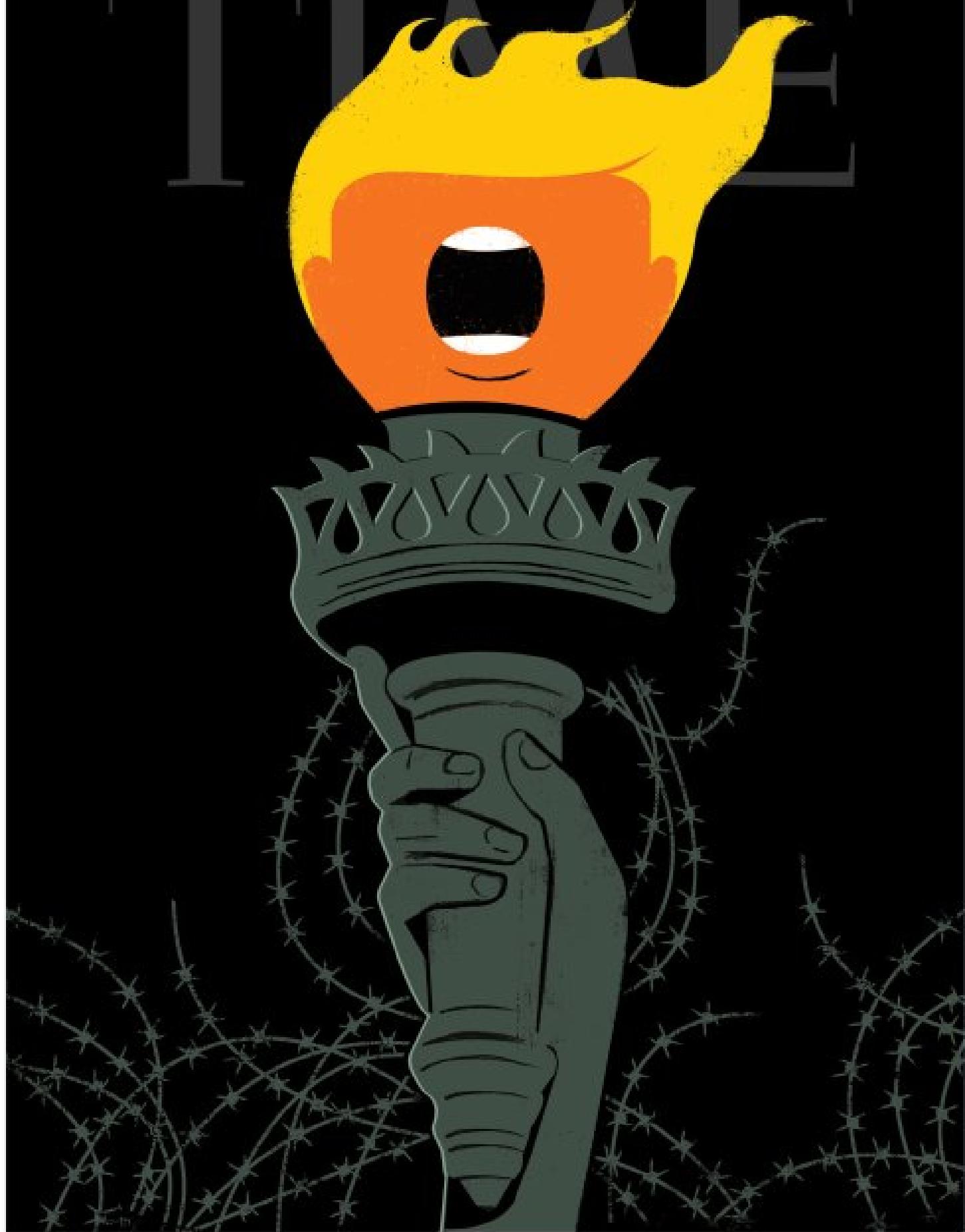


JUNE 23, 2023

TRUMP



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[June 23rd, 2025]

- [Articles](#)

Articles

- [Inside Donald Trump's Mass-Deportation Operation](#)
- [Fishing Communities in the Philippines Are Fighting for their Future as Waters Rise](#)
- [The Orb Will See You Now](#)
- [Ukraine's Drone Strikes Against Russia Could Become the Global Norm](#)
- [What We Know About the Boulder, Colorado Attack](#)
- [Why 'Hundred-Year' Weather Events Are Happening More Than Once Every 100 Years](#)
- [Family and Fans Pay Tribute to Phil Robertson, Outspoken Christian and Conservative Star of Duck Dynasty, After Death at 79](#)
- [Be Careful Where You Swim This Summer](#)
- [The 'Song of the Summer' Is Dead. Thank God for That](#)
- [The Meaning of Lee Jae-myung's Election Triumph](#)
- [Scientists Are Stumped by Mysterious Pulsing 'Star'](#)
- [How Soon Should Companies Prepare for a 2°C World?](#)
- [Medicaid Expansions Saved Tens of Thousands of Lives, Study Finds](#)
- [Meet the Marine Biologist Working to Protect Our Oceans from Deep-Sea Mining](#)
- [The World Isn't Valuing Oceans Properly](#)

- ['Ignorance' Is the Most Pressing Issue Facing Ocean Conservation, Says Sylvia Earle](#)
- [Geopolitical Tensions are Shaping the Future of our Oceans](#)
- [How We Can Restore Coral Reefs](#)
- [How F1 Went Hollywood](#)
- [Netflix's Dept. Q Is One Character Short of a Great Detective Show](#)
- [Owen Wilson's Stick Sounds Like a Ted Lasso Ripoff. Actually, It's Better](#)
- [The Life of Chuck Works Too Hard For Its Warm Fuzzies](#)
- [Why Isn't Mike Birbiglia More Famous?](#)

Inside Donald Trump's Mass-Deportation Operation

Cortellessa is a correspondent at TIME, based in the Washington, D.C., bureau. He covers Congress, Donald Trump, and national politics.

Bennett is the senior White House correspondent at TIME, based in the Washington, D.C., bureau. He has covered wars in Iraq and Afghanistan, interviewed world leaders, traveled across the globe with President Trump and President Biden, and written extensively about intelligence, immigration, and the fallout of major disasters.



“Pay attention to the noise,” says Belarmino Garcia, the warden of El Salvador’s Terrorism Confinement Center. He ushers a group of foreign

visitors inside CECOT’s Module 8, a unit unlike others at the sprawling facility situated at the base of a volcano. This one holds 238 Venezuelan nationals who were shipped from the U.S. on March 15 to be held in one of the world’s most infamous prisons at the behest of President Donald J. Trump.

The cacophony is overwhelming. Inmates climb out of their bunks, lean on the bars, and plead and whistle for attention. Module 8 is different from a typical CECOT unit in several ways, Garcia explains. The detainees are allowed blankets and pillows. They eat fast food. They are rambunctious and defiant. As the warden leads the visitors out, the prisoners appear on the verge of mutiny, chanting “*Libertad! Libertad!*”

Next, Garcia takes the visitors into Module 7. It’s silent inside. The prisoners are Salvadoran nationals, some of whom have been at CECOT for years. They wear white shirts, white shorts, and face masks, and sit upright, staring blankly through the bars. Their cells contain nothing but a *pila*—a tub they use as a toilet—and bare steel bunks. Inmates spend all day inside, emerging only for 30 minutes of calisthenics or Bible study, according to the warden. There are no TVs or radios. The prisoners can’t make or accept phone calls. They can’t receive visitors, or even letters. They have spoken to no one outside the prison since their arrival. Staff remind them what El Salvador’s President, Nayib Bukele, has said publicly: No one who goes into CECOT will ever come out. “They have lost the will to fight or resist us,” Garcia says.

JUNE 23, 2025



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The prospect of the U.S. sending migrants to a foreign prison notorious for alleged human-rights violations would have been unimaginable less than a year ago. But it is only one dramatic component of Trump's unprecedented deportation project. The President has revoked the temporary legal status of hundreds of thousands of people and expanded the power of Immigration and Customs Enforcement (ICE) to round up and remove millions of others. He is authorizing ICE to direct a network of law-enforcement agencies, from the FBI and the Bureau of Alcohol, Tobacco, Firearms, and Explosives to the DEA and U.S. Park Police, to assist the effort. He has pressed the Internal Revenue Service and the Postal Service to share information to identify targets. Homeland Security Operations has developed new software technology, called RAVEn, to consolidate data about migrants. Trump has used federal powers to coerce cities and counties to cooperate with the mission and threatened to withdraw federal funding if they don't. Working with sheriffs and local police departments, ICE has raided schools, parks, and restaurants across the U.S., detaining some 82,000 people in a few short months.

The work is only beginning. On June 7, Trump ordered National Guard troops to Los Angeles to quell anti-ICE protests. The Department of Justice is weighing arresting and prosecuting public officials who impede their immigration agenda, according to Administration sources familiar with the matter. The White House is considering suspending habeas corpus, a protection against illegal government detention enshrined in the Constitution that grants every person the right to have a judge review their imprisonment. "We're looking at every option," Trump border czar Tom Homan tells TIME. In addition to sending Venezuelans to CECOT, Trump has deported asylum seekers to Panama and sent others to Guantánamo Bay in Cuba and South Sudan. Homan says the Administration is in talks with three more countries to accept U.S. deportees. It also plans to build and expand other detention centers in the U.S., he says, with the goal of doubling capacity to hold detainees awaiting deportation to 100,000. So far, the Administration has deported more than 139,000 migrants, which is behind pace to reach Trump's aggressive targets. Even so, the number in immigration detention has spiked 30%.

Read More: [Exclusive: Inside Trump's First 100 Days.](#)





This sweeping effort has few analogues in recent world history. Its ambition goes beyond anything attempted in the U.S. since the Eisenhower-era Operation Wetback in its aims to expel millions of people and change the makeup of the country. Removing that many undocumented immigrants, as Trump has promised, would eliminate a key source of labor. It would end a decades-long wave of migration that has made the country progressively more multiethnic. And it would change how the U.S. has treated those seeking refuge from violence and oppression since before the end of the Cold War.

Trump officials say all this is overdue. The U.S. experienced a surge in migrants, including undocumented immigrants, under President Biden, who revoked some of Trump's first-term border policies. Trump officials say they intend to reverse a trend that has displaced American workers, depleted state and local governments of resources, and, they argue, undermined social cohesion.

Already, Trump's deportation program is instilling fear in newcomers. "I can't go back," says Hilda Espinoza Telon, a refugee from Guatemalan gang violence, whose lawyer says she was recently fitted with an ankle monitor by ICE. "Nearly my whole family has been murdered over there." She has given her 14-year-old son instructions for what to do if she disappears from their Virginia home.

A TIME investigation, based on interviews with more than 20 Trump Administration officials, exclusive access to detention facilities in the U.S. and abroad, and conversations with numerous migrants, immigration experts, and attorneys reveals how Trump is testing the moral and legal extremes to which the government is willing to go. Catholic bishops and Republican-appointed judges have joined those speaking out against his deportation project. District courts have issued injunctions. Constitutional scholars have alleged Trump's team is not only abusing presidential power but also breaking laws. "The Administration is treating immigration not as a law-enforcement matter but is trying illegally to repurpose the tools of war and counterterrorism against migrants," says Brian Finucane, a lawyer at the independent International Crisis Group and former State Department official. "It's a turducken of illegality."





Trump Administration officials say they are complying with all laws they deem constitutional. Whether they are correct will ultimately be decided by the Supreme Court, which has halted some of Trump's actions while the Justices consider the merits. But moves to slow or reverse his agenda have only hardened the President's resolve. "We have to do it," Trump told TIME in late April, arguing he had been elected on a promise to crack down on illegal immigration. "People have been let into our country that are very dangerous." As the Administration escalates its efforts, critics are asking how we got here. Others wonder what took so long. But all Americans have a stake in understanding how Trump is trying to transform the country by deporting millions of its inhabitants—and what it will mean for their communities.

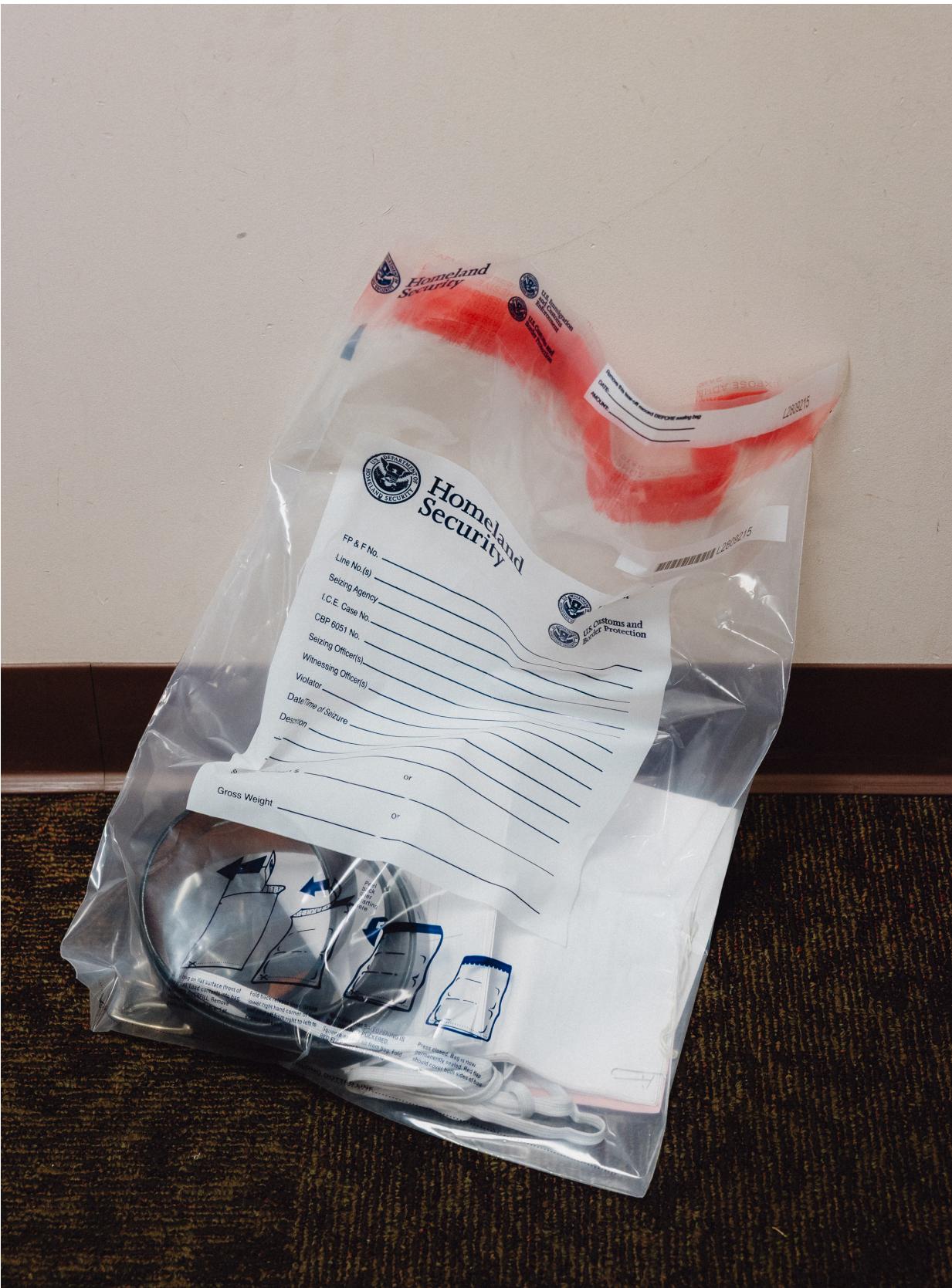
When Cristian David Marin Leiva stepped inside the South Louisiana ICE Processing Center in New Orleans on April 14, he thought his appointment

would take only a few minutes. The agency had summoned Cristian, a boyish teenager with bright eyes and a patchy goatee, for a regular “check-in.” He had reported for check-ins twice previously without incident—most recently in February—since he crossed the Texas border illegally in April 2021. Cristian moved to the U.S. to escape violence in Honduras, he says, settling with his father and stepmother in Slidell, La. “Where I lived was full of gangs,” he says. “They would make the minors join the gang or be killed.”

Shortly after he crossed the border, he hired a lawyer, who asked a judge to designate Cristian a Special Immigrant–Juvenile. He had been abandoned by his mother in Honduras, his attorney says, and needed to live with his father in the U.S. The judge approved the petition and granted Cristian four years of “deferred action from removal,” providing a reprieve from deportation at least until 2027.

Now a high school junior, Cristian, 18, walked into the ICE office near the French Quarter around 7 a.m., planning to make it to school in time for his first-period biology class. He approached an officer and handed him the letter requesting a check-in. The agent glanced at the paper, furrowed his brow, and then looked back at Cristian. He pulled out a pair of handcuffs. “Follow me,” he said.

Cristian was led into a small holding cell with dozens of detainees and stripped of his possessions. “They just called me over and put these on me and kept me here,” he told TIME, shackled at his wrists and ankles. Agents told him he could make a phone call after he was transferred to a processing center in Central Louisiana. There he could choose either to voluntarily board a flight to Honduras or face a judge. Nobody informed Cristian’s family what was happening. Rubin Marin, Cristian’s father, was oblivious when TIME reached him by phone later that afternoon. He thought his son was in school.





Summoning migrants for unexpected detention is one in a range of tactics the Trump Administration has adopted. The message sent is clear: Migrants who entered the country illegally are not only unwelcome but also at risk of sudden removal or imprisonment wherever they are and whether they've followed the law since arriving or not. "It's just getting them the hell out of here," Homan says.

Read More: [Read the Full Transcript of Trump's '100 Days' Interview With TIME.](#)

To understand how the deportation dragnet works, TIME joined ICE officers on a pair of morning raids in the New Orleans area. Inside a truck, ICE officers reviewed files on their targets, including biometric data, arrest and conviction records, work histories, and frequent whereabouts. "We surveil them for a period of time to identify patterns of behavior," says Mellissa Harper, director of the New Orleans field office. "Once we know that they are at a certain location at a certain period of time regularly, we plan out an enforcement operation."

The raids TIME witnessed didn't lead to arrests. In one case, the person had left the state overnight. In another, they simply weren't home. But the target list has multiplied. When he took office, Trump revoked the temporary protected status of hundreds of thousands of migrants and rescinded memos that limited ICE arrests during raids. Before that, "if we conduct a targeted enforcement operation for one guy and we show up to his house and there are four other -illegals there, we could only arrest the one guy," explains Scott Ladwig, Harper's deputy. "Now we grab them all."

Local police have lined up in support, transferring migrants they arrest on other alleged crimes or even traffic violations. After the fruitless predawn raids on April 14, the ICE officers returned to the New Orleans field office to find 12 migrants transported from the Kenner, La., police department. The detainees walked in a single-file line, wearing handcuffs and leg restraints. When they reached the offices, ICE agents interviewed them using a Spanish translation app on their government phones.

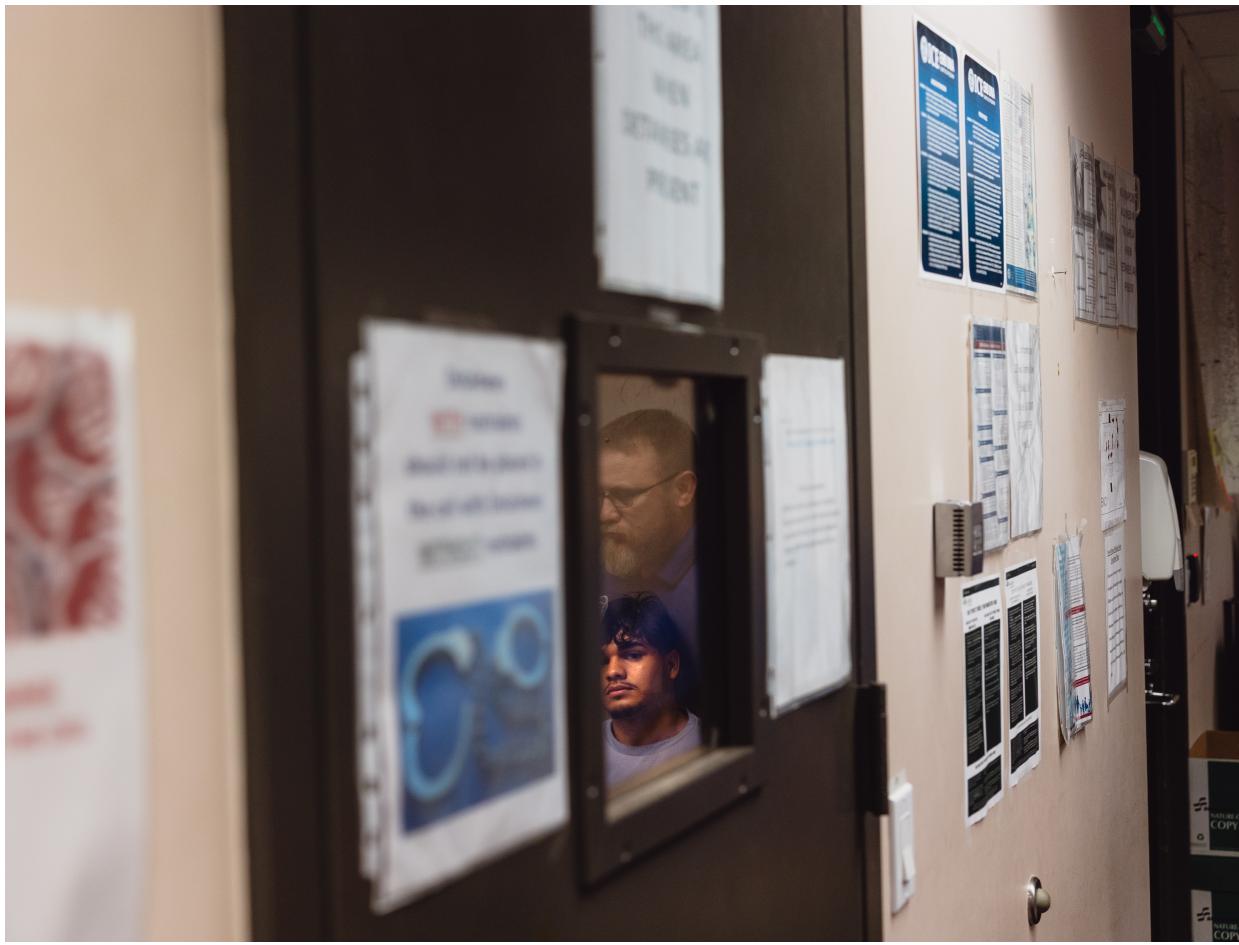
One of the detainees, Fernando Milla, 28, had been arrested on suspicion of drunk driving. The officer who ran his license, Milla says, saw he had

overstayed a student visa. After two nights in the county jail, police transferred Milla, a Honduran national, to ICE custody. Sitting inside a holding cell, Milla was resigned to his fate. “I’m not going to hire a lawyer or anything,” he tells TIME. “I’m going back.”

As the migrants in Milla’s group were being questioned by the ICE agents processing their paperwork, Cristian emerged from the holding cell. He spent 16 minutes answering questions from an officer. Then he was left waiting again, hoping he ends up back with his father and not on a flight to Honduras.







The detention of migrants like Cristian is the first link in Trump's new deportation chain. It's the product of years of planning. Trump left office in January 2021 determined to make immigration a centerpiece of his political comeback. Top aides found refuge at friendly think tanks to plot the next steps. Homan, who was acting ICE director in Trump's first term, took residency at the America First Policy Institute and the Heritage Foundation, where he contributed to the latter organization's manifesto for a second term, titled Project 2025. Russell Vought, the Office of Management and Budget director, founded the Center for Renewing America, where he studied Trump's rally speeches and devised plans to turn promises into policy. Longtime adviser Stephen Miller, an architect of Trump's first-term immigration crackdown that included separating families, founded America First Legal to sue the Biden Administration, and explored legal mechanisms for Trump's deportation goals.

Together they sketched the contours of a new, even more aggressive immigration agenda. It would concentrate power in the Oval Office and use federal powers to pressure state and local jurisdictions, withholding funds for sanctuary cities and forcing agencies with access to sensitive data to assist in the deportation effort. Vought and others suggested pulling federal funding from state and local police departments that refused to cooperate. Miller proposed declaring a national emergency to invoke extraordinary powers to round up and remove migrants. Homan wanted to restructure ICE, reassigned employees with desk jobs to conduct field operations and ramping up the agency's capacity to identify and arrest people.

They looked for ways to move fast, and studied the law to devise the methods and legal defenses for their most boundary-pushing measures, according to several current Administration officials. Working with Miller at America First Legal was Gene Hamilton, the principal author of Trump's controversial family-separation policy, according to a January 2021 Justice Department inspector general report. All four men now work out of the White House. "The President and the entire Administration are certainly open to all legal and constitutional remedies to ensure we can continue with the promise of deporting illegal criminals," White House press secretary Karoline Leavitt said.



Just how “legal and constitutional” the White House actions are is a matter of dispute. Normally, Executive Orders are vetted by experts at the Office of Legal Counsel at the Justice Department, in order to ensure the President is following the law. Trump has reportedly curtailed that front-end review, leaving government lawyers to defend controversial claims of powers granted to the President only in extreme circumstances, like wartime. Asked to illustrate how this approach to following the law differs from the norm, one litigator who left the Justice Department in February tells TIME, “Draw a horse and put a cart in front of it.”

