

The Case for Climate Visuals in the Courtroom

KELLY MATHESON

Documenting is about conveying experiences.

Franco Viteri, Kichwa Leader, Sarayaku

A substantial evidentiary record documents that the [US] federal government has long promoted fossil fuel use despite knowing that it can cause catastrophic climate change, and that failure to change existing policy may hasten an environmental apocalypse.¹

Judge Hurwitz, 9th Circuit Court of Appeals writing for the majority
in *Juliana v. United States*

14.1 THE CASE FOR URGENT AND CREATIVE ACTION

Climate change is the overarching crisis that not only prevents solutions to all of the world's entrenched human rights tragedies – war, disease, migration, and poverty – but also exacerbates these global struggles. The unrelenting exploitation of fossil fuels devastates land, water, communities, and planetary life support systems. In turn, our changing climate threatens every one of our basic human and constitutional rights.

In June 2019, Philip Alston,² in his role as the UN Special Rapporteur on extreme poverty and human rights, released a compelling call to

¹ *Juliana v. United States*, 947 F.3d 1159 (9th Cir. 2020).

² The United Nations Human Rights Council appointed Mr. Alston as the Special Rapporteur on extreme poverty and human rights in June 2014. See “Mr. Philip Alston,” United Nations Human Rights, <<https://www.ohchr.org/EN/Issues/Poverty/Pages/PhilipAlston.aspx>>; see also “Philip Alston,” NYU Law, <<https://its.law.nyu.edu/facultyprofiles/index.cfm?fuseaction=profile.biography&personid=19742>>.

action.³ He reported on the catastrophic consequences of climate change for human rights, highlighting that billions of people will struggle even if warming is limited to the Paris target of 1.5 degrees Celsius above pre-industrial levels.⁴ According to science, this political target is too high to protect humanity.⁵ Estimates from Alston's report conclude that millions of people will face malnutrition due to devastating drought and many more will have to choose between starvation and migration. Five hundred million people will likely be exposed and vulnerable to water stress and 4.5 billion could be exposed to heat waves. The year 2017 alone saw 18.8 million people displaced across 135 countries – nearly twice the number displaced by conflict – as a result of disasters made more severe and frequent by climate change. And this figure is poised to rise significantly in the decades to come.

That is climate change by the numbers.

Alston went on to underscore that if we fail to find and implement urgent and extraordinary solutions to this urgent and extraordinary challenge, “we risk a ‘climate apartheid’ scenario where the wealthy pay to escape overheating, hunger, and conflict while the rest of the world is left to suffer.” His overarching advice to the human rights community was clear: “The community as a whole . . . needs to step up and engage determinedly and creatively with climate change.”

Heeding Alston's call to action, and with an understanding that litigation is only one important part of the overall strategy needed restore the health of our atmosphere, this chapter briefly explores how the climate litigation community could ensure that the climate numbers move in the right direction by creatively deploying visual evidence to help secure courtroom decisions that manifest in landmark change.

³ See “UN Expert Condemns Failure to Address Impact of Climate Change on Poverty,” United Nations Human Rights, <<https://www.ohchr.org/EN/NewsEvents/Pages/DisplayNews.aspx?NewsID=24735&LangID=E>>; see also Report of the Special Rapporteur on extreme poverty and human rights, “Climate Change and Poverty,” UN Doc A/HRC/41/39, June 25, 2019, <<https://digitallibrary.un.org/record/3810720>>.

⁴ Paris Agreement to the United Nations Framework Convention on Climate Change, Art. 2, 1(a), December 12, 2015, TIAS No. 16-1104.

⁵ The science shows that staying well below 1.5°C, with a return to 350 ppm/1°C or less by the end of the century, will be necessary to avoid irreversible feedbacks in the climate system. See James Hansen et al., “Young People's Burden: Requirement of Negative CO₂ emissions” (2017) 8 *Earth System Dynamics* 577; see also Ben Haley et al., “350 ppm Pathways for the United States” (2019) Evolved Energy Research, <<https://static1.squarespace.com/static/571d109bo4426270152febe0/t/5cd3a78f1ee7700012c74a3/1557374885630/350+PPM+Pathways+for+the+United+States.pdf>>.

14.2 THE CASE FOR USING VISUAL EVIDENCE TO SHOW THE UNOBSERVABLE AND UNIMAGINABLE

On November 29, 1945, only a week into the trial, the . . . prosecution introduced an hour-long film titled “The Nazi Concentration Camps.” When the lights came up in the Palace of Justice all assembled sat in silence. The human impact of this visual evidence was a turning point in the Nuremberg trial. It brought the Holocaust into the courtroom.⁶

Screengrab from the film “*Nazi Concentration Camps*”
© US Department of Defense



Some abuses are too incomprehensible for the human mind to accept as true merely because they cannot be readily observed. General Dwight D. Eisenhower understood this. From the moment Eisenhower witnessed, first-hand, the horrors of the Nazi concentration camps in April of 1945, he ordered American troops to film the liberation of the camps. In doing so, Eisenhower sought to document the extent of Nazi atrocities, defend against general public and media perceptions that these were propaganda stories or exaggerations of the truth, and provide visual evidence to help build a watertight case for a potential international military tribunal.

⁶ See “We Will Show You Their Own Films’: Film at the Nuremberg Trial,” US Holocaust Memorial Museum, <<https://encyclopedia.ushmm.org/content/en/article/we-will-show-you-their-own-films-film-at-the-nuremberg-trial>>. For information on the screengrab from the documentary film, see *Nazi Concentration and Prison Camp* (shown at the Nuremberg Trials, November 29, 1945). The image, taken at the Nordhausen Slave Labor Camp, shows a man being freed and evacuated for treatment in Allied hospitals. Found at 25 minutes 50 seconds. To watch the full documentary played during the trials, see “Nazi Concentration Camp – Film Shown at Nuremberg War Crimes Trial,” YouTube, March 13, 2013, <https://www.youtube.com/watch?v=_pQJ4zONPD0&t=191s&bpctr=1589919377>.

