



WHAT CAN WE DO ABOUT THE CLIMATE CRISIS?

Leila Niamir^{1*} and Elke U. Weber²

¹Energy, Climate, and Environment Program, International Institute for Applied Systems Analysis (IIASA), Laxenburg, Austria

²Andlinger Center for Energy and the Environment, School of Public and International Affairs, Princeton University, Princeton, NJ, United States

YOUNG REVIEWERS:



CALEB

AGE: 11



KYLA

AGE: 12



MAX

AGE: 11

Understanding how our planet's climate is changing because of human actions is super important if we want to keep living here. A changing climate means hotter weather, droughts, wildfires, heavy rains, storms, and floods. To fix things, we need to figure out which human activities are making the climate act this way and how we can change those activities. Everyone has a part to play—politicians, companies, engineers, and citizens. Small things like changing how we travel or use energy can help a lot. When the younger people who will inherit the planet come together and demand action on climate change, they can have a big impact. It helps when young people combine these demands with personal action, to show others that they, and lots of other people, care about this issue: by eating less red meat, using transportation wisely, pushing for changes in how businesses operate, and voting for leaders who care about the environment.

GREENHOUSE GAS EMISSIONS

Gases like carbon dioxide and methane released into the air from activities like burning fossil fuels, which trap heat in the atmosphere and contribute to global warming.

CARBON FOOTPRINT

The amount of pollution, like carbon dioxide, that we create when we use energy, like driving a car or turning on the lights.

Earth's climate is changing, getting warmer and more extreme and unpredictable, leading to ever more frequent catastrophes like hurricanes, floods, and wildfires. These changes result from the big increase in human-caused **greenhouse gas emissions** since the Industrial Revolution. Climate changes will get much worse if there is no action.

The climate crisis requires two types of action. One is to find ways to slow down or stop the changes, and the other is to figure out how to adapt to the unavoidable changes we are already experiencing. These two goals require action from everyone. Scientists and engineers can look for new ways to generate energy without emitting more greenhouse gases, politicians can pass laws regulating emissions and provide tax breaks for companies that develop climate-friendly technology, and companies can lead the way in reducing their own emissions and selling products that have lower **carbon footprints**. Young people like you also have an important role to play! [1].

People have learned a lot about how the way we live affects the climate. It is not just about the emissions from our cars or factories, it is also about where we live, how we get around, and even what we eat. Some of us walk to school; others take a school bus or the subway; still others get there in a chauffeured car. Some of us have never left the area we live in, even for vacations; others expect to travel regularly with family and friends to faraway places, for fun or education. Some of us live in huts in rural villages without regular electricity and running water; others live in apartments or mansions in big cities. We eat differently, sometimes by choice and sometimes due to financial and cultural circumstances. Some of us barely have enough to eat, for others, overeating leads to obesity and poor health. What we eat, and specifically how much red meat we consume, has impacts on the climate, as the farming of cows and other livestock emits much more greenhouse gases per calorie than growing grains and vegetables does. All these lifestyle factors add up and can change the average temperature and rainfall around the globe, making extreme weather like droughts, floods, hurricanes, and cyclones happen more often [2].

CITIZENS

Does it seem like individuals—and especially children and teens—cannot make much of a difference? As a child, your ability to take action is limited because most housing, transportation, and even food decisions are made by your parents or other adults. But things may be better than they seem. Parents are often influenced by their children's concerns. Greta Thunberg is a great example. As a teen, she convinced her whole family to change the way they were living. Her mother, an opera singer,

no longer flies to engagements, and her father fully supports Greta's climate activism as her manager. There are many other examples in which children and teens, by expressing their concerns and fears about the future and their confusion and anger over the apparent failure of adults to take significant actions to protect the climate, have motivated parents and grandparents to change their personal or professional lives. There are personal stories from the leaders of big companies (e.g., Air France, Unilever), and a recent opinion poll in the USA found that 74% of Americans feel they have a "moral obligation" to make the world a better place, by addressing climate change not only for their own children and grandchildren but for all children to come.