Read More: [Donald Trump, TIME’s 2024 Person of the Year.](#)

Even those willing to advocate for the broadest presidential powers in pursuit of deportations have found themselves out of a job. Erez Reuveni, a veteran federal litigator who had defended in court Trump’s 2017 ban on travelers from Muslim-majority countries, was fired after Reuveni told a

court the Administration had mistakenly sent a Salvadoran man named Kilmar Abrego Garcia to CECOT because of a clerical error. The Department also placed on leave Reuveni's supervisor, August Flintje, who had defended Trump's family-separation policy in court in 2018.

Traditionally, Justice Department lawyers have been required to keep their distance from the White House to avoid the appearance of politicization. Attorney General Pam Bondi, by contrast, has emphasized "zealous" advocacy of Trump's agenda. "Any attorney who fails to abide by this direction will face consequences," Bondi said the day after Reuveni's court appearance.

Eight hours after his arrest, Cristian was sent to the Central Louisiana ICE Processing Center in Jena, La., about four hours from New Orleans, on the edge of a forest of loblolly and longleaf pines. The facility, which holds nearly 1,200 inmates, is run by the private corrections company GEO Group, a Trump donor for which Homan worked as a paid consultant. Most days, the prison is quiet, though on occasion hundreds of protesters show up to demand the release of its most famous inmate, Mahmoud Khalil, a Columbia University graduate student whom the Trump Administration arrested without a warrant in March for his role in the campus' pro-Palestinian protests, and has accused, without supplying evidence, of "activities aligned to Hamas."

When TIME visited the Jena facility on May 29, nine landscapers in lime green shirts sat in the intake room on long benches, waiting their turn to be formally admitted. Their shirts read *Twin Shores Landscape & Construction Services*. Two days earlier, they had been starting a project on the Mirabeau Water Garden construction site in New Orleans, part of a \$30 million federally funded drainage project to reduce flooding in the area. At 7 a.m., ICE officers surrounded the site, blocking the exits to the park, as a government helicopter hovered overhead.





Donald Tercero, 36, was among those arrested. Tercero, who is Nicaraguan, had worked on farms and as a teacher before arriving in the U.S. in 2022. He presented himself to the Border Patrol at McAllen, Texas, seeking humanitarian parole under a program the Biden Administration had started that year. He's not planning to fight his deportation. "I want to go back," Tercero says.

Manuel Carillo, a 29-year-old from Guatemala, was also among the construction crew arrested in the New Orleans ICE raid. "Not everyone wants to do the work we are doing," he says. "Unfortunately, Donald Trump doesn't want us to stay." Jimmy Bingham, the warden at Jena, says fewer detained migrants are resisting deportation these days. "They don't feel like it's worth their time to fight," Bingham says.

Upon admission, inmates are given colored uniforms—red and yellow garb for the most serious felonies, green and orange for lesser offenses, blue for

those with no conviction. They are separated according to these classifications and housed in dorms that hold 80 people apiece, with showers, phones, televisions, and a gaming system. They get two hours for recreation in the morning and another two hours in the afternoon, says the prison administrator. When TIME enters one of the dorms, a group of inmates rushes over, asking to tell their stories. Some had been there a few days, others a few weeks, and some even a few months as they waited to have their cases heard. The lucky ones are granted bond and can return home until a judge is ready to determine their fate.

Read More: [Trump's 2024 Person of the Year Interview Transcript](#)

Jena is one of around 200 ICE detention facilities across the U.S., but agency officials like to send prisoners there for a few reasons. It's cheaper to detain migrants in Louisiana than in other parts of the country, and the state has a conservative federal Circuit Court that's more likely than some others to rule in the government's favor when it seeks a removal. Jena is also located near the Alexandria Staging Facility, a small airport managed by GEO. On average, the Alexandria facility flies six planes a day to other countries, says Ragan Lewis, an ICE officer who runs the airport. Some days see as many as 12 outgoing flights. As a plane loaded up with prisoners, Lewis waved his hand toward a stretch of grass next to the airfield. If there were money to expand the holding cells, he says, he could fit 2,000 people there. Lewis hopes the broad legislative package moving through Congress will allocate funding to expand the Jena facility to house more migrants, who could then be flown out of the country on planes from Alexandria.





Just after dawn on May 29, the swish of chains dragging on asphalt was loud enough to be heard over idling engines. Roughly 70 men shuffled across the tarmac toward a chartered jet that would take them to Nicaragua. Before boarding, guards patted each down, looking for hidden weapons, unlocking

and relocking their restraints, and directing them to make the awkward ascent up the stairs to the plane. One of the men, wearing a black hoodie, shook the chains around his wrists at a guard and said, “*Como perros! Como perros!*” (Like dogs.) Once the detainees were on board, agents brought in a van with dozens of women, also manacled, to board next. Then came the only migrants without chains: family units. A woman with her teenage son got on first, followed by a woman with her young daughter. By the time the flight lifted off, there were 118 passengers on board.

Whether Cristian will end up on one of these planes isn’t yet clear. In May he was let out of Jena on a \$4,000 bond. He is due back in immigration court in New Orleans on Sept. 2 to find out whether he will be sent back to Honduras or can remain in the U.S. with his father.

The deportation chain in Louisiana exemplifies a nationwide operation that is redefining American immigration policy, legally and morally. The fallout is reaching far beyond those who entered the country without permission. Law-enforcement officials have snatched foreign students off the street for engaging in speech the Administration doesn’t like. Trump has revoked student visas and put foreign students into deportation proceedings without warning. “A visa is a gift,” Secretary of State Marco Rubio told reporters on March 28. “No one is entitled to a visa.”

Trump is targeting younger children too. His attorneys have argued in federal court that he should be allowed to ignore the 14th Amendment’s guarantee of citizenship for those born in the U.S. and terminate the rights of children born to parents who were in the country illegally. The President has cut federal funding to social-service nonprofits that offer legal representation to people facing deportation to ensure their cases are fairly decided. “The very idea of deporting a child without a lawyer should be unthinkable in America,” says Jojo Annobil, the CEO of the Immigrant Justice Corps.

Perhaps no other issue has crystallized criticism of Trump’s immigration agenda like the deportation of Venezuelan nationals to El Salvador. Like many of Trump’s policies, it came about through a series of conversations, rather than a conventional legal process. On the campaign stump, Trump occasionally castigated Bukele, the Salvadoran President, for sending MS-13

gang members to the U.S. Trump ally and former Florida Congressman Matt Gaetz, one of Bukele's biggest American fans, told Trump that this wasn't true. Bukele was the most popular leader in Latin America, he told Trump, and attacking him wasn't going to help win over the Hispanic voters Trump was courting.



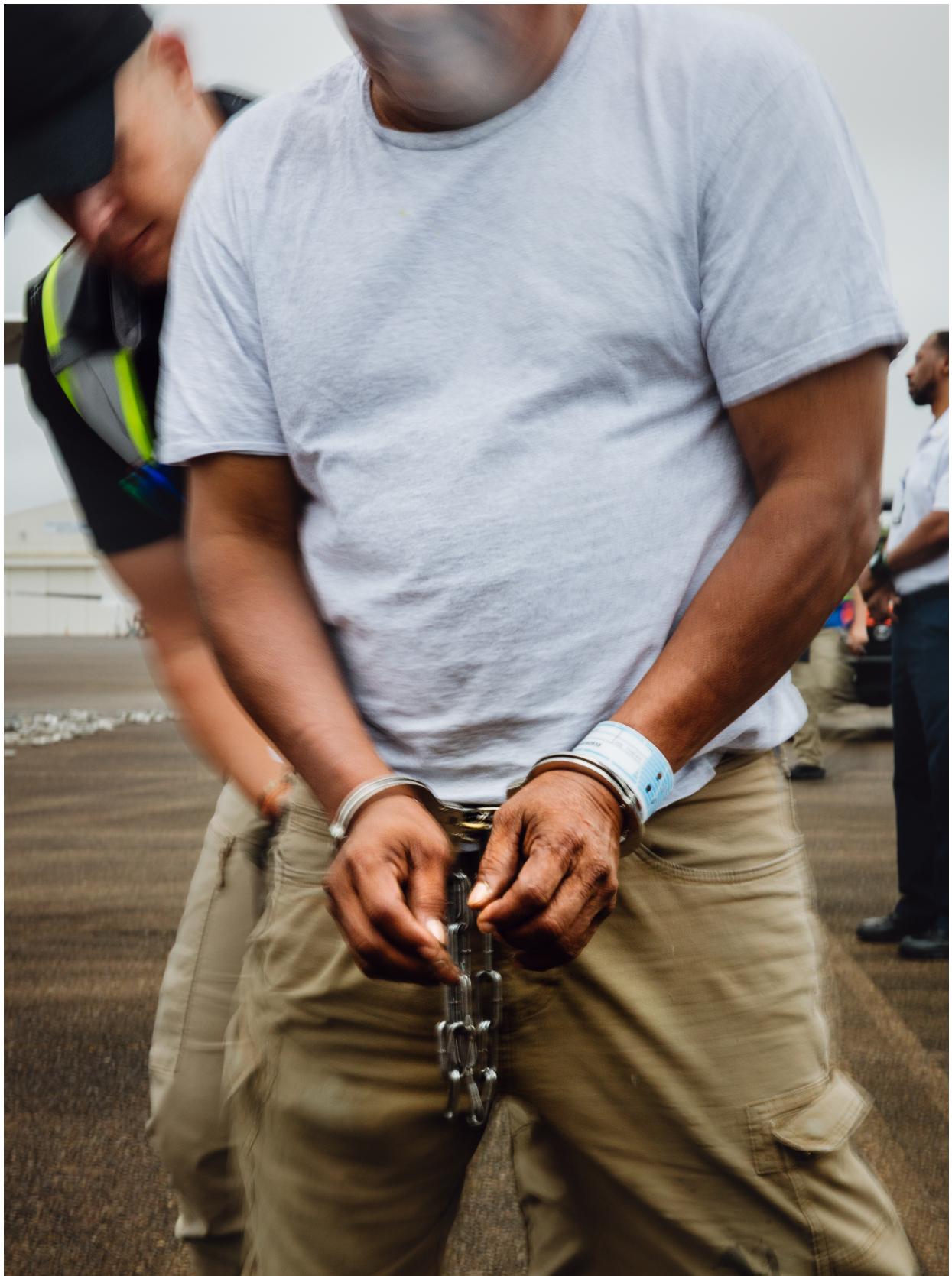
When Gaetz visited El Salvador for Bukele's second inauguration last summer, he and Bukele discussed the idea of the Salvadorans holding some of the migrants whom Trump planned to deport if he won. When Gaetz returned, he tells TIME, he brought the idea to Trump and his team. Shortly after taking office, Trump directed Rubio to cut a deal with Bukele, two senior White House officials say. Rubio came back with an offer in hand, according to U.S. officials: \$20,000 per prisoner for a year.

There were wrinkles in the deal. Bukele wanted the Trump Administration to send a handful of Salvadoran MS-13 members held in U.S. prisons, including some who the Treasury Department alleged in December 2021 had engaged in secret negotiations with officials of Bukele's government. At the same time, the deportations would require claims of extraordinary presidential powers. Miller and the White House Counsel's office planned to invoke the Alien Enemies Act, a 1798 law that grants the President wartime authority during an invasion or "predatory incursion." The plan was so closely held that only a few senior members of the Administration knew it was happening, one of them tells TIME.

On March 15, the Trump Administration sent 238 Venezuelan nationals to El Salvador, alleging they were gang members or terrorists. Some had recently been arrested. Many of them had not been convicted in U.S. court. The Administration invoked the Alien Enemies Act for the fourth time in U.S. history, and the first since World War II. The declaration was made at 3:53 p.m. The flights for El Salvador were scheduled for 5:26, 5:44, and 7:36 p.m.

Prompted by an emergency motion from the American Civil Liberties Union and Democracy Forward, U.S. Judge James Boasberg ordered a virtual hearing on the matter for late that afternoon. Boasberg heard arguments, then ordered the government to halt the removals. "Whether turning around a plane or not embarking anyone on the plane, or those people covered by this on the plane, I leave to you," Boasberg told the DOJ. "But this is something that you need to make sure is complied with immediately." Yet two planeloads of migrants had already left ahead of schedule. A third one was still on the tarmac at a Texas airfield, but took off anyway.

The Trump Administration has not confirmed the names of the Venezuelans on those flights. Nor has it shown evidence that all of the men belonged to the criminal gang Tren de Aragua. A review by the Cato Institute found that more than 50 of the Venezuelans sent to El Salvador had followed legal steps to enter the country. A CBS News investigation found that most of the Venezuelans had no criminal record in the U.S. or abroad.





One of the men on the planes was Abrego Garcia, who the Justice Department would later admit had been mistakenly deported. Another was Franco Caraballo Tiapa, who worked as a barber in Venezuela. In 2023, Tiapa and his wife Johanny trekked across the Darién Gap, sleeping in the open and surviving on scraps of discarded food, until they presented themselves at the U.S. border and asked for asylum. The two lived together in Sherman, Texas, where they made money cutting hair.

On Feb. 3, Tiapa visited an ICE office in Dallas for a regular check-in. This time he was arrested, according to Johanny. The Administration says his tattoos show he's a member of the Tren de Aragua gang. One is of his daughter's name. Others depict a lion; a rose; and a razor blade on the side of his neck—a symbol of his work as a barber, according to his wife. She says he has no criminal record in the U.S. or Venezuela. "They were only looking at his tattoos," Johanny says.

Outside of CECOT's Module 7, Garcia, the warden, brings out a Styrofoam container with a hamburger, French fries, ketchup packs, and Milano cookies. This is a typical meal for the Venezuelan inmates, he says. Their diet was devised by Bukele, who instructed they be fed fast food to gain weight, as a way of trolling critics who argue CECOT's conditions are inhumane, according to Salvadoran sources. "It's a cat-and-mouse game," says one person close to Bukele. The maneuver is similar to the photo op Bukele staged when Democratic Senator Chris Van Hollen traveled to El Salvador to meet with Abrego Garcia. The pair were photographed sitting poolside with what Van Hollen said were "fake" margaritas. (Abrego Garcia was returned to the U.S. in early June.)



After the tour of the prison, Garcia allows TIME to interview one inmate in a holding area near the unit's entrance. The man says his name is Hector Hernandez. He appears to be the nightmare that Trump has conjured time and again on the campaign trail. He says he is an MS-13 member, and has tattoos all over his body, from his face and neck to his forearms. The prisoner claims that before he was deported in 2019 and apprehended by Salvadoran authorities, he murdered 50 people in Northern Virginia—more than three times the number of reported murders in Prince William or Fairfax counties for that year. TIME was unable to verify the details provided by the prisoner, including his name, his alleged crimes, or how he came to be there. Inside CECOT, the extreme terminus for Trump's deportation program, the truth, like everything else, is under the control of the authorities.

What is clear, however, are the draconian conditions to which the Salvadoran inmates at CECOT are subjected. They are under constant surveillance. The lights never go off. They share cells with rival gang members. Prisoners who

get out of line face up to 14 days in pitch-black solitary confinement, says Garcia. For the past 2½ years, the man who identifies himself as Hector Hernandez says, he's had no communication with the outside world. He hasn't spoken to family. He hasn't seen or read a news report. He doesn't know who the President of the United States is. —*With reporting by Harry Booth, Leslie Dickstein, and Tharin Pillay*

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Fishing Communities in the Philippines Are Fighting for their Future as Waters Rise

Campbell is an editor at large at TIME, based in the Singapore bureau. He covers business, tech, and geopolitics across Asia. He was previously China bureau chief.

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It's around 10 a.m. each morning that Noemi Reyes's heart fills with hope. That's when her husband Marionito's boat appears on the shimmering horizon of the Pacific. By the time his skiff has been hauled onto the shingle beach, it's already clear whether his toil has been profitable. Today was not: just eight small sardines and mackerel from five hours casting handlines at sea. "Almost nothing," laments their 11-year-old son, Cjay, as he clammers back up the slope to their shack.

The catch is sufficient to provide the family a proper meal but won't help rebuild their home, which was destroyed late last year when a record-breaking six consecutive storms battered the Philippines. Ever since November, the Reyes family has lived here, beneath tarpaulin and nipa palm, wedged between crashing waves and a coastal highway in northeastern Luzon. When it rains, water gushes through gaps in the roof. At night, passing juggernauts rattle the structure, shaking them from their slumber. With no locks or even doors, passing strangers sometimes wander inside. "I find it hard to sleep and worry that one of the trucks might hit us," says Noemi, 42, as she cleans and guts the fish for traditional *sinigang* sour soup.

It's a precarious existence that is all too common in the Philippines, an archipelago nation of 115 million people scattered across more than 7,000 islands. The sea remains the lifeblood of the country. Fishing employs over 1.6 million people, whose catch is the nation's principal protein source, a daily bounty of some 12,000 tons. But it's a relationship that has become increasingly strained. Intensifying typhoons and dwindling catches are transforming what has always been the font of life into a source of destruction and despair. "Sometimes the sea is all about luck," shrugs Marionito, 50, as he collapses exhausted onto the timber platform that sleeps the couple and five of their nine children.

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THE OCEANS ISSUE

FIGHTING FOR THE FUTURE AS WATERS RISE

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TIME



The Reyeses, a fishing family, stand on their shrinking coastal home in the Philippines

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If fortune has deserted the Reyes family, odds are increasingly stacked against all the 600 million people around the globe who depend on small-scale fisheries and aquaculture. Coastal communities from Bangladesh to Cuba and from Senegal to Vanuatu are finding their livelihoods and security increasingly challenged. Rising greenhouse gases are increasing the intensity of extreme-weather events that both reduce fish stocks and make accessing them more difficult and dangerous for this generation and the next.

“Coastal communities are on the front lines, facing rising seas, brutal storms, and tidal surges that destroy millions of homes, businesses, public infrastructure,” Simon Stiell, executive secretary of the U.N. Framework Convention on Climate Change, and a former senior government minister of Grenada, tells TIME. Stiell is no mere onlooker. Just last July, Hurricane Beryl devastated his home island of Carriacou, where 98% of homes and buildings were severely damaged or destroyed, displacing over 3,500 people.

Society’s most vulnerable are bearing the brunt, especially the young. UNICEF estimates that around the world, an average of 20,000 children are displaced every day, 95% by the same floods and storms that render coastal fishing communities increasingly hazardous. And the Philippines has the dubious distinction of hosting the most child climate refugees. According to UNICEF, the Philippines experienced a record 9.7 million child displacements from 2016 to 2021, owing partly to 60% of the population living by the ocean—more people than live in Canada—as well as sea levels rising at up to four times the global average.

“Children are seeing their schools flooded, health services and water systems damaged, and crops and other food sources washed away,” says UNICEF executive director Catherine Russell. Along with a litany of health risks including malnutrition and waterborne disease like cholera and dengue, displaced youngsters suffer disrupted education and are more likely to drop out of school to support their families, meaning fewer opportunities for them to build more prosperous and secure lives than those of their parents, whose own occupations are ever more fraught.



“Constant threats of displacement create chronic anxiety and trauma, particularly among children,” says Gwendolyn Pang, secretary general of the Philippine Red Cross. “There’s no semblance of normalcy because they constantly move, evacuate, relocate. Frequent disasters become emotionally and mentally exhausting.”

The cascade of hardships stands to compound a larger peril. Each pound of fish caught by wild fisheries involves just 1/2 to 3 lb. of carbon, while red-meat production ranges from 15 to 50 lb. But the tropics are predicted to see communities displaced from the coast to cities, and declines in potential seafood catch of up to 40% by 2055, turning coastal populations from sustainable food producers into urban consumers with an exponentially larger carbon footprint. In response, governments, NGOs, and the local people are striving to instill resilience into coastal communities, strengthen homes and infrastructure to better cope with extreme weather, and diversify incomes to mitigate the impact of a changing climate. But providing future generations with greater prospects than the last is an uphill battle.

“What people told me is simple: they want their families, their wider communities, their businesses and livelihoods to be better protected,” says

Stiell. “They want to focus on education, health care, economic opportunity—not have to scramble to survive the next storm.”

Few nations have internalized the ocean like the Philippines. For centuries before Ferdinand Magellan first set foot here in 1521, the inhabitants were natural seafarers, docking on its islands and thriving aboard floating communities on boats called balangay, a word that today has come to mean the country’s smallest political unit, or village.

Filipinos make up over a quarter of the global seafaring worker community. Put differently, 1 out of every 5 Filipinos currently employed abroad are working on the water. Manila remains one of Southeast Asia’s top ports, while the surrounding waters, including those within the hotly contested South China Sea, teem with oil and gas deposits.

But this kinship with the ocean has also made the Philippines acutely vulnerable to the extreme weather that is becoming both more fierce and frequent. Situated in the Pacific’s “typhoon belt,” the Philippines experiences an average of 20 tropical cyclones annually, most occurring from July to October. Typhoons are known as compound events, since low pressure effectively sucks up seawater to inundate land just as heavy rainfall surges down hillsides and high winds batter homes and infrastructure. “The coast is really where all the problems meet and the intensity is increasing,” says Robert Vautard, a working group co-chair at the U.N. Intergovernmental Panel on Climate Change.

Many Filipinos live with the constant fear of displacement. At the opposite end of Luzon from the Reyes family, the village of Sula, Vinzons, in the Bicol region sits nestled on a sandbank barely 400 ft. wide separating the Pacific Ocean from tidal mangroves. Without even an access road, life here revolves around fishing, shrimping, and farming oysters and crab. The only non-aquatic industries are a nearby watermelon farm and the occasional cluck and snuffle of chickens and pigs.



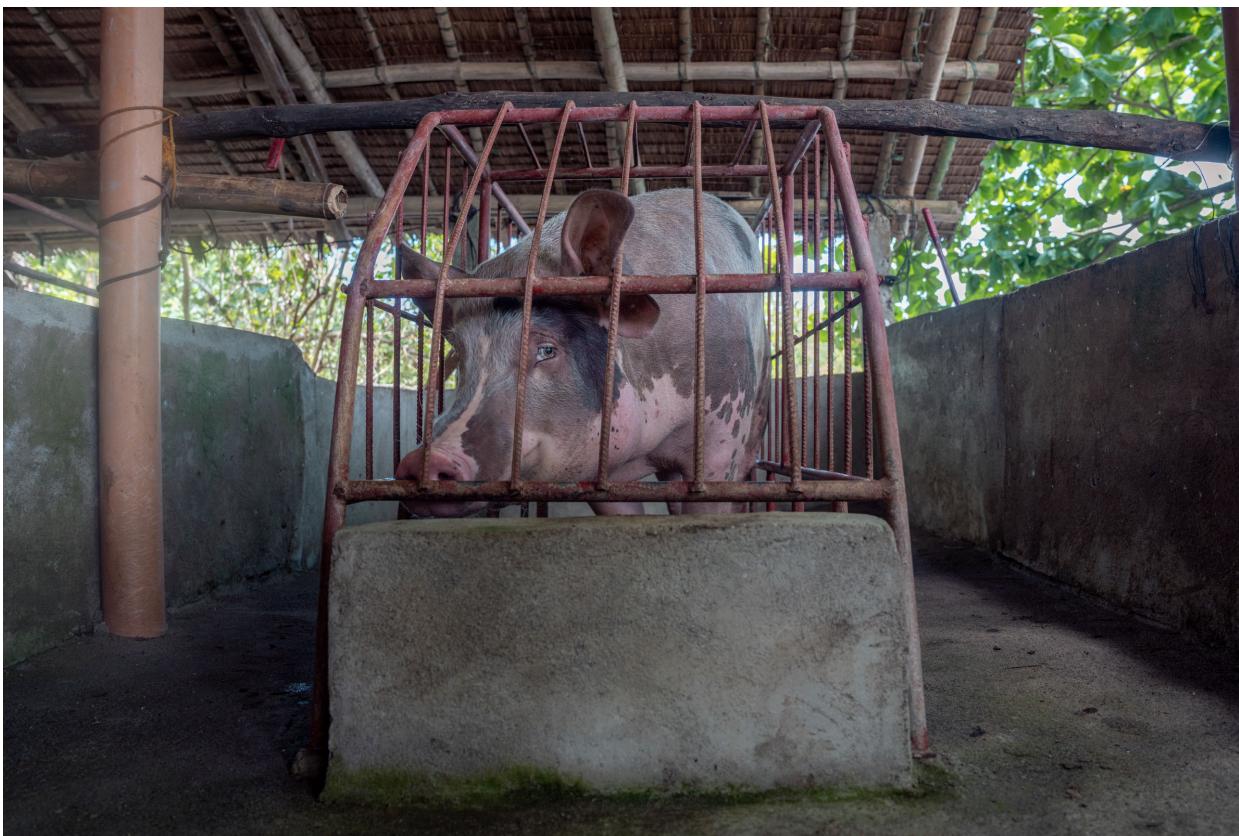




Around four times each year, village captain Rosemarie Abogado gives the order to evacuate, and Sula's 269 families clamber onto boats for the 20-minute journey to a nearby elementary school. There they must hunker down on mats for days while inclement weather submerges the village in swirling eddies of seawater, destroying crab pots, fishing nets, and homes. "Usually, it's men who are reluctant to leave the village because they want to take care of their livestock," says Abogado, sitting beneath the mango tree whose shade serves as an informal village hall.

