended the United Nations COP26 climate conference in Glasgow, Scotland. COP stands for Conference of the Parties and 26 indicates that it is the 26th such conference. The first conference, or COP1, was held in Berlin in 1995. Prior to that, in 1992, 197 countries, including the United States, ratified the United Nations Framework Convention on Climate Change (UNFCCC), which set out a framework in which countries could address climate change with the goal of limiting rising temperatures.

In addition to the COP conferences, nearly 200 countries, including the United States, gathered in Paris in December 2015 to reach a consensus of what should be and could be done to deal with the global problem of climate change. The agreement reached in Paris was for all countries to work toward limiting global temperature increase to just 1.5 degrees Celsius. According to the agreement, the countries would reconvene every five years to report on their progress and update their pledges.

In November 2020, the Trump Administration formally withdrew the U.S. from the Paris Agreement, though the administration's intention to withdraw was announced in 2017. On Inauguration Day 2021, the Biden Administration took the necessary steps to get back into the Paris Agreement and on February 19, 2021, it was announced that the U.S. had officially rejoined.

Back to COP26

There were some promises made at the conference that are worth noting. More than 20 governments, including the United States, Canada and the United Kingdom, agreed to stop funding new overseas fossil fuel projects with public money by the end of 2022. More than 40 countries signed on to the Global Coal to Clean Power Transition statement, which is a promise to transition away from coal power and not issue any new permits.

One of the most notable agreements at COP26 was announced by the Glasgow Financial Alliance for Net Zero (GFANZ), a global coalition of financial institutions committed to accelerating decarbonization of the economy. Under an agreement with its 450 organizations in 45 countries, which manage 40% of global financial assets, GFANZ will require members to commit to net zero emissions by 2050 using science-based guidelines.

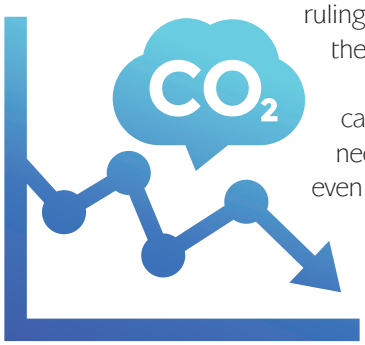
Bringing home the urgent need to help all nations deal with climate change was Shauna Aminath, the minister of environment for The Maldives, a small island nation in the Indian Ocean.

"What is balanced and pragmatic to other parties will not help the Maldives adapt in time. For us, this is a matter of survival," Aminath said. "We recognize the foundations that this outcome provides, but it does not bring hope to our hearts. The difference between 1.5 and 2 degrees is a death sentence for us."

COP27 will be held in Egypt in November 2022. ■

of sea level rise in and around the city, as well as the doubling of high tide flood days since 2000. In 2012, according to the lawsuit, Superstorm Sandy sent 450 million gallons of storm surge into the nation's third most densely populated city, submerging 80 percent of the municipality, and stranding 20,000 residents in their homes.

"Storms like this are becoming more frequent and severe because of anthropogenic [caused by humans] climate change, requiring Hoboken to undertake extensive mitigation and adaptation initiatives to protect itself from being regularly inundated by stormwater," the suit states.



Like the Baltimore case, the Hoboken lawsuit is bogged down in procedural issues over jurisdiction. A federal judge in New Jersey sent Hoboken's suit back to state court in September 2021; however, the defendants were granted a stay while they appeal the decision to the Third Circuit Court of Appeals.

Suing the government

As climate change cases mount against gas and oil companies, the number of complaints against governments is growing, too. At least a half-dozen suits have been filed against leadership in Alaska, Florida, Montana, Virginia and Washington, mostly by young **plaintiffs**.

The Alaskan case was dismissed by the state's Supreme Court in January 2022. Filed more than four years ago by 16 youths, the lawsuit claims the state's support for fossil fuel production contributed to climate change and violated the youngsters' constitutional rights.

Despite acknowledging "compelling" climate change concerns, Alaska's highest court upheld a 2018 lower court ruling dismissing the lawsuit; justices in both state courts agreed the case raised political questions that were best addressed by other branches of government.

The accusations in the Alaskan lawsuit mirror those in *Juliana v. United States*, a complaint filed by 21 Oregon youths in 2015. The landmark suit charges the U.S. government with violating the youths' constitutional rights to life, liberty, and property.

The plaintiffs claim the government violated their rights by ignoring the impending harm from climate change, as well as permitting, authorizing, and subsidizing the fossil fuel industry's activities, which have contributed to increased carbon dioxide levels in the atmosphere.