Personal activism is a way to express your hopes and fears, to find others who share your values and concerns, and to let the world know about your feelings through physical actions and social media. The [FridaysforFuture](#) movement, started by a single teen as a protest in front of the Swedish parliament in 2018, now includes 14 million students in 7,500 cities around the world. Making your worries, wishes, and opinions known by talking about them at school and at home can help you to see how many others share your views. Because many people (adults included) think that others might not share their views, sometimes we do not talk about what we think and thus never find out how common our views really are. Talking about our opinions and taking action based on those views have many multiplying effects and can change how society, politicians, and companies think about climate action.

Leading by personal example is a good thing and often major effects. Social youth movements like FridaysForFuture have spawned other social movements like [Seniors for Climate Action Now! \(SCAN\)](#). Knowing how widespread youth climate anxiety and support for climate action is has also encouraged adult activists to take legal action against governments on behalf of children. Attorneys from [Our Children's Trust](#), a non-profit environmental group, have brought legal actions against U.S. state governments on behalf of youth in all 50 states. In 2023, this organization won its case in the state of Montana, where a judge ruled that the state was violating the rights of the 16 young people who had filed the lawsuit to "a clean and healthful environment", as well as their rights to dignity, health and safety, and equal protection under the law ([Figure 1](#)).

GOVERNMENTS

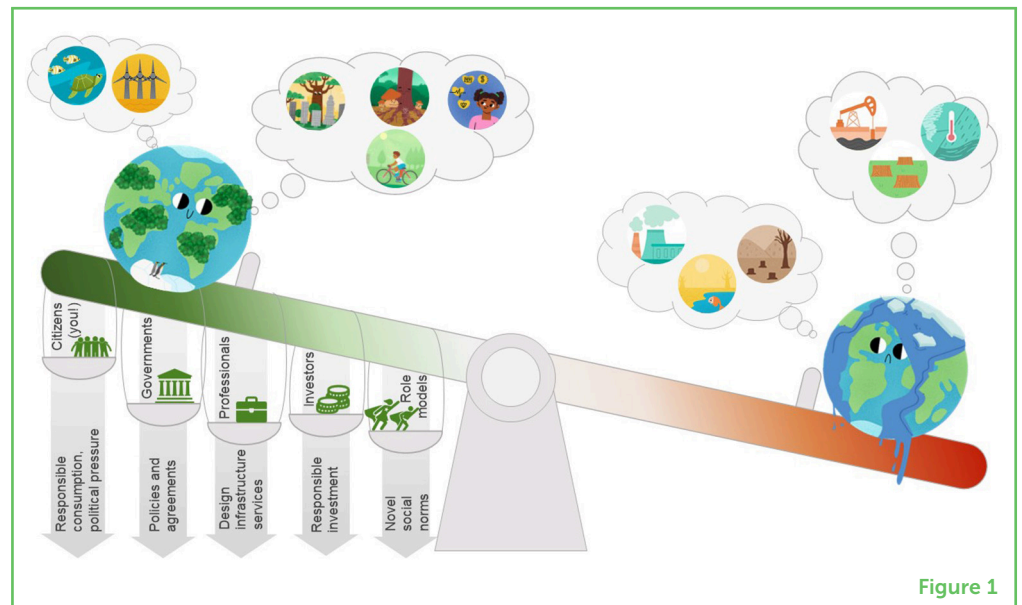
In the quest for a sustainable and healthy future, governments are like the captain steering the ship through stormy seas. Governments play a crucial role in creating an environment where everyone—from individuals to businesses—can contribute to the fight against climate change. Governments have the power to plan strategies to make societies more environmentally friendly. By investing

Figure 1

The two different worlds on opposite sides of the seesaw show the choices we face. Our current social, economic, and political actions are tilting us toward an Earth that is not inhabitable by humans. The actions illustrated on the left can tip the seesaw toward a sustainable future.

RENEWABLE ENERGY

Power we get from nature, like the sun, wind, or water, that can be used again and again without running out.



in **renewable energy** sources and eco-friendly transportation, for example, governments pave the way for a cleaner, more sustainable planet.