After the typhoon passes, the villagers return to see what remains. Following last November's storms, Ricky Pioquinto found his two-room thatch house had been flattened. "It's only luck whether the pigs get flooded or not," says the dad of three. A fattened swine can fetch 12,000 pesos, or \$215. "Sell a pig and you can buy anything," Pioquinto, 41, says. By comparison, fishing and crabbing are less profitable these days. A pound of crabs brings between 100 and 200 pesos (\$1.75 to \$3.50) depending on the size and quality. But

catches have been getting sparser. “Sometimes we don’t catch anything,” says Pioquinto.



Around one-third of the world's fish stocks are overfished, including those in Southeast Asia, where China operates a colossal fishing operation. Climate change is compounding the problem. Oceans play a major role in climate dynamics: 83% of the global carbon cycle is circulated through the oceans, which have absorbed 93% of the excess heat from greenhouse-gas emissions since the 1970s.

But warmer waters alter the distribution of fish species, pushing those more suited to cooler temperatures farther and deeper, while reducing oxygen levels, impacting fish survival and productivity. Estimates suggest that at current rates of warming, fish and other marine species will be pushed around 20 km (12 miles) every decade. Meanwhile, ocean acidification, caused by increased carbon dioxide absorption from the atmosphere, is degrading coral reefs vital for marine life, while harming shellfish and other organisms with calcium carbonate shells. "On top, these cyclones and storms have a really negative impact on the ecosystems as well as fishing infrastructure," says Michelle Tigchelaar, senior scientist and impact area lead for climate and environmental sustainability at the WorldFish NGO.

All of this means future generations of artisanal fishers will not see the catches that sustained their parents.

The frequency of typhoons, locally called *bagyo*, means Filipinos are used to responding to them. The national weather bureau has an alphabetical list of names for storm systems which repeats every four years. A name is retired only when it is attached to a cyclone that has caused widespread destruction and loss of life.

One name that will never return is Yolanda—what Filipinos call Typhoon Haiyan—which killed more than 7,000 people, displaced 47.5 million, and caused more than \$12 billion in damage in 2013. Yolanda was the deadliest storm to have ever struck the Philippines and more than anything served to redefine the nation's relationship with the ocean. Stretching 500 miles from tip to tip, its sustained winds of 195 m.p.h. tore into the central Visayas region, where storm surges of up to 23 ft. snapped coconut palms like matchsticks and razed entire towns.

Marinel Sumook Ubaldo was just 16 years old when the maelstrom ripped apart her home perched on the shoreline of Matarinao, Salcedo municipality, in Eastern Samar. “Only three concrete pillars remained,” she recalls. Survivors were isolated for days without food or clean water and spent months with no electricity nor proper shelter. “We were literally eating whatever we could find floating on the water,” says Ubaldo.



All the Ubaldo family possessions disappeared; dead bodies littered the devastation. Like nearly all the local fishermen, her father lost his boat, destroying both his livelihood and sense of self-worth. Even if it had survived, the seas remained too rough for small vessels for some six months after the storm, and people recoiled at the thought of consuming fish that may have grown plump on the corpses of their departed neighbors. “He has been fishing since he was 8 years old,” she says. “So it really affected him.”

Yolanda’s wake left hundreds of orphans, but even those like Ubaldo whose family had survived had their childish innocence ripped away. “Afterwards, I felt grown up,” she recalls. “We lost our home. We literally went back to zero. I don’t know how I would be able to go to college, so I became a breadwinner.”

While working multiple jobs including at a fast-food restaurant to support her family, Ubaldo eventually won scholarships to study social work at university. But that helpless feeling stuck with her. A month after Yolanda, another typhoon struck, but this time nobody would take in her family, which was forced to shelter huddled next to a mountain. “I felt like I was just done being ‘resilient,’” she says. “So we lobbied our local government unit to be more proactive.”

In 2019, Ubaldo organized the Philippines’ first youth climate strike. Today, she works in Washington, D.C., for the League of Conservation Voters environmental advocacy group, and has testified on climate issues at the U.N. and U.S. Senate. “During disasters, people are gracious that they help each other,” she says. “But trauma really comes after a disaster: What should I do now?”

After Yolanda, the Philippine government added a new “level 5” to the existing four grades of storms, stressing the imperative for people to seek shelter when the worst arrives. But for many, the psychological bond with the ocean had been forever broken. “That relationship of the ocean both giving life and unfortunately, with these climate disasters, increasingly taking life away, is something that’s very difficult to wrestle with,” says Sean Devlin, a Filipino Canadian comedian and filmmaker who has been documenting displaced communities for over a decade.

Yolanda exposed other vulnerabilities that have made the Philippines a test case of disaster response. The sheer force of these storms can remake the very shoreline where communities exist. Too often, poor villagers don’t have deeds or other documentation to codify their ownership of land that has been used by their families for generations.

This lack of documentation exposes these communities to disaster capitalism. Around the world, natural disasters—including the Indian Ocean tsunami in 2004 and Hurricane Katrina the following year—have entrenched this concept, whereby crises create a blank sheet ready to be exploited by Big Business. It can happen even where ownership is clear. In post-Katrina New Orleans, destroyed public schools, housing, and health care facilities were replaced by private alternatives. In effectively commercializing the

response, financial interests clashed with humanitarian goals. Something similar is now happening in the Philippines.



After Yolanda, the Philippine government enlisted the help of influential private firms to lead the recovery effort. Tellingly, those that secured development partners were mostly urbanized areas or strategic locations for transport and other investments, while remote municipalities found it harder to attract help. In the city of Tacloban, the epicenter of Yolanda, previously thriving communities were declared “no-build zones” as they were deemed too dangerous for human habitation. Instead, retail shops and strip malls sprang up.

If alternative housing was provided, it was typically set back many miles from the coast—while seemingly safer, it was impractical for those making a living at sea. “One of the fundamental things that I see anger expressed over is lack of consultation in terms of the response to storms and how people are relocated,” says Devlin.

In 2023, Devlin released *Asog*, a black comedy set amid a real Visayan community still struggling from the social and economic fallout of Yolanda. The film features residents of Sicogon Island, some 6,000 of whom were subjected to a poststorm land grab perpetrated by Ayala Land Inc. to build a luxury resort. Following *Asog*’s success on the festival circuit, Ayala eventually started listening to residents’ demands and has agreed to pay \$5.1 million in reparations to 784 displaced families.

Most of the cash has been used to build 474 new storm-resistant homes within easy reach of the ocean. Still, the local community continues to fight with Ayala over the deeds. “Ayala has delivered just a portion of what they committed to,” Amelia Dela Cruz, president of the Federation of Sicogon Island Farmers Fisherfolks Association (FESIFFA), said in a statement. “We won’t give up until they fully comply with the agreement they signed and we have been given the titles to our land.” (Ayala Land Inc. did not respond to repeated requests for comment from TIME.) It’s a remarkable victory of society’s poorest over entrenched corporate interests.

The Philippines has also become a leader in securing legal protections for communities displaced by climate change. In September, lawmakers for the Bangsamoro Autonomous Region in Muslim Mindanao—a swath of the nation’s second largest island boasting over 2,000 miles of coastline with rich fishing waters—passed a Rights of Internally Displaced Persons Act to

safeguard people's access to basic necessities, health care, education, employment, cultural practices, freedom of movement, and popular representation.

The law is the first of its kind in the Philippines and one of only a handful worldwide. While refugees have specific charters governing their rights, including the 1951 U.N. Refugee Convention, people displaced within their own borders still technically enjoy all their national protections, as well as those enshrined by international human-rights and humanitarian law. However, in reality they often slip through the cracks. "Displacement has been a painful reality in our homeland," Bangsamoro Government Chief Minister Ahod Balawag Ebrahim said upon the law's passing. "But today, we declare that the Bangsamoro will no longer be a region where displacement defines our people's lives."

The need to instill resilience in communities is key—and remains an ongoing debate. Regions across the Philippines have begun building towering seawalls to protect against storm surges, though many locals doubt their efficacy. Tacloban residents have criticized the fact that their new seawall is shorter than the storm surge from Yolanda. And if the walls are breached, the fear is these concrete perimeters may impede receding floodwaters and increase the chance of drownings and destruction.





Half an hour's drive from the Reyes family in northern Aurora, Lucy Faner Ruiz also had her home destroyed in last winter's storms and now resides with her son. The 68-year-old retired teacher believes a half-built seawall 200 m from her home exacerbated the damage by retaining the floodwater and preventing it from draining away. "I won't rebuild until the seawall is completed," she says, standing amid the splintered wood and corrugated-iron scraps of her toppled home.

Others favor natural alternatives to seawalls. Standing in gum boots by the lapping water of northern Luzon's Casiguran Sound, Jose Bitong stabs the mud with a metal spear, pumps his arm to widen the hole, and then thrusts in a mangrove seedling. It's a routine Bitong and his small army of volunteers at the Casiguran Mangrove Rehabilitation and Protection Organization have repeated more than a million times since 1996, helping to regreen over 1,160 acres of coastline.

Aside from acting as natural barriers against storms and floods, mangroves reduce erosion while providing vital habitats for aquatic species that help

replenish fish stocks. In addition, mangroves and coastal wetlands sequester carbon at rates 10 times that of mature tropical forests. “My goal is to plant as many mangroves as possible for climate-change mitigation,” says Bitong, who operates two nurseries that cultivate 20,000 mangrove seedlings for his own organization and to donate to others.

It’s not the only way local people are taking charge of their future. In the face of depleted fish stocks, younger coastal residents—aided by foreign and domestic NGOs—are leading the charge in trying to diversify into previously shunned species and develop new revenue streams, like cultivating seaweed for export.

On Sicogon Island, once the Ayala compensation was announced, FESIFFA could’ve just congratulated themselves and waited for their new homes. Instead, they insisted that local people join the building work. That way, islanders can learn new trades and take charge of future renovations and construction, enhancing capacity while keeping more money inside the community. “It’s so impressive and just a testament to allowing communities to really envision and lead solutions to these disasters,” says Devlin. “They understand their situations better than anyone else.”



It's for this reason that aid groups like Oxfam Pilipinas concentrate on targeted cash donations for vulnerable families to use on housing, livelihood tools, or education as they see fit. In the 2024–2025 financial year, Oxfam Pilipinas spent over \$4.5 million toward humanitarian interventions, around half in cash for 189,807 individuals belonging to 37,961 households, including the Reyes, Ruiz, and Pioquinto families.

Few want to rely on a dilatory and distracted state. When TIME visited these communities, campaigning was in full swing for May's Philippines general election, and seemingly every pillar and beam had been festooned with party colors. In absurdist irony, even the Reyes family's shack had not escaped crass political adornment. "Two candidates visited and asked if they could stick up their posters," shrugs Noemi, glancing forlornly at the coiffured hair and beaming smiles stapled overhead. "But neither said they would help us."

Help is desperately needed—and fast. Our mid-April visit was only the third occasion that Marionito had managed to take his boat out this year, owing to treacherous, churning currents left over from the winter storms. Instead, he's

been working as a day laborer cutting grass and planting crops on a nearby farm. Now he has only until the returning monsoon renders fishing too dangerous in August to earn sufficient cash to rebuild their home. Noemi is doing her best to contribute. After preparing breakfast for her kids, she trudges to the wreckage of their former house to collect palm fronds to bundle into brooms, which she then sells for 12 pesos, or 22¢. “Working from morning until afternoon, I can make 10 brooms,” she says. In every way, the Reyes family feels their lives drifting farther away from the ocean.

Asked whether he wants his kids to follow in his footsteps, Marionito doesn’t hesitate. “Never,” he says, gazing out at the deep blue. “The fisherman’s life is full of uncertainty.” And one fighting a relentlessly rising tide.

Campbell and de Guzman reported this story out of the Philippines.

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The Orb Will See You Now

Perrigo is a correspondent at TIME, based in the London bureau. He covers the tech industry, focusing on the companies reshaping our world in strange and unexpected ways. His investigation '[Inside Facebook's African Sweatshop](#)' was a finalist for the 2022 Orwell Prize.



Once again, Sam Altman wants to show you the future. The CEO of OpenAI is standing on a sparse stage in San Francisco, preparing to reveal his next move to an attentive crowd. “We needed some way for identifying, authenticating humans in the age of AGI,” Altman explains, referring to artificial general intelligence. “We wanted a way to make sure that humans stayed special and central.”

The solution Altman came up with is looming behind him. It's a white sphere about the size of a beach ball, with a camera at its center. The company that makes it, known as Tools for Humanity, calls this mysterious device the Orb. Stare into the heart of the plastic-and-silicon globe and it will map the unique furrows and ciliary zones of your iris. Seconds later, you'll receive inviolable proof of your humanity: a 12,800-digit binary number, known as an iris code, sent to an app on your phone. At the same time, a packet of cryptocurrency called Worldcoin, worth approximately \$42, will be transferred to your digital wallet—your reward for becoming a “verified human.”

Altman co-founded Tools for Humanity in 2019 as part of a suite of companies he believed would reshape the world. Once the tech he was developing at OpenAI passed a certain level of intelligence, he reasoned, it would mark the end of one era on the Internet and the beginning of another, in which AI became so advanced, so *human-like*, that you would no longer be able to tell whether what you read, saw, or heard online came from a real person. When that happened, Altman imagined, we would need a new kind of online infrastructure: a human-verification layer for the Internet, to distinguish real people from the proliferating number of bots and AI “agents.”

And so Tools for Humanity set out to build a global “proof-of-humanity” network. It aims to verify 50 million people by the end of 2025; ultimately its goal is to sign up every single human being on the planet. The free crypto serves as both an incentive for users to sign up, and also an entry point into what the company hopes will become the world’s largest financial network, through which it believes “double-digit percentages of the global economy” will eventually flow. Even for Altman, these missions are audacious. “If this really works, it’s like a fundamental piece of infrastructure for the world,” Altman tells TIME in a video interview from the passenger seat of a car a few days before his April 30 keynote address.



The project's goal is to solve a problem partly of Altman's own making. In the near future, he and other tech leaders say, advanced AIs will be imbued with *agency*: the ability to not just respond to human prompting, but to take actions independently in the world. This will enable the creation of AI coworkers that can drop into your company and begin solving problems; AI tutors that can adapt their teaching style to students' preferences; even AI doctors that can diagnose routine cases and handle scheduling or logistics. The arrival of these virtual agents, their venture capitalist backers predict, will turbocharge our productivity and unleash an age of material abundance.

[video id=vbijlDAM autostart="viewable"]

But AI agents will also have cascading consequences for the human experience online. “As AI systems become harder to distinguish from people, websites may face difficult trade-offs,” says a recent paper by

researchers from 25 different universities, nonprofits, and tech companies, including OpenAI. “There is a significant risk that digital institutions will be unprepared for a time when AI-powered agents, including those leveraged by malicious actors, overwhelm other activity online.” On social-media platforms like X and Facebook, bot-driven accounts are amassing billions of views on AI-generated content. In April, the foundation that runs Wikipedia disclosed that AI bots scraping their site were making the encyclopedia too costly to sustainably run. Later the same month, researchers from the University of Zurich found that AI-generated comments on the subreddit /r/ChangeMyView were up to six times more successful than human-written ones at persuading unknowing users to change their minds.

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The arrival of agents won't only threaten our ability to distinguish between authentic and AI content online. It will also challenge the Internet's core business model, online advertising, which relies on the assumption that ads are being viewed by humans. "The Internet will change very drastically sometime in the next 12 to 24 months," says Tools for Humanity CEO Alex Blania. "So we have to succeed, or I'm not sure what else would happen."

For four years, Blania's team has been testing the Orb's hardware abroad. Now the U.S. rollout has arrived. Over the next 12 months, 7,500 Orbs will be arriving in dozens of American cities, in locations like gas stations, bodegas, and flagship stores in Los Angeles, Austin, and Miami. The project's founders and fans hope the Orb's U.S. debut will kickstart a new phase of growth. The San Francisco keynote was titled: "At Last."

It's not clear the public appetite matches the exultant branding. Tools for Humanity has "verified" just 12 million humans since mid 2023, a pace Blania concedes is well behind schedule. Few online platforms currently support the so-called "World ID" that the Orb bestows upon its visitors, leaving little to entice users to give up their biometrics beyond the lure of free crypto. Even Altman isn't sure whether the whole thing can work. "I can see [how] this becomes a fairly mainstream thing in a few years," he says. "Or I can see that it's still only used by a small subset of people who think about the world in a certain way."



Yet as the Internet becomes overrun with AI, the creators of this strange new piece of hardware are betting that everybody in the world will soon want—or need—to visit an Orb. The biometric code it creates, they predict, will become a new type of digital passport, without which you might be denied passage to the Internet of the future, from dating apps to government services. In a best-case scenario, World ID could be a privacy-preserving way to fortify the Internet against an AI-driven deluge of fake or deceptive content. It could also enable the distribution of universal basic income (UBI)—a policy that Altman has previously touted—as AI automation transforms the global economy. To examine what this new technology might mean, I reported from three continents, interviewed 10 Tools for Humanity executives and investors, reviewed hundreds of pages of company documents, and “verified” my own humanity.

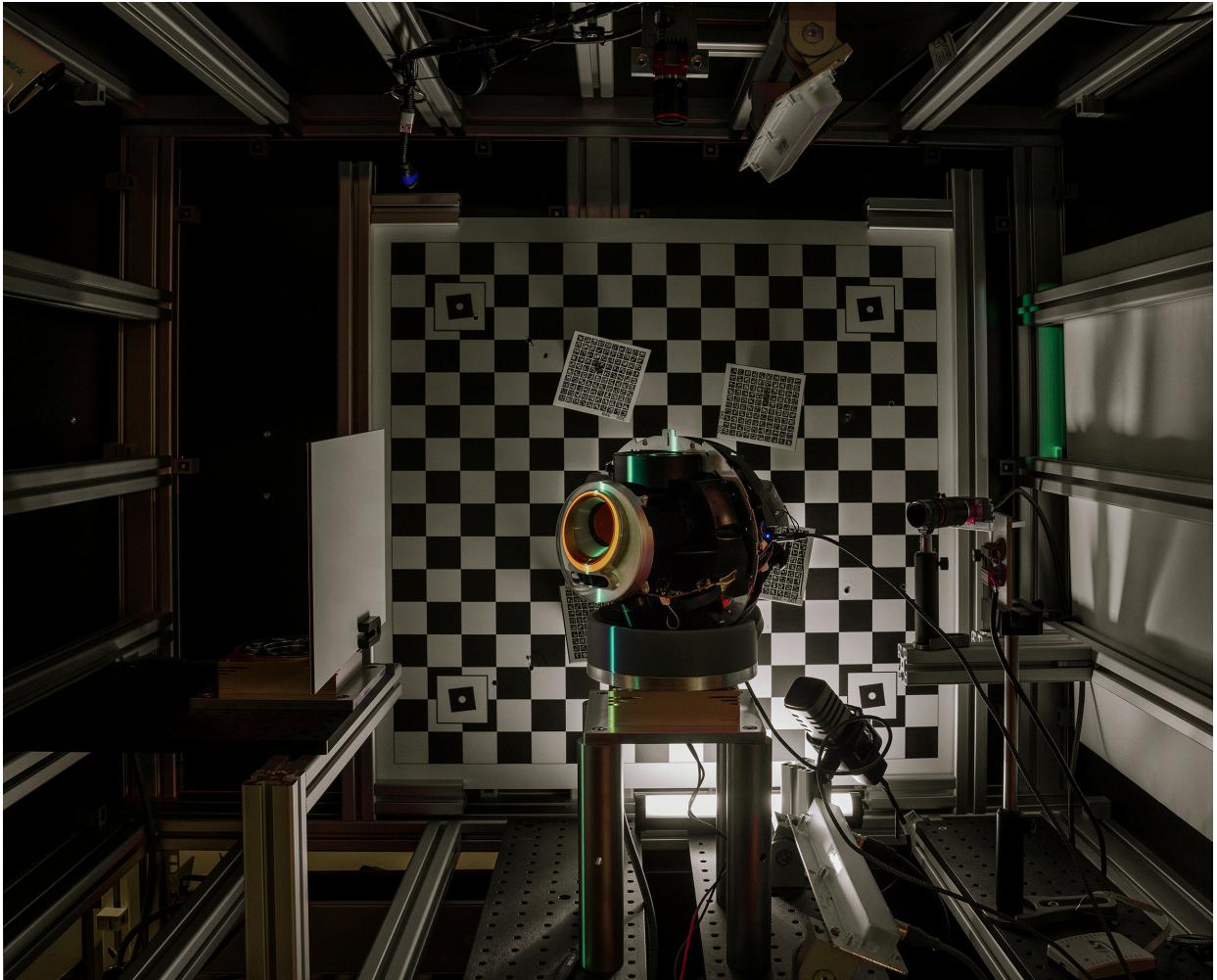
The Internet will inevitably need some kind of proof-of-humanity system in the near future, says Divya Siddarth, founder of the nonprofit Collective Intelligence Project. The real question, she argues, is whether such a system will be centralized—“a big security nightmare that enables a lot of

surveillance”—or privacy-preserving, as the Orb claims to be. Questions remain about Tools for Humanity’s corporate structure, its yoking to an unstable cryptocurrency, and what power it would concentrate in the hands of its owners if successful. Yet it’s also one of the only attempts to solve what many see as an increasingly urgent problem. “There are some issues with it,” Siddarth says of World ID. “But you can’t preserve the Internet in amber. Something in this direction is necessary.”

In March, I met Blania at Tools for Humanity’s San Francisco headquarters, where a large screen displays the number of weekly “Orb verifications” by country. A few days earlier, the CEO had attended a \$1 million-per-head dinner at Mar-a-Lago with President Donald Trump, whom he credits with clearing the way for the company’s U.S. launch by relaxing crypto regulations. “Given Sam is a very high profile target,” Blania says, “we just decided that we would let other companies fight that fight, and enter the U.S. once the air is clear.”

As a kid growing up in Germany, Blania was a little different than his peers. “Other kids were, like, drinking a lot, or doing a lot of parties, and I was just building a lot of things that could potentially blow up,” he recalls. At the California Institute of Technology, where he was pursuing research for a masters degree, he spent many evenings reading the blogs of startup gurus like Paul Graham and Altman. Then, in 2019, Blania received an email from Max Novendstern, an entrepreneur who had been kicking around a concept with Altman to build a global cryptocurrency network. They were looking for technical minds to help with the project.

Over cappuccinos, Altman told Blania he was certain about three things. First, smarter-than-human AI was not only possible, but inevitable—and it would soon mean you could no longer assume that anything you read, saw, or heard on the Internet was human-created. Second, cryptocurrency and other decentralized technologies would be a massive force for change in the world. And third, scale was essential to any crypto network’s value.



The goal of Worldcoin, as the project was initially called, was to combine those three insights. Altman took a lesson from PayPal, the company co-founded by his mentor Peter Thiel. Of its initial funding, PayPal spent less than \$10 million actually building its app—but pumped an additional \$70 million or so into a referral program, whereby new users and the person who invited them would each receive \$10 in credit. The referral program helped make PayPal a leading payment platform. Altman thought a version of that strategy would propel Worldcoin to similar heights. He wanted to create a new cryptocurrency and give it to users as a reward for signing up. The more people who joined the system, the higher the token’s value would theoretically rise.

Since 2019, the project has raised \$244 million from investors like Coinbase and the venture capital firm Andreessen Horowitz. That money paid for the \$50 million cost of designing the Orb, plus maintaining the software it runs

on. The total market value of all Worldcoins in existence, however, is far higher—around \$12 billion. That number is a bit misleading: most of those coins are not in circulation and Worldcoin’s price has fluctuated wildly. Still, it allows the company to reward users for signing up at no cost to itself. The main lure for investors is the crypto upside. Some 75% of all Worldcoins are set aside for humans to claim when they sign up, or as referral bonuses. The remaining 25% are split between Tools for Humanity’s backers and staff, including Blania and Altman. “I’m really excited to make a lot of money,” Blania says.

From the beginning, Altman was thinking about the consequences of the AI revolution he intended to unleash. (On May 21, he announced plans to team up with famed former Apple designer Jony Ive on a new AI personal device.) A future in which advanced AI could perform most tasks more effectively than humans would bring a wave of unemployment and economic dislocation, he reasoned. Some kind of wealth redistribution might be necessary. In 2016, he partially funded a study of basic income, which gave \$1,000 per-month handouts to low-income individuals in Illinois and Texas. But there was no single financial system that would allow money to be sent to everybody in the world. Nor was there a way to stop an individual human from claiming their share twice—or to identify a sophisticated AI pretending to be human and pocketing some cash of its own. In 2023, Tools for Humanity raised the possibility of using the network to redistribute the profits of AI labs that were able to automate human labor. “As AI advances,” it said, “fairly distributing access and some of the created value through UBI will play an increasingly vital role in counteracting the concentration of economic power.”

Blania was taken by the pitch, and agreed to join the project as a co-founder. “Most people told us we were very stupid or crazy or insane, including Silicon Valley investors,” Blania says. At least until ChatGPT came out in 2022, transforming OpenAI into one of the world’s most famous tech companies and kickstarting a market bull-run. “Things suddenly started to make more and more sense to the external world,” Blania says of the vision to develop a global “proof-of-humanity” network. “You have to imagine a world in which you will have very smart and competent systems somehow flying through the Internet with different goals and ideas of what they want to do, and us having no idea anymore what we’re dealing with.”

After our interview, Blania's head of communications ushers me over to a circular wooden structure where eight Orbs face one another. The scene feels like a cross between an Apple Store and a ceremonial altar. "Do you want to get verified?" she asks. Putting aside my reservations for the purposes of research, I download the World App and follow its prompts. I flash a QR code at the Orb, then gaze into it. A minute or so later, my phone buzzes with confirmation: I've been issued my own personal World ID and some Worldcoin.



