

# BIG IDEAS BOLD ACTION

EDF IMPACT 2024



Environmental  
Defense  
Fund

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# INNOVATION. PERSISTENCE. RESULTS.

Bringing bold climate solutions to life takes more than big ideas. It requires navigating messy, real-world considerations, staying the course in difficult circumstances and working on a global scale.

It's by engaging in these complicated spaces that EDF gets results, ensuring real, durable progress across the world.

As we look toward 2025, we face a new political landscape. The United States has elected a president whose previous policies and current rhetoric pose a grave threat to the global fight against climate change.

EDF will not waver in our work to secure a brighter future with abundant clean energy, family-sustaining jobs in clean manufacturing, and healthier, more resilient communities.

Thanks to your generous support, in 2024 our progress included:

**Launching MethaneSAT**, EDF's groundbreaking satellite, to track planet-warming methane pollution globally.

**Deploying a new hydrogen sensor** to measure emissions in the real world, helping ensure that the rapidly growing hydrogen industry delivers on its climate promises.

**Safeguarding forests, supporting communities and defending the climate** by combatting deforestation in the Amazon and beyond.

In the past year, the number of EDF members grew to 3.5 million. We are stronger because of you.

We hope that you enjoy reading about all that we've accomplished, thanks to your support, and what will come next.

Together, we are building a vital Earth for everyone.



**Amanda Leland** | Executive Director



**Fred Krupp** | President



**Mark Heising** | Chair, Board of Trustees



# PROTECTING THE TREES THAT PROTECT US



**The world’s forests absorb 1.5 times more carbon pollution than the U.S. emits annually. EDF works with communities, businesses and governments to broker large-scale agreements that safeguard forests and the climate.**

From California to Brazil, forests are being devastated at an alarming rate, due to catastrophic wildfires, logging and more. Engaging with local and Indigenous communities is central to halting this decline.

In California, where fires destroyed more than 1 million acres of forest in 2024, EDF supported the Karuk Tribe’s successful effort to pass legislation that restores tribal sovereignty over cultural burning. Cultural burns – the intentional lighting of small, controlled fires – have been central to Indigenous cultures for generations. Throughout the Western U.S., EDF worked to enact management practices that improve forest health and can prevent flare-ups from becoming devastating wildfires.

In South and Central America, EDF worked with Indigenous and local communities, including 1,200 leaders in Brazil alone, to support their efforts to preserve forests and benefit from international finance for conservation. In the Brazilian state of Pará, a historic, \$180 million agreement will fund programs to further reduce deforestation and support sustainable economic development.

Thanks to a landmark deal EDF helped finalize in 2024, Ghana and Costa Rica will receive more than \$60 million for forest conservation and sustainable development, benefiting Indigenous and local communities.

And because participating in carbon markets involves highly technical processes, we mobilized \$25 million to help governments committed to forest preservation to build the necessary capacity to begin.

**WHAT’S NEXT?**

EDF is helping broker carbon credit purchase agreements that are projected to conserve tens of millions of acres of the world’s most biodiverse regions. We are also building support for the Tropical Forest Forever Facility, a multinational fund that provides incentives to tropical forest nations to slow and reverse deforestation.

◀ **ESAK ORDONEZ (LEFT) OF CALIFORNIA’S AMAH MUTSUN TRIBAL BAND. IN THE WESTERN U.S., INDIGENOUS COMMUNITIES ARE BRINGING BENEFICIAL FIRE BACK TO ANCESTRAL LANDS TO KEEP FORESTS HEALTHY AND CONTROL FUEL BUILD-UP.**

**7.6 billion**

**THE NUMBER OF METRIC TONS OF CO<sub>2</sub> ABSORBED BY FORESTS AROUND THE WORLD EACH YEAR – ROUGHLY 1.5 TIMES ANNUAL U.S. EMISSIONS**

**SUSTAINABLE FUTURES**

Tatiana Martínez, a leader of the Indigenous Bribri people in Costa Rica, is participating in efforts to bring vital funding for forest protection and sustainable development to her community via carbon markets. Through workshops and on-the-ground engagement, EDF supports communities like the Bribri as they work to overcome the bureaucratic and technical challenges of participating in these markets. “This is an opportunity for Indigenous territories and especially women to participate in and understand the negotiations that affect our forests, our environment and our lives,” says Martínez.



