

Hi, I'm Sophie Kivlehan, I am one of 21 youth plaintiffs in the lawsuit filed by the organization Our Children's Trust against the United States government, because the government is encouraging emission of dangerously high levels of carbon dioxide.

I will begin by explaining a little bit of the science, and then spend most of our time talking about the lawsuit, a solution to keep climate change from running out of our control, and how young people can achieve this solution. A solution is only possible if people understand what is needed. Young people, especially, must realize their political power (for example in the campaigns of Barack Obama and Bernie Sanders- it was really the young people who drove them) and use that power wisely! Adults are leaving us a mess, and unfortunately we may be the only ones who can clean it up!

This is because the climate system responds very slowly to the damage that humans are applying to it by adding CO<sub>2</sub> and other gases to the air. The effects of the damage are not immediately noticed by people. The result of the delayed response means there is more warming yet to occur without even adding any more CO<sub>2</sub> to the atmosphere. This means that if we stopped burning fossil fuels right now the earth would still get warmer because there is more heat in the climate system that we have yet to feel the effects of. The public does not easily recognize that there is a global warming crisis. This is partly because global warming is small compared with day-to-day weather fluctuations, and partly because of the delayed response of the climate. The deep ocean and thick ice sheets on Earth have great inertia and do not respond quickly. So much of the warming due to increased CO<sub>2</sub> in the air is still "in the pipeline," and it will occur during our lifetimes. This creates a danger that we will lose control of the situation.

Sea level rise is probably the greatest threat, because more than half the world's largest cities are located on coastlines. Imagine what happens if these cities are partially submerged and become dysfunctional. The economic consequences would be incalculable and there would be hundreds of millions of refugees. Think about all the troubles refugees face today and imagine adding even 100 million more refugees. It is possible that the world might become ungovernable.

In trying to figure out how much sea level will rise, scientists look at Earth's geologic past. This shows a very clear relationship between global temperature and sea level. The most recent time that Earth was warmer than today was during the Eemian period, about 120,000 years ago, when the temperature was between 1 and 2 degrees Celsius warmer than pre-industrial conditions. Global warming since industrialization, in the past century, is already 1 degree Celsius, so global temperature is within less than a degree of reaching Eemian temperature. Eemian warmth was enough to raise sea level 6-9 meters higher than today, which is 20-30 feet.

I am working with my grandfather to make short videos that help explain effects of climate change and what is needed to solve the problem. In this clip I am drawing the parts of Florida that would be covered by 5 meter and 9 meter sea level rise.

What young people do not want is for such chaos to be locked in and out of our control. This is the motivation behind our lawsuit. We target the federal government because they are taking actions that almost guarantee such chaos. If we keep burning fossil fuels as we are, the science indicates that sea level rise of many meters will occur within 50 to 150 years, which is within our lifetime or at latest the lifetimes of our children and grandchildren. It seems that the older guys running the fossil fuel industry and government do not have the mindset to address problems that they likely won't feel the effects of themselves.

We clearly cannot wait for government to solve problems.

Earlier lawsuits tried to address this toxic situation, mainly using the Public Trust Doctrine. The idea of Public Trust, which was written about by Thomas Jefferson and James Madison, is that the government has a responsibility to future generations. The lawsuits argued that by leaving a climate mess, the government was breaking its trust, its obligations to young people and their children.

One challenge to this argument is that Public Trust is not explicitly enumerated in the Constitution. However, the 9<sup>th</sup> Amendment states that "enumeration in the Constitution of certain rights shall not be construed to deny or disparage others retained by the people." This means people still have rights that are not written in the constitution.

Nevertheless, the first case brought against the federal government by Our Children's Trust was lost at a level just below the Supreme Court. The judges ruled that a sufficient Constitutional basis had not been shown, but in so saying they seemed to almost invite a new case in which the Constitutional argument was strengthened.

In this new case, in which I am one of the plaintiffs, we keep the Public Trust argument, but we add greater emphasis on equal rights, similar to civil rights cases. We argue that our constitutional right to life, liberty, and property is violated when the government approves the mining of fossil fuels and emission of high levels of CO<sub>2</sub> into the air, despite being aware of its damaging effects.

[Chart 4] Equal rights of all people is the most fundamental concept of our nation, enshrined in our Declaration of Independence and in our laws via the Constitution [Chart 5]. In effect, we are asking the Court, "are young people people?"

We use the Due Process Clause of the 5<sup>th</sup> Amendment to the Constitution, which bars the government from depriving a person of life, liberty or property without due process of law. We assert that the government is doing just that by actively promoting fossil fuel development and emissions, which are driving dangerous climate change.