While I stared into the Orb, several complex procedures had taken place at once. A neural network took inputs from multiple sensors—an infrared

camera, a thermometer—to confirm I was a living human. Simultaneously, a telephoto lens zoomed in on my iris, capturing the physical traits within that distinguish me from every other human on Earth. It then converted that image into an iris code: a numerical abstraction of my unique biometric data. Then the Orb checked to see if my iris code matched any it had seen before, using a technique allowing encrypted data to be compared without revealing the underlying information. Before the Orb deleted my data, it turned my iris code into several derivative codes—none of which on its own can be linked back to the original—encrypted them, deleted the only copies of the decryption keys, and sent each one to a different secure server, so that future users' iris codes can be checked for uniqueness against mine. If I were to use my World ID to access a website, that site would learn nothing about me except that I'm human. The Orb is open-source, so outside experts can examine its code and verify the company's privacy claims. "I did a colonoscopy on this company and these technologies before I agreed to join," says Trevor Traina, a Trump donor and former U.S. ambassador to Austria who now serves as Tools for Humanity's chief business officer. "It is the most privacy-preserving technology on the planet."

Only weeks later, when researching what would happen if I wanted to delete my data, do I discover that Tools for Humanity's privacy claims rest on what feels like a sleight of hand. The company argues that in modifying your iris code, it has "effectively anonymized" your biometric data. If you ask Tools for Humanity to delete your iris codes, they will delete the one stored on your phone, but not the derivatives. Those, they argue, are no longer your personal data at all. But if I were to return to an Orb after deleting my data, it would still recognize those codes as uniquely mine. Once you look into the Orb, a piece of your identity remains in the system forever.

If users could truly delete that data, the premise of one ID per human would collapse, Tools for Humanity's chief privacy officer Damien Kieran tells me when I call seeking an explanation. People could delete and sign up for new World IDs after being suspended from a platform. Or claim their Worldcoin tokens, sell them, delete their data, and cash in again.

This argument fell flat with European Union regulators in Germany, who recently declared that the Orb posed "fundamental data protection issues" and ordered the company to allow European users to fully delete even their

anonymized data. (Tools for Humanity has appealed; the regulator is now reassessing the decision.) “Just like any other technology service, users cannot delete data that is not personal data,” Kieran said in a statement. “If a person could delete anonymized data that can’t be linked to them by World or any third party, it would allow bad actors to circumvent the security and safety that World ID is working to bring to every human.”

On a balmy afternoon this spring, I climb a flight of stairs up to a room above a restaurant in an outer suburb of Seoul. Five elderly South Koreans tap on their phones as they wait to be “verified” by the two Orbs in the center of the room. “We don’t really know how to distinguish between AI and humans anymore,” an attendant in a company t-shirt explains in Korean, gesturing toward the spheres. “We need a way to verify that we’re human and not AI. So how do we do that? Well, humans have irises, but AI doesn’t.”

The attendant ushers an elderly woman over to an Orb. It bleeps. “Open your eyes,” a disembodied voice says in English. The woman stares into the camera. Seconds later, she checks her phone and sees that a packet of Worldcoin worth 75,000 Korean won (about \$54) has landed in her digital wallet. Congratulations, the app tells her. You are now a verified human.



A couple dozen Orbs have been available in South Korea since 2023, verifying roughly 55,000 people. Now Tools for Humanity is redoubling its efforts there. At an event in a traditional wooden *hanok* house in central Seoul, an executive announces that 250 Orbs will soon be dispersed around the country—with the aim of verifying 1 million Koreans in the next 12 months. South Korea has high levels of smartphone usage, crypto and AI adoption, and Internet access, while average wages are modest enough for the free Worldcoin on offer to still be an enticing draw—all of which makes it fertile testing ground for the company’s ambitious global expansion. Yet things seem off to a slow start. In a retail space I visited in central Seoul, Tools for Humanity had constructed a wooden structure with eight Orbs facing each other. Locals and tourists wander past looking bemused; few volunteer themselves up. Most who do tell me they are crypto enthusiasts who came intentionally, driven more by the spirit of early adoption than the free coins.

The next day, I visit a coffee shop in central Seoul where a chrome Orb sits unassumingly in one corner. Wu Ruijun, a 20-year-old student from China, strikes up a conversation with the barista, who doubles as the Orb’s operator. Wu was invited here by a friend who said both could claim free cryptocurrency if he signed up. The barista speeds him through the process. Wu accepts the privacy disclosure without reading it, and widens his eyes for the Orb. Soon he’s verified. “I wasn’t told anything about the privacy policy,” he says on his way out. “I just came for the money.”

As Altman’s car winds through San Francisco, I ask about the vision he laid out in 2019: that AI would make it harder for us to trust each other online. To my surprise, he rejects the framing. “I’m much more [about] like: what is the good we can create, rather than the bad we can stop?” he says. “It’s not like, ‘Oh, we’ve got to avoid the bot overrun’ or whatever. It’s just that we can do a lot of special things for humans.”

It’s an answer that may reflect how his role has changed over the years. Altman is now the chief public cheerleader of a \$300 billion company that’s touting the transformative utility of AI agents. The rise of agents, he and others say, will be a boon for our quality of life—like having an assistant on hand who can answer your most pressing questions, carry out mundane

tasks, and help you develop new skills. It's an optimistic vision that may well pan out. But it doesn't quite fit with the prophecies of AI-enabled infopocalypse that Tools for Humanity was founded upon.

Altman waves away a question about the influence he and other investors stand to gain if their vision is realized. Most holders, he assumes, will have already started selling their tokens—too early, he adds. “What I think *would* be bad is if an early crew had a lot of control over the protocol,” he says, “and that’s where I think the commitment to decentralization is so cool.” Altman is referring to the World Protocol, the underlying technology upon which the Orb, Worldcoin, and World ID all rely. Tools for Humanity is developing it, but has committed to giving control to its users over time—a process they say will prevent power from being concentrated in the hands of a few executives or investors. Tools for Humanity would remain a for-profit company, and could levy fees on platforms that use World ID, but other companies would be able to compete for customers by building alternative apps—or even alternative Orbs.

The plan draws on ideas that animated the crypto ecosystem in the late 2010s and early 2020s, when evangelists for emerging blockchain technologies argued that the centralization of power—especially in large so-called “Web 2.0” tech companies—was responsible for many of the problems plaguing the modern Internet. Just as decentralized cryptocurrencies could reform a financial system controlled by economic elites, so too would it be possible to create decentralized organizations, run by their members instead of CEOs. How such a system might work in practice remains unclear. “Building a community-based governance system,” Tools for Humanity says in a 2023 white paper, “represents perhaps the most formidable challenge of the entire project.”

Altman has a pattern of making idealistic promises that shift over time. He founded OpenAI as a nonprofit in 2015, with a mission to develop AGI safely and for the benefit of all humanity. To raise money, OpenAI restructured itself as a for-profit company in 2019, but with overall control still in the hands of its nonprofit board. Last year, Altman proposed yet another restructure—one which would dilute the board’s control and allow more profits to flow to shareholders. Why, I ask, should the public trust Tools for Humanity’s commitment to freely surrender influence and power?

“I think you will just see the continued decentralization via the protocol,” he says. “The value here is going to live in the network, and the network will be owned and governed by a lot of people.”

Altman talks less about universal basic income these days. He recently mused about an alternative, which he called “universal basic compute.” Instead of AI companies redistributing their profits, he seemed to suggest, they could instead give everyone in the world fair access to super-powerful AI. Blania tells me he recently “made the decision to stop talking” about UBI at Tools for Humanity. “UBI is one potential answer,” he says. “Just giving [people] access to the latest [AI] models and having them learn faster and better is another.” Says Altman: “I still don’t know what the right answer is. I believe we should do a better job of distribution of resources than we currently do.”

When I probe the question of why people should trust him, Altman gets irritated. “I understand that you hate AI, and that’s fine,” he says. “If you want to frame it as the downside of AI is that there’s going to be a proliferation of very convincing AI systems that are pretending to be human, and we need ways to know what is really human-authorized versus not, then yeah, I think you can call that a downside of AI. It’s not how I would naturally frame it.”

The phrase *human-authorized* hints at a tension between World ID and OpenAI’s plans for AI agents. An Internet where a World ID is required to access most services might impede the usefulness of the agents that OpenAI and others are developing. So Tools for Humanity is building a system that would allow users to delegate their World ID to an agent, allowing the bot to take actions online on their behalf, according to Tiago Sada, the company’s chief product officer. “We’ve built everything in a way that can be very easily delegatable to an agent,” Sada says. It’s a measure that would allow humans to be held accountable for the actions of their AIs. But it suggests that Tools for Humanity’s mission may be shifting beyond simply proving humanity, and toward becoming the infrastructure that enables AI agents to proliferate with human authorization. World ID doesn’t tell you whether a piece of content is AI-generated or human-generated; all it tells you is whether the account that posted it is a human or a bot. Even in a world

where everybody had a World ID, our online spaces might still be filled with AI-generated text, images, and videos.

As I say goodbye to Altman, I'm left feeling conflicted about his project. If the Internet is going to be transformed by AI agents, then some kind of proof-of-humanity system will almost certainly be necessary. Yet if the Orb becomes a piece of Internet infrastructure, it could give Altman—a beneficiary of the proliferation of AI content—significant influence over a leading defense mechanism against it. People might have no choice but to participate in the network in order to access social media or online services.

I thought of an encounter I witnessed in Seoul. In the room above the restaurant, Cho Jeong-yeon, 75, watched her friend get verified by an Orb. Cho had been invited to do the same, but demurred. The reward wasn't enough for her to surrender a part of her identity. "Your iris is uniquely yours, and we don't really know how it might be used," she says. "Seeing the machine made me think: are we becoming machines instead of humans now? Everything is changing, and we don't know how it'll all turn out."

—With reporting by Stephen Kim/Seoul. *This story was supported by Tarbell Grants.*

Correction, May 30

The original version of this story misstated the market capitalization of Worldcoin if all coins were in circulation. It is \$12 billion, not \$1.2 billion.

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| [Section menu](#) | [Main menu](#) |

Ukraine's Drone Strikes Against Russia Could Become the Global Norm

Shuster is a senior correspondent at TIME. He covers international affairs, with a focus on Russia and Ukraine. For his first book, [*The Showman*](#), he reported inside Ukrainian President Volodymyr Zelensky's compound in Kyiv as the Russian invasion unfolded.



The drone factory in Kyiv had an enviable problem. It could make more combat drones than the Ukrainian military needs. The heavy ones, known as Vampires, can be assembled at a rate of 4,000 per month, the factory's founder told me on a tour of the facility in March. The smaller ones, similar to the drones Ukraine [used this weekend to devastate](#) Russia's bomber fleet, could be made many times faster, he said: roughly 4,000 per day.

All around us, the noise of the production line made it difficult to hear, as did the speaker system playing '80s music ("I just died in your arms

tonight...”). So I asked the founder to repeat himself: Did he just say 4,000 drones... per day? “Yeah, that’s at full capacity,” he said. “Right now we’re only making around half that.”

Sunday’s attack, which targeted Russian air bases as far away as Irkutsk, in eastern Siberia, employed a total of 117 kamikaze drones, according to [President Volodymyr Zelensky](#). Each of them costs around \$400 to produce, and they destroyed Russian aircraft worth billions. By Ukraine’s count, that would make this operation one of the most efficient, dollar for dollar, in the history of warfare. No doubt the operatives behind the strike deserve to take a bow. But once the Russian targets stop smoldering at their bases, it may be worth considering how such weapons will be used in the future, not only in Russia but around the world.

For the moment, the drones Ukraine produces remain inside the country, because the government has banned the export of weapons during the war. Once the war ends, those restrictions are likely to be lifted, and Ukrainian drones could appear on the global market in abundant supply. Last year, Ukraine produced more than two million combat drones of various types. This year, it’s on the way to making twice that many.

For the government in Kyiv, the foreign market for these weapons is a critical part of the plan to rebuild and rearm after the war. One lawmaker [estimated](#) last year that selling drones to other countries could earn Ukrainian manufacturers some \$20 billion, which could be reinvested into the domestic arms industry.

The founder of the factory I visited in March told me that he has already received purchase requests from several European countries, as well as Egypt, India and Pakistan. “They all know our drones work, because they’ve been tested in actual combat,” he says, asking not to be named for security reasons.

Once these drones become widely available, governments around the world may need to rethink their military doctrines, as well as their protocols for guarding high officials.

Last fall, an officer for Ukraine's military intelligence agency showed me a prototype for a new type of drone that had been used in numerous strikes inside Russia. It looked like a model airplane with an explosive shell attached to its belly, and the officer said it had a range of at least a thousand miles. He was clearly proud of the ingenuity that had gone into the drone's development.

But as an expert in security, he also wondered what would happen if these weapons end up in the wrong hands. "Protecting military objects is going to get a lot harder," he told me. "The usual strategies won't work."

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| [Section menu](#) | [Main menu](#) |

What We Know About the Boulder, Colorado Attack

Sutherland is a reporter at TIME, based in the London bureau.



Fifteen people were injured at an outdoor mall in Boulder, Colo., by a man police say attacked demonstrators with [makeshift incendiary devices and a flamethrower](#) while they were calling for the release of Israeli hostages in Gaza.

The suspect, identified by the FBI as 45-year-old [Mohamed Sabry Soliman](#), was arrested at the scene on Sunday and has been charged with 118 state-level criminal charges and a federal hate crime. Authorities are investigating the Pearl Street Mall attack as an act of terrorism. The Department of Justice [decried](#) it as a “needless act of violence, which follows recent attacks against Jewish Americans.”

President Donald Trump pledged in a Monday [post](#) on his Truth Social platform to prosecute the perpetrator “to the fullest extent of the Law.”

“Yesterday’s horrific attack in Boulder, Colorado, WILL NOT BE TOLERATED in the United States of America,” Trump wrote.

Special Agent in Charge of the FBI’s Denver field office, Mark Michalek, said in [a press conference on Sunday evening](#): “Attacks like this are becoming too common across the country, this is an example of how perpetrators of violence continue to threaten communities.”

[In a statement](#), Colorado Attorney General Phil Weiser said that the attack “appears to be a hate crime given the group that was targeted” and that the group was conducting one of its weekly meets.

Who is the suspected attacker?

Soliman, who has recently been living in Colorado Springs, is an Egyptian national who arrived in the U.S. on a non-immigrant B-2 visa in August 2022 that expired in February 2023, Department of Homeland Security Assistant Secretary Tricia McLaughlin said in a Monday [post](#) on X. She added that he filed for asylum in September 2022. “The Colorado terrorist attack suspect, Mohamed Soliman, is illegally in our country,” McLaughlin told TIME in a statement.

“He came in through Biden’s ridiculous Open Border Policy, which has hurt our Country so badly. He must go out under ‘TRUMP’ Policy,” Trump said of Soliman in his Truth Social post. “This is yet another example of why we must keep our Borders SECURE, and deport Illegal, Anti-American Radicals from our Homeland. My heart goes out to the victims of this terrible tragedy, and the Great People of Boulder, Colorado!”

According to the FBI’s Michalek, Soliman shouted “Free Palestine” during the attack.

Read More: [*Who Is the Suspect in the Colorado Attack?*](#)

According to the Associated Press, video from the scene showed Soliman holding two clear bottles with transparent liquid while he shouted at onlookers, and another video shows a witness shouting, “He’s right there. He’s throwing Molotov cocktails,” as an armed police officer approaches him.

Boulder Police Chief Stephen Redfearn said that the attack took place around 1:30 p.m. local time on Sunday, June 1, and that Soliman was taken to hospital with minor injuries.

“At this time it appears the perpetrator acted alone,” Michalek said at a Monday afternoon press conference. But he noted that authorities “do continue to investigate all possibilities and pursue all investigative leads.”

“If we uncover evidence that others knew of this attack or supported the subject in this attack, rest assured that we will aggressively move to hold them accountable to the fullest extent of the law,” he said.

Soliman faces 118 counts on the state level, including 28 counts of attempted first-degree murder, according to court documents. He has also been charged with a federal hate crime.

“The Department of Justice has swiftly charged the illegal alien perpetrator of this heinous attack with a federal hate crime and will hold him accountable to the fullest extent of the law. Our prayers are with the victims and our Jewish community across the world,” Attorney General Pam Bondi said in a statement.

An FBI affidavit supporting the hate crime charge says Soliman confessed to the attack after being taken into custody and told police he planned it for a year, targeting what he described as a “Zionist group.”

Acting U.S. Attorney for the District of Colorado J. Bishop Grewell said during Monday’s press conference that Soliman told authorities he had previously tried to buy a firearm, but was unable to because he is not a legal citizen and instead resorted to using Molotov cocktails.

“There were 16 unused Molotov cocktails within arm’s reach of the subject at the time of his arrest,” Dougherty said. “So there is no question that the first responders saved lives and prevented further victims from being injured.”

Soliman is next scheduled to appear in court for a preliminary hearing in the federal case on June 18. A preliminary hearing is set in the state case for July 15.

His wife and five children were detained by ICE on Tuesday, with the White House saying in a [post](#) on its official X account that they could be deported as soon as that night under expedited removal. A federal judge [temporarily blocked](#) their deportation in a Wednesday ruling. Hearings are set to be held in that case next week.

Who are the victims?

Fifteen people and one dog are believed to have been injured in the attack, Boulder County said in a [press release](#) on Thursday.

The victims include eight women and seven men with ages ranging from 25 to 88 years old. [Four men and four women](#) between the ages of 52 and 88 were hospitalized Sunday. The injuries were consistent with people being set on fire, [Redfearn said](#) that day, adding that one of the victims was in critical condition.

Read more: [What We Know About the Victims of the Colorado Attack](#)

The event calling for the release of hostages held by Hamas was part of [Run for Their Lives](#), non-violent running and walking events organized in communities around the world.

Run for Their Lives has two chapters in Colorado, plus 100 others across 30 U.S. states. [According to its website](#), it was started by a group of Israelis in the Bay Area of San Francisco alongside the Hostage and Missing Families Forum (#BringThemHomeNow).

The Boulder attack came almost two weeks after [two Israeli embassy staff were fatally shot](#) in Washington, D.C. while attending an event at the Capitol Jewish Museum. The suspect, Elias Rodriguez, told police after the shooting that he did it for Gaza, and “for Palestine.”

Antisemitism and political violence is [on the rise](#) across the U.S. [The FBI recorded](#) 1,989 incidents of anti-Jewish hate crimes in 2023, the last year for which data is available.

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| [Section menu](#) | [Main menu](#) |

Why ‘Hundred-Year’ Weather Events Are Happening More Than Once Every 100 Years

Kluger is an editor at large at TIME. He covers space, climate, and science. He is the author of 12 books, including [*Apollo 13*](#), which served as the basis for the 1995 film, and was nominated for an Emmy Award for TIME's series [*A Year in Space*](#).



Climate change is leading not only to droughts, wildfires, and extreme weather. It's also leading to oxymorons—at least when it comes to what are known as [hundred-year storms, floods, and other events](#).

Long-term weather forecasting—the kind that predicts conditions months or even years or decades in advance—is all about probabilities, factoring

together not only current conditions and trends, but the historical record. An area that has seen [floods in the past](#) when the spring was unusually rainy or tropical storms were unusually fierce, is likely to see them again if the same conditions recur. [Ditto the likelihood of severe storms](#) when the atmosphere is holding a lot of moisture and the oceans are atypically warm.

Environmental scientists have gotten so good at reading weather history that they can characterize some severe storms or floods as likely to occur in a given area only once in 100 years—or even 500 years or a thousand years. That's where the oxymoron comes in. As climate change leads to greater meteorological volatility, the one in 100—or 500 or 1,000—year events are occurring twice or three times or more in those windows. Since 1999, [there have been nine storms](#) along the North Carolina coast that qualify as hundred or thousand year events. From 2015 to 2019, one suburb of St. Louis [experienced three major floods](#), two of which met the criteria for hundred-year events. [One study](#) by the Montreal-based carbon removal project Deep Sky calculates that the frequency of deadly hurricanes has jumped 300%, with 100-year storms now forecast to occur once every 25 years.

Climate change is also redefining what qualifies as one of these rare and intense events. “In April, an extreme rainfall event hit the Mississippi Valley, including Arkansas, Mississippi, Kentucky, and Tennessee,” says climate scientist Andrew Pershing, chief program officer at [Climate Central](#), an advocacy and communications group. “Some of our colleagues at the World Weather Attribution group [did a study](#) and calculated that it was a 100-year event based on today’s climate, but without climate change it would have been more like a 500-year event.”

Making those kinds of calculations can take some doing—and a fair bit of data modeling—because climate unfolds over the course of millennia and modern weather and climate records barely go back a century. “Scientists first look at 30 years of data, 50 years of data and figure out how frequently these events occur,” says Pershing. “The challenge is that when you do that you’re using data from the past when it was around two degrees cooler than it is now. When you start to do the calculations for today’s climate, you find

that events that you might expect to happen once every hundred years might happen once every 20 years.”

The math here gets a little simpler. By definition, a hundred-year storm has a 1% likelihood of occurring in any one year; for a 500-year storm it's 0.2%; for a thousand years it's 0.1%. But every year the probability clock starts anew; if the 1% longshot comes in and a hundred-year storm occurs on the Carolina coast in 2025, that same area would typically have the same 1% chance in 2026—but climate change is making the likelihood even higher. “It's not like you can calendar one of these events and say you're cool for another 100 years,” says Pershing.

Driving the more frequent events is what Pershing describes as a “thirstier” atmosphere, one that is hotter and thus capable of holding more moisture. “We have a supercharged water cycle and that means that when you get a rain event it has a better chance of being a bigger event than it used to be,” says Pershing.

Some of those bigger events could be coming soon—in the form of hurricanes. On May 22, the National Oceanic and Atmospheric Administration (NOAA) [released its projections](#) for storm severity in the 2025 Atlantic hurricane season, which runs from June 1 to November 30. NOAA did not attempt to predict 100- or 500- or thousand-year events, but it does see trouble looming. The agency projects a 60% chance of an above-average hurricane season, a 30% chance of an average season, and just a 10% chance of below average. Across the six hurricane months, NOAA predicts 13 to 19 named storms—with winds of 39 mph or higher—up to 10 of which will likely develop into hurricanes with winds of 74 mph or more. Up to five of those could be major hurricanes—category 3, 4, or 5, with winds of 111 mph or more. And the impact could extend far beyond the coastal regions that are usually hardest hit.

“As we witnessed last year with significant inland flooding from hurricanes Helene [in September] and Debby [in August], the impacts of hurricanes can reach far beyond coastal communities,” said acting NOAA administrator Laura Grimm in a statement. Things could get dicey not only in the Atlantic, but in the Pacific as well. Already, [tropical storm Alvin is](#)

forming off the southwest coast of Mexico, two weeks ahead of the start of the eastern Pacific hurricane season.

In addition to hurricanes, floods, and storms, heat waves, droughts, and wildfires can be projected out over centuries. “A hotter atmosphere can hold more water, but if you squeeze that moisture out over a mountain range like what happens in the west, then you end up with a much drier air mass,” says Pershing. “The atmosphere then wants to suck the moisture out of the ground and so droughts get more severe.”

There’s no easy fix for a feverish atmosphere. In the short run, adaptation—dikes and levees to protect flood-prone cities, relocating residences away from eroding coasts—can help. In the longer run, shutting off the greenhouse emissions that created the problem in the first place is the best and most sustainable bet for limiting hundred-year storms to their hundred-year timelines. “We have to quit fossil fuels as fast as we can,” says Pershing. “This will give the climate a chance to stabilize and us a chance to adjust.”

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| [Section menu](#) | [Main menu](#) |

Family and Fans Pay Tribute to Phil Robertson, Outspoken Christian and Conservative Star of Duck Dynasty, After Death at 79

De Guzman is a reporter at TIME, based in the Singapore bureau. He covers the Asia-Pacific region and global overnight news.



“Don’t cry.” That’s how Phil Robertson, who found fame and fortune through his hunting-business empire and some controversy but also popularity for his outspoken religious and political beliefs, requested people respond to his death. “Dance, sing, but don’t cry when I die,” he [said](#) on a podcast with his son Jase in 2023 after undergoing back surgery.

The *Duck Dynasty* patriarch died at age 79 on Sunday after being diagnosed in 2024 with Alzheimer’s disease, his family announced in statements on social media.

Phil Robertson’s daughter-in-law Korie, who is married to another of Robertson’s four sons, Willie, said in a [Facebook post](#) on behalf of the family: “We celebrate today that our father, husband, and grandfather, Phil Robertson, is now with the Lord.” She quoted the Bible, writing of Phil Robertson: “He reminded us often of the words of Paul, ‘you do not grieve like those who have no hope. For we believe that Jesus died and rose again, and so we believe that God will bring with Jesus those who have fallen asleep in him.’”

“We know so many of you love him and have been impacted by his life,” the statement added. “We’re having a private service for now, but we’ll share details soon about a public celebration of his life.”

Jase Robertson [posted on X](#): “My dad has gone to be with the Lord today! He will be missed but we know he is in good hands, and our family is good because God is very good! We will see him again!” Phil Robertson’s granddaughter Sadie Robertson, daughter of Willie and Korie, [took to Instagram](#) to pay tribute. “One of the last things he said to me was ‘full strength ahead!’ Amen!”