# LOCKING IN CLIMATE PROGRESS



**Thanks to record investments unlocked by the Bipartisan Infrastructure Law and Inflation Reduction Act, the U.S. made historic progress toward a cleaner, more prosperous economy in 2024. EDF advocated for the effective use of those dollars to deliver maximum benefits across the country.**

Some 30,000 electric trucks and nearly 5,000 electric school buses are now on U.S. roads, with many more American-made clean vehicles on the way. EDF's engagement with state agencies, manufacturers, fleet operators and communities was instrumental in hastening the rollout. Together with our affiliate Moms Clean Air Force, we're ensuring that kids in neighborhoods battling poor air quality get electric buses first.

The two laws have also resulted in the announcement of more than 300,000 new clean energy jobs. And they are helping states prepare for extreme weather, even as hurricane recovery continues across the Southeast. In North Carolina, EDF worked with Governor Cooper to direct \$421 million toward nature-based flood solutions, including reforestation 55,000 acres and restoring 33,000 acres of wetlands and coastal habitats.

And, across 26 states, EDF's research and on-the-ground advocacy has helped to seal more than 10,000 abandoned, leaky oil and gas wells, reducing pollution that's harmful to both the climate and people's health. There are many more "orphan wells" to seal, but already the benefit is equivalent to taking tens of thousands of cars off the road.

## WHAT'S NEXT?

EDF is ensuring that climate initiatives around the world deliver results. In the U.S., we will work to safeguard Biden-era investments, helping ensure that the U.S. stays competitive in the global clean energy race and providing people with abundant, cheaper energy, and family-sustaining jobs. In Europe, we are helping secure concrete implementation of the European Green Deal, which aims to slash carbon emissions by at least 55% by 2030. We're also serving as a resource to the International Maritime Organization's member states as they move to cut pollution from the vast global shipping industry.

◀ AT ITS CLEVELAND DEPOT, LOGISTICS PROVIDER PITT OHIO USES WIND AND SOLAR ENERGY TO CHARGE THIS ELECTRIC TRUCK, MADE IN SOUTHWEST VIRGINIA.