In October of 1945, Justice Robert H. Jackson took a leave from the US Supreme Court to serve as the Chief Prosecutor for the Nuremberg trials. While the meticulous paper records kept by the Nazis formed the backbone of the case brought against the twenty-three accused, Jackson, like Eisenhower, understood the important impact graphic images would have over written documents. In his opening statement, Jackson promised the panel of judges, and the world, that the prosecutorial team would not only prove their case with documents but with visual evidence too. And they did. The prosecution followed their opening statement by showing six reels, reflecting 6,000 feet of film footage, shot by American and British cameramen during the camps' liberation.⁷ Not only does this footage still inform our understanding of the Holocaust today, but historians also firmly believe this visual evidence was a turning point in the Nuremberg trials.⁸

14.3 THE CASE FOR CLIMATE VISUALS IN THE COURT OF PUBLIC OPINION

More than any other issue [climate change] exposes the deepest workings of our minds, and shows our extraordinary and innate talent for seeing only what we want to see and disregarding what we would prefer not to know.

George Marshall, Founder, Climate Outreach Information Network

Social scientists specializing in the emerging field of climate communications understand what Eisenhower and Jackson knew – visual evidence can explain the unimaginable. They appreciate that visuals can debunk propaganda, rally public support, accelerate learning, and motivate implementation of needed policy, technological, and lifestyle changes.⁹

However, today's social scientists seeking to shed light on the serious threats posed by climate change face a far more perplexing challenge than

⁷ The Department of Defense originally requested the film footage for the potential Military Tribunal. Hollywood film director George Stevens assembled the graphic Allied footage from the liberation of twelve camps in Austria, Belgium, and Germany: Leipzig, Penig, Ohrdruf, Hadamar, Breendonk, Hannover, Arnstadt, Nordhausen, Mauthausen, Buchenwald, Dachau, and Belsen. The six reels, lasting approximately two hours, reflected 6,000 feet of the 80,000 feet shot by the Americans and British cameramen during the liberation of the camps. See John J. Michalczyk, "Film as Visual Documentation at the Nuremberg Trials," in *Filming the End of the Holocaust: Allied Documentaries, Nuremberg and the Liberation of the Concentration Camps* (London: Bloomsbury Academic, 2014), pp. 65–112.

⁸ For more information on the use of film footage in the Nuremberg trials, see *ibid.*

⁹ Individuals can make a difference by reducing their personal greenhouse gas emissions. The Earth Institute at Columbia University outlines thirty-five simple changes. See Renee Cho, "The 35 Easiest Ways to Reduce Your Carbon Footprint," Earth Institute at Columbia University, December 27, 2018, <<https://blogs.ci.columbia.edu/2018/12/27/35-ways-reduce-carbon-footprint/>>.

Eisenhower and Jackson did in exposing the deeds of the Third Reich. Communications specialists need to convey the slow and incremental,¹⁰ yet urgent and irreversible degradation inflicted by climate change on our everyday lives and basic rights. This task is much more difficult than conveying the mass, graphic, and acute violence implemented under the Nazi regime.

Motivated by this visual challenge, the early 2000s produced a plethora of research about how communications could effectively educate people about the causes and dangers of climate change and, in turn, encourage civic action and involvement. In 2005, Yale launched its pioneering program on Climate Change Communication.¹¹ George Mason University followed with its own center in 2007.¹² That same year, James Balog founded the Extreme Ice Survey (EIS). EIS captures time-lapse footage of receding glaciers, dying coral reefs, and deteriorating forests to reveal how quickly climate change is dramatically impacting the planet.¹³ In 2016, Climate Visuals, a project of Climate Outreach, launched the world's first evidence-based photography resource.¹⁴ Through research, social scientists questioned how to best communicate the risks of a global problem with less certainty and day-to-day

¹⁰ Unlike the Holocaust-era images showing piles of corpses, unfathomable injuries, and skeletal human beings almost dead from starvation that easily convey acute horror, the ecological and human rights impacts caused by climate change tend to progress in slow motion. Watching climate change affect our world is similar to watching a child grow. A parent who is with their child daily will not notice the child's slow, incremental growth. A grandparent, on the other hand, that only gets to see their grandchild once a year finds the child's changes obvious and stark. Similarly, it may be impossible to see the shoreline eroding until – one day – a storm made more severe by climate change washes the homes – now closer to the water – away.

¹¹ See Yale Program on Climate Change Communication, <<https://climatecommunication.yale.edu/>>.

¹² See “Our Mission,” George Mason University Center for Climate Change Communication, <<https://www.climatechangecommunication.org/>>.

¹³ The EIS team places cameras on glaciers, in forests, and underwater at coral reefs. The cameras take one photo every hour, yielding approximately 8,000 frames per camera, per year. EIS then combines these images into compelling, time-lapse videos that reveal how climate change transforms large regions of our planet. For more information, see “Extreme Ice Survey – a program of Earth Vision Institute,” EIS, last accessed 17 September 2020 <<http://extremeicesurvey.org/>>; and watch *Chasing Ice* and *Chasing Coral*, available for screening via different platforms depending on the region. For the US access, see Netflix. For more information, see *Chasing Ice*, <<https://chasingice.com/>>; and *Chasing Coral*, <<https://www.chasingcoral.com/>>.

¹⁴ See Climate Visuals, <<https://climatevisuals.org/>>; see also Climate Outreach, <<https://climateoutreach.org/>>.

immediacy than most other, more familiar problems, yet that also poses far graver implications. To date, however, the vast majority of climate communications work has focused on advancing public understanding of how climate change already affects our lives, rather than assisting the courts in understanding their essential role in flattening the climate curve.