Jase first publicly spoke about his father’s Alzheimer’s diagnosis, which he said was in its “early stages,” in a [December episode](#) of their podcast *Unashamed With the Robertson Family*. “According to the doctors, they’re sure that he has some sort of blood disease that’s causing all kinds of problems,” Jase said. “He’s just not doing well. He’s really struggling.” In an April 2 episode, Jase [gave an update](#), saying that his father’s status was “not good” and that he has since needed “some professional care.”

Robertson, a Louisiana-based college football player turned professional hunting entrepreneur, invented the Duck Commander duck call instrument in 1972 that went on to be the namesake product of a multimillion-dollar hunting gear company led by Robertson and his family.

Beginning in 1987, the family business extended into media with the direct-to-video series *Duckmen*. In 2012, A&E began airing what would become one of its most-famous programs, *Duck Dynasty*, which through 2017 followed the Robertson family and their business. The reality-television series has spawned a number of spinoffs, including *Duck Dynasty: The Revival*, which is [set](#) to center on Willie and Korie and their children and is expected to premiere this summer.

Robertson has also gained popularity for being unapologetic about his Christian faith and conservative views. In 2013, Robertson was [briefly suspended](#) by A&E after telling [GQ](#) when he was asked to describe sin: “Start with homosexual behavior and just morph out from there.” He added: “We never, ever judge someone on who’s going to heaven, hell. That’s the Almighty’s job. We just love ‘em, give ‘em the good news about Jesus—whether they’re homosexuals, drunks, terrorists. We let God sort ‘em out later, you see what I’m saying?”

Robertson has also been vocal about abortion, which he opposed, and he endorsed Republican candidates for local and national political office, including first backing Ted Cruz in 2016 before announcing his support for Donald Trump in [2016](#) and again in [2020](#).

“He loved Jesus & he was utterly fearless,” Sen. Cruz (R, Texas) said in a [post on X](#) remembering Robertson.

President Donald Trump’s son Don Jr., an avid hunter, [posted on Instagram](#) a photo with Robertson, whom he called “an absolute legend.” Trump Jr. shared an anecdote about meeting with Robertson. “It’s something I’ll never forget,” he said. “My condolences to Jase, [Willie] and the entire Robertson family our thoughts and prayers are with you. R.I.P.”

Robertson is survived by his wife since 1966 Marsha ‘Miss Kay’ Carroway; his sons Alan, Jase, Willie, and Jep; his [daughter from another relationship](#)

Phyllis; his brother and “[best friend](#)” Silas; and a number of grandchildren as well as many friends and supporters.



Since his passing was announced, social media sites have seen an outpouring of tributes for Robertson, particularly from politicians as well as conservative-media and religious figures.

House Speaker Mike Johnson (R, La.) [posted on X](#): “We’re praying for the Robertson family tonight & grateful for the extraordinary legacy of one of Louisiana’s favorite sons. We can’t know this side of Heaven how countless many people were impacted for eternity by Phil’s life & ministry.”

Republican Gov. Jeff Landry of Louisiana [posted on X](#) a photo of him with Robertson, whom he called “one of a kind” and “simply irreplaceable.”

“Phil Robertson was a living example of what God can do in all of our lives if we follow Him,” Republican Gov. Sarah Huckabee Sanders of Arkansas, who previously served as White House press secretary during Trump’s first

term, [posted on X](#). “He was a bright light for the world to see. Bryan and I are praying for the whole Robertson crew tonight.”

Rep. Chip Roy (R, Texas) also [paid tribute](#) to Robertson on X: “Phil is what makes America great. Faith in Jesus, hard work, happiness, family, and love of freedom. My daughter said ‘Mr. Robertson was our childhood!’ Indeed. God bless you and your great family.”

Rep. Marjorie Taylor Greene (R, Ga.) extended her condolences too. “I’m sorry to hear that Phil Robertson passed away,” Greene said in a [post on X](#). “Many prayers for his family.”

Former Housing and Urban Development Secretary Ben Carson and his wife Candy, in a [statement on X](#), described Robertson as “a man of deep faith, bold conviction, and unwavering love for his family.” Alongside a photo and anecdote, the statement added: “He was an American original who never backed down from the truth. His legacy of faith, family, and freedom will live on.”

“Phil Robertson was an American icon and an inspiring hero to millions of Americans,” said Turning Point USA founder and CEO Charlie Kirk in a [lengthy tribute](#) shared on X. “He was the real deal,” [posted](#) conservative radio host Eric Metaxas. “He was a breath of fresh air in a world that desperately needed more authenticity,” [posted](#) Blaze News host Jill Savage. “Legends never die,” [posted](#) conservative YouTuber Benny Johnson, alongside a video of a short speech Robertson gave at a Trump rally in 2019.

Jim Daly, president of the Christian, socially-conservative organization Focus on the Family, said in a [statement shared on X](#) that Robertson’s death represents “the glorious beginning of the eternal life he so fervently and faithfully preached and proclaimed.”

“We mourn his passing but celebrate his liberation from this world and all its challenges, including his Alzheimer’s disease,” Daly added. “Phil helped build a sporting empire and a ‘dynasty’ that seemed to focus on duck calls and other hunting products. In reality, Phil was more interested in calling all of us sinners to forge a personal relationship with Jesus Christ. He saw the

family of faith in the Lord as the one true dynasty that would never falter or fail.”

Franklin Graham, the president and CEO of the Billy Graham Evangelistic Association and president of the humanitarian aid organization Samaritan’s Purse, [posted on X](#): “Please join me in praying for Miss Kay and all of the Robertson family as Phil Robertson has passed away. Now he is in the presence of his Lord and Savior. I always appreciated that Phil stood firm with the Word of God and took every opportunity to talk about his faith in Jesus Christ. … There’s no question, he will be greatly missed.”

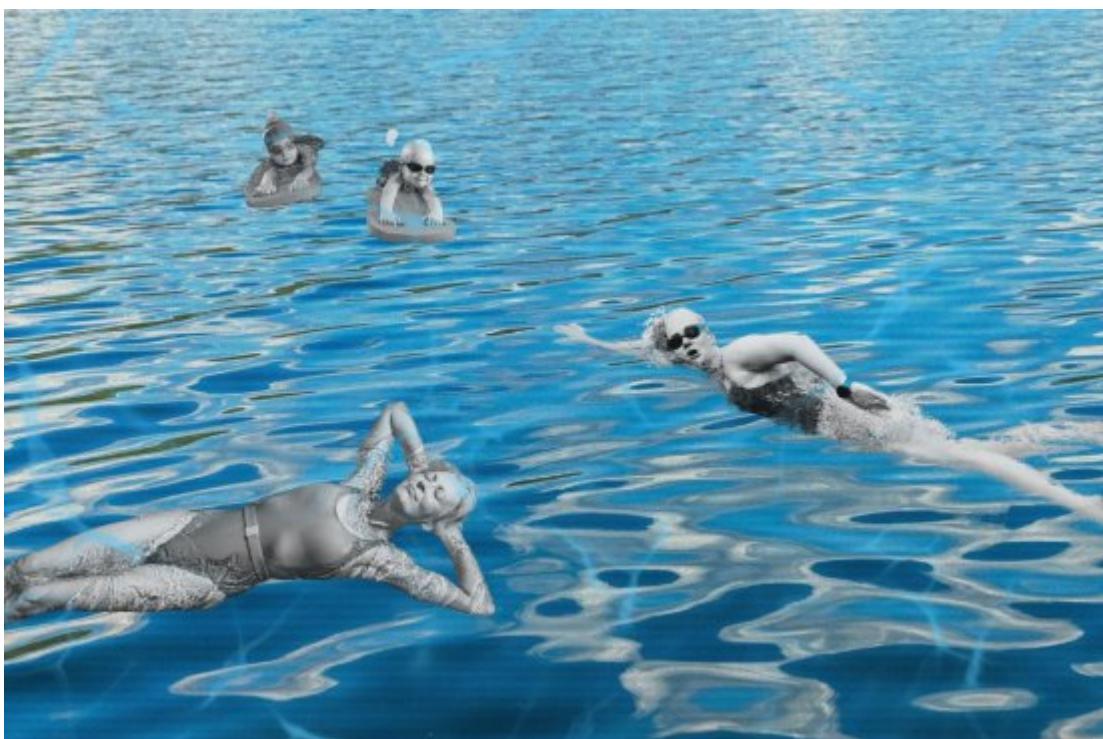
The Louisiana Tech University football program also shared a tribute to its alum, who in the late 1960s played as [starting quarterback](#) over the future NFL hall-of-famer Terry Bradshaw. “We are saddened to learn of the passing of former LA Tech quarterback, Phil Robertson. Our thoughts and prayers are with the Robertson family during this time,” the team’s X account [shared](#) alongside a photo of its pair of former stars. (Robertson has said that he turned down an offer during his junior year to go play for the Washington then-Redskins, often retelling that he chose a life of chasing ducks instead of chasing bucks.)

On [Reddit](#), users described Robertson as “an absolute pioneer” and a role model. “Such a life,” commented one user, “he chose passion over money. And in the end, found the money. RIP.”

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Be Careful Where You Swim This Summer

Haupt is a health and wellness editor at TIME. She covers happiness and actionable ways to live well.



That glistening swimming hole might look—and feel—refreshing on a sweltering day. But writhing in pain from stomach cramps, nausea, and vomiting? Staring at the bathroom ceiling instead of the blue, sunny sky? Not so much.

Jumping into even the prettiest and clearest rivers, lakes, creeks, and other natural bodies of water can expose you to a cesspool of unpleasant and invisible fellow swimmers—most commonly bacteria, viruses, and parasites. “These germs are microscopic, so you’re not going to be able to tell they’re there,” says Bill Sullivan, a professor of microbiology and

immunology at the Indiana University School of Medicine and author of [Pleased to Meet Me: Genes, Germs, and the Curious Forces That Make Us Who We Are](#). “Swimming is a great, fun activity—don’t get me wrong. But you do need to be mindful that there are dangers that lurk out there.”

That’s especially true for certain people. If you’re mostly healthy, you’ll fare better than some; if you’re exposed to bacteria or other nefarious germs, your body should recover fairly successfully. The people most susceptible to severe illness are “the very young, the very old, and those with preexisting conditions that weaken their immune system,” Sullivan says. “If you’re in one of those vulnerable populations, you should definitely reconsider swimming in questionable water.”

We asked experts what threats might be lurking in your favorite swimming hole, and how to stay safe.

The problem with inland water

Environmental scientists have a reliable way of monitoring the water quality at popular coastal beaches, often by taking samples on a daily or weekly basis. If bacteria levels surpass a certain threshold, they post an advisory online and put up signs that warn swimmers the water might be contaminated. “The problem with inland locations is that it’s hard to know where people are going to try to jump in,” says Rachel Noble, a professor in the Institute of Marine Science at the University of North Carolina who leads a laboratory that studies bacteria and viral pathogens in recreational and other types of water. Someone who’s kayaking at a local lake, for example, might make their way to a small island away from the main swimming area and decide to dive in to cool off.

Read More: [How to Spend Time Outside if You Hate Getting Sweaty](#)

Still, resources exist. There’s data available for many inland bodies of water, though monitoring is less frequent than at coastal spots. Where Noble lives in North Carolina, for example, she can pull up a [recreational water quality website](#) and review data—and a helpful map—from the last week,

six months, or year. Every state has a similar resource, she adds, and it's a good idea to check yours regularly.

The most common health threats

You might think of *E. coli* and *Salmonella* in relation to undercooked meat or tainted lettuce. But they're also the likeliest types of bacteria you'll encounter in a swimming hole, thanks to fecal contamination from humans or, more likely, animals, Sullivan says. Imagine livestock grazing in a tributary that feeds into the lake you're swimming in, for example. All it takes is one heavy rainstorm to push their manure and animal waste into the water. "It washes downstream to where people might be swimming," he says. If you end up with *E. coli* or *Salmonella*, you could experience potentially severe gastrointestinal symptoms—which sometimes get so bad, people land in the hospital with dehydration.

A bacteria called *Pseudomonas aeruginosa*, meanwhile, causes swimmer's ear, which can lead to ear pain, swelling, and discharge. "It's not an extremely dangerous infection, and sometimes it resolves on its own," Sullivan says. "Sometimes a shot of antibiotics will clear it right up, but it can still be a nuisance."

In addition to bacteria, rotavirus and norovirus could be lurking in the water. Both cause "rapid-onset" diarrhea and vomiting, Sullivan says. Norovirus is particularly contagious, he adds, and can survive outside of the body for one to two weeks. If you get one of these viruses, your symptoms will likely last a few miserable days.

Read More: [10 Weird Symptoms That Might Be Allergies](#)

Another threat, parasites, can cause longer-lasting distress. *Cryptosporidium*, which is excreted by cows, commonly contaminates natural bodies of water—and if you get sick, you'll experience watery diarrhea, stomach cramps, and vomiting. "If you have any reason to believe that cattle are near the body of water you're swimming in, that would give me pause as to whether I want to dip my toe into those waters," Sullivan

says. *Giardia*, which is shed in the feces of animals like beavers and muskrats, is also common and leads to similar symptoms.

Typically, people need pharmaceutical assistance to recover from parasites, Sullivan says, but there aren't as many treatments available for *Giardia* as there are *Cryptosporidium*. "You've usually just gotta ride it out, and it's a really unpleasant experience that lasts about one to two weeks," he says. Parasites tend to linger, especially if you're immunocompromised—and in addition to the physical symptoms, "there's a psychological element, in that there are these creepy things living inside you," he says.

Rarer but more extreme risks

You've probably seen headlines about the dramatic-sounding "brain-eating amoeba," or *Naegleria fowleri*—a parasite found in warm freshwater. It can enter swimmers' noses and then make its way to their brain, causing an infection called primary amebic meningoencephalitis that's almost always fatal. "It can feel scary because it's probably essentially everywhere, but it doesn't cause disease very often," says Dr. Daniel D. Rhoads, chair of the College of American Pathologists' microbiology committee, and section head of microbiology at the Cleveland Clinic. "I'm sure pretty much all of us have been exposed to it, but it doesn't usually cause a problem because it's physically challenging to get all the way into the brain just from swimming in water." When people do get infected, they almost always die within a week.

Read More: [How Well Will You Age? Check Your Grip Strength](#)

Meanwhile, global warming has [caused a spike](#) in "flesh-eating disease," more formally known as necrotizing fasciitis. It's caused by bacteria in saltwater or brackish water and eats away at soft tissue and muscles. "What happens is the bacteria get inside the body through a break in the skin—some kind of wound," Sullivan says. "Once it starts taking root, it happens pretty quickly. It causes extreme pain, and it looks like it's eating away at the flesh, but what's really happening is the bacteria is destroying muscle and nerves underneath the wound."

That prevents your immune cells from reaching the site where they would need to be to fight the bacteria—and keeps medicine from getting there, too. That's why the most common treatment is "either carving away the infected tissue or even amputating the limb," Sullivan says.

The path to infection

The most common way people swimming inland get sick is by swallowing the water. How much you consume matters: "If you swallow just a teeny-tiny bit, you might be able to get away with it," Sullivan says. "But if you swallow a good mouthful, there's a reasonable chance that's enough to make you sick."

Read More: [*When to Go to the Emergency Room vs. Urgent Care*](#)

Keeping your head above water can help reduce the likelihood of gulping down germs. But it's not foolproof. When people emerge from the water, their skin might be covered with bacteria or viruses. The next thing you know, they're chowing down on a ham sandwich or passing around bottles of water, and those germs are hopping from person to person. That's why you should always sanitize or wash your hands with soap and water after swimming, Sullivan says; if possible, rinsing off in an outdoor shower is a good idea, too.

When should you see a doctor? If you sense your gastrointestinal distress isn't typical, if you have a high fever, if your symptoms last beyond a few days, or if you see blood in your diarrhea, schedule an appointment, Rhoads says.

How to stay safe

If you're determined to swim in a river or lake, there are some ways to make the experience safer. Here's what experts recommend.

Heed posted warnings

Take signs about swimming risks and possible contamination seriously. “If somebody’s taking the time to provide health guidance, it’s worth listening to it,” Rhoads says. In addition to checking local water-quality reports, click over to your destination’s social-media account. Some parks, for example, post warnings about the water, especially after severe storms or if there’s been a sewage leak.

Use all of your senses

Most of the time, the water you’re swimming in won’t have any noticeable signs of what’s lurking beneath the surface. But if you do happen to detect a foul odor or notice a strange color in the water, stay out. Discoloration could indicate “there’s discharge from a pipe or a nearby golf course,” Noble says. “If you see a lot of cloudiness, or if a lake is otherwise clear blue and it looks brown and covered with algae, then the likelihood is that there’s some sort of runoff that’s getting to that location,” she says. “The runoff can contain things that make you sick, so use your senses.”

Pay attention to the weather

The risk of infection spikes in the aftermath of a storm. Heavy rain can wash all kinds of contaminants into the water: dog waste from nearby paths, debris, chemicals, human sewage, and more. It’s impossible to say exactly how long the risk remains elevated, Noble says, because many factors influence it. But if you notice active runoff—or rainwater flowing across the land into the water—it’s best to stay on dry land.

Opt for well-maintained areas

Always do a sweep of the area where you’re swimming to get a pulse on its cleanliness, Noble advises. Is there visible dog waste? Overflowing garbage cans? “If the trash cans aren’t regularly emptied, you can get a lot of birds in them, and those birds will defecate,” she says. “Then that feces will make its way into the water.”

Read More: [What to Wear When It’s Really Hot Outside](#)

While birds will naturally inhabit areas with swimming holes, poorly maintained garbage disposal makes it more likely they'll congregate in high numbers, and that can affect water quality.

Never drink the water

Whether you get thirsty kayaking down the river—or while you're biking and happen to pass a nice stream—do not drink the water, however tempting it may look. One of the classic case reports Rhoads hears about is people who spotted nice-looking water in a mountain stream and filled up their water bottles—not realizing there were beavers upstream going to the bathroom. Then, he says, they end up with a parasite.

Use ear plugs and nose plugs

Wearing ear plugs when you swim can help protect you from the bacteria that causes swimmer's ear. And [nose plugs](#) (sometimes called clips) act like "a clamp for the outside of the nose," Sullivan says, which can block water from entering your nostrils. The [U.S. Centers for Disease Control and Prevention recommends](#) employing them to help ward off serious infection.

Don't swim if you have open wounds

This can help protect you from flesh-eating bacteria, Sullivan says. You should also cover any cuts, scrapes, or fresh tattoos or piercings with a waterproof bandage, he advises. Stay away from sharp objects while you're swimming, too: "If there's a lot of rocks or shells, and they cut you while you're swimming, the flesh-eating bacteria can get into your body that way."

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The ‘Song of the Summer’ Is Dead. Thank God for That

[Crumpton](#) is a music, pop culture, and politics writer from Dallas. In her work—which can be found in outlets like *The Washington Post*, *The Wall Street Journal*, *Harper’s Bazaar*, The Guardian, NPR, and many other platforms—Crumpton writes about a range of topics from Black Queer advocacy to the underrepresented hip-hop scenes in the southern United States to pop analysis on releases like “WAP” and “Black Is King”



The “Song of the Summer” feels like a relic of the past. With the absence of music video programs, such as *Total Request Live* and *106 & Park*, and the decline in relevance of televised award shows, like the *MTV Video Music Awards*, the idea of a pop monoculture has not only ceased to exist but has also resulted in the loss of shared cultural touch points that connect (or sometimes, some might say, thrust upon) millions of Americans. In its

stead, a fragmented culture has come to exist, thanks to the rise of the curated algorithm and our social media feeds perfectly sculpted to fit our interests and experiences.

Yes, this has made us more—or at least feel more—disconnected. But is it all so bad? Perhaps, in the absence of the so-called “meritocracy” that once dictated culture, this abundance of choice for people to connect with music and pop culture could be a good thing.

Maybe that’s why the Song of the Summer feels like such a dinosaur. We’ve simply grown out of it.

In 2010, when *Billboard* created the [Songs of the Summer chart](#), the music trade publication explained that a song’s placement on the Songs of the Summer chart was [determined](#) by its “cumulative performance on the weekly streaming, airplay, and sales-based Hot 100 chart from Memorial Day through Labor Day.” This makes sense, given the time at which the chart was created. In 2010, [Facebook](#) was the most popular social media platform. The first-generation iPad had just been made available to the public. And “California Girls” by Katy Perry was the No. 1 song on the inaugural summer songs chart. True to form, that song was everywhere—you couldn’t escape it.

Fast forward to 2024, and the song of the summer was “I Had Some Help” by Post Malone featuring Morgan Wallen. The placement, which seems to be at odds with [Brat summer](#), the meteoric rise of [Chappell Roan](#), “[the bubblegum pop of Sabrina Carpenter](#),” and the historic [rap beef](#) of Drake and Kendrick Lamar, is an indicator of the chart’s inability to encapsulate the music that people are actually listening to. (“Not Like Us” reached No. 3 on *Billboard* in 2024, followed by “Espresso” at No. 4 and “Please, Please, Please” at No. 6, and “Good Luck Babe” at No. 11. “Like That”, the catalyst for the Drake-Kendrick beef landed at No. 15) This is partly because of TikTok, which has completely changed the way music streaming (and a song’s popularity) operates. And their [data](#) tells a different story.

Read More: [Maybe We Need Recession Pop Right Now](#)

Tinashe, Blood Orange, ian, Lay Bankz, GloRilla featuring Megan Thee Stallion, and Jordan Adetunji held the coveted top spots on TikTok's U.S. summer charts. With the exception of "Champagne Coast" by Blood Orange, which was released in 2011, the remaining top 10 songs were released in 2024. These music choices appear to be more reflective of how vastly the concept of the Song of the Summer has changed for music listeners. Americans are shifting towards [personalized music experiences](#) and [playlists](#), rather than being homogeneous music consumers.

For emergent artists, the move towards personalization is a double-edged sword. Now, artists are utilizing data from social media platforms to shape and develop how they connect with their audiences. But the unintended consequences of personalization sometimes means the absence of access points for artists to connect with new fans, unless they find their way onto a listener's algorithmic playlists. In the 1990s and 2000s, artists could be exposed to a larger audience via song placement on a prominent movie soundtrack or a guest appearance on a popular television show. The advent of TV and film streaming has, to some extent, destroyed that pipeline for musicians.

The only artists to claim worldwide dominance and control over music and pop culture that symbolize any semblance of a monoculture are [Beyoncé](#) and [Taylor Swift](#). In 2023, the Renaissance World Tour and The Eras Tour brought in [billions of dollars](#) to the economy. Throughout their respective decades-long careers, the two have appeared on film & tv, music video programs, performed at televised award shows, and released chart-topping songs that defined a summer. They might have greatly benefited from the monoculture, but in a multicultural world, where consumers and listeners are curating their own experiences, there is no need for uniformity.

In 1999, music critic Ann Powers described the [song of the summer](#) in *The New York Times* as "The singles that blare forth from car radios or boom boxes in parks and at the beach are the catcalls of a nation baring its collective skin. With the pop scene in a giddy, fast-moving mood, such quickly fading shout-outs seem more resonant than usual." But the collective skin of America is not homogeneous. The average American is

not going to Fire Island for a [tea dance](#) during the summertime. Or [Martha's Vineyard](#) to relax around the shores with their families.

There has never been a universal summertime experience in America. So how can one song feel right to *all* of us?

The only thing that connects Americans during the summer is the weather. The sunshine breeds an incessant need for a beach or proximity to a pool of water. The produce demands a picnic in the park with a sandwich to be eaten alongside chips and a pickle. The nonstop waves of heat usher in short shorts and bikini tops, in an attempt to regulate body temperature. Young Americans, out of school, utilize the season to declare their independence from school, while the employed are looking up the nearest happy hour to their place of work. These are the experiences that connect us. Maybe it is the right of every American to dictate what song feels right to them. And maybe sharing your respective summer songs with others is the connection point that America actually needs.

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| [Section menu](#) | [Main menu](#) |

The Meaning of Lee Jae-myung's Election Triumph

Ian Bremmer is a foreign affairs columnist and editor-at-large at TIME. He is the president of Eurasia Group, a political-risk consultancy, and GZERO Media, a company dedicated to providing intelligent and engaging coverage of international affairs. He teaches applied geopolitics at Columbia University's School of International and Public Affairs, and his most recent book is [The Power of Crisis](#).



According to [exit polls](#), South Korea's presidential election today delivered a resounding triumph for [Lee Jae-myung](#), the veteran center-left politician and leader of the Democratic Party of Korea (DP). His victory over Kim Moon Soo of the conservative People Power Party (PPP) closes a [tumultuous chapter](#) in South Korean politics, marked by former president Yoon Suk-yeol's short-lived martial law declaration, [impeachment](#), and

removal from office. It also ushers in a left-leaning administration with wide latitude to govern, setting the stage for a [dramatic reorientation](#) of the country's domestic and foreign policy.

Lee takes office with a rare advantage in South Korea's often fractious political system: a unified government. The DP already holds a majority in the National Assembly through at least 2028, when the next legislative elections are set to take place, giving Lee power to enact his agenda without the checks and gridlock that stymied his predecessor. Though he campaigned on a centrist message to broaden his appeal among moderate and undecided voters, Lee will use his large margin of victory and the highest turnout since 1997 to claim a strong political mandate and govern as a progressive.

