

# Reception



**Lori Byron**

*Chair*

*Montana Health Professionals for a Healthy Climate*



**Julia Olson**

*Executive Director & Chief Legal Counsel*

*Our Children's Trust*



The Medical Society Consortium on  
**CLIMATE & HEALTH**

# Youth, Health Professionals, and the Climate Movement

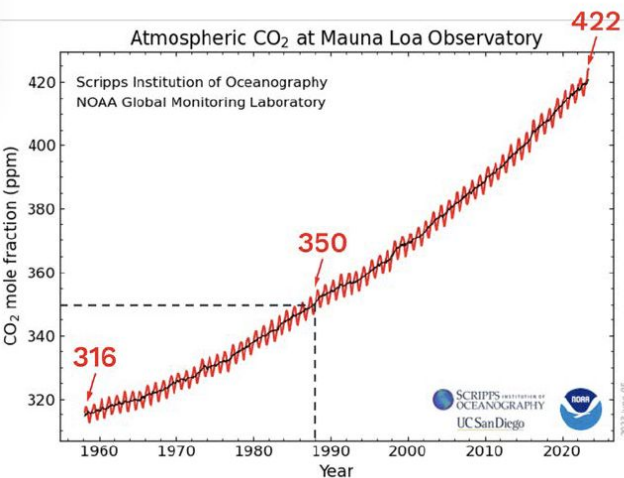
Julia Olson

Executive Director & Chief Legal Counsel  
Our Children's Trust



## OUR GOALS

### Science-Powered Solution



### Youth-Powered Litigation



We trust children.

### Democracy-Powered Future



We trust democracy.

We trust science.

“The climate crisis is the single biggest driver of health for every child born today.”

**Lisa Patel, MD, MEd**

Executive Director, Medical Society Consortium  
on Climate and Health

Board Member, Our Children's Trust



A group of diverse young people, including students and professionals, are walking along a paved sidewalk in a city. The scene is set during the day with soft lighting, suggesting late afternoon or early evening. In the background, there are trees, street lamps, and buildings with awnings. The overall atmosphere is one of a vibrant, safe urban environment.

# WE BELIEVE

that young people deserve to be happy and safe today and in the future. We use our legal and scientific expertise so they can tell their stories.

# Our Courts

are vital to democracy  
and empowered to  
protect our children  
and the planet.





# Human Rights Lawyers for Youth since 2010

We advocate for and elevate the voices of Youth and Future Generations for climate rights

We advocate only for science-based and legally enforceable systemic remedies in court