Equal protection of the laws is spelled out in the 14<sup>th</sup> Amendment and was central to civil rights cases including "Brown versus Board of Education" which declared segregation to be unconstitutional. We argue that young people also deserve "equal protection." Older people burn the fossil fuels, get the benefits from them, but suffer

only moderate consequences, because of the delayed response of the massive climate system.

We filed our case (fittingly on National Youth Day) on August 12, 2015. The government's response was to file a motion to dismiss our case before it could get to trial. I traveled with my grandfather to Eugene, Oregon, to participate in a subsequent hearing on March 9, 2016. My grandfather, Dr. James Hansen, is a climate scientist who serves as guardian in the case to me, the other plaintiffs, and future generations.

During the court proceeding, the government did not deny the reality of human-caused global warming, but they asserted that they were addressing the matter and argued that the case should be dismissed. We waited weeks for the verdict, and we were not disappointed; the motion to dismiss our case was denied! Judge Thomas Coffin stated, "...the alleged valuing of short-term economic interest, despite the cost to human life, necessitates a need for the courts to evaluate the constitutional parameters of the action or inaction taken by the government."

In other words, the government claims that it would be economically harmful to solve the climate problem. The Court was not willing to accept that argument as a reason to dismiss the case. Judge Coffin noted that, if we could verify our assertions about the likely effects of continued high fossil fuel emissions, the consequences for young people were "beyond the pale", providing adequate reason that the case should proceed to trial.

Therefore it may not be essential for our legal case for us to discuss what the economic costs of addressing climate change will be. However, the argument can be made that a sensible program to address climate change actually makes economic sense, that there is no net cost if the policies are smart policies. I believe this to be true, and it is perhaps tangentially related to the lawsuit.

The reason that I say this is that the courts historically have seldom got far out ahead of public opinion. The courts could have addressed civil rights much earlier than they did. It was not until the 1950s and 1960s, when the public was getting very angry about civil rights abuses, that the courts finally came down strongly in favor of civil rights. So, if we want the public to put broad pressure on all branches of our government to address climate change, it would be helpful if the public understood that doing so is not economically painful.

There is another reason that it is important for the public to have an understanding of the policies that are needed to limit climate change. Courts cannot prescribe specific policies for the government, the courts cannot assume responsibilities that the Constitution defines as responsibilities of the Executive or Legislative branches of government. However the courts can find that actions or policies of the government violate the Constitution and must be changed.

For example, the Supreme Court ruled in *Brown versus Board of Education* that

segregation of schools violated the equal rights guarantee of the Constitution. The Court could require desegregation, but it could not define the plans for doing that. It could, however, require the government to report back on how it was ending segregation. This is an important example, because the government was very slow in defining and implementing effective desegregation plans.

We do not want the government to fool around for a couple more decades with ineffectual plans for phasing out fossil fuel emissions. That could be disastrous for young people. So it is important that the public be familiar with climate policies that the government is considering and understand what policies would be effective.

This is another activity, independent of the legal case, which I am working on with my grandfather. We just made a short video a few days ago to discuss the kind of policy that is needed to achieve rapid reduction of fossil fuel CO<sub>2</sub> emissions.

**[Chart: U.S. Energy Consumption]** We need energy. Before the Industrial Revolution our energy came mainly from burning wood and back-breaking physical work, much of it by slaves. The industrial revolution, starting with the invention of the steam engine, allowed machines to work for us, and the average standard of living increased. First the energy was provided by coal, and then oil, gas and other sources of energy.

Americans are not willing to give up their standards of living, and there are other populous countries such as China and India that want to raise their standards of living, lifting millions of people out of poverty. This is good because the best hope of slowing population growth seems to be higher standards of living that contributed to lower fertility rates in the developed world.

The problem is that if we all keep using fossil fuels as the main energy source, climate scientists agree that climate change will grow rapidly, sea level rise of many meters will be locked in, and many other effects of climate change will increase.

Fortunately, there is an approach for rapidly reducing fossil fuels that actually makes economic sense. It is not true that solving the climate problem needs to be expensive. A logical and feasible solution exists to limit emissions, and economic studies have shown that this solution would actually lead to an increased gross national product and create millions of jobs.

The fundamental requirement is to raise the price of fossil fuels to make their price more honest. Honest prices make an economy more efficient and stronger. For the price of fossil fuels to be honest, it must include the costs of air pollution, water pollution and climate change. These costs are not now included in the price of fossil fuels, as the fossil fuel industry is allowed to use the atmosphere as a free waste dump. If a child gets asthma from air pollution, the fossil fuel companies do not pay the bill. If a climate change disaster occurs, the victims pay or perhaps the taxpayer if the government provides assistance, but not the fossil fuel industry.