Read More: [Lee Jae-myung Aims to Steer South Korea Through Crisis](#)

A populist shaped by his years as a labor and human rights lawyer, Lee has long advocated for a stronger state role in redistributing economic gains and curbing the excesses of South Korea's powerful conglomerates. His recent [pro-market signals](#)—such as pledges to [double the KOSPI](#) and pursue [MSCI developed market index inclusion](#)—contrast with his lifelong skepticism of the private sector and appear aimed at shoring up business and consumer confidence, which cratered in the aftermath of the Yoon-triggered political crisis. While structural changes such as [sweeping chaebol reform](#) may be blunted by institutional resistance, his administration will push for increased social welfare spending, higher taxes on corporations and the wealthy, and tighter oversight of big business.

Despite his clear mandate, Lee's policy rollout will be delayed by transition logistics and early constraints. He takes office on June 4 under by-election rules, but it will take him weeks to form his cabinet and months to begin implementing his legislative agenda. His administration won't unveil a detailed policy platform until mid-August, with its first proposed budget arriving in September. In the meantime, Lee must stabilize an economy under pressure from weak domestic demand, falling exports, and the looming threat of [higher U.S. tariffs](#).

U.S.-South Korea trade talks will represent Lee's first test. The Trump administration's [90-day tariff reprieve](#) expires July 9, at which point U.S. tariffs will rise from 10% to 25% unless a new trade deal is struck. Lee has so far adopted a cautious tone, signaling that he may seek a deadline extension to allow him to benchmark South Korea's deal against those being negotiated by Japan and others. If talks stall or collapse, South Korea—whose second-largest export market after China is the U.S.—would face major headwinds as Lee tries to stimulate growth.

Foreign policy is another arena where Lee will chart a distinct course. He has pledged to maintain South Korea's core alliances, but his record suggests a cooler posture toward Washington and Tokyo and a [pivot toward Beijing](#) and Pyongyang. Lee has criticized his predecessor's overtures to Japan as overly "[subservient](#)" and is skeptical of deeper trilateral security cooperation that binds South Korea more closely to the U.S.-Japan alliance. A friendlier approach to China—which Beijing is all too happy to [encourage](#)—would further strain ties with Washington.

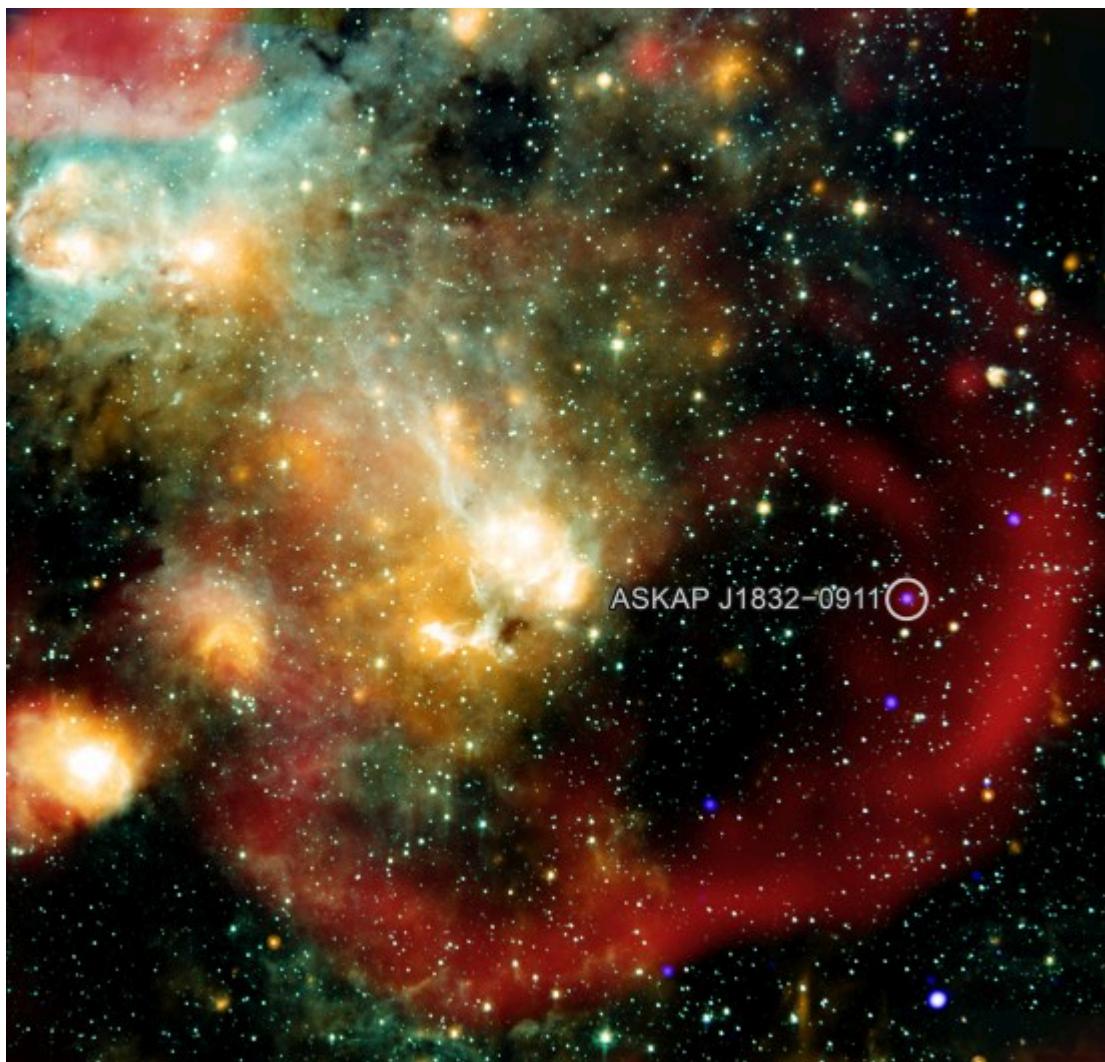
At the same time, Lee has expressed openness to restarting talks with North Korea and wants to avoid Seoul being sidelined if Donald Trump revives his own outreach to Kim Jong-un. But Kim's [renunciation of reunification](#) and deepening ties with Russia limit expectations for diplomacy. Still, engagement with Pyongyang is one of the few areas where Lee and Trump could find common ground.

After three years of divided government, institutional clashes, and episodic crises, South Korea is taking a sharp left turn—driven by a president who has the mandate, the parliamentary majority, and the political will to deliver it. His presidency will mark the most cohesive governing era South Korea has seen in years—and possibly the most transformative. If Lee can deliver on even part of his agenda, he will reshape the contours of the country's politics—and its place in the world—for years to come.

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Scientists Are Stumped by Mysterious Pulsing ‘Star’

Kluger is an editor at large at TIME. He covers space, climate, and science. He is the author of 12 books, including [*Apollo 13*](#), which served as the basis for the 1995 film, and was nominated for an Emmy Award for TIME's series [A Year in Space](#).



Something strange is going on 15,000 light years from Earth. Out at that distant remove, somewhere in the constellation [Scutum](#), an unexplained body is semaphoring into space, blinking in both X-ray and radio frequencies once every 44 minutes in a way never seen by astronomers before. The object could be a [white dwarf](#)—an Earth-sized husk that remains after a star has exhausted its nuclear fuel. Or not. It could also be a [magnetar](#)—a neutron star with an exceedingly powerful magnetic field. Unless it's not that either.

“Astronomers have looked at countless stars with all kinds of telescopes and we’ve never seen one that acts this way,” said astronomer Ziteng Wang of Curtin University in Australia, [in a statement](#) that accompanied the May 28 release of [a paper in Nature](#) describing the object, for which he was lead author. “It’s thrilling to see a new type of behavior for stars.”

So what exactly is the mysterious body—which goes by the technical handle ASKAP J1832—and how common is this species of object?

ASKAP J1832 is by no means unique in the universe in sending out energy in steady flashes. [Pulsars](#)—rapidly spinning neutron stars—do too. But pulsars flash much faster than ASKAP J1832 does, on the order of milliseconds to seconds. In 2022, astronomers discovered a type of object known as a [long-period transient](#), which, like ASKAP J1832, sends out flashes of radio waves on the order of tens of minutes. So far 10 such bodies have been found, but none identical to ASKAP J1832, which is the first to emit X-rays too.

What’s more, ASKAP J1832’s emissions have changed over time. During one observation with NASA’s orbiting [Chandra X-Ray Observatory](#) in February 2024, the object was prodigiously producing both X-rays and radio waves. During a follow-up observation six months later, the radio waves were 1,000 times fainter and no X-rays were detected. That was a puzzle.

“We looked at several different possibilities involving neutron stars and white dwarfs, either in isolation or with companion stars,” said co-author Nanda Rea of the Institute of Space Sciences in Barcelona, Spain, [in a](#)

statement. “So far nothing exactly matches up, but some ideas work better than others.”

One of those ideas is the magnetar, but that doesn’t fit precisely, due to ASKAP J1832’s bright and variable radio emissions. The white dwarf remains a possibility, however in order to produce the amount of energy it does, ASKAP J1832 would have to be orbiting another body in a formation known as a binary system, and so far that second body hasn’t been detected. Viewed from Earth, ASKAP J1832 appears to be located in a supernova remnant, a cloud of hot gas and high energy particles that remains after an aging star meets its explosive end. But the authors of the paper concluded that the remnant merely lies in the foreground of the observational field with ASKAP J1832 in the background, the way an earthly cloud can drift in the path of the sun.

So for now, the object remains a riddle—one that will be investigated further. “Finding a mystery like this isn’t frustrating,” said co-author Tong Bao of the Italian National Institute for Astrophysics, in a statement. “It’s what makes science exciting.”

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| [Section menu](#) | [Main menu](#) |

How Soon Should Companies Prepare for a 2°C World?

Worland is a senior correspondent at TIME, based in the Washington, D.C., bureau. He received Covering Climate Now's inaugural Climate Journalist of the Year award in 2022, among other awards. He is the Outrider Foundation fellow at TIME.



Look through the new [five-year outlook](#) from the World Meteorological Organization (WMO), and you won't see the U.N. atmospheric science body use the words "emergency" or "disaster." And yet it would be hard for anyone even semi-literate in the science of climate change to flip through it without a sense of urgency and alarm.

The report, released earlier this week, finds that global temperatures will continue at or near record levels with a possibility that the temperature-rise

since the Industrial Revolution nears 2°C by 2030. Already, warming momentarily [breached 1.5°C of warming](#) in 2024. It's a big marker: decades ago policymakers settled on 2°C as an ideal cap of sorts. That's because, at some point between 1.5°C and 2°C, we might expect to begin seeing climate effects that are both dire and, perhaps more importantly, irreversible. The WMO report reaffirms that the world has entered that danger zone—and the risks posed by the planet's warming are on the verge of growing dramatically.

The increasingly dire atmospheric reality, underscored by this new report, might lead to some urgent calls for companies to cut their emissions. Indeed, reducing emissions is the only way to keep the problem from getting worse. But our temperature-rise trajectory should also push companies to take a hard look at how prepared they are for the changes that will come on the road to 2°C—not decades from now but in the next five years.

“We are in a climate emergency, and the situation worsens every year,” Sonia I. Seneviratne, a professor at the Institute for Atmospheric and Climate Science of the ETH Zurich, told me earlier this year. “It’s not necessarily making the headlines, because there are also many other crises, but we shouldn’t forget it.”

The WMO report outlines a number of alarming predictions for the next half-decade. For the summer season in the Northern Hemisphere, temperatures are expected to exceed averages in previous decades “almost everywhere.” In the Arctic during the Northern winter season, the warming is expected to be particularly extreme, with the temperature anomaly more than 3.5 times as large as the global anomaly. And sea ice is expected to continue to decline across the Arctic.

Perhaps more importantly, and left uncovered by the report, are the second-order effects of a warmer planet. Between 1.5°C and 2°C, heat waves become more frequent and intense, according to the U.N.’s climate science body. Crop yields decline. And coral reefs may be wiped out completely.

This spells trouble for a wide range of companies. Infrastructure faces increased flood and fire risk. Demand for air conditioning will stretch

electric utilities thin. Farmers and agriculture companies not only face crop losses but also [declining worker productivity](#) in the heat and other extreme weather. All of this adds up to a massive headwind poised to slow economic growth. A [2021 report](#) from Swiss reinsurance giant Swiss Re found that 2°C of warming would lead to global GDP that is 11% lower by the mid-century.

Don't get me wrong. Sophisticated companies are aware of the challenges on the horizon. [Research](#) has shown that a growing number of firms are disclosing the risks posed to their business by the physical effects of climate change. Nonetheless, [many companies](#) are still early in grappling with these challenges. Few are able to quantify the risk in financial terms and most lack comprehensive plans to prepare.

And, even for the most forward-thinking firms, the problem with this new atmosphere in which we find ourselves is that it's impossible to fully understand what destruction these hotter temperatures will bring—and, therefore, what can be done to prepare. With each fraction of a degree that global temperatures rise, the further we get into uncharted territory that stretches our scientific analysis.

Climate deniers use uncertainty to argue that we should slow our efforts to reduce emissions: why should we spend trillions to address something we don't fully understand? But the truth is that the present uncertainty is far scarier than even potentially hyperbolic messaging about climate change ending the world. The new climate reality means we can expect a variety of extreme weather events, seemingly unpredictably. Over the next half-decade, we will get a good sense of who has prepared effectively.

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Medicaid Expansions Saved Tens of Thousands of Lives, Study Finds

Semuels is a senior economics correspondent at TIME. She covers work, consumer spending, retail, gender, and technology. She is a four-time finalist for the Gerald Loeb Award for Distinguished Business and Financial Journalism, and she has won awards from the Society of Business Editors and Writers and the Los Angeles Press Club.



As Congress eyes sweeping cuts to Medicaid, the health care program for low-income adults that serves about 20% of people living in the U.S., a new study has a sharp conclusion: cuts to Medicaid will cost lives.

The study, published in the [National Bureau of Economic Research](#) on May 5, tracked nearly 40 million people who gained Medicaid through state-based expansions under the Affordable Care Act between 2010 and 2022. It

found that during that time, Medicaid expansions increased enrollment and reduced members' risk of death by 2.5%.

People who enrolled in Medicaid because they gained eligibility saw a 20% reduction in their risk of death when compared to people in states who could not access Medicaid, the study found. In short, Medicaid expansions saved about 27,400 lives between 2010 and 2022, according to the study, by Dartmouth economics professor Angela Wyse and University of Chicago economics professor Bruce D. Meyer.

It might seem obvious that expanding access to health insurance will improve people's health. But academics have actually had a difficult time proving this, Wyse says.

"This study really does a lot to advance our understanding of the magnitude of this relationship between health insurance and this really important health outcome," she says.

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Medicaid expansion saves lives because it allows people to see doctors and access preventative care, and get recommendations from doctors about how to improve their lifestyles, she says.

The study is one of the largest to date showing the health impacts on expanding Medicaid. It also found that gaining access to Medicaid reduced the chance of death across demographics.

Its conclusion is especially relevant as Congress seeks to cut [\\$600-\\$800 million](#) from the Medicaid program over the next decade. Though around 70 million Americans are enrolled in Medicaid, the numbers vary tremendously by state. That's because the Affordable Care Act, also known as Obamacare, allowed states to expand Medicaid to more people, offering some funding for them to do so.

[Forty-one states](#)—including conservative ones like Arkansas, Oklahoma, and Louisiana—have expanded Medicaid in the years since the 2010

passage of the Affordable Care Act. But 12 states have trigger laws in place that would automatically end the Medicaid expansion, or that would require significant changes to the program should there be reductions to the amount of money the federal government provides.

Potential cuts to Medicaid are extremely controversial; an [April KFF poll](#) found that 76% of the public opposes major cuts to Medicaid. Even some Republicans seem wary of approving cuts. In April, 12 conservative members of Congress [wrote a letter](#) to GOP leaders reiterating their support of Medicaid. “We cannot and will not support a final reconciliation bill that includes any reduction in Medicaid coverage for vulnerable populations,” the letter concluded.

The study also found that Medicaid is a relatively cost-effective way to save lives. It cost only about \$5.4 million per life saved, which is actually relatively low compared to other interventions, Wyse says.

“I feel pretty confident in saying that restricting Medicaid access is going to have the real human cost of having more people die than otherwise would have,” she says.

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| [Section menu](#) | [Main menu](#) |

Meet the Marine Biologist Working to Protect Our Oceans from Deep-Sea Mining

Kluger is an editor at large at TIME. He covers space, climate, and science. He is the author of 12 books, including [*Apollo 13*](#), which served as the basis for the 1995 film, and was nominated for an Emmy Award for TIME's series [A Year in Space](#).



The oceans need more care than they ever have before—and few people are taking on that job with more commitment than Diva Amon. A marine biologist at the Benioff Ocean Science Laboratory at the University of California, Santa Barbara, (Marc and Lynne Benioff are TIME's owners and co-chairs), Amon has a special love for the [deeper reaches of the ocean](#)—below 200 meters, where sunlight does not penetrate, pressures are up to 110 times that of sea level, and temperatures drop to 39°F. Despite those punishing conditions, all manner of life forms thrive there. One of the greatest potential dangers to that fragile ecosystem is deep-ocean mining—industrializing the untouched and unseen ocean floor to extract nickel, cobalt, copper, manganese, gold, silver, and more. For now, the mining is not taking place—and Amon and her colleagues are advocating and

mobilizing to help keep it that way. Amon spoke to TIME in a wide-ranging conversation that has been edited for brevity and clarity.

TIME: There are a lot of riches to be had on the floor of the oceans. What is the current state of mining?

Amon: Mining in international waters is governed by the [International Seabed Authority](#), an autonomous United Nations authority. They have been granting licenses for exploration only over the past 20 years in the Pacific, Atlantic, and Indian Oceans. There have been more than 30 licenses granted so far. Most of them cover areas around 75,000 kilometers [46,602 miles], or about the size of Sri Lanka, so it's not inconsequential. In addition, Norway, Japan, the Cook Islands, and Papua New Guinea are considering deep-sea mining in their own waters.

Read more: [*Fishing Communities in the Philippines Are Fighting for their Future as Waters Rise*](#)

What are countries and companies studying in these exploration activities?

They're looking for three kinds of resources. First, there are polymetallic nodules, which are sort of a metallic lump, anywhere from cherry sized to potato sized. They form in a way similar to a pearl, accreting around a tiny particle like a shark's tooth, a shell, or a piece of sediment. The rate at which they form is a few millimeters per million years. They are also looking for polymetallic sulfides, found at hydrothermal vents, which are one of the most remarkable and iconic deep-sea ecosystems. Finally, they're looking for cobalt rich ferromanganese crusts, which are a layer that forms on seamounts [underwater mountains]. The crusts can be anywhere from millimeters to several feet thick.

You mention ecosystems. How robust is life in these three resource areas?

The minerals that are being targeted form a critical part of the sea floor, and the sea floor is what life attaches to in the deep ocean. Things like coral, anemones, and fungi are attached to the deep floor. In the case of nodules,

they use them as an anchor or as a shelter. They are really the cornerstone of the ecosystem.

What other kinds of organisms live in these areas?

We don't fully know. There are big gaps in our knowledge. There was a [study](#) that came out in 2023 that found that in the Clarion Clipperton Zone [which extends from Hawaii to Mexico], 88% to 92% of the multicellular species that live there have not been described by science. We're not talking about just one or two life forms. We're talking about thousands.

How big are the areas that would be affected by mining?

The spatial scales of this are enormous. Just in the Clarion Clipperton Zone, industry projections are that they're planning to mine 500,000 square kilometers [more than 193,000 square miles]. And because of the three dimensional nature of the ocean, the concern is that the impact will extend both vertically for thousands of meters and horizontally, potentially tripling the area of impact. There is a plume that is generated at the sea floor from the mining activity like a dust storm that will spread well beyond the mining tract.

There's a secondary plume too. Anything that's mined will be pumped up a pipe to a ship which is waiting on the surface. The minerals will be separated from water and sediment and metal particles. Then that sediment, wastewater, and particulate and dissolved matter will be pumped back into the ocean from the ship. There are currently no regulations to dictate at what depth that waste is pumped back into the ocean—whether it's at the surface or thousands of meters deep or right back to the sea floor.

Could ecosystems recover from all of this?

Life in the deep sea is extremely slow. There's very little food, and that means that life moves slowly, grows slowly, reproduces slowly. And so it really does not deal very well with impact. It takes a long time to recover. With nodules for instance, we will not see ecosystem recovery except on a scale of millions of years. Essentially, this would be irreversible damage.

In the nearer term, there are increases in noise and light from mining that has never been seen before in the deep sea. All of that is going to result in biodiversity loss. You also have contaminants being released by the plumes that are going to work their way up the food chain. This could affect ecosystem services that we get from the deep sea, such as fisheries.

There is an argument that deep-sea mining actually has some environmental benefits because it replaces mining done on the surface. Is there anything to this?

There's no evidence that deep-sea mining would prevent terrestrial mining. It's likely that both will occur, causing double destruction, rather than one taking the place of the other. Something else that is often disregarded is that we know that the ocean plays a critical role in regulating the climate; it's where a majority of heat is absorbed, it's where an enormous amount of carbon is sequestered. The ocean is one of our greatest allies in the fight against the climate crisis. To argue for using deep-sea mining to solve the climate crisis is like smoking to lower your stress.

What role does your work play in determining the future of deep-sea mining?

I'm collaborating with many other scientists undertaking research into the deep sea and the impact of mining, trying to understand how these ecosystems function. I've also been going to meetings of the International Seabed Authority and many other intergovernmental agencies to try to communicate the science to the decision makers in the room. I'm not going to shy away from creating awareness of the incredibleness of the deep sea. I absolutely adore the deep sea and it's such a privilege to be able to work there.

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[The World Isn't Valuing Oceans Properly](#)

['Ignorance' Is the Most Pressing Issue Facing Ocean Conservation, Says Sylvia Earle](#)

Geopolitical Tensions are Shaping the Future of our Oceans

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| [Section menu](#) | [Main menu](#) |

The World Isn't Valuing Oceans Properly

Worland is a senior correspondent at TIME, based in the Washington, D.C., bureau. He received Covering Climate Now's inaugural Climate Journalist of the Year award in 2022, among other awards. He is the Outrider Foundation fellow at TIME.



Troves of in-demand critical minerals sit untouched deep at the bottom of the ocean: nickel, cobalt, and copper, to name a few. With the stroke of a pen in April, President Donald Trump signed an Executive Order to catalyze a “[gold rush](#)” in pursuit of those deposits. The value of those minerals could total in the trillions, and the Trump Administration wants American companies to access them in a bid to bolster the economy. Pushback to the move has largely focused on the potential for ecological damage and the order’s flaunting of international rules. There is also a good case to be made that the economic and financial math may not add up. For one, the outlook of different critical minerals is evolving. Cobalt demand

projections, for example, have fallen below expectations as new battery chemistries emerge that rely less on that metallic element.

And then there are the costs associated with missed opportunities and unknown side effects. The depths of the ocean where deep-sea mining would take place have been untouched for millennia. In those waters, flora and fauna that could unlock medical breakthroughs sit untouched, and ocean dynamics mediate global climate conditions. “If we start mucking around with our seabed floor in pursuit of short-term wealth and growth,” says Hawaii Governor Josh Green, a vocal opponent of seabed mining, “God knows what the long-term damage will be.”

Read more: [*Fishing Communities in the Philippines Are Fighting for their Future as Waters Rise*](#)

The bigger problem is that human society—policymakers, companies, and financial institutions—simply hasn’t figured out how to value all that oceans do for us. To grapple with a full assessment of the economic value of oceans would mean a wholesale rethinking of how we interact with the world deep in the seven seas.

Using economics to value nature isn’t new. For decades, scientists and economists have crunched the numbers on the contribution of what is known as ecosystem services. Those “services” include everything from coastal protection provided by coral reefs to the value of fisheries to local communities that rely on them for sustenance. Listing the services is one thing; tallying their worth is another, challenging task. Researchers say that the total economic value of oceans needs to include the direct use of oceans like fishing and tourism as well as indirect functions like storing carbon and protecting biodiversity that keeps the planet in balance.

The math isn’t simple. How can you put a price on, say, the role that oceans play regulating the global climate? Nonetheless, researchers consistently [come up](#) with figures that reach into the tens of trillions of dollars in annual value. Whatever the precise number, a bigger problem is that leaders in government and business aren’t using it. “A wide array of methods and techniques for ecosystem valuation exist, but are only occasionally implemented in policy decisions,” reads a [2019 paper](#) from the European

Marine Board, an ocean-policy think tank. No country has fully accounted for the economic value of oceans in its policymaking. A survey of leaders in developing countries found that, even though many of those nations depend on marine resources, protecting marine life ranked last among the U.N. Sustainable Development Goals.

To account for the value of oceans in decision making, researchers are pushing for countries to adopt what has become known as natural capital accounting. That would entail incorporating data on the ecological and economic value of oceans into country-level accounting systems. Such recommendations are not the work of radical activists or fringe academics. The World Bank, for example, advises that low-income countries use natural capital accounting to assess and protect their natural resources.

In the absence of such a formal move, leaders concerned about economic stability would be wise to shift their thinking. In some cases, that may mean moving away from viewing the ocean as a source of easily exploited resources. In others, it may mean moving from viewing ocean conservation as an altruistic act to an act of economic self-preservation.

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‘Ignorance’ Is the Most Pressing Issue Facing Ocean Conservation, Says Sylvia Earle

Shah is a reporter at TIME.