We protect fundamental human rights



# Held v. State of Montana

**First Ever Children's Constitutional Climate Trial**

**June 12 – 20, 2023, Helena, MT**







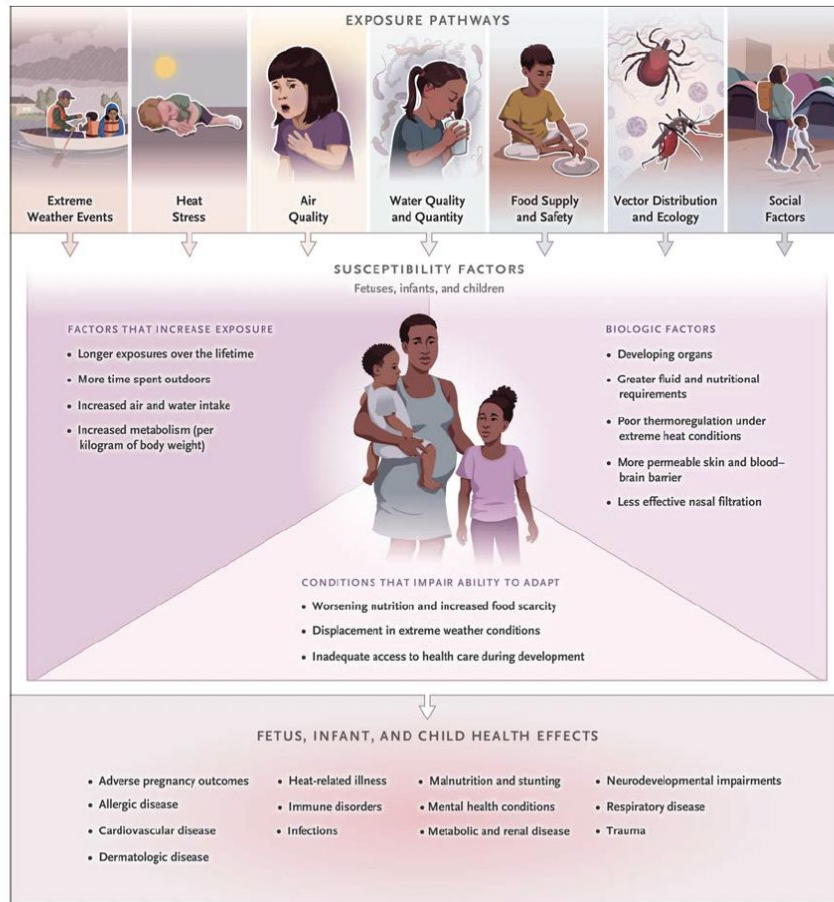
# Dr. Lori Byron



## Conclusions

- The health and well-being of the Plaintiffs, both now and in the future, is being put at risk by Montana's fossil fuel energy system and the resulting air pollution and climate impacts.
- Health is already being harmed by global temperature increases.
- Simply "treating" health problems caused by air pollution or climate change after they arise is neither adequate nor acceptable.
- The most important interventions are those that address the underlying causes and transition Montana away from extracting and burning fossil fuels.

# CLIMATE CHANGE & HEALTH



Drs. Federica Perera & Kari Nadeau, *Climate Change, Fossil-Fuel Pollution, and Children's Health*, New England Journal of Medicine (2022).

# Smoke Impacts



**Lander**



**Badge**



**Kian**



**Sariel**



**Eva**



**Georgi**



**Grace**



**Olivia**



**Mica**



**Taleah**



**Claire**



**Ruby**



**Lilian**



**Jeff**



**Nate**



**Rikki**

POLICY FORUM

CLIMATE CHANGE

## Intergenerational inequities in exposure to climate extremes

Young generations are severely threatened by climate change

By Wim Thiery, Stefan Lange, Joeri Rogelj, Carl-Friedrich Schleussner, Lukas Gudmundsson, Sonia I. Seneviratne, Marina Andrijevic, Katja Frieler, Kerry Emanuel, Tobias Geiger, David N. Bresch, Fang Zhao, Sven N. Wilmer, Matthias Böcher, Jan Volkholz, Nico Sauer, Jirfeng Chang, Philippe Clais, Marie Duru, Louis François, Manolis Grillakis, Simon N. Gosling, Naota Hanasaki, Thomas Hickler, Veronika Haber, Akhilesh Kumar, Jilka Jäger, Nikolay Khabarov, Aristides Koutoulis, Wenting Liu, Wolfgang Lutz, Matthias Mengel, Christoph Müller, Sebastian Ostberg, Christopher P. O. Reyner, Tobias Stacke, Yoshihide Wada

Under continued global warming, extreme events such as heat waves will continue to rise in frequency, intensity, duration, and spatial extent over the next decades (1–4). Younger generations are therefore expected to face more such events across their lifetimes compared with older generations. This raises important issues of solidarity and fairness across generations (5, 6) that have fueled a surge of climate protests led by young people in recent years and that underpin issues of intergenerational equity raised in recent climate litigation. However, the standard scientific paradigm is to assess climate change in discrete time windows or at discrete levels of warming (7, a “period” approach that inhibits quantification of how much more extreme events a particular generation will experience over its lifetime compared with another. By developing a “cohort” perspective to quantify changes in lifetime exposure to climate extremes across generations (see supplementary materials), we estimate that children born in 2020 will experience a two- to sevenfold increase in extreme events, particularly heat waves, compared with people born in 1960, under current climate pledges (see the first figure).

Our results highlight a severe threat to the safety of young generations and call for drastic emission reductions to safeguard their future. Meteorological extremes, hazards, or climate change impacts are mostly studied as they evolve over time under varying emission scenarios and socioeconomic pathways (2, 4, 8). For example, applying a heat wave indicator (see table S1) to four bias-adjusted global climate models indicates that

Author affiliations are available in the supplementary materials. Email: wim@wimthiery.be

the land area annually affected by such heat waves will increase from ~15% around 2020 to ~23% by 2100 under a scenario compatible with limiting global warming to 1.5°C and to ~46% under a scenario in line with current emission reduction pledges (see the first figure). Recent studies extended this approach, studying aspects of climate change as a function of global mean temperature (GMT) increments, highlighting the scenario-independence of several extreme event indicators (1, 3, 9) but remaining, in essence, a comparison of time windows.

By contrast, we performed a birth cohort analysis by combining a collection of multimodel extreme event projections (3) with country-scale life expectancy inference (10), gridded population data (11), and future global temperature trajectories (12) from the Intergovernmental Panel on Climate Change (IPCC) Special Report on Global Warming of 1.5°C (see supplementary materials). By integrating the exposure of an average person in a country or region to extreme events across their lifetime, we encapsulate spatiotemporal changes in climate hazards, population density, cohort size, and life expectancy (see the first figure).