Conventional litigators may argue that there is not a pressing need to present courts with visual evidence of climate change because judges around the world consistently treat the climate science introduced in strategic litigation as valid and authoritative. Judges describe the evidence of human-induced climate change as “copious,” “compelling,” “substantial,” and a “fact of life.”¹⁵ Judges find that “the unprecedented rise in atmospheric carbon dioxide levels stemmed from fossil fuel combustion and will wreak havoc on the Earth’s climate if unchecked.”¹⁶ Moreover, fossil fuel use “can cause catastrophic climate change, and that failure to change existing policy may hasten an environmental apocalypse.”¹⁷ Based on the scientific evidence, judges consistently and definitively conclude that the climate is warming, that human activity is driving the observed and anticipated changes, and that those changes will have a variety of adverse impacts across the globe. Yet, ultimately, the courts routinely dismiss many of the strategic climate cases brought to protect our basic human and constitutional rights on standing, justiciability, or legislative displacement grounds.¹⁸ Understanding that the overarching scientific evidence of global climate change is commonly accepted by courts, litigators should also consider focusing their attention on cultivating a robust evidentiary record that (i) ensures courts expressly recognize the personal injuries that result from climate change and (ii) demonstrates the viable solutions that can address the climate emergency. Building this record is essential as injury and redressability appear to be far less tangible to the courts.

This chapter now turns to the question of whether environmental human rights litigators – building on the research of climate change communications experts – should corroborate the incontrovertible scientific evidence¹⁹ with

¹⁵ See Maria L. Banda, “Climate Science in the Courts: A Review of U.S. and International Judicial Pronouncements” (2020) Environmental Law Institute, <<https://www.eli.org/sites/default/files/eli-pubs/banda-final-4-21-2020.pdf>>.

¹⁶ *Juliana v. United States*, 947 F.3d 1159 (9th Cir. 2020).

¹⁷ *Ibid.*

¹⁸ See Banda, “Climate Science in the Courts,” above note 15 at 10.

¹⁹ This chapter focuses on how visual documentation can be leveraged to demonstrate environmental harm and the violation of human and constitutional rights. This chapter does not address how visuals could be used to help prove other aspects of rights-based climate cases

robust visual evidence showing courts exactly how unchecked atmospheric warming will continue to violate our common rights enshrined in constitutions across the globe. And, if so, how?

14.4 CASE NOTES: VISUAL EVIDENCE IN THE COURTROOM

The persuasive oral rhetoric of lawyers is increasingly being replaced by compelling visual media displays presenting a range of digital evidence in a convincing and credible manner.

Frederic Lederer, Director, Center for Legal and Court Technology,
William and Mary Law School

While Nuremberg marks the first moment that cinematic evidence convinced the world of an unimaginable truth, the first known use of film as courtroom evidence took place in 1928. In *United States v. Feather River Lumber Co.*, the prosecutor presented moving pictures depicting the aftermath of a forest fire in Northern California to help prove that the Feather River Lumber Company negligently destroyed timber in the Plumas National Forest when one of its railroad engines started a fire.²⁰ The film footage admitted showed the burnt forest and fallen stands of timber three years after the fire. The District Court relied on these images, along with other evidence, to find Feather River Lumber Company liable for degrading natural resources and award damages to the US government.

Since *Feather River*, the worth of images to serve as evidence of human and environmental rights violations has endured the test of time. Images have – and always will – excel at showing the aftermath of destruction, whether it be the destruction of human life or the shared natural resources that we all depend upon for our survival. As the methods to capture visual evidence grow, so do the opportunities to leverage visuals for accountability and justice. To explore how visual evidence has, and could be, leveraged in rights-based climate litigation moving forward, this section examines three Case Notes from the Sinangoe and Sarayaku communities of Ecuador, as well as the Native Village of Kipnuk in Alaska.

(e.g., what governments knew, legislative displacement, redressability). However, legal teams could certainly introduce visuals to support these aspects of a case as well.

²⁰ See *United States v. Feather River Lumber Co.*, 23 F.2d 936 (N.D. Cal. 1928); see also *Feather River Lumber Co. v. United States*, 30 F.2d 642 (9th Cir. 1929).

14.4.1 Kofan Indigenous People of Sinangoe v. Ecuador Ministry of Mining²¹

The high-Andean peaks of the Cayambe-Coca Ecological Reserve²² in Ecuador safeguard the headwaters of the majestic Aguarico River – a major tributary of the Amazon River that is vitally important to dozens of Indigenous communities and the ancestral home of the Kofan people of Sinangoe.²³ In 2017, the Kofan established the Guardia Indígena (Indigenous Guard), training dozens of community members in GPS mapping, photo and video documentation, and the use of drones and camera traps to protect their territory from outsiders illegally entering their lands to extract natural resources like gold, timber, and wildlife.

In early 2018, the Guards heard the low hum of a motor while patrolling along densely forested mountain trails. Instead of approaching, they flew a drone to investigate. The drone captured the unexpected: images of illegal gold-mining activity on the banks of the Aguarico River. Upon further investigation, the Kofan learned that, in December 2017, the Ecuadorian government began granting new gold mining concessions in the headwaters of the river. The government granted these claims without notifying or consulting with the community of Sinangoe, despite the government's knowledge that mining would directly impact the Kofan community, the river they depended on, their land, and their way of life. The situation escalated when the miners began operating without the required permits and illegally mined outside of the concessions' boundaries. In the months that followed, the Indigenous Guard methodically gathered relevant, reliable, and trial-ready visual evidence, illustrating exactly how the illegal mining operations affected their ancestral lands for use in a lawsuit against the Ecuadorian government.

By June 2018, armed with a watertight evidentiary record, including irrefutable and convincing visual documentation, the Kofan took their case to court.

²¹ See *Ai Cofán de Sinangoe v. El Ministerio de Minería, La Agencia de Regulación y Control Minero (ARCOM), El Ministerio del Ambiente (MAE), La Secretaría Nacional del Agua (SENAGUA), La Procuraduría General del Estado (PGE)* [October 22, 2018] Sala Unica de la Corte Provincial de Justicia de Sucumbíos, Juicio No: 2133201800266.

²² Also known as the Cayambe-Coca National Park, this protected area is located along the Equator, about twenty-four miles from the capital city of Quito. The park encompasses an area of 996,090 acres.