In a 2018 article for *The Conversation*, an independent news organization, Mary Wood, a law professor at the University of Oregon, wrote, "...youth plaintiffs are asserting well-established rights under the Constitution's due process and equal protection clauses to personal security, family autonomy, and property." Professor Wood, who provided some of the legal reasoning for the *Juliana* case, continues, "They further assert rights secured by the public trust doctrine, a principle with ancient roots requiring government to hold and protect essential resources as a sustaining endowment for citizens, in the present and the future."

Both the Obama and Trump administrations fought to dismiss the *Juliana* case, contending that environmental issues belong in the executive and legislative branches of government rather than the courts. A federal appeals court sided with the government in 2020 and dismissed the *Juliana* complaint, ruling the youths must take their case to politicians or the U.S. **electorate**.

"The plaintiffs' experts opine that atmospheric carbon levels of 350 parts per million are necessary to stabilize the global climate. But, even accepting those opinions as valid, they do not suggest how an order from this Court can achieve that level, other than by ordering the government to develop a plan," Ninth Circuit U.S. Court of Appeals Judge Andrew D. Hurwitz wrote in the court's opinion.

Juliana attorneys unsuccessfully **appealed** the Ninth Circuit Court decision and asked a federal judge in Oregon to reinstate the litigation. Instead, the judge ordered both sides to meet to discuss a settlement. Five months of talks between the youth plaintiffs in the case, their attorneys and the U.S. Department of Justice, resulted in negotiations breaking down in November 2021 and no resolution reached.

Michael Gerrard, one of America's foremost environmental attorneys and a professor at Columbia University, said the Ninth Circuit dismissed the Juliana appeal based on jurisdictional rule.

"The Ninth Circuit did not agree that the federal government violated the plaintiffs' rights," says Professor Gerrard, the founder and faculty director of the Sabin Center for Climate Change Law. "It is the function of Congress and the executive branch, not the courts, to make major policy decisions as to what to do about climate change. The courts do not have the power to provide the relief the plaintiffs are seeking."

At press time, the attorneys in *Juliana* were waiting to hear whether their request to file a second amended complaint would be granted. In the meantime, 18 states—led by Alabama—have requested in court documents to join the *Juliana* case, seeking to obstruct settlement negotiations. Attorneys for *Juliana's* plaintiffs filed a brief opposing the intervention of those 18 states.

"The ultimate argument that won in the Ninth Circuit was the issue of whether this is a political question rather than something for the courts to address," says Michael O'Neil, a law student at the University of Oregon and a research fellow for Professor Wood.

O'Neil explains that bringing the case to the U.S. Supreme Court is not an option at this point because there hasn't been an actual trial. The case is lingering in the courts on procedural

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grounds.

"The goal is to get the government in court, get the factual record in there and see what happens," says O'Neil. "To put the government on trial would be a big victory."

Professor Gerrard agrees that such a trial could be advantageous to the *Juliana* plaintiffs.

"A trial would garner a great deal of publicity," Professor Gerrard explains, "and could cast a harsh light on the actions of the federal government in promoting the use of fossil fuels."

DISCUSSION QUESTIONS

1. The article discusses litigation against companies in the fossil fuel industry, as well as against the federal government and outlines the arguments for each. Which strategy do you think is more compelling? Explain your answer.
2. As a young person, how do you feel about the arguments presented by the young plaintiffs in the *Juliana* case? Do you feel your right to "life, liberty, and property" has been violated due to the government's inaction on climate change? If so, how? Explain your answer.

Youth Around the World Litigate Climate Change

According to the Grantham Research Institute on Climate Change and the Environment, based in London, more than 1,000 climate cases have been filed worldwide since 2015.

It seems the United States is not the only country being sued by its youth over inaction on climate change. Governments in other countries are landing in court as well, with young people as plaintiffs. Here are two foreign cases with differing outcomes.

Climate change down under

In 2020, eight youth, claiming to represent all those under the age of 18, filed a class action lawsuit in Australia's Federal Court seeking to block a coal project from moving forward. The plaintiffs in *Sharma and others v. Minister for the Environment* argued that Sussan Ley, Australia's Minister for the Environment, had a common law duty of care to young people and that digging for and burning coal would harm those young people in the future.

While the Federal Court of Australia established a new duty of care that included avoiding personal harm to children in May 2021, it declined to issue an **injunction** for the coal mine project. Then in March 2022, the Full Federal Court of Australia **overturned** the decision to impose a duty of care on the Minister for the Environment.