### EXTREME EVENT EXPOSURE

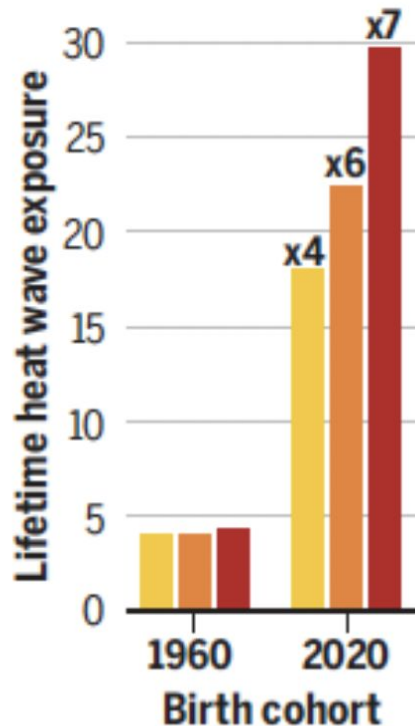
Our results allow for comparing lifetime exposure to climate extremes across birth cohorts globally. For example, a person born in 1960 will on average experience around 4 ± 2 (± 2) heat waves across their lifetime according to our extreme heat wave definition (see the first figure). The lifetime heat wave exposure of this cohort is largely insensitive to the three future temperature scenarios considered here. By contrast, a child born in 2020 will experience 30 ± 9 heat waves under a scenario that follows current climate pledges, which could be re-

duced to 22 ± 7 heat waves if warming is limited to 2°C or 18 ± 8 heat waves if it is limited to 1.5°C. In any case, that is seven, six, or four times more, respectively, compared with that of a person born in 1960. Repeating this analysis for all cohorts born between 1960 and 2020 highlights clear differences in lifetime exposure to heat waves between older and younger cohorts globally (see the first figure). The effect of alternative future temperature trajectories on the lifetime exposure multiplication factor becomes discernible only for cohorts younger than 40 years in 2020, with the largest differences for the youngest cohorts.

The previous example only uses one hazard indicator and a subset of all possible future temperature pathways. We expanded this approach and considered six extreme event categories: wildfires, crop failures, droughts, river floods, heat waves, and tropical cyclones (see table S1), which we analyzed under a wide range of temperature pathways that resulted in future warming that ranges from constant present-day levels up to 3.5°C by 2100 (see materials and methods and fig. S1). To this end, we generated a total of 273 global-scale projections with 15 impact models forced by four bias-adjusted global climate models (see table S2). Inspired by the IPCC’s Reasons for Concern Framework (7), we visualized the exposure multiplication factors, relative to a hypothetical reference person living under preindustrial climate conditions, as a function of the 2100 GMT anomaly and cohort (see the second figure and fig. S2). Life expectancy varies with the cohort, whereas the hypothetical reference person is given the same life expectancy as that of the 1960 birth cohort in our figures. Therefore, in contrast to the previous comparison of lifetime exposure across generations given historical and climate conditions (see the first figure), we assessed how projected lifetime exposure of birth cohorts is affected by climate change since the preindustrial era and by increased life expectancy since 1960.

Our results highlight that lifetime exposure to each of the considered extreme events consistently increases for higher warming levels and younger cohorts. Changes in extreme event frequencies have relatively little effect on lifetime exposure for cohorts above age 55 in 2020, but this rapidly changes for younger cohorts as they experience increasing extreme events in the coming years and decades (see the second figure and fig. S2). For a 2°C global warming pathway, a 6-year-old in 2020 will experience twice as many wildfires and tropical cyclones, three times more river floods, four times more crop failures, five times more droughts, and 36 times more

...children born in 2020 will experience a two- to sevenfold increase in extreme events, particularly heat waves, compared with people born in 1960...