²³ For more information about the A'i Kofan and their groundbreaking monitoring and legal efforts, visit the websites for Alianza Ceibo, an Indigenous-led Ecuadorian organization working toward the defense of Indigenous territory, cultural survival, and the building of viable solutions-based alternatives to rainforest destruction at <<https://www.alianzaceibo.org>>; and for Amazon Frontlines, an organization that defends Indigenous rights to land, life, and cultural survival in the Amazon rainforest at <<https://www.amazonfrontlines.org/>>.



The mining site along the Aguarico River, upriver from the Kofan community of Sinangoe in the Ecuadorian Amazon, as seen by a drone

© Amazon Frontlines and Alianza Ceibo

As part of the case, the Kofan needed to prove that the mining operations adversely impacted their territory. Inside the courtroom, their legal team systematically walked through the array of thoughtfully curated visual evidence. They introduced drone footage and satellite imagery into the evidentiary record to show how mining operations rapidly expanded over time and, in turn, how the scar along the once-pristine riverbank broadened with every passing week.²⁴ They submitted photos and video footage collected on cell phones to show how heavy machinery flattened the forest and compacted the soil. The cell phone images also demonstrated how the extractive activities increased the sedimentation levels of the Aguarico River, making it unsuitable for drinking, bathing, and fishing. The legal team then augmented the imagery of the actual mining site with maps that showed the proximity of the extractive operations to the Kofans' territorial boundaries. The maps helped convey to the court how the mining activity directly and adversely impacted the community's natural and cultural resources.

On October 22, 2018, the Kofan won a landmark legal battle that nullified fifty-two mining concessions that had been granted by the Ecuadorian

²⁴ In addition to presenting visual evidence in court, field visits were conducted for both the regional and provincial hearings, bringing the judges and legal teams to the mining area. With the use of the drone and 3D goggles, the judges were able to see in real time the impacts of mining on the land and the river.

government in violation of the Kofans' right to consultation.²⁵ This decision protected the headwaters of the Aguarico River and freed more than 32,000 hectares of primary rainforest from the devastating environmental and cultural impacts of gold mining. Specifically, the Provincial Court of Justice of Sucumbíos found that the government failed to consult with the Kofan prior to authorizing the mining concessions; denounced the mining operations for having violated Indigenous rights to water, food, and a healthy environment; and canceled all mining concessions laying at the foothills of the Andes. The historic ruling, upheld by Ecuador's highest court – the Constitutional Court – on January 27, 2022, invoked the precautionary principle²⁶ and cited the rights to nature embedded in Ecuador's Constitution while finding that the government violated those rights.²⁷ It also orders authorities to implement restoration measures at the site.

While the Kofan built a strong record consisting of many sources of evidence, the community's ability to strategically leverage visual evidence guaranteed that all levels of Ecuador's judiciary had only one legitimate choice: to conclude that mining operations adversely impacted Kofan territory.²⁸ Not only does this case demonstrate how present-day tools to capture visual evidence of environmental destruction have dramatically improved since the days of the *Feather River* case nearly a century ago, it also serves as a concrete case study of how visuals can help prove the link between harm to the forest and harm to community well-being. Finally, the decision, affirmed and strengthened on by Ecuador's Constitutional Court, serves as inspiration for Indigenous nations worldwide facing similar struggles, and it will galvanize the fight to protect Indigenous lands for years to come.

²⁵ See *AI Cofán de Sinangoe v. El Ministerio de Minería, La Agencia de Regulación y Control Minero (ARCOM), El Ministerio del Ambiente (MAE), La Secretaría Nacional del Agua (SENAGUA), La Procuraduría General del Estado (PGE)*, above note 22.

²⁶ The precautionary principle is a general principle of environmental and international law. It provides that if there is a strong suspicion that a certain activity may have environmentally harmful consequences, it is better to pause the activity, review the scientific evidence, and determine what measures could be put in place to avoid the hazardous and often irreversible impacts before allowing the activity to go forward.

²⁷ See Republica del Ecuador, Constituciones de 2008, October 20, 2008, Title II, Ch. One, Art. 10, <<https://pdba.georgetown.edu/Constitutions/Ecuador/english08.html>>.

²⁸ To learn more about the legal and non-legal strategies utilized by the Kofan, see AI Kofan, <<https://www.alianzaceibo.org/alianza/aikofan/>>; and Amazon Frontlines, <<https://www.amazonfrontlines.org/chronicles/>>.

14.4.2 Kichwa Indigenous People of Sarayaku v. Ecuador²⁹

The Indigenous community of Sarayaku sits deep within the Amazon Rainforest, along the banks of Ecuador's Bobonaza River and in the heart of one of the most biologically diverse places on Earth. Encircled with natural beauty, the Sarayaku follow their ancestral way of life – hunting, gathering, and farming within their territory. Sarayaku land possesses natural resources that cannot be readily seen. Hidden beneath the surface lay vast oil reserves that Ecuador's government and fossil fuel corporations had been eyeing for exploitation for decades.

In 1996, the Ecuadorian government granted the Argentinian energy giant, Compañía General de Combustibles S.A. (CGC),³⁰ rights to explore for oil in Sarayaku territory. This decision was made in direct violation of a 1992 legal agreement in which the Ecuadorian government legally recognized Sarayaku territory and guaranteed the community's freedom from intruders. Despite the agreement, with the protection of Ecuador's armed forces, the CGC entered Sarayaku lands in 1999. Without permission, the company began opening trails through the forest, building heliports, destroying sacred sites, and burying over 3,000 pounds of explosives in the forest to facilitate seismic exploration. This forced entry led to various confrontations between the Sarayaku, the company, and Ecuador's armed forces, culminating in threats against the Sarayaku leaders and violence against community members.

This illegal invasion of Sarayaku territory, and subsequent trespass by CGC, ignited a decade-long legal battle between the Sarayaku and the state of Ecuador.³¹ At the heart of this rights-based case was whether the community of Sarayaku consented to oil exploration on its land and whether the state of Ecuador threatened the personal integrity of community members when it provided CGC with protection during the forced entry. As with every

²⁹ See *Kichwa v. Ecuador*, Merits, Reparations and Costs, Judgment, ¶ 58, Inter-Am. Ct. H.R. (ser. C) No. 245 (June 27, 2012).