Marine biologist Sylvia Earle could easily rest on her laurels. In a career that began in the 1950s, she has become a pioneer in ocean exploration and conservation. She holds the record for the deepest walk under the sea and was the first female chief scientist at the U.S. National Oceanic and Atmospheric Administration. But on the cusp of her 90th birthday this August, she has no plans to slow down—and believes that the problems

currently facing our oceans now have never been more urgent. Her most recent venture, Mission Blue, aims to create a worldwide network of marine protected areas known as “Hope Spots.” As of June 2, this includes the Chesapeake Bay. TIME spoke to Earle in May after a dive she made in the country’s largest estuary.

This interview has been edited for length and clarity.

Read more: [Fishing Communities in the Philippines Are Fighting for their Future as Waters Rise](#)

TIME: You have been involved in ocean conservation work for decades. What changes have you noticed since you first started this work?

EARLE: We have learned more about the nature of the ocean, of the planet as a whole, and even about ourselves.

When I was a child, no one had been to the moon, no one had been to the deepest part of the sea. The internet did not exist. Think about the things we did not know, even about the microbial world, and how influential that is on everything and every one. That was just missing in our understanding of how the world functions. [We've learned more about] the magnitude of our climate and what our role has been in bringing about change. In many cases, we've lost more than during all preceding history.

What do you feel is the most pressing issue facing our oceans now?

Ignorance, complacency, lack of awareness that the ocean is essential to everyone, everywhere, all the time. Every breath we take, every drop of water we drink, we are connected to the ocean.

Our very existence depends not just on the existence of rocks and water. 97% of Earth's water is ocean, and ocean is essential to life, but what really matters is that the ocean has populated with creatures who preceded us, not just by centuries or millennia, but hundreds of billions of years, fine tuning rocks and water into a habitable planet.

It just seems perverse that we take so much for granted and are so casual about consuming nature [when] you realize how long it has taken for the natural systems to come to a state where we actually can not just survive here, but thrive here.

We know what to do. We just need, in this really critical crossroads in time, to use the knowledge we have and to come together. Everybody is, without exception, vulnerable to the state of the planet, the habitability of Earth. If you can't breathe, nothing else quite matters. Or if you don't have water, if you don't have food. All of the basics anchor back to [the idea that] we've got to take care of what keeps Earth, our home, safe in a universe that is really inhospitable. For those who want to go to Mars and set up housekeeping, I say, good luck. It's a great vision. I think we'll get there for a small number of people, for small periods of time, but it's not an alternative to Earth. We are of the Earth. Actually, we are of the ocean, because it's the ocean that makes our existence possible.

As someone who has led more than 100 expeditions and logged more than 7,000 hours underwater, what's one thing you wished more people knew about our oceans?

I wish people could understand [that the ocean] is not just a massive amount of salt water, but rather it's a living system. What we put into the ocean changes the chemistry of not just the ocean, but of the planetary functions as a whole.

The consequences to planetary chemistry, to planetary security, are right now facing us with the prospect of the sharp changes that we won't be able to control if they get to that tipping point. The good news through all of this, I think, is that the world has not tipped yet into a state from which we cannot recover. We've got all the warning signs, the rapid increase temperature, the rapid increase of carbon dioxide in the atmosphere, the rapid loss of forests on the land, and the consequences of clear cutting forests, disrupting the carbon cycle, clear cutting the ocean of fish, of squid, of krill from Antarctica, all of this. We know what we need to do.

A big part of Mission Blue's work is identifying "Hope Spots" in the ocean. When much of our ecosystems are under threat, why is it

important to you to highlight these areas?

The real purpose underlying the Hope Spot concept is to ignite public awareness and support for protecting nature. The Hope Spot is a means to a broader end, to get people to be aware of why the ocean in particular matters. Land and sea together, the whole world is one big, mostly blue hope spot, but [we want to] energize individual champions, communities, institutions, to come together with a common purpose of protecting a place that they know and love.

And this is meant to highlight and enforce and support everybody else who's trying to do something to turn from declined to recovery, one hope spot, one community, one champion at a time. And it is contagious. People want to know, what can I do to make a difference?

You are almost 90 years old—what keeps you diving?

Why not? I think it's important to keep doing the things you love as long as you can. How can I resist when most of the areas on Earth where life exists have yet to be explored. I want to keep doing it as long as I can breathe. Don't you want to do the same thing?

Read more from TIME's Ocean Issue

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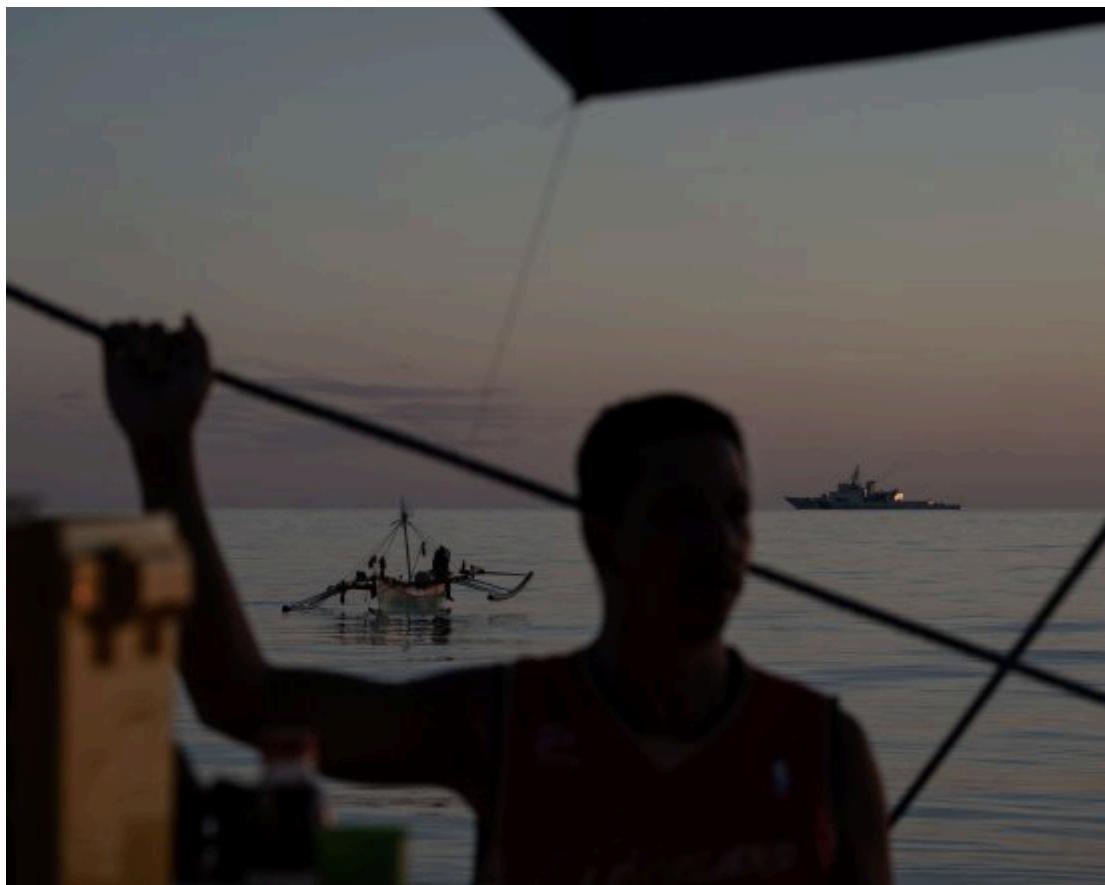
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Geopolitical Tensions are Shaping the Future of our Oceans

Henriksen is Special Adviser, Ocean, to the U.N. Global Compact, and co-chair of the G20 Ocean group.



The urgency of halting ocean degradation and unlocking the promise of a sustainable blue economy has never been greater. Yet, as the third U.N. Ocean Conference convenes from June 9-13 in Nice, France, this mission unfolds against a backdrop of rising geopolitical tension: great power rivalries, trade disputes, and a fraying rules-based world order are steadily eroding the trust and institutions essential for genuine collaboration.

The very notion of shared destiny and collective goals is fading. The U.S. administration has even declared that it “rejects and denounces” the U.N. Sustainable Development Goals—among them, “Goal 14: Life Below Water,” which forms the bedrock of these conferences and other global efforts aimed at conserving and sustainably using the ocean. But the stakes stretch far beyond marine ecosystems. What unfolds in the ocean will shape the future of life on land.

The ocean is humanity’s greatest global commons and the foundation of life on Earth. It is a single, interconnected body of water, as the saying often goes, “carrying riches and resources, pollution and problems, from coast to coast.” The blue economy is [projected](#) to grow faster than global GDP in the coming decades. Looking ahead, the ocean must become even more central to building better lives for more people.

To deliver clean, reliable, and affordable energy to industries, nations, and communities, offshore wind farms, floating solar parks, and kinetic energy harvested from waves, currents, and tides must form a major part of the solution. A low- and zero-emission international merchant fleet is crucial to ensuring the continued flow of seaborne trade that underpins global commerce and secures the movement of food and energy across the world. To expand total food production and strengthen the resilience of global supply chains, scaling up sustainable aquaculture and ensuring responsible international management of wild fish stocks will be essential. These efforts will also ease pressure on land ecosystems and reduce the consumption of scarce freshwater resources.

Moreover, a clean, healthy, and productive ocean is at the heart of the fight against climate change. Nature-based marine solutions and maritime industries are estimated to offer [up to a third](#) of the emissions reductions needed to meet the goals of the Paris Agreement.

Read more: [*Fishing Communities in the Philippines Are Fighting for their Future as Waters Rise*](#)

Unlocking this immense potential requires elevated ambition and renewed global cooperation. There have, encouragingly, been signs of progress. The Kunming-Montreal Global Biodiversity Framework—adopted in 2022 with

the goal of reversing nature loss by 2030—and ongoing negotiations under the International Maritime Organization to decarbonize shipping provide reasons for optimism. Yet, as I explore in my recently published book, *The Ocean: How it has Formed Our World—and will Shape our Destiny*, today's geopolitical currents are pulling in the opposite direction. Major powers are turning inward and against each other, while protectionism, populism, and divisive nationalism are on the rise. In this turbulent landscape, the ocean—ever a driver and theatre of global affairs—is once again at the center.

Around the world, powerful nations—and many smaller ones—are expanding naval capabilities and reinforcing coastal defenses. These moves aim to protect coastlines, secure maritime trade routes, assert oceanic claims, and bolster global influence. As terrestrial resources dwindle, competition for fish stocks, seabed minerals, and other marine resources is intensifying.

This maritime tension is further fuelled by the world's shifting centers of demographic, economic, and diplomatic gravity—from the north-western to the south-eastern hemisphere. Unlike other continents, which are landscapes surrounded by ocean, Southeast Asia is a “seascape”—an ocean enclosed by land. This unique geography heightens both the necessity for cooperation and the risk of conflict over marine spaces.

Just as other parts of the rules-based world order are under strain, so too is the U.N. Convention on the Law of the Sea—the so-called Constitution of the Ocean. The United States has unilaterally expanded its continental shelf, approved deep-sea mining in national and international waters without waiting for global rules, and exited negotiations to curb shipping emissions. Meanwhile, China continues to reject the 2016 Permanent Court of Arbitration ruling on disputed South China Sea territories, citing “historical rights” to assert its claims.

To achieve a meaningful outcome at the U.N. Conference in Nice, the international community must rally in a spirit of solidarity and shared purpose. Yet the prevailing winds are those of geopolitical rivalry and division, turning our greatest global commons into an increasingly contested and perilous domain. That is a course we simply cannot afford.

The opportunity cost —in terms of sustainable growth, prosperity, and planetary stability—is immense. If ever there was a time for bold, responsible action, it is now. The moment calls for genuine ocean leadership: visionary, inclusive, and resolute. Without a clean, healthy and productive ocean, our collective future is in jeopardy.

Sturla Henriksen is Special Adviser, Ocean, to the U.N. Global Compact, co-chair of the G20 Ocean group under the Presidency of South Africa, and author of The Ocean: How It Has Formed Our World—and Will Shape Our Destiny (Hero/Legend Times Group, UK, 2025). The views expressed his own, not any organization.

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| [Section menu](#) | [Main menu](#) |

How We Can Restore Coral Reefs

Benioff is Salesforce Chair and CEO, TIME owner, and a global environmental and philanthropic leader.

Russo is Chair of the White House Environmental Advisory Task Force. President and CEO of the Florida Keys Environmental Coalition and a board member of Reef Relief, he is a longtime environmental advisor to President Donald Trump.



The ocean may be nature's single greatest gift to humanity. It provides about half of the [oxygen](#) we breathe, feeds billions of people, supports countless [jobs](#) in every corner of the globe, and absorbs more [carbon dioxide](#) than anything else on earth. The ocean connects us all.

But right now, the ocean is sounding an unmistakable alarm. Fishing boats around the world are returning emptier. Coastal zones are growing warmer

and murkier, and they are becoming more polluted as millions of gallons of water laced with pharmaceuticals, forever chemicals, and sewage leak into the sea. Coral reefs are turning white.

We come to these challenges with different experiences and perspectives. One of us lives in the Florida Keys and chairs the White House Environmental Advisory Task Force. The other lives in Hawaii and the Bay Area and leads a global technology company. At the same time, we share something fundamental: a deep commitment to the health of the oceans—and a deep belief that differences in some areas should not prevent us from working together on pressing issues where we agree. We need to roll up our sleeves and get to work.

We have an opportunity for global action. From June 9 to June 13, officials from more than 100 nations, scientists, and innovators will gather in Nice, France, for the United Nations Ocean Conference, held only once every few years. The meeting will test our ability to work together across sectors, borders, and worldviews, and to act on behalf of future generations.

That's why we're calling for a focused global effort to restore coral-reef health. Coral-reef ecosystems—from the famous reefs of the Florida Keys National Marine Sanctuary to the Great Barrier—are the ocean's rainforests. Vital and vulnerable, they shelter nearly a quarter of marine life, buffer coastal communities from storms, and sustain billions of dollars in fisheries and tourism. Yet they are disappearing at unprecedented speed.

Rising temperatures are part of the problem. But so are decades of negligence, coastal pollution, overfishing, and damage from dredging and poorly planned ports and coastal infrastructure.

We believe that addressing coral-reef health is a smart place to focus—not because it is the only crisis, but because it offers a clear, actionable, achievable goal that can unite governments and ocean advocates across sectors. We also know that nature-based solutions are powerful, proven, and cost-effective tools for addressing the impacts of climate change and biodiversity loss. Restoring coral reefs—like planting and conserving trees—empowers nature to do what it does best: regenerate, protect, and sustain life.

We've seen a model for this kind of collaboration before.

As part of the Trillion Trees (1t.org) movement, the first Trump Administration joined an unprecedented global effort to reforest the planet. Trees are the planet's natural air purifiers—the single most effective “device” we have to pull carbon out of the atmosphere. There remains far more work to do. Yet with more than 9.7 billion trees pledged and more than 54 million hectares of land under sustainable management so far, the Trillion Trees initiative demonstrates the progress that's possible when we align behind a common goal.

We believe that we can take lessons from the Trillion Trees movement—underwater. It's helpful to think of the ocean as a patient in the emergency room. Long-term recovery depends on curing the disease, and, yes, different people may have different ideas on the best long-term approach. But right now, we're losing a lot of blood, and we need to stop it—fast. We need to deal with immediate problems that threaten the health of coral reefs.

Solutions exist, and many communities, ecopreneurs, and conservationists are already deploying them. Here's what a focused, global effort to restore coral reefs could look like:

1. Curb septic and sewage runoff—especially in critical reef zones like Hawaii, South Florida, Puerto Rico, American Samoa, and Guam—by upgrading and modernizing the infrastructure that treats waste water and scaling new technologies such as denitrification that converts toxic nitrogen to a harmless gas. We also need to set up water-testing programs that help us pinpoint and address pollution hot spots near the most important reefs. Nothing we do to restore coral reefs will matter if water quality doesn't improve to the point where they can survive.

2. Scale science-based coral restoration, including advanced farming of specially grown corals and responsible management of protected marine zones.

3. Stop plastic—which harms reefs by smothering coral, increasing the risk of disease, and entangling marine life—before it reaches the ocean. We can tackle this through bans on single-use waste, incentives for alternative

materials, and as a last resort, the implementation of new technologies that intercept ocean-bound plastic in waterways. The world needs more efforts like Hawaii's Papahanaumokuakea Marine Debris Project, which is removing plastics from the ocean, and the Benioff Ocean Science Lab, which helps innovate solutions to capture and remove plastic from rivers before it ends up in the ocean.

4. Empower fishing businesses to promote sustainable practices by eliminating overfishing, ending harmful fisheries subsidies globally, and reducing the sometimes destructive impacts of fisheries on marine habitats.

5. Restore coastlines with mangroves, wetlands, seagrass meadows and coastal forests. Many of these ecosystems can serve as nursery habitat for commercially and ecologically important coral-reef fish. They also often act together to dissipate waves that pound coastlines and serve as natural, free, and self-repairing seawalls. Healthy shorelines mean healthier oceans, and healthier oceans in turn mean safer and more prosperous coastal communities.

We recognize that some will say calling attention to discrete, nature-based approaches like coral-reef restoration is a moral hazard, distracting from the bigger long-term solutions to our environmental challenges. At the same time, there is widespread agreement that the crisis facing the oceans demands a diverse range of approaches. We need to harness every available solution. Sometimes, we need to start with the work—and the opportunity for collaboration—right in front of us.

That's what makes this week's conference in Nice so important. It comes as ocean action has never been more essential. It will require leadership from every sector, including business, government and science. The question is whether we can turn shared understanding into shared action. What's needed is the will to save the ocean, one commitment at a time.

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How F1 Went Hollywood

Gregory is a senior sports correspondent at TIME. His work has been cited in the annual Best American Sports Writing anthology nine times. His stories have won awards from the U.S. Basketball Writers Association and the American Academy of Orthopaedic Surgeons, and his work was named a finalist for Deadline Club and Mirror awards for excellence in magazine writing and reporting on media, respectively.



[Formula One](#) teams treat their trade secrets like matters of national security. In a motor-sport where milliseconds separate champions from also-rans, hiding technical know-how from opponents is as key as a fresh pair of tires. So when Joseph Kosinski, director of *F1 the Movie*—the summer-blockbuster hopeful starring [Brad Pitt](#) and hitting theaters and IMAX on June 27—tried to gain access to the inner workings of Formula One, a rush of déjà vu hit him. After all, Kosinski made [Top Gun: Maverick](#), the 2022 naval-aviator smash that grossed \$1.5 billion, with the support of the U.S. Department of Defense. “It was the same level of security,” he says, “that I experienced when I went to some secret bases.”

Kosinski spent a year bugging Toto Wolff, team principal of the Mercedes-AMG Petronas F1 team, for permission to film at the Mercedes race simulator. Most Mercedes employees themselves can't access this space at headquarters, 70 miles northwest of London. But Wolff finally relented. So in the movie viewers will see Pitt and [Damson Idris](#), who respectively play Sonny Hayes and Joshua Pearce, drivers for the fictional APXGP team, practicing on Mercedes' high-priced toys. "We were keen on contributing to making this a success," says Wolff, who along with F1 president and CEO Stefano Domenicali is credited as an executive producer. "And that means you cannot be half pregnant and say, 'Yeah, we're playing along, but no, we don't want to let you into our factory.'"

The *F1* filmmakers still made post-production alterations to protect Mercedes' intellectual property. All sides had to compromise, and deliver, in unique ways to bring *F1* to life. It was all part of a delicate balancing act between a big-budget production team, led by Jerry Bruckheimer, used to calling its own shots, and a \$3.4 billion sport with a dedicated global fan base, whose participants could not afford distractions just to appear in some Hollywood fantasy. Sure, *F1* was allowed to bring its cast and crew to actual races across the globe. But they'd have to film during downtime at the track, or just blend into the background. "The live sport," says Domenicali, "I cannot touch."

The stakes were similarly high in a movie industry where original stories struggle to compete with [familiar IP](#); box-office success would be meaningful for future original ideas. And the involvement of Apple, whose studio arm backed the film—which will live on Apple TV+ after *F1*'s Warner Bros. Pictures-distributed theatrical run—added another element of complexity. "It was very, very complicated trying to have Apple and *F1*, two massive organizations that are very controlling of their own brands, to play along," says Kosinski. "But the fact that Stefano had the vision for the film, and Apple took the gamble on this movie, here we are, four years later. We're about to take it out to the world."

Read more: [The 37 Most Anticipated Movies of Summer 2025](#)



F1's origin story begins a decade ago, when Kosinski was developing a script called "Go Like Hell," which later became the 2019 Oscar-winning [auto-racing hit *Ford v Ferrari*](#). Kosinski had Tom Cruise and Pitt attached to the roles that would eventually be played by Matt Damon and Christian Bale. Cruise and Pitt even did a script read at Cruise's house. But Kosinski dropped out, mainly over budget conflicts, and turned his attention to *Top Gun* with Cruise and Bruckheimer. During the pandemic, Kosinski caught the racing bug again while bingeing *Formula One: Drive to Survive*, Netflix's series chronicling Formula One's behind-the-scenes intrigue. Kosinski emailed seven-time F1 champion Lewis Hamilton, a cinephile who planned to join the *Top Gun* cast before realizing he couldn't swing that and chase championships. Kosinski told him he needed his help making the most authentic auto-racing movie ever.

Kosinski got Hamilton—a producer on the film who makes a cameo—Bruckheimer, and Pitt on board. The goal was to gain access to F1 races and factories so they wouldn't have to CGI the whole thing. In early 2022, Kosinski, Bruckheimer, and Pitt met with Domenicali in London. Domenicali accompanied Kosinski and Pitt at a private *Top Gun* screening, to give the F1 boss a taste of the whizbang effect such a film could bring to his sport. He saw the potential. A movie fronted by Pitt could corral a mass audience and leave them wanting to know more about F1. "This has always been the strategy," says Domenicali. "To connect with new people, new markets."

Read more: [How Lewis Hamilton Finally Got His Ferrari Red](#)

Still, some F1 race teams remained skeptical. They were nervous about being portrayed in an unflattering light. “Somebody’s got to be the villain,” says Bruckheimer. And while there is a minor character, unassociated with any actual F1 race team, who emerges as a foil to Hayes, Bruckheimer made clear that the story centers on the tension between two drivers, the aging Hayes and the up-and-comer Pearce, on the same fictional team. That’s a familiar dynamic: both drivers are seeking individual success, and want to beat the pants off the other guy. At least nominally, however, they’re supposed to play nice on the track. At Mercedes, for example, Hamilton and Nico Rosberg, the 2016 F1 champion, famously clashed. “It became real hostile,” recalls Wolff.

Mercedes helped convert cars from Formula Two, the minor-league circuit, into machines that could pass for F1 cars. The filmmakers had a half-dozen at their disposal: if they wanted to film a scene in which Pitt’s APXGP car passes a Ferrari, they’d stage that action with their own cars at an F1 track between practice and qualifying sessions before a race. Later, they would “skin” the Ferrari design over the production car to make it look like a Ferrari on the screen. (Kosinski used this skinning technique with the *Top Gun* jets.) They could also capture actual race footage and skin the APXGP car over the [Red Bulls and Ferraris](#). The production team installed 15 camera mounts on its cars, filming with up to four at once, to capture Pitt and Idris in their cockpits, and action on the track. “Brad Pitt, he’s driving the car,” says Eddy Cue, Apple’s senior vice president of services. “It’s not blue screen or CGI.” Both actors learned to drive as fast as 180 m.p.h., not too far off from real F1 drivers’ top speeds of around 220 m.p.h.



“These guys were fast,” says [Javier Bardem](#), who plays Ruben Cervantes, the owner of the struggling APXGP team who recruits Pitt’s Hayes, at a Florida coin laundry, in a Hail Mary attempt to lift his squad. “The first time I saw them racing, I said to Joe, ‘What’s insurance got to say about that?’ Joe goes, ‘What insurance?’”

F1 filmed at 14 races during the 2023 and 2024 F1 seasons, across three continents. The production reportedly cost more than \$200 million. During some races, APXGP had their own garage, paddock, and perch along the pitwall, where the fictional team principal, technical director, and race engineers sit. “We designed it ourselves,” says Bruckheimer. “One of the Mercedes designers came in there and said, ‘Sh-t, I’m going to lose my job.’”

Much like the actual Formula One drivers, the actors needed to be on their games—even the ones who never sat in the driver’s seat. Right before the start of the 2023 British Grand Prix, *F1* shot a scene in which Cervantes introduces Hayes to a team board member, played by Tobias Menzies. It was

like performing a live stage play in front of more than 150,000 spectators: Formula One wasn't about to hold up the race for repeated takes. "It was terrifying," says Bardem. "I kept telling myself, 'Don't f-ck it up, Javier. Don't f-ck it up.'" He didn't.

The production crescendoed in Abu Dhabi last December, when, after the actual podium celebration recognizing Lando Norris' victory, Charles Leclerc of Ferrari, Mercedes' George Russell, and one of the APXGP drivers mounted the podium to celebrate the fake F1 finish. Wolff filmed his cameo in Abu Dhabi: he tells Idris' Pearce to call him if he wants to jump ship to Mercedes. Wolff wasn't impressed with his own work. "I don't think I'm going to follow Arnold Schwarzenegger as the next big Austrian thing," he says with his pronounced accent.

While the film puts a premium on authenticity to please the carheads, it also strives to attract general moviegoers, with its soaring Hans Zimmer score, high-speed crashes, the Hayes-Pearce conflict, and a romance between Hayes and the team's technical director, Kate McKenna (Oscar nominee [Kerry Condon](#)). The sensitivities surrounding a workplace relationship between F1's (fictional) first female team tech director and one of her drivers—which would seem quite scandalous if it went public in real life—did cross Kosinski's mind. But when he floated it to F1 insiders, no one objected. Romances within the tight-knit world are relatively common. "I'm not worried," says Domenicali. "And by the way, it gives you the right Hollywood touch."