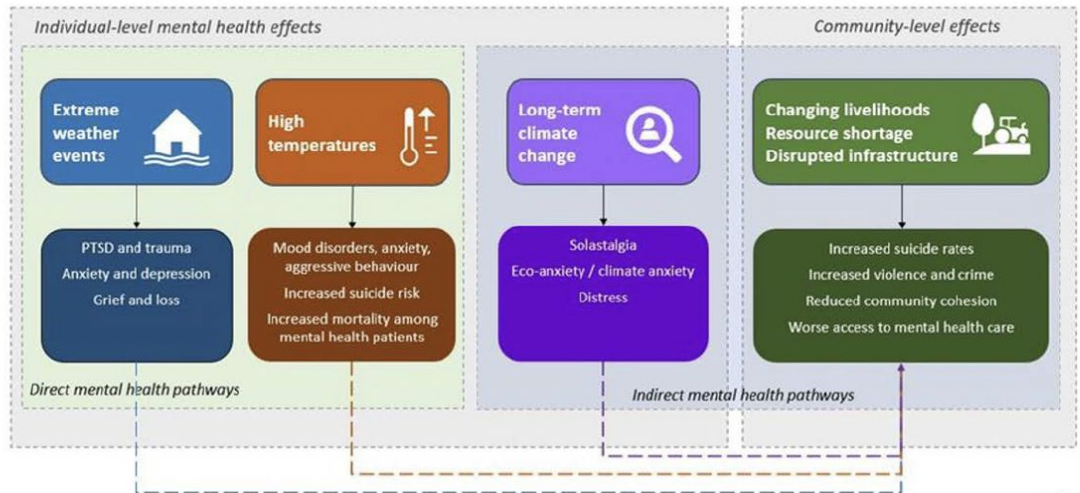


Wim Thiery et al., *Intergenerational inequities in exposure to climate extremes*, Science (2021).

# Dr. Lise Van Susteren



## Climate Change Impacts on Mental Health



*Held v. Montana  
Lise Van Susteren  
The main pathways of climate change impacts on mental health in Europe. EEA elaboration, based on Lawrance et al. (2021) and Berry et al. (2010)  
LVS-12*





## Plaintiffs Have Proven Injury

1 107 (1998). However, Plaintiffs' mental health injuries stemming from the  
2 effects of climate change on Montana's environment, feelings like loss, despair,  
3 and anxiety, are cognizable injuries.

4 6. Every additional ton of GHG emissions exacerbates  
5 Plaintiffs' injuries and risks locking in irreversible climate injuries.

6 7. Plaintiffs' injuries will grow increasingly severe and  
7 irreversible without science-based actions to address climate change.

8 8. Plaintiffs have proven that as children and youth, they are  
9 disproportionately harmed by fossil fuel pollution and climate impacts

10 9. Plaintiffs have proven that they have suffered injuries that  
11 are concrete, particularized, and distinguishable from the public generally.

12 10. Plaintiffs suffer and will continue to suffer injuries due to  
13 the State's statutorily mandated disregard of climate change and GHG emissions  
14 in the MEPA Limitation, and due to SB 557's removal of MEPA's preventative  
15 equitable remedies with Mont. Code Ann. § 75-1-201(e)(a)(ii).

### 16 B. Plaintiffs Have Proven Causation at Trial.

17 11. The PSC is exempted from MEPA as a matter of law. Mont.  
18 Code Ann. § 75-1-201(3).<sup>2</sup>

19 12. There is a fairly traceable connection between the MEPA  
20 Limitation and the State's allowance of resulting fossil fuel GHG emissions,  
21 which contribute to and exacerbate Plaintiffs' injuries.

22 13. There is a fairly traceable connection between the State's  
23 disregard of GHG emissions and climate change, pursuant to the MEPA  
24 Limitation, GHG emissions over which the State has control, climate change  
25 impacts, and Plaintiffs' proven injuries. Unlike in *Bitterrooters Inc.*, the causal

<sup>2</sup> Hereinafter, when the Court refers to Defendants or the State, the PSC is excluded.  
Findings of Fact, Conclusions of Law, and Order – page 87  
CDV-2020-307

Every additional ton of GHG emissions exacerbates Plaintiffs' injuries and risks locking in irreversible climate injuries.