³⁰ PETROECUADOR (the State Oil Company) and a consortium made up of Compañía General de Combustibles S.A. ("CGC") and Petrolera Argentina San Jorge S.A. have agreed to a contract for the "exploration and exploitation of hydrocarbons in Block No. 23." The consortium is commonly referred as "CGC," and Block No. 23 is 200,000 hectares and includes territory held by the Sarayaku, Jatun Molino, Pacayaku, Canelos, Shami, and Uyumi communities with the Sarayaku holding around 65 percent of the block. See John Kelly, "Kichwa Indigenous People of Sarayaku v. Ecuador" (2017) 40 *Loyola of Los Angeles International and Comparative Law Review* 1469.

³¹ See Mario Melo, "Sarayaku before the Inter-American Human Rights System: Justice for the People of the Zenith and their Living Forest" (2019) *Dejusticia*, <<https://www.dejusticia.org/wp-content/uploads/2016/11/Sarayaku-before-the-Interamerican-Human-Rights-System.pdf>>.

adversarial process, the stories differed. Fortunately, a courageous young filmmaker from the community, Eirberto Gualinga, captured images on camera that helped prove the Sarayaku had the truth on its side.

To complement the traditional forms of evidence submitted to the Inter-American Court of Human Rights (IACHR) – testimony, documents, technical reports – the Sarayaku also submitted visual evidence to corroborate and contextualize several of the community's core legal claims.

First, during the company's exploration of the land, CGC flew helicopters into the dense jungle to drop off company workers. Eirberto captured one of the landings with his camera. As the helicopter arrived on the riverbank, the video shows CGC workers stepping out and being met by a group of women from the community. The women peacefully – yet expressly – demand respect of their territory and that the oil workers leave.³² Further, they clearly explain that the community, as a whole, has repeatedly told the head of CGC that the company is not allowed on Sarayaku land.³³



CGC employees landing in Sarayaku territory

© Eirberto Gualinga

The community further communicated its dissent to the corporate and military presence by taking peaceful action. During an assembly, the Sarayaku

³² See Videotape: Soy Defensar de la Selva (Eirberto Gualinga 2002), <<https://www.youtube.com/watch?v=nnLvVNsUmnY&t=13s>>, helicopter landing from 5 min. 23 sec. to 6 min. 46 sec.

³³ See *ibid.*, the community explaining to CGC employees is not welcome on Sarayaku land, from 6 min. 46 sec. To 7 min. 53 sec.

people declared a state of emergency, halted their daily lives, divided into groups, and spread out to six locations along the boundary of their territory, establishing “Peace and Life Camps.” They set up the camps to mark their borders, peacefully protest, and dissuade CGC and the Ecuadorian military from entering Sarayaku territory. Video of the camps shared with the court corroborated witness testimony explaining the reasons that camps were set up and the calm, communal, and peaceful character at the sites.³⁴

To help prove that the Ecuadorian government interfered with the community’s rights to freedom of movement, the Sarayaku introduced video showing military checkpoints and Ecuadorian soldiers blocking the Bobonaza River – the community’s primary transportation route.³⁵ In the video, soldiers are seen stopping and searching boats at the checkpoint, resulting in a basic invasion of privacy in addition to the restrictions on movement. Additional admitted footage depicted damage to the land caused by exploration activities, including trash dumps, flaring, oil spills, and deforestation. The sum of footage ultimately helped prove direct environmental harm caused by the occupation.³⁶

While strategic litigation will never be won on video evidence alone, the video evidence played at least two key roles in protecting over 330,000 acres of primary Amazon rainforest that shelters the community of Sarayaku and serves as a critical carbon sink³⁷ for the global community. First, the images painted a vivid picture of violations faced by the Sarayaku, thereby contextualizing the myriad rights violations perpetrated by the company in collaboration with the government during the invasion. Second, the video evidence substantiated a number of the core legal claims at the center of the case.

The IACHR issued its final, unanimous decision in June 2012, finding that Ecuador violated the Sarayaku’s rights to property, life, physical, mental and moral integrity, fair trial, and judicial protection.³⁸ In the judgment, the court

³⁴ See *ibid.*, the peaceful nature of the camps from 13 min. 38 sec. to 14 min. 19 sec.

³⁵ See *ibid.*, blocking of and checkpoints on the river from 8 min. 2 sec. to 8 min. 48 sec.

³⁶ See *ibid.*, damage to the environment from 10 min. 46 sec. to 11 min. 04 sec.

³⁷ A carbon sink is an area of forest [or other ecosystems] that is large enough to absorb large amounts of carbon dioxide from the Earth’s atmosphere and therefore reduce the effect of global warming. See “Carbon Sink,” *Cambridge Dictionary*, <<https://dictionary.cambridge.org/dictionary/english/carbon-sink>>.

³⁸ See *Kichwa v. Ecuador*, Merits, Reparations and Costs, Judgment, ¶ 58, Inter-Am. Ct. H.R. (ser. C) No. 245, (June 27, 2012).

ruled that governments must consult with Indigenous communities throughout the Americas prior to implementing activities that affect their land, recognized the existence of collective rights as opposed to individual rights, and further enshrined a right to cultural identity in law.³⁹ This monumental judgment was not only a victory for the Sarayaku but was also a major step forward in the fight to safeguard Indigenous rights and the climate-stabilizing forests they defend.

14.4.3 Kanuk v. State of Alaska

In 2011, Nelson Kanuk, a sixteen-year old native Alaskan from the village of Kipnuk, alongside five other young plaintiffs, brought suit against the state of Alaska, arguing that the Public Trust Doctrine codified in Alaska's Constitution imposes an affirmative fiduciary obligation on the state of Alaska to manage shared natural resources, including the atmosphere, for the common good.⁴⁰ They further argued that this constitutional obligation requires the state to reduce greenhouse gas emissions to slow the rate of climate change in order to ensure that the plaintiffs and future generations can inherit a viable atmospheric resource and other protected resources of the state that secure a livable future.⁴¹

When litigants bring action against governments, they usually must file a standing declaration.⁴² Standing declarations are the heart of many human rights cases brought against governments.⁴³ The declarations, written by the plaintiffs, tell the powerful human story behind the lawsuit.