The simplest way to do this in a way that does not cause economic disruption is to collect a steadily rising carbon fee from the fossil fuel companies. A carbon fee can easily be collected from fossil fuel companies at the first sale, at domestic mines & ports of entry.

That money should go to the public, not to special interests or the government. The most effective way is to distribute the money equally to all legal residents. This way the person doing better than average in limiting his fossil fuel use will make money. Most people can come out ahead. This carbon fee-and-dividend is progressive. Wealthy people have a larger carbon footprint, because they tend to have larger houses and travel more, so they may lose some money, but they can afford it.

About 70% of the people will come out ahead with the present distribution of energy use. People will simply need to pay attention to the prices of things they buy, if they want to stay on the positive side of the ledger – because products that use more fossil fuels will become more expensive.

This fee and dividend system is easy to administer, since everyone gets an equal dividend. The dividend can be distributed electronically to a person's bank account or debit card at regular intervals.

Economic studies show that this revenue-neutral approach – no money to the government – would work. It would cause CO<sub>2</sub> emissions to decrease rapidly, at least 30 percent in the first 10 years, much faster than can be achieved with regulations such as President Obama implemented, and now President Trump is trying to dismantle.

**[Baker Chart]** Thoughtful conservative leaders, even some who are skeptical about climate change, agree that this is the best approach. They point out that this market-based system would stimulate competition and innovation.

Perhaps the most important merit of this approach is the relative ease with which it could be made near-global. If the United States adopted fee-and-dividend it would also place a border duty on products from countries that do not have an equivalent fee, which would be a great incentive for other countries to adopt their own fee so that they could collect the money, rather than have us collect it at our border.

I hope that I now have time to play a 2 minute video of Rex Tillerson, who is now our Secretary of State and who was then CEO of EXXON/Mobil **[VIDEO]**. If there are leading conservatives who understand the common sense need for a carbon fee, and if liberals all believe that climate change is a problem, why the devil hasn't this happened. After all this Tillerson video is from 2009, eight years ago, one year after my grandfather suggested the idea to President-elect Obama?

According to my grandfather, who has been making trips to Washington for 50 years, there are just two problems: Democrats and Republicans. Democrats want the money. Bernie Sanders introduced a bill for Fee-and-Dividend, but it has the government taking 40% of the money. If the government takes the money, it's a tax and it depresses the

economy. The public will not like it. They see gasoline getting more expensive, but the dividend is too small to cover increased costs. Instead of 70 percent of the people coming out ahead, it will be less than 30 percent. Bernie says that he cares about everything, but his position shows that he doesn't care much about climate.

As for Republicans, they say that climate change is a hoax. What else could they say when they are on the payroll of the fossil fuel industry? They don't call it payroll – they call it campaign contributions.

What can young people do? A lot. Look at how young people drove the successful campaign of Obama and the almost successful campaign of Sanders. A few days ago thousands of courageous young people demonstrated in Russia – they risked their lives. I am not sure how that will turn out.

We don't need to take that risk. We still live in a democracy. Let me first tell you about an organization, Citizens Climate Lobby (CCL), which is trying very hard to get bipartisan support for fee & dividend. They use the democratic process. They visit Senators and Representatives. They are polite. They write letters-to-the-editor. There are now more than 300 chapters and 50,000 members, growing rapidly.

CCL is a volunteer organization, mostly older people who have the time to donate. They are doing a very good job. If they were joined by dynamic youth, social media experts, who worked as they did for Obama and Sanders, maybe rapid movement to a carbon fee would be possible. I hope young people will consider joining this organization.

Young people need to understand that it is not enough to campaign for a politician who says that he will fix the climate problem. We must also know what his planned policy is.

Our democracy provides ways to fix problems, to find a path to a bright future for all people. But a democracy can work only if the public understands the situation and supports effective policies that are designed for **all of the public**, not just for limited special interest groups.

How can we do that? Can Republicans and Democrats be persuaded to compromise on a carbon fee with the money going to the public? What if Republicans refuse to give up their loyalty to the fossil fuel industry? What if Democrats insist on taking the carbon money for social programs?

Is it necessary to have a third party, based on interests and ideas of young people? We may have to take our future in our own hands.

I am not claiming that I know the answers. These are just some suggestions that may be worth thinking about. Thanks for your attention.