“

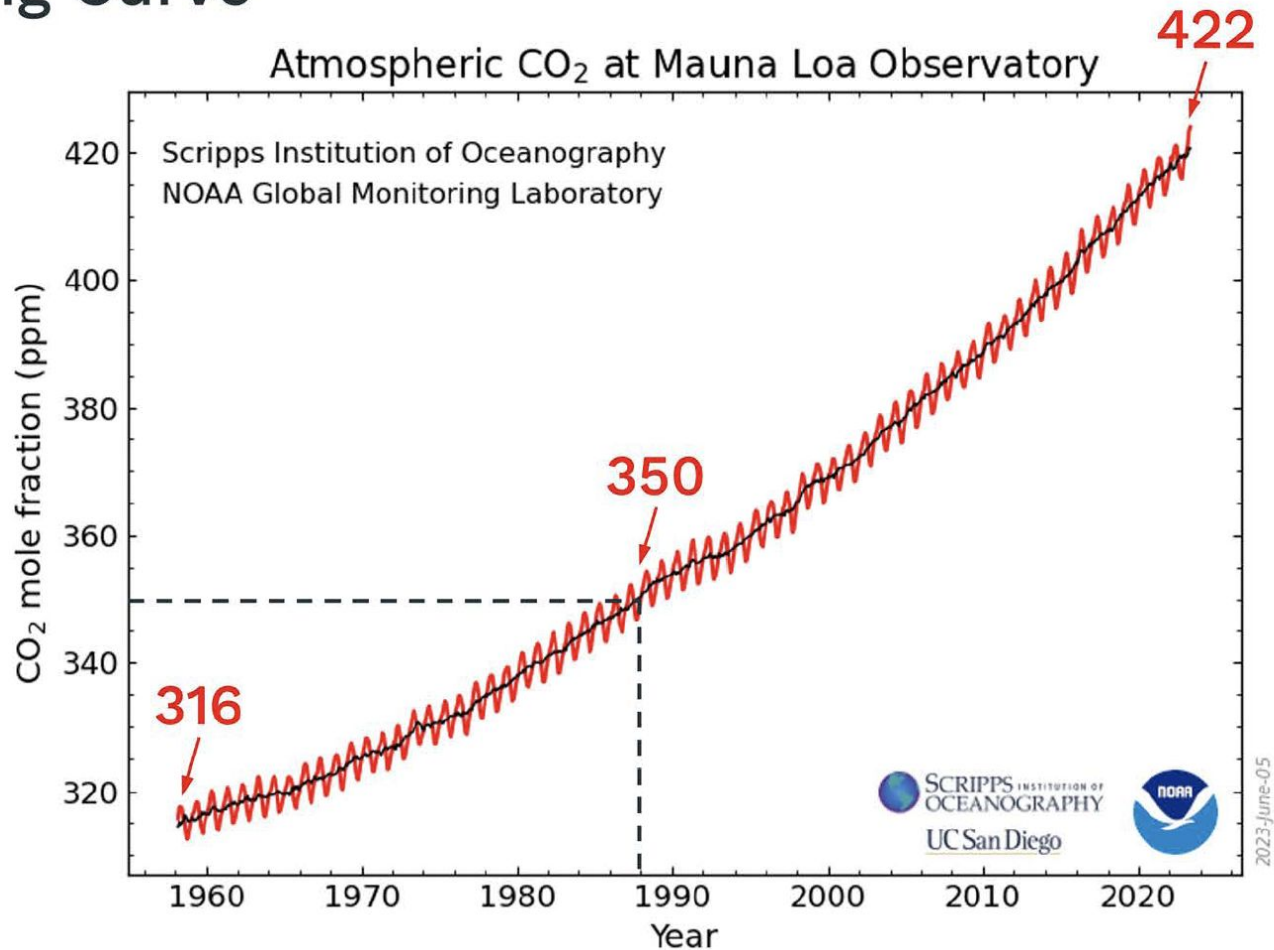
In every rights-based climate case, the judge asks, **‘What standard must the court use to assess whether government promotion of fossil fuels—or failure to act on climate change—has breached fundamental rights?’** In other words,

**‘What is *the safe zone*?’”**

**Kelly Matheson**

**Deputy Director of Global Climate Litigation  
Our Children’s Trust**

# Keeling Curve



*Held v. Montana*  
Steven Running

<https://gml.noaa.gov/ccgg/trends/>

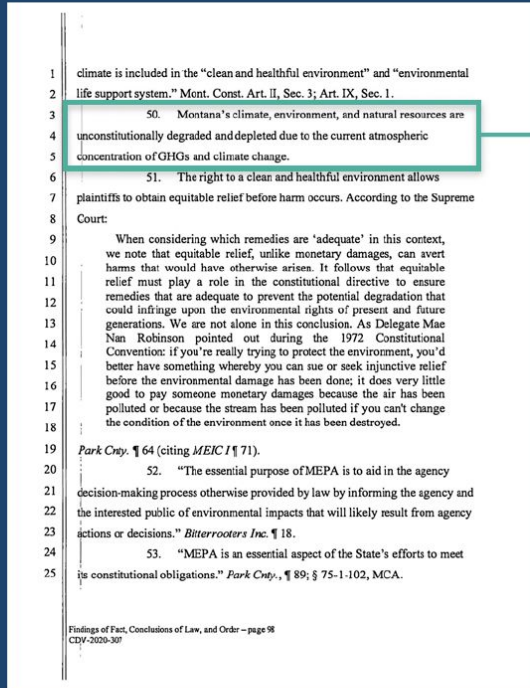
SR-18

# SCIENCE-BASED STANDARDS TO PROTECT CHILDREN'S HUMAN RIGHTS

**<350 ppm CO<sub>2</sub> by 2100**

**1.5 °C is NOT a safe temperature target**

# Plaintiffs Have Proven Constitutional Violation



Montana's climate, environment, and natural resources are unconstitutionally degraded and depleted due to the **current** atmospheric concentration of GHGs and climate change.