³⁹ Ibid.

⁴⁰ See *Kanuk v. Alaska Dept. of Nat. Resources*, 335 P.3d 1088 (Alaska 2014). See also Constitution of Alaska, Art. VIII, §§ 1, 2, 3, 4 and 6. The constitutional public trust doctrine provides that the state holds public trust resources, including, but not limited to, waters (surface, subsurface, and atmospheric), fish, wildlife, air (atmosphere), the climate system, the sea and the shores of the sea, submerged and submersible lands, beaches, forests, grasslands, grasslands, and tundra in trust for public use.

⁴¹ See *Kanuk v. Alaska Dept. of Nat. Resources*, 335 P.3d at 1091.

⁴² Standing is the determination of whether a specific person, group of persons, or organization is the proper party to bring a particular matter to court for adjudication. In many judicial systems, this means that the plaintiff must show they were, or are likely to be, "sufficiently and personally injured" as a result of a legal wrong. In the United States, a plaintiff must show that they have suffered an "injury-in-fact" that is "traceable to the challenged action of the defendant," where the court can provide redress with a favorable decision. See *Lujan v. National Wildlife Fed'n*, 110 S. Ct. 3177 (1990).

⁴³ Julia Olson, Executive Director and Chief Legal Counsel for Our Children's Trust and Lead Counsel for *Juliana v. United States*.



Nelson in the film *TRUST Alaska*

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In his legally sworn statement to the court, Nelson explained why climate change was personal for him. He wrote, “climate change has adversely affected me and impacted my life by delaying the onset of winter. For example, in Kipnuk, the snow used to start falling earlier than it does now. Also, the sea ice starts forming later than in the past and melts earlier in the spring. Although this might not seem to be too significant, it is critically important for me, my village, and our way of life.”⁴⁴ Nelson’s statement went on to detail how the late freeze and early thaw causes dangerous flooding and rapid erosion, threatening his home and limiting the availability of food and water sources, jeopardizing his community’s subsistence lifestyle.

Many of Alaska’s government officials responsible for protecting the state’s shared natural resources denied or simply ignored the scientific fact that a warming climate results in grave harm to native communities – despite abundant documentation to the contrary. Understanding that personal stories can change minds and knowing that legal documents all too often do not get read by the people who should consider them, Nelson, together with Our Children’s Trust, WITNESS, and iMatter, produced an eight-minute film, *TRUST Alaska*,⁴⁵ using his standing declaration as the shooting script. The film brings the black and white, Times New Roman legal text to life.

In the award-winning film, audiences have the opportunity to meet Nelson, a young Yup’ik firefighter and Native Olympic athlete, who learned how climate change was affecting his community and felt he could best help by sharing his story. Staying true to the facts in his declaration, Nelson shows

⁴⁴ Declaration of Standing, Nelson Kanuk (August 2011) for *Kanuk v. Alaska Dept. of Nat. Resources*, 335 P.3d 1088 (Alaska 2014).

⁴⁵ See “Stories of Trust Calling for Climate Recovery: TRUST Alaska (Our Children’s Trust, WITNESS, & iMatter 2011), <<https://www.ourchildrenstrust.org/short-films>>.

viewers his small village, introduces his family, and takes audiences on a family boat trip to pick berries while describing how he lives a subsistence lifestyle. He explains that the main problem facing the northern parts of the world is that winter comes later and later. This results in increased flooding due to warmer temperatures, increased erosion due to permafrost melt, and intensified storms because the sea ice forms later in the season and is unable to provide a natural barrier for coastal communities. This, in turn, leads to the loss of homes, communities, cultures, and a way of life.

Nelson's film was the third in a ten-part series called *Stories of TRUST: Calling for Climate Recovery*.⁴⁶ Each film shows how the lives of other youth plaintiffs from across the United States are harmed by climate change. These plaintiffs, and the NGOs they collaborated with, did not produce the films to be submitted as evidence in the cases they brought. Instead, the films propelled a strategic communications plan, developed specifically to support the goals of the strategic litigation and the broader TRUST Campaign.

Nelson's film screened all over the world – in classrooms in his home state of Alaska, in gymnasiums packed full of students in other US states, during keynote presentations by committed environmental human rights lawyers, and at convenings with Indigenous leaders from around the world. As film festivals across the globe showed Nelson's film on the big screen, festival juries recognized the magnitude of his story with awards. The film also reached key decision-makers. After viewing his story, State Congressional Representatives invited Nelson to present in front of the Alaskan State Legislature. Then-head of the US Environmental Protection Agency, Lisa Jackson, wrote asking for copies of his film. Shortly after, *TRUST Alaska*, along with four other films from the series, were hand-delivered to President Obama in the Oval Office.

What began as an Alaskan story to complement human rights-based climate litigation soon grew into a gold-star communications campaign with international recognition and influence. In many ways, the TRUST Campaign laid the foundation that we collectively stand upon today, advancing our understanding that a healthy atmosphere is an inherent human right.

Unexpectedly, the film also reached the Alaska Supreme Court. The Alaska Inter-Tribal Council (AITC) is an Indigenous-led nonprofit organization that advocates in support of Tribal governments throughout the state. AITC submitted an Amicus Curiae brief⁴⁷ in support of the youth, describing how

⁴⁶ Ibid.

⁴⁷ An amicus curiae brief is a written submission to a court in which an amicus curiae (literally a "friend of the court": a person or organization who/which is not party to the proceedings) can

Alaskan Natives are particularly impacted by a warming climate. As part of the submission, AITC included Nelson's film. Although the film could not serve as direct evidence given that it was edited for external communications purposes, it could provide context and ground the court in the fundamental constitutional rights at stake.