Climate change knows no borders, so the governments of all countries must work together to address this global challenge. Through collaborations, agreements, and shared responsibilities, nations can pool resources and knowledge to tackle climate change collectively. For example, the United Nations, an international organization of 193 countries, organizes meetings to assess the progress being made in dealing with climate change and negotiating agreements on actions that countries can take together to reduce its impact (Figure 1).

PROFESSIONALS AND INVESTORS

Did you know that businesses and professionals can also play important roles in protecting Earth's climate? Professionals can offer eco-friendly services, such as providing shared bikes or scooters for transportation, or they can install and maintain solar panels to help generate electricity. Investors—people or organizations that put money into a business for financial returns—can play an important role by providing the money to support sustainable practices, businesses, and projects that benefit the environment [3]. More importantly, investors can refuse to invest in the fossil fuel industry. When investors choose to invest in companies that use clean energy or contribute to the protection of our planet through green technologies, infrastructure, and services, they actively contribute to making the world a better place (Figure 1).

ROLE MODELS

Celebrities and role models can use their influence to educate and inspire people on the importance of environmental and climate conversations. Actors like Leonardo DiCaprio use their fame to advocate for clean energy and animal protection. Even individuals like Greta Thunberg, though not traditional celebrities, are recognized as heroes for speaking up about climate change. However, the power to drive positive change is not limited to public figures; it extends to all young leaders (Figure 1).

Your generation could significantly contribute to shaping a sustainable future by supporting actions and lifestyles that are good for the climate. You can be a leader, too! Start by taking simple but impactful steps, like cycling or walking to school, reducing air travel, and eating less meat and more plant-based foods. You can also involve your family and friends by sharing information about sustainable practices—like installing solar panels, adjusting the temperature settings for cooling or heating your home, and avoiding the use of fossil fuels. You could also consider getting involved in local groups or projects centered around protecting the environment. In those groups, you will meet other people with the same views and learn new ways to help save the climate [3]. But please note that the best actions are positive, peaceful, and respectful. Refrain from joining groups or protests that may cause harm to people or objects—such protests can push away the people you need to help your cause.

By actively participating in positive efforts, you can contribute to the collective effort to build a world where both nature and humanity thrive. Together, through collaboration and dedication, we can forge a more sustainable future.

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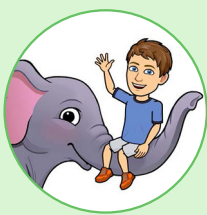
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YOUNG REVIEWERS

CALEB, AGE: 11

Caleb enjoys all things science, animals, reading, exploring the outdoors, playing the violin, and curling. When he grows up, Caleb wants to be an architect focusing on eco-friendly and animal oriented buildings. He has tried four sports and is always up for trying something new. Caleb's favorite foods are macaroni and cheese or lasagna. He enjoys traveling and would like to go to an animal reserve.



KYLA, AGE: 12

Kyla is going into 7th grade. She likes coding, digital design and maker projects. She also likes cats and narwhals. In her free time, Kyla likes to code games. Kyla also likes to mess around with digital drawing tools to create animations and art. In the future, Kyla is excited to learn more about robotics. Over the summer, Kyla is looking forward to reading good books, going to improv camp, and spending time with her family.





MAX, AGE: 11

Max is a fun-loving 11 year old who loves to read and play video games. He cares very much about the climate change crisis and has read up on it a lot. He has a business with his best friend Armen.

AUTHORS

LEILA NIAMIR

Leila Niamir is a passionate young scientist dedicated to studying and preserving the Earth. Her childhood love for nature led her to pursue a career in science, focusing on Earth science, climate change, and energy. Now, she collaborates with scientists worldwide to combat climate change and improve the planet's health. Leila's research emphasizes the importance of cooperation between scientists, governments, and individuals to protect the environment and ensure a high quality of life for all. She strives to understand how our actions impact the climate and environment, and advocates for collective efforts to create a happier, healthier Earth for everyone. *niamir@iiasa.ac.at

ELKE U. WEBER

Elke U. Weber is a psychologist who has been trying to understand for a long time why we often do not do the things that we know we ought to do, and how to redesign the way we describe decisions and consequences in ways that make us more concerned about the future and willing to contribute to a livable climate and fair world. Born and raised in Germany, she has lived and worked in Canada and the United States for the last half century.