The New York Times

## Judge Rules in Favor of Montana Youths in a Landmark Climate Case

☰ **CNN** US Crime + Justice Energy + Environment Extreme Weather Space + Science

## Montana judge hands young plaintiffs significant victory in landmark climate trial

**BBC**

## Judge sides with 16 activists in Montana climate case

**The Washington Post**  
*Democracy Dies in Darkness*

## Youths sued Montana over climate change and won. Here's why it matters.

Photo: Robin Loznak

# Held v. Montana Medical Professionals Amicus Brief

[susan@ourchildrenstrust.org](mailto:susan@ourchildrenstrust.org)



# Juliana v. United States of America







**Exacerbated medical conditions**

**Damage to property**

**Psychological harm**

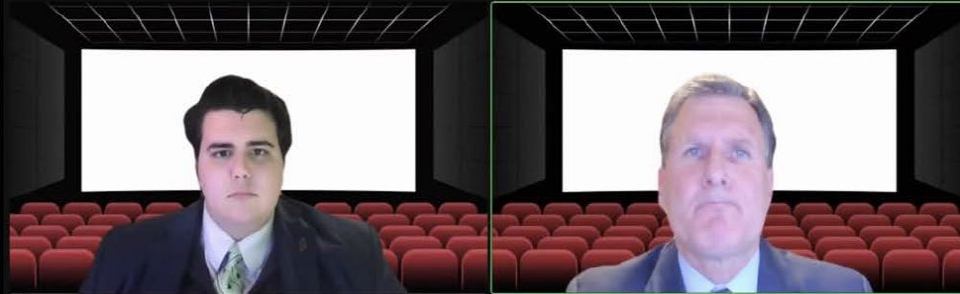


**JULIANA V. UNITED STATES**  
**America's Climate Case**

## **District Court Sets *Juliana* Back on Track for Trial!**

Does the U.S. Fossil Fuel  
Energy System Violate  
Plaintiffs 5<sup>th</sup> Amend.  
Rights to Life, Liberty,  
Personal Security?

**PG-15 | FEDSOC STUDY BREAK**  
**EXTENDED SEQUENCES OF INTENSE LEGAL ANALYSIS**  
**AND EXHILARATING LEGAL EXPERIENCE**



“My number 1 priority from day one was to kill  
*Juliana v. United States.*”

— Eric Grant, Former Deputy Assistant Attorney General, U.S. Department of Justice



"Every year that passes, I see things getting worse in my state and in my community from climate change .... The clock is ticking against me and my co-plaintiffs, and our future.

I find it very frustrating that my government keeps making the problem worse instead of fixing it. While I try to keep myself busy, I can't escape my anxiety that exists."

Miko  
Plaintiff, *Juliana v. US*



The truth is, I have been displaced by climate change from my home and my community, and the beach and ocean that are part of who I am.”