While the Alaska Supreme Court fell short of granting the youth their desired legal remedies, the court issued important rulings that moved rights-based climate law forward and opened the door for the next round of litigation in Alaska. The court wrote that the youth "make a good case . . . that the atmosphere is an asset of the public trust, with the State as trustee and the public as beneficiary." The court seemingly agreed with the youth that the state of Alaska has obligations to combat climate change, calling the science of anthropogenic climate change "compelling" and citing numerous climate science studies and reports. The court also stated that the atmosphere and the ecosystems it protects should be subject to constitutional protections, even without the court's legal declaration that the atmosphere is part of the public trust. Nonetheless, the Court ruled that it could not order the relief requested by the plaintiffs because the "underlying policy" choices regarding the state's response to climate change were not the Court's to make "in the first instance."⁴⁸

Respecting the Court's guidance, 16 young Alaskans filed a new suit against the state of Alaska in 2017. Their opening complaint explained to the Court that the state had already enacted underlying climate policy "in the first instance" that, at its heart, affirmatively promotes fossil fuels. The youth, together with their legal team, then explained how this pro-fossil fuel policy violates their fundamental rights under the due process, equal protection, and public trust provisions of Alaska Constitution.⁴⁹

In a three-to-two split decision, a narrow majority of the Alaska Supreme Court ultimately declined to order the youth's requested relief for "prudential reasons." However, the Court again provided guidance for future rights-based climate claims in Alaska and wrote a powerful dissent.

The dissent recognizes a "right to a livable climate – arguably the bare minimum when it comes to the human rights to which the Alaska Constitution is dedicated."⁵⁰ In the words of Supreme Court Justice Ruth Bader Ginsberg, "Dissents speak to a future age . . . the greatest dissents do

set out legal arguments and recommendations in a given case. 'Amicus Curiae Brief,' ECCHR, <<https://www.ecchr.eu/en/glossary/amicus-curiae-brief/>>.

⁴⁸ *Kanuk v. Alaska Dept. of Nat. Resources*, 335 P.3d at 1098.

⁴⁹ *Sagoonick v. State of Alaska*, 503 P.3d at 805; Our Children's Trust at <<https://www.ourchildrenstrust.org/alaska>>.

⁵⁰ *Sagoonick*, 503 P.3d at 805.

become court opinions and gradually over time their views become the dominant view. So that's the dissenter's hope: that they are writing not for today, but for tomorrow." It the youth of today, who courageously share their stories with our courts, that set the stage, for tomorrow. It is the youth of today, hand-in-hand with human right litigators, that will succeed in securing constitutional rights to a climate system capable of sustaining humanity.

14.5 THE CASE FOR CLIMATE VISUALS IN SUPPORT OF RIGHTS-BASED STRATEGIC LITIGATION

I am a generalist judge. And so, I'm heavily dependent upon the briefs that are filed and upon the arguments that are made.

Justice Breyer, Associate Justice, US Supreme Court

A striking characteristic of human memory is that pictures are, remarkably, remembered better than words.⁵¹ This once-intuitive, and now scientifically proven, fact has propelled the use of visual evidence dating back as far as the *Feather River* case in 1928. Since then, and as the Case Notes above illustrate, lawyers have supplemented their briefs and oral arguments with robust visual evidence to help judges appreciate the complexities of a case and the consequences of their decisions.

As noted by former US Supreme Court Justice Stephen Breyer, enhancing judicial understanding is an essential part of any litigator's work. When answering a direct question about the breadth of the public trust doctrine – one of the key legal issues under consideration in *Kanuk v. State of Alaska* – in US federal law, Justice Breyer responded, "I don't know."⁵² He then eloquently explained that since judges are "generalists," they must rely on legal scholars and practitioners to inform the courts' understanding of how to interpret and apply the law in relation to changing global circumstances. Tasked with the responsibility of conveying the facts of a case clearly and linking the facts to the law, lawyers would be remiss if they failed to consider how visual evidence may strengthen cases and, in turn, secure justice and accountability for clients – and in the case of climate litigation – for the world.

⁵¹ See Cheryl L. Grady et al., "Neural Correlates of the Episodic Encoding of Pictures and Words" (1998) 95 *Proceedings of the National Academy of Sciences of the United States of America* 2703.

⁵² See "American Society of International Law: Keynote & Address by Justice Stephen Breyer," YouTube, April 5, 2016, <https://www.youtube.com/watch?v=UB6GrD3zL-Q&feature=emb_logo>, at 46 min. 15 seconds.

This is especially true given the current technological landscape. Today, the opportunities to use visual evidence to help secure legal accountability for human rights violations are more accessible as a result of the advance of new technologies, especially the proliferation of the camera. The number of smartphone/camera-ready users surpassed three billion in 2020 and is forecast to reach nearly four billion by 2021.⁵³ The mass adoption and usage of drones for aerial photography is still in its infancy, but drone development is rapidly underway due to significant investments pouring into this promising industry. The number of satellite-based monitoring applications and technologies publicly available has also exploded in recent years.⁵⁴ In turn, it is not surprising that courtroom environments – one of the last bastions of oral tradition – are morphing into cinematic display environments in an effort to better communicate with judges.⁵⁵ To date, however, the use of visuals in the emerging field of rights-based climate litigation has been limited, despite the strong potential to leverage visuals for meaningful results. To illustrate the potential of visuals in climate litigation, Section 14.5.1 will consider how the legal team representing the survivors of Australia’s devastating bushfires could curate and present visual evidence as part of their recently filed climate case.

14.5.1 Bushfire Survivors for Climate Action Incorporated v. Environment Protection Authority⁵⁶

Just before the fiftieth anniversary of Earth Day, survivors of Australia’s 2019/2020 bushfire crisis took legal action to force the New South Wales

⁵³ See S. O’Dea, “Number of Smartphone Users Worldwide from 2016 to 2021,” Statista, August 20, 2020, <<https://www.statista.com/statistics/330695/number-of-smartphone-users-worldwide/>>.