The producers insist feedback has been positive. According to Domenicali and Cue, when test audiences unfamiliar with F1 are asked, after watching, if anyone would now be interested in attending a race, hands go up. Stakeholders also hope it gives diverse audiences the itch to work in the industry. “It’s going to inspire female engineers and mechanics,” says Hamilton. “It’s going to inspire people from all over, from all different backgrounds.”

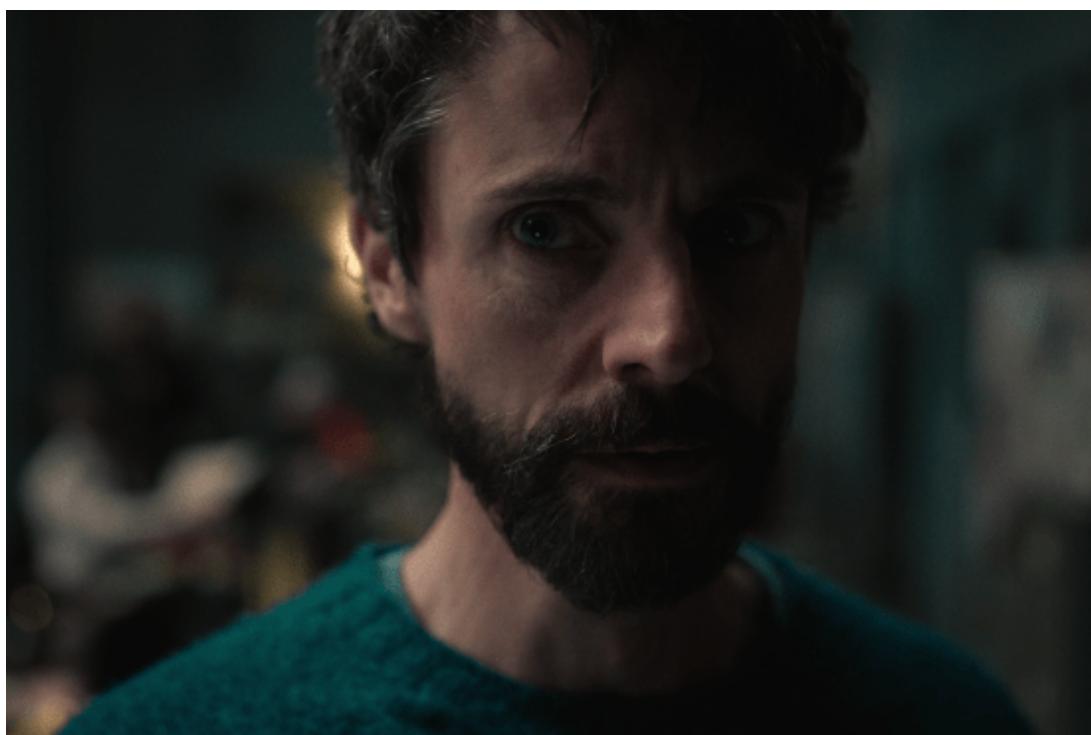
Sounds like lofty expectations for [popcorn fare](#). But the F1 portrayed on the big screen—globe-trotting from Italy to Japan to Vegas to the Middle East, with its fireworks on and off the track—undoubtedly has its upsides.

Aerodynamics lesson, anyone?

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Netflix's Dept. Q Is One Character Short of a Great Detective Show

Berman is the TV critic at TIME. Along with reviewing current television, she writes about the ways in which entertainment and pop culture intersect with our larger social and political realities. Her TIME essay on [Ted Lasso and modern masculinity](#) won a New York Press Club award in 2022.



Dept. Q, a Netflix crime drama from [The Queen's Gambit](#) writer-director Scott Frank, presents itself as a show about difficult people. Its antihero, Edinburgh police detective Carl Morck, has just come back to work after being shot in the line of duty—while berating a young cop who was killed before Carl, distracted by anger, had a chance to finish his rant. Body cam footage of the shooting, along with an already-irascible reputation, ensures his return is anything but triumphant. The premiere also introduces Merritt Lingard, a prickly prosecutor whose hostile cross-examination of a man

she's sure murdered his wife infuriates her colleagues. "You go too far," Merritt's boss warns her. Carl's superiors feel similarly about his aggressive approach.

There's great potential in the entwining of these "good guys" with bad personalities whose obsessive pursuit of justice has left them isolated and embittered. If only the show's many plot twists didn't limit its parallel accounts of abrasive crusaders navigating a flawed criminal justice system by limiting viewers' perspective on Merritt (Chloe Pirrie). Frank, adapting a series of novels by Danish author Jussi Adler-Olsen, is ultimately more invested in Carl's side of the story. What is, in one sense, a disappointing choice does have the benefit of setting up a detective series that has the potential to run for many seasons without getting old, thanks to characters and performances much richer than we normally see in this overcrowded genre.



As portrayed by the wonderful Matthew Goode—a charming period-drama stalwart who made impressions as [*The Crown's* Lord Snowdon](#), [*Downton Abbey's* Henry Talbot](#), and [*The Offer's* Robert Evans](#)—Carl, an Englishman who complains incessantly about his adoptive home of Scotland, is as fascinating in his transparently self-protective arrogance as he is frustrating.

“The phrase *superiority complex* seems to be the overall theme of your personnel file,” notes Dr. Irving (a wry Kelly Macdonald), the therapist he’s required to see as a condition of his return to work. He replies that he’s less impressed with himself than he is unimpressed by other people. It gradually becomes apparent that this attitude is his way of suppressing his guilt over not just his inferior’s death, but also the grave injury suffered by still-hospitalized partner, DCI James Hardy (Jamie Sives), in an incident for which everyone around Carl seems to blame him.

A more formulaic detective show would send him on a rogue mission to apprehend the mysterious assailant who shot all three cops, shortly after they arrived on the scene of a wellness check that yielded the discovery of a body. Yet Frank, who wrote or co-wrote all nine episodes and directed six, makes the intriguing decision to keep that case mostly in the background. The season focuses, instead, on Carl’s new assignment to establish Department Q —a cold-case division funded by law-enforcement leaders bent on generating positive press by creating fodder for [true crime podcasts](#). This role is hardly an honor. Carl’s supervisor, Moira (Kate Dickie), a woman with a perma-grimace who despises him, resents being forced to reopen old cases when she urgently needs resources for active ones. So she gives Carl a box of yellowing files to choose from, banishes him to a murky sub-basement that used to be the building’s shower room, and uses his budget to buy everyone else new computers.



Though Moira is none too eager to give him the help he needs, Hardy has nothing better to do while convalescing than scrutinize evidence, and Dept. Q eventually cobbles together a small staff. Detective Constable Rose Dickson (Leah Byrne) has been confined to her desk since a car accident shattered her nerves. Unpleasant as it can be, working with Carl gives the young officer a chance to get back in the field, where her warmth and people skills win over essential allies he alienates. Recruited from IT, Syrian refugee Akram Salim (Alexej Manvelov), who claims to have relevant experience from his home country, has been bugging Moira to put him on the force. Like Carl, Akram crosses lines, though his transgressions are fueled by expediency rather than temper. “Back home, were you working for the good guys or the bad guys?” Carl asks him. “When you know which is which,” Akram replies, “please tell me.”

This sense of moral uncertainty—of how we should feel about detectives who do bad things in service of good outcomes, of whether the blame for their behavior lies with institutions that rarely work well without manipulation—pervades the series. No easy answers are provided, as the missing-person case Dept. Q takes on complexifies. This is, in large part, a refreshing break from the didactic tone of so many crime shows, although Frank does leave some compelling ideas insufficiently examined. He seems

much more concerned with introducing relationships and storylines that could potentially fuel subsequent seasons by developing each character (Merritt aside) in tandem with the central mystery. (His coyness about major aspects of Carl's personal life does feel a bit gratuitous.) Though they're very different people, Carl, Rose, Akram, Hardy, and even Moira have all been scarred by jobs that force them to absorb endless trauma. "I'm two people," Carl reflects, in a rare moment of vulnerability: one who is immersed in humanity's most terrifying impulses and another who's struggling to project normalcy. "I have to be that way."



It's an effective choice, on Frank's part, to lean into its protagonist's cognitive dissonance instead of trying too hard to maintain a uniform mood. If the unhinged nature of the criminals they're closing in on clashes, tonally, with the groundedness of Carl and his colleagues' interactions while working on the case, that only makes the show more effective on a psychological level. By inhabiting the interiority of detectives who live in our mundane world but have to keep their heads in a scarier one that's equally real, *Dept. Q* expands beyond typical crime fare in much the same way *The Queen's Gambit* transcended its ostensible subjects: chess, midcentury fashion, female empowerment. The first season does lack the latter show's depth. But what it accomplishes should be enough to make it very popular. In that case,

it stands a chance of becoming one of TV's best long-running procedurals, with as many opportunities to go deeper as there are files on Carl's desk.

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| [Section menu](#) | [Main menu](#) |

Owen Wilson's Stick Sounds Like a Ted Lasso Ripoff. Actually, It's Better

Berman is the TV critic at TIME. Along with reviewing current television, she writes about the ways in which entertainment and pop culture intersect with our larger social and political realities. Her TIME essay on [Ted Lasso and modern masculinity](#) won a New York Press Club award in 2022.



The third episode of the new Apple TV+ golf comedy *Stick* is called “Daddy Issues,” but that might as well be the title of the show. Created by [Ford v. Ferrari](#) writer Jason Keller, it stars Owen Wilson as a former top golfer, Pryce Cahill, who publicly flamed out 20 years ago. He’s been mired in the past ever since, from his job at a sporting goods store to his refusal to finalize the divorce initiated by his long-suffering wife ([Judy Greer](#)), move

out of their old house, and accept that he's no longer a husband, a father, or a pro athlete. When he spots a surly teen at a driving range, Santi (Peter Dager), who has the makings of a major talent, Pryce sees in this potential protégé a shot at redemption. But Santi, whose now-estranged dad used to push him too hard on the golf course, doesn't exactly relish the prospect of having a new father figure to satisfy.

It sounds hackneyed and heartstring-yanking—another comedy that uses sports as a cover to talk about men's feelings and relationships from the platform that brought us *Ted Lasso*. There are indeed elements of *Stick*, which premieres on June 4, that come off as pandering; as if a dad-rock soundtrack ("Baba O'Riley," "The Boys Are Back in Town") weren't enough, it even rips off *Lasso*'s earnest folk theme song. While it's a relief that Greer isn't forced to play a harpy, the show can be cringily conspicuous in its efforts to model empathy for women. A self-described "genderqueer, anticapitalist, postcolonial feminist" character named Zero (Lilli Kay) initially reads as an assemblage of lazy Gen Z clichés that exist mostly in the imaginations of boomers.



Yet within the limitations of its formula, *Stick* works. A trite setup gives way to a looser road-trip vibe after Pryce convinces Santi and his savvy mom (Mariana Treviño) to pile into a RV with him and his cranky ex-caddie (an effectively typecast Marc Maron) for a summer of amateur tournaments.

Everyone is low-key lonely, with familial baggage that keeps them from connecting with others. Thankfully, Keller's scripts aren't as twee or didactic about this stuff as *Lasso* and *Shrinking*, creator Bill Lawrence's tend to be. Nor are his characters cartoons like Ted; most, including Zero, quickly become multifaceted people, courtesy of a cast blessed with unshowy charisma. A game changer it isn't, but *Stick* still comes out a few strokes ahead of par.

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| [Section menu](#) | [Main menu](#) |

The Life of Chuck Works Too Hard For Its Warm Fuzzies

Zacharek is the film critic at TIME. She is the recipient of a Newswomen's Club of New York award and was a 2015 Pulitzer Prize finalist.



Stories about the meaning of life tend to work at cross-purposes with the job of actually living it, particularly when they pedal hard to activate the tear ducts. [Mike Flanagan's](#) science-fiction life affirmer *The Life of Chuck*—adapted from a [Stephen King](#) novella—is an ambitious little film that has already earned some laurels: it was an audience favorite at last year's Toronto International Film Festival, winning the People's Choice Award. Thanks to a few key moments, and the strength of its actors, it's easy to see why audiences would warm to the film. But if you're immune to its charms, you won't be alone. From its cute-fake soundstage-town setting to the authoritative yet chummy voice-over narration (courtesy of Nick Offerman),

The Life of Chuck works doggedly to give you the warm fuzzies—and a little bit of that fuzz goes a long way.

The story is ingeniously—or pretentiously, depending on your mood—constructed to unspool backward, beginning with the third act and ending with the first. In the opening section, [Chiwetel Ejiofor](#) plays schoolteacher Marty, whose class is interrupted just as his students are digging into [Walt Whitman's](#) “Song of Myself,” particularly its key phrase “I contain multitudes.” A student gasps: she’s just seen the news on her phone that part of California has fallen into the ocean. Then the internet shuts down altogether, possibly for good—the end times are near, maybe, and the world is getting ready. Marty sees a weird billboard, featuring a smiling man in a business suit and the words charles krantz, 39 great years!, and thanks chuck! (The missing comma in that last phrase is presumably just one of the mysteries of life.) Marty doesn’t know who Chuck is, nor does anyone he asks. But this billboard, followed by other mysterious Chuck references, may hold the key to the end of the world.

Read more: [The Best Movies of 2025 So Far](#)



In the second act, we find out exactly who Chuck is: a pleasant accountant, played by [Tom Hiddleston](#). And in the third—which is to say the first and final act—we learn Chuck’s backstory, how he was orphaned at a young age and sent to live with his grandparents, Mark Hamill’s gruff but kind bookkeeper Albie and his sensible but joyful homemaker wife Sarah, played by Mia Sara. Sarah loves to dance, and she teaches young Chuck—at this point played by an appealing child actor named Benjamin Pajak—her best moves. He’s a natural, though something is holding him back. And he too will study that Walt Whitman poem: it will shape not only his destiny, but also that of the world.

Because *The Life of Chuck* is based on a Stephen King story, all that heavy-duty supernatural pondering just comes with the territory. The problem is that Flanagan—known for eerie but subtle horror films like *Hush* and *Oculus* and [Netflix series](#) like *Midnight Mass* and *The Haunting of Hill House*—puts too many overly earnest quotation marks around what should be the most moving scenes. The score becomes grand and syrupy whenever there’s a big emotional revelation; characters deliver solemn soliloquies on the orderly

beauty of math. *The Life of Chuck* explores the joys and sorrows of a life well lived in the most precious way—though Hiddleston and Ejiofor succeed somewhat in counterbalancing the mawkishness. Ejiofor explains Carl Sagan's Cosmic Calendar with a Shakespearean authority that makes every word matter. And Hiddleston, in the second section, has an extended dance number that momentarily sends the movie soaring. As a street drummer (Taylor Gordon, also known as the Pocket Queen) beats out a fascinatin' rhythm, Hiddleston's Chuck taps, whirls, and moonwalks through a spontaneous routine that, for as long as it lasts, almost manages to connect you with the meaning of life. He's the spirit of Gene Kelly reincarnated in a regulation accountant's gray suit; when he's in motion, *The Life of Chuck* really is transcendent.

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| [Section menu](#) | [Main menu](#) |

Why Isn't Mike Birbiglia More Famous?

Luscombe is an editor at large at TIME, where she has covered a wide swath of topics but specializes in interviews, profiles, and essays. In 2010, she won the Council on Contemporary Families Media Award for her stories on the ways marriage is changing. She is also author of [*Marriageology: the Art and Science of Staying Together*](#).



For a lapsed Catholic, comedian Mike Birbiglia sure loves a good confession. His standard joke format begins with an observation, goes somewhere surprising, and ends with an admission. Early in his new Netflix special, *The Good Life*, which is about him trying to teach his then 9-year-old daughter what's important, he tells the story of her ballet performance, during which he and his wife tear up—"because she doesn't have it." He then turns serious and adds that he went backstage and told her how good

she was. “She goes, ‘You would say I was fantastic, even if I wasn’t fantastic,’” he says. “And I go, ‘That’s true.’” Pause. “You’re so much better at logic than you are at ballet.””

It’s dangerously marshy terrain, trying to joke about yourself via your family, especially when children are involved. It’s too easy to drift into being sappy or brutal. But in this special, out May 26, Birbiglia puts on the extra-long waders and squelches in. A big theme of the performance is the decline of his father, an impressive but often inexplicably angry neurologist. “When I was a kid, I always viewed my dad as larger than life. He was a doctor and in his free time he got a law degree,” he says. “That’s how much he didn’t want to be a dad.” But there’s more. “In fairness, we weren’t great kids.” Pause. “We always wanted a dad.”

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The Good Life is the sixth of Birbiglia’s one-man shows, each one more or less chronicling a life stage; this is the one where he’s at the phase of beginning to lose people, whether they’re ailing like his dad, or growing up, like his daughter. Four of his shows have been made into specials, and he’s written and directed two movies. Birbiglia has won a bunch of awards, written books, was nominated for an Emmy, has [a popular podcast](#) with big-name guests, and made significant appearances in TV shows and a [Taylor Swift video](#). But curiously, he’s not that famous. Walking through Brooklyn Bridge Park in New York City just days before the special aired, Birbiglia says he recently reminded his wife that “it’s a week away from when I’m famous for a month and then not for two years.”

Earlier that morning he had posed like a goose with other geese, climbed a tree, pretended to eat grass, and stood on a public bench in order to help a photographer get a good shot. Despite these antics he got stopped just once in the park, by a gardener, who had heard him on a podcast. While he waited for coffee, a distinguished-looking man looked up from his own coffee to say that he admired the work. And when a young woman on the street asked for a selfie, the comedian obliged while enthusing over her choice of high-end food provider: “Poppy’s! They have two of those now, right?” His lack of fame is not due to any lack of eagerness to please.



There's something about Birbiglia's normality and friendliness that might be mutually exclusive with stardom. He looks and acts like a regular 46-year-old male human. His show was taped during a six-show run at New York City's Beacon Theatre, which was followed by a six-show stint by comedian [Nikki Glaser](#), and since they are friends—he's friends with most comedians—they did a guest spot on each other's show. Shortly afterward, he was at his daughter's school and one of the moms mentioned she had seen Glaser's show. "I go, 'Oh, I was on one of the shows,'" says Birbiglia. "And the person goes, 'On stage?'" He tells the story almost with pride. "I like that. That means I'm being a good dad."

Birbiglia's shows are less a series of funny jokes and impressions (although he does a decent Jim Gaffigan) and more a string of loosely connected stories around a central theme, such as how do you live a good life? He'll often build the emotion to the point just this side of corniness and then plunge the audience into an abyss of dark comedy. Just before he lands the joke, as he sees the turn, he often gives a little smile. After a lot of jokes about his father's debilitation, he steps out of the narrative and reminds the audience where they are, that comedy "is a coping mechanism." Watching his show is almost like watching a man try to diagnose and treat his own nervous system—a task usually left to neurologists.

"I do think that comedians are a special type of broken," says Birbiglia, who has been in therapy since a girlfriend left him when he was 22 and recommended he stop calling her to talk about it. (He sees her therapist's wife.) The task of the comedian is to turn that pain into laughter. "The job is to make the hurt funny. If you don't, you will be gone from comedy," he says. "If you can achieve that magic trick, it's a gift you're giving the audience. They need to laugh. That's why they showed up."

Birbiglia is so accommodating and reasonable it's easy to imagine he has been spared the challenges that comedians have faced in recent years, as the wall between offensive and funny has become very disputed. But even he is careful. "The decontextualization of sound and video in the last decade has given anyone who speaks into a microphone a certain new level of self-consciousness," he says. "It's like, what does this paragraph sound like? What does this sentence sound like? What does this word sound like? You

start to isolate everything and I'm not free of that. I do think oh, OK, could this be cut out of context?"

This decontextualization could be one of the forces that has led to the rise of a new phalanx of avowedly political and right-wing comedians. "Tribalism in the last 10 years has gotten so regimented that if either side steps out of line of what their tribe is saying, they get scolded on the internet," says Birbiglia. "I think that has radicalized some people. They don't want to be scolded, so they leave." He defends [Tony Hinchcliffe](#), who made a joke at a [Trump rally](#) about Puerto Rico that was reported in some outlets as a statement. "You can like the joke or not," says Birbiglia, "but it was a joke."



Birbiglia could have been famous. In 2008, CBS ordered a pilot based on his life story, with Bob Odenkirk and Frances Conroy. It did not get picked up. Birbiglia calls the process an inflection point. "I had that experience of getting an extraordinary amount of notes on my own personal story, and then

having it be rejected,” he says. “I just thought, I only want to be rejected on my own terms.” Later that year his show *Sleepwalk With Me*, a half theater, half stand-up show about his rare sleep disorder that caused him to walk through a window, opened Off Broadway, with a little help from Nathan Lane. The show did well and spawned a book, an album, and a movie. “I like staying in a small realm,” says Birbiglia. “It’s control, which is a little bit of an Achilles’ heel, wanting that much control.”

John Mulaney, one of his closest friends, doesn’t believe Birbiglia does not want to be famous. “I think everyone wants to be famous,” says the comedian. But he also thinks his friend is already there. “It’s kind of relative, the question of fame, because he’s had successes that maybe some more household names haven’t,” he says. “I don’t know anyone with as much respect in the theater, stand-up, film, and TV world all at once.” It’s not that Birbiglia turned his back on prominence, Mulaney says; he just sought it down a different path. “He made deliberate choices about having a much more interesting career than pursuing one of the agreed-upon mainstream routes.”

Birbiglia grew up as one of four kids about 45 minutes outside Boston. “What I’m realizing as I get older is that my childhood was much lonelier than I realized it was at the time,” he says. “I was this Mike Birbiglia, Comedian, but as a child, so no one got the jokes.” He listened to a lot of Weird Al on car rides and had an epiphany when his older brother Joe, who now helps run his production company, took him to see Steven Wright and he realized he could be funny for a living. At Georgetown he discovered improv. When he left the troupe, he handed the reins to Nick Kroll, who later handed them to Mulaney. When Mulaney was a sophomore, Birbiglia was already working professionally and the younger comic would open for him. “I went from being someone that wanted to do stand-up to someone who was a comedian because I was opening for him,” Mulaney says.

A lot of comedians are in Birbiglia’s debt. He produced and put up the financing for the Off Broadway versions of [Alex Edelman’s Just for Us](#) in 2022, which became an HBO Special, and [Jacqueline Novak’s Get on Your Knees](#) in 2019, which went to Netflix. (His show *The Old Man and the Pool* was nominated for an Emmy against both of these last year; Edelman won.) His [podcast](#) *Working It Out*, which has featured Ben Stiller, Stephen Colbert,

and Hannah Gadsby, is basically a real-time recording of him helping other comedians work on their jokes. “The personal and professional development of people around him is good for all,” says one of his producers, Mabel Lewis, who has worked for him for seven years, since she was 17. “That belief is in his bones.”



Another producer, [Gary Simons](#), also a stand-up, has opened for Birbiglia on his live tour and says Birbiglia helped him “get past at the cellar,” which is comedy-speak for getting approved by Estee, the booker at New York City’s Comedy Cellar, where a lot of stand-ups get their start. In the past, Mulaney has tried to persuade Birbiglia to do more stand-up. “It was always important to me, having been so influenced by him, that people kept it front of mind that he’s also just a f-cking great stand-up comic.” Birbiglia has a great Sinatra story that he’s never told. “I’ve asked him, ‘Why don’t you do that?’” says Mulaney. “He goes, ‘It doesn’t fit in the show I’m doing,’ and I go, ‘Oh, just do an hour where you tell random stories!’”

But it does not seem to bother Birbiglia that, while many of the people he has worked with and nurtured have gone on to become huge stars, he has not. “I did a whole movie about jealousy, called [Don’t Think Twice](#),” he says. It’s about what happens to an improv troupe when some of the members get called up to do a famous TV sketch show, probably based on *Saturday Night Live*. Birbiglia wrote and directed and says that process exorcised most of those feelings for him. “After I made it that movie, I was like, ‘Yeah, this is a useless thing to put yourself through.’” A testament to his no-hard-feelings ethos is that he cast Maggie Kemper Rogers, the ex-girlfriend whose departure put him in therapy, as his love interest—at the suggestion of his wife.

One of the secrets to Birbiglia’s ability to resist the siren song of stardom may be his wife Jen Stein, who, under the name J. Hope Stein, is a poet, an occupation whose practitioners have taken a vow of non-celeb-acy for decades. “She has no interest in self-marketing and every interest in the art form, so that really grounds me,” he says. There are other similarities too. Like a poet, Birbiglia works on his comic bits in minute detail until they’re exactly as he wants them. “We’ve witnessed so many waves of people going up, people going down, people going up, people going down. And I feel like the thing that I’m really proud of is that I get a little bit better every year.”

Recently, his wife suggested a new outlet. “She goes, ‘You should do improv again.’ She goes ‘When you do improv, you’re actually happy,’” he says. “I go, ‘But I haven’t done improv for 10 years.’ She goes, ‘Exactly.’” Recently he has done a few sets with the comics from [SNL’s Please Don’t Destroy](#). It’s an interesting development, since Birbiglia chose to stay small so he could

have more control, which is what you have to let go of when doing improv. But he loves it. “It’s the most joy I have,” he says. Perhaps it’s because improv is also about being goofy in a way that makes the people around you look good, which is what Birbiglia is famous for.

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