"The threat of climate change and global warming was and is not in dispute between the parties in this litigation," Chief Justice James Allsop wrote in the court's decision but went on to say that the question was not suited to the courts. "To the extent that the evidence and the uncontested risks of climate catastrophe call forth a duty of the minister or the executive of the commonwealth, it is a political duty: to the people of Australia."

The eight teenage plaintiffs in *Sharma* will have to decide whether to appeal their case to Australia's highest court.

A German court sides with youth

In Germany, nine young people, ranging in age from 15 to 24, brought a lawsuit against the German government over a 2019 climate protection law. The case, *Neubauer, et al. v. Germany*, was filed in February 2020 and challenged Germany's Federal Climate Protection Act.

The Act set out emission reduction targets only up until 2030, and not beyond. Carbon emission reductions from 2031 to 2050 were left open and wouldn't be decided until 2025. The young German activists said that wasn't good enough, pointing out that their generation would be the one to make the sacrifices to reduce carbon emissions from 2030 to 2050. In April 2021, the German court sided with them.

"The **appellants**, some of whom are still very young, have had their liberties violated by the challenged provisions," the ruling said. "To preserve fundamental liberty, the legislature should have made provisions to mitigate this burden."

The court ordered the government to have the law revised by the end of 2022 and to specify targets beyond 2030.

Felix Ekardt, lead attorney for the plaintiffs in the case, told Radio Canada his team "got the court to recognize for the first time that freedom must be guaranteed not only here and now, but also globally—that is, across generations and across state borders."

Germany's Minister of Economy and Energy Peter Altmaier agreed, calling the court's decision "epochal for climate protection and the rights of young people."

Christophe Bals, executive director of Germanwatch, a nonprofit environmental organization, told *The New York Times*, "This ruling will be a key reference point for all climate lawsuits pending around the world."—*Jodi L. Miller*

Education

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students now have jobs in fields that didn't exist 15 years ago, 20 years ago," he remarks. "It feels good to see the program grow."

DISCUSSION QUESTIONS

1. What are the benefits of incorporating climate education into all subject areas, not just science? What have you learned about the issue in your non-science courses?
2. The article mentions that members of your generation prioritize climate change as the most important issue facing the world today. Do you agree or disagree with that statement? Explain your answer.
3. Have you contributed to combatting climate change or making others aware of climate change? If so, how?

GLOSSARY

appeal — a request that a higher court review the decision of a lower court.

appellants —a person who applies to a higher court for a reversal of a decision of a lower court.

defendant — in a legal case, the person accused of civil wrongdoing or a criminal act.

divest — to get rid of something that is no longer wanted, such as a business interest.

electorate — all the people in a country who are entitled to vote.

endowment — a combination of assets invested by a college/university to support its educational endeavors.

injunction — a judicial order that requires halting a specific action.

jurisdiction — authority to interpret or apply the law.

mitigate — to make less severe or serious.

overturned — in the law, to void a prior legal precedent.

partisan — someone who supports a party or cause with great devotion.

plaintiff — person or persons bringing a civil lawsuit against another person or entity.

propaganda — misinformation or half-truths.

remand — to send a case back to a lower court.

strict scrutiny — it he highest standard of judicial review that a court will use to evaluate the constitutionality of governmental discrimination.

What Can You Do About Climate Change?

If you want to do your part to reduce emissions, here are a few things you can do. These suggestions may seem small, but they add up.

- Replace inefficient light bulbs with LED light bulbs. LED bulbs use 50% less power than fluorescent bulbs.
- Turn off the lights. Turning off the lights when you leave a room saves energy and reduces carbon emissions.
- Set a "2 degree" goal. Setting thermostats a couple of degrees up (for air conditioning) or down (for heat) depending on the season can make a difference in energy use. It will also save money on heating and cooling bills. For each degree raised (in the case of air conditioning), 3 to 5 percent can be saved on energy costs.
- Walk or bike somewhere you would normally drive, if possible. You will save on fossil fuel emissions and get the added benefit of exercise.
- Plant a tree. Trees remove carbon dioxide from the air and release oxygen.
- Choose a slower shipping option. If you're not in a rush for whatever you're buying online, don't select overnight shipping. Delivery trucks need to make more trips when consumers select expedited shipping options.
- Unplug appliances and electronics when not in use. Small appliances, such as toasters, can suck up energy even when not in use. Even your phone charger can suck up energy if not connected to a device, so don't leave it plugged into an outlet.
- Wash clothes in cold water. Most of the energy used in doing a load of laundry comes from warming the water.
- Save water. It takes energy to produce water, so the more water you save, the more energy you save. For example, don't let the water run when you're brushing your teeth.

Source: University of California—Davis