⁵⁴ At the time of writing, examples of satellite imagery providers include but are not limited to: Airbus Geostore; Bing Maps; Eagleview; Google Earth Engine and Google Earth Pro; HERE WeGo Satellite; Hexagon Geospatial; Landsat 8; Mapbox Satellite Live; Maxar Imagery Mosaics; MODIS, NAIP; Nearmap Orthographics; Newarmap; OpenAerialMap; Planet Basemaps; Sentinel-2; Vexcel Imaging; and Zoom.Earth. See @mouthofnorrison, Twitter, January 2, 2020, 3:59 PM, <<https://twitter.com/mouthofnorrison/status/1212840820019208192/photo/1>>.

⁵⁵ See Michael E. Heintz, “The Digital Divide and Courtroom Technology: Can David Keep up With Goliath?” (2002) 54 *Federal Communications Law Journal* 567.

⁵⁶ See “Bushfire Survivors for Climate Action Incorporated v. Environment Protection Authority,” Sabin Center for Climate Change Law, <<http://climatecasechart.com/non-us-case/bushfire-survivors-for-climate-action-incorporated-v-environment-protection-authority/>>. On April 20, 2020, Bushfire Survivors for Climate Action brought a civil enforcement proceeding to compel the New South Wales Environmental Protection Authority to regulate greenhouse gas emissions. The plaintiffs, represented by the New South Wales Environmental Defenders Office, are Australians who allege that they have been harmed by bush fires made likely or more intense by climate change. According to news reports, the case was brought under the

Environmental Protection Authority (NSW EPA) to address climate change. The case, *Bushfire Survivors for Climate Action Incorporated v. Environment Protection Authority*, seeks to compel the NSW EPA to develop policies and guidelines to regulate greenhouse gas emissions and sustain a safe climate. If the NSW EPA fights the case, the list of emblematic, visual evidence that could – and may – be curated for the proceedings is long. Visuals could be used to show the

- extent of property damage by submitting photos and video of a selection of the over 5,900 buildings, including over 2,800 homes lost, before and after the fires;
- vast ecological damage to the millions of acres scorched by introducing video footage captured by a drone and corroborated by both satellite imagery and on-the-ground photos and videos from the burnt areas;
- loss of biodiversity by submitting a series of photos of animal carcasses, showing the array of animals that perished in the fires or footage from infrared-equipped drones that located injured wildlife in the aftermath of the Australian wildfires;⁵⁷
- intense smoke and air pollution stemming from the fires by showing photos and videos of smoke plumes, visible degradation of air quality in the major cities near the fires, and/or satellite imagery of the smoke as seen from space as it drifted across the Pacific Ocean;
- the myriad of physical injuries sustained by survivors – from burns to eye irritation to respiratory problems from exposure to smoke, hazardous gases, and particulate matter – by introducing photos of injuries and videos of respiratory problems;
- triggers leading to mental health problems by submitting corroborating material showing the experiences survivors endured (e.g., being trapped in high-risk areas, the trauma of emergency evacuations along blocked roads, or watching unprecedented firestorms from temporary shelters on beaches, boats, or in empty fields);
- pollution in the aftermath of the fires by sharing photos and videos of the ash that landed on school playgrounds and in backyards, or washed up on beaches;

New South Wales Protection of the Environment Operations Act 1997, which requires the Environmental Protection Authority to “develop environmental quality objectives, guidelines and policies to ensure environment protection.”

⁵⁷ See Cody Melissa Godwin, “How to Find Stricken Kangaroos in Australian Wildfires,” BBC, March 3, 2020.

- damage to water supplies from the destruction of infrastructure or the growth of cyanobacteria (commonly known as blue-green algae) by submitting visuals of melted water pipes, fallen trees on or over freshwater catchments, and the growth of cyanobacteria and plankton blooms; and
- the price tag to the Australian economy and livelihoods by showing damaged infrastructure such as burnt businesses, scorched pastures, razed vineyards, and killed livestock.

Depending on the precise rights violations the plaintiffs need to prove – from loss of property to loss of life, or loss of livelihoods to loss of health – the ideas in this non-exhaustive list could be used as direct or corroborative evidence to prove material facts, to contextualize or corroborate expert reports, or supplement *Amicus Curiae* briefs. And, this is just one short list of visuals for one case.

14.6 CLOSING ARGUMENT

The least we can do is: not look away. Not justify. Not erase. Not brush aside. Not make something “normal” that is not. And: nurture and defend our free, democratic constitution. Because only that is what will protect us from terror and insanity.⁵⁸

Willem-Alexander, King of the Netherlands

When presented with the horrifying visual evidence of the Holocaust, many of us cover our eyes, driven by the human desire to avoid experiencing pain and discomfort. I cannot help but wonder if we are doing the same with respect to our changing climate. But looking away will not make the problem disappear.

I live in the Netherlands. The warehouse where Anne Frank spent twenty-five months in forced hiding in a small attic is a ten-minute walk from my front door. Within fifteen minutes by bike, I can arrive at Muiderpoort, the station where hundreds of onlookers quietly witnessed the heavily guarded trams overflowing with people on their way to Nazi concentration camps, yet said nothing. Spring 2020 marked the seventy-fifty anniversary of the end of World War II, an ominous reminder that we must face global challenges with a fierce and unwavering commitment to human rights.

⁵⁸ King of the Netherlands, “Speech on King Willem Alexander on National Remembrance Day,” May 4, 2020, <<https://www.royal-house.nl/documents/speeches/2020/05/04/speech-by-king-willem-alexander-national-remembrance-day-4-may-2020>>.

Complex political problems require complex solutions. Video evidence alone will certainly not solve the climate crisis. However, as demonstrated through the Case Notes here, the strategic and effective use of visual evidence matters. So perhaps, in response to Alston's call to step up and engage determinedly and creatively with climate change, it is time to bring climate visuals into the courtroom to ensure that judges, and society at large, cannot look away, justify, erase, brush aside, or make "normal" something that is decidedly not.