Levi  
Plaintiff, *Juliana v. US*

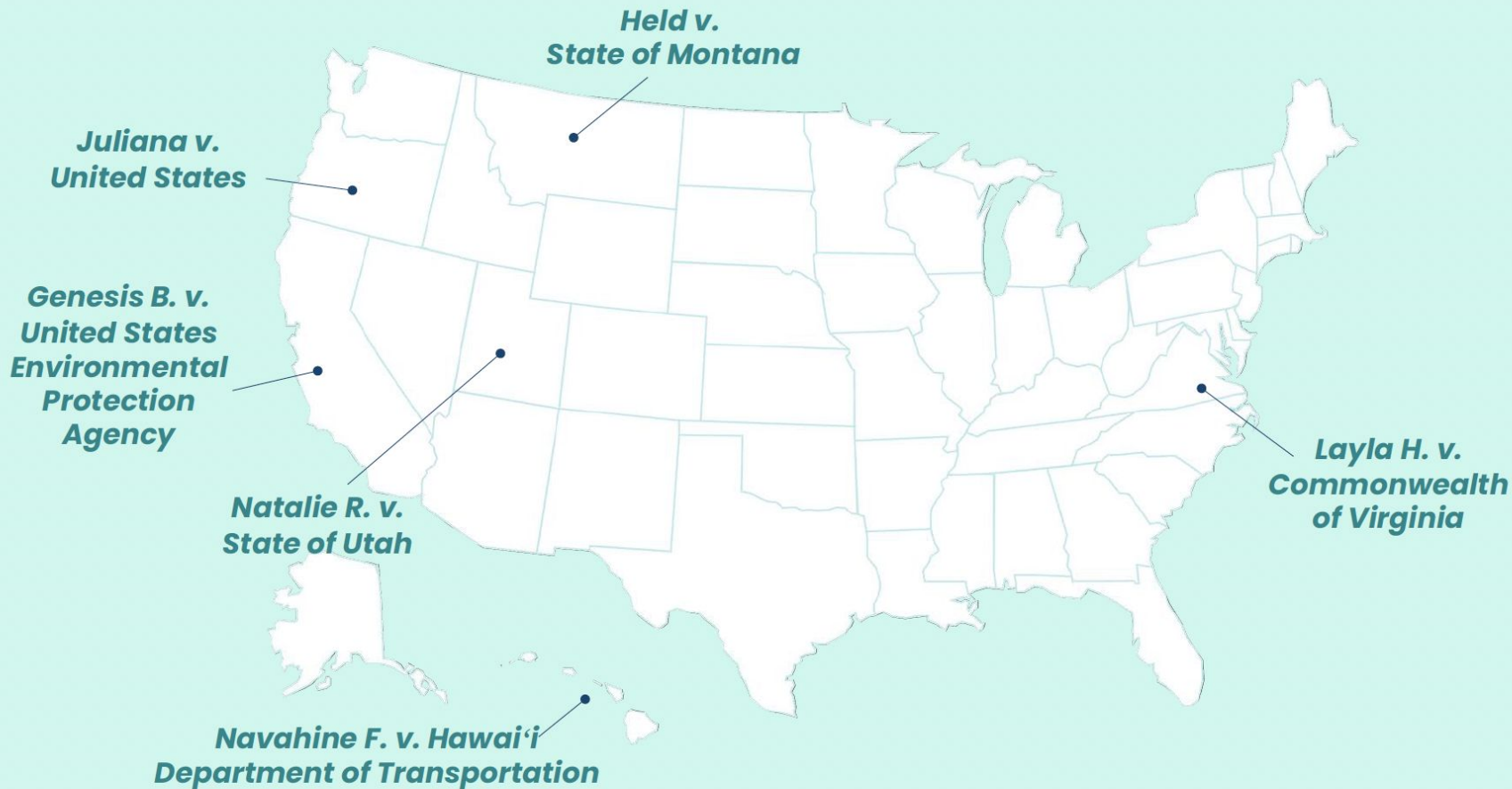
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## YOUTH-POWERED LITIGATION IN THE U.S.





# Layla H. v. Commonwealth of Virginia

Oral Arguments March 12, 2024, Richmond, VA





# Genesis B. v. U.S. EPA

Filed Dec. 10, 2023. First Hearing set for April 29, 2024

# Natalie R. v. State of Utah

In the Utah Supreme Court



# Navahine F. v. Hawai'i Department of Transportation

Trial set for June 24, 2024

NA KAKOU KE KULEANA

# WORLD-POWERED HUMAN RIGHTS DEFENDER

## México

### **Acción Por El Clima Baja California Jóvenes**

Case on behalf of 15 youth elevated to Mexico's highest court, the Supreme Court of Justice of the Nation. Plaintiffs are represented by Defensa Ambiental del Noroeste (DAN).

### **Acción Por El Clima Baja California Sur Generaciones Futuras**

DAN's case on behalf of 23 children elevated to Mexico's highest court, the Supreme Court of Justice of the Nation.

## Costa Rica

### **Request for Advisory Opinion on the Climate Emergency and Human Rights**

Young people together with medical professionals submitted brief to IACTHR affirming that best available climate and medical science is key to protecting children's rights.

## Switzerland

### **General Comment No. 26 on Children's Rights and the Environment with a Special Focus on Climate Change**

Submitted comments to the United Nations Committee on the Rights of the Child recommending that best available science be used to protect children's rights in the context of climate change.

### **KlimaSeniorinnen v. Switzerland**

Granted permission to intervene in the first climate cases before the ECtHR. Submitted a brief affirming that best available science concludes that heatwaves threaten the right to life.

## Canada

### **La Rose v. His Majesty the King**

Argued case brought by 15 youth plaintiffs from 7 provinces before a Federal Court of Appeal panel, seeking reversal of lower court order precluding the constitutional climate claims from being heard at trial. Plaintiffs are represented by Arvay Finlay LLP, Tollefson Law Corporation, and supported by David Suzuki Foundation and Pacific Centre for Environmental Law and Litigation.

## Portugal

### **Duarte Agostinho v. Portugal and 32 Others**

Granted permission to intervene in the first climate cases before the ECtHR. Submitted a brief affirming that best available climate science is key to protecting children's rights.

## France

### **Carême v. France**

Granted permission to intervene in the first climate cases before the ECtHR. Submitted a brief affirming that best available science finds that climate change threatens coastal communities.

## Germany

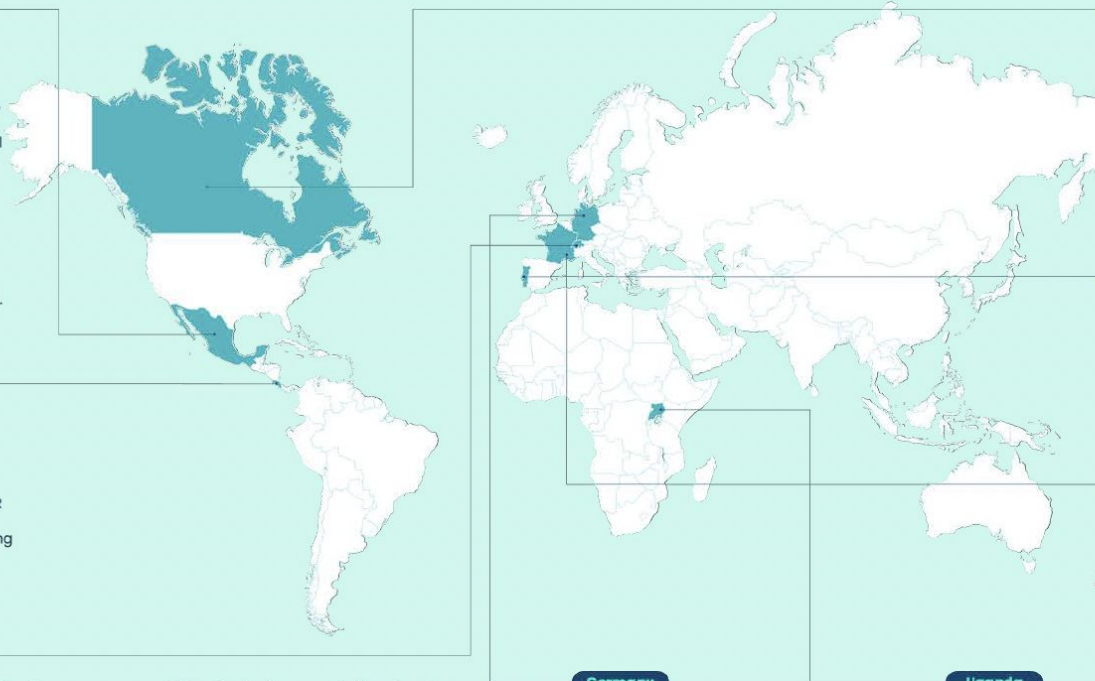
### **Request for Advisory Opinion on Climate Change and International Law**

24 youth from 6 U.S. states and 6 Canadian provinces submitted brief to ITLOS affirming climate science is key to protecting oceans and marine environments.

## Uganda

### **Mbabazi & Others v. The Attorney General and National Environmental Management Authority**

Ongoing exchanges with the Court on behalf of 4 youth to enforce their constitutional right to a clean and healthy environment, and the government's duty to protect shared natural resources. Youth plaintiffs are represented by Greenwatch.



A photograph of three young women standing on a beach at sunset. The woman on the left is wearing a blue t-shirt and green overalls. The woman in the middle is wearing a black halter top. The woman on the right is wearing a black tank top. The background shows the ocean and a sunset sky with clouds.

# USE YOUR VOICE

and share your perspective,  
that's a way to make a difference. You  
never know how much you're  
going to impact another person.

—Kalālapa



**MONTANA  
YOUTH MAKING  
CLIMATE  
HISTORY!**  
*Hold your own Montana*

**MONTANA  
YOUTH MAKING  
CLIMATE  
HISTORY!**

**THE RIGHT  
TO A SAFE  
CLIMATE!**

# Make a Donation to Our Children's Trust!



[bit.ly/OCTgive](https://bit.ly/OCTgive)

# Thank you.

Julia Olson  
Executive Director & Chief Legal Counsel  
Our Children's Trust

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[julia@ourchildrenstrust.org](mailto:julia@ourchildrenstrust.org)