# 300,000+

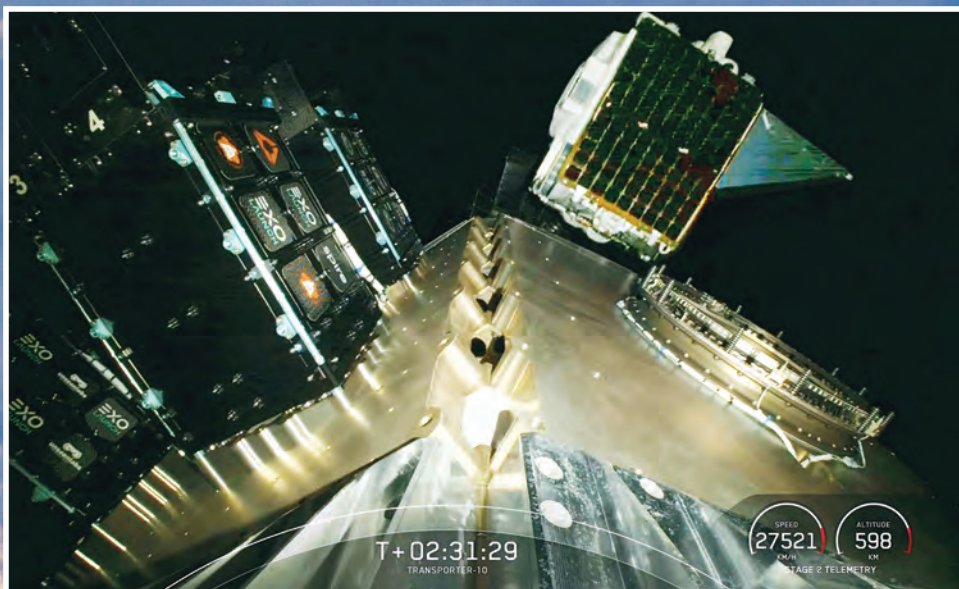
**NEW CLEAN ENERGY JOBS  
ANNOUNCED THANKS TO  
RECENT U.S. CLIMATE ACTION**

## A CLEAN RIDE FOR STUDENTS

Carmen Cortez, a school bus driver in Maryland, is a trailblazer in the U.S.'s electric bus rollout. "I resisted at first, because I did not know what this change implied," she says. "But the day I drove the vehicle I could feel how quiet it was, and the most important thing is that I was able to breathe cleaner air." Now, she trains other drivers on electric buses for the district's program, which is set to expand from 86 to 326 electric buses in the coming years. "This change is not only felt by me, but also by the students on my bus and the neighbors who live on my routes," she says.



# NEW DATA DRIVES GLOBAL METHANE ACTION





**Visionary technology developed by EDF is revealing the facts about methane pollution from the oil and gas industry and driving action to reduce it.**

On March 4, 2024, an eager crowd gathered in the bright sunshine at California’s Vandenberg Space Force Base. They arched their heads skyward, watched in awed silence, and then roared as MethaneSAT, EDF’s world-changing, methane-hunting satellite, lifted off into space. The satellite is able to detect pollution other satellites can’t, making it a vital tool in EDF’s efforts to reduce the world’s emissions of methane.

The main component of gas used for heating, cooking and generating electricity, methane is responsible for about 30% of today’s global warming. Finding and fixing leaks and cutting routine emissions from oil and gas operations is the fastest way to slow climate change now.

Initial, high-precision images from the satellite were released this fall. In early 2025, MethaneSAT will publicly release data through Google Earth Engine and MethaneSAT’s own portal.

A new partnership with the International Energy Agency and the U.N.’s International Methane Emissions Observatory will use this and other information to monitor pollution from the world’s 100 largest oil and gas producers. It will also track the progress of more than 50 oil and gas companies that have pledged to reduce their methane pollution by as much as 90%.

**WHAT’S NEXT?**

In the EU, the world’s largest gas importer, MethaneSAT data will support new methane rules that EDF helped develop. By 2030, oil and gas companies selling into the EU market will be required to meet the region’s new standards for methane pollution reductions. Japan, also a major importer, has formed a new alliance with the European Commission to tackle methane emissions.



**Google and EDF have a long history of working together to map pollution and provide data that can help solve environmental challenges. The MethaneSAT collaboration represents a great opportunity to address the urgent challenge of climate change.**

**Karen Tuxen-Bettman, Ph.D.**  
 Outreach Director  
 Google Earth

**THE NEXT CHALLENGE**

Hydrogen could be a clean alternative to fossil fuels, and billions of dollars are pouring into hydrogen projects around the world. But without careful attention to how it’s made, managed and used, hydrogen can have climate downsides. One issue: The gas escapes easily, contributing to global warming. EDF, along with industry and academic partners (*Utrecht University researcher Ceres Woolley Maisch, pictured*), is launching a first-of-its-kind study to measure hydrogen emissions in real-world settings, using a new, fast, high-precision sensor. Testing and preparations are underway to measure emissions at multiple locations in Europe and the U.S. By shedding light on how much hydrogen is emitted, and from where, the research will help determine how to minimize emissions and ensure this growing industry delivers the climate benefits the world needs.



◀ METHANESAT’S LAUNCH AND DEPLOYMENT INTO ORBIT (INSET) HERALD A NEW ERA OF INDUSTRY ACCOUNTABILITY.

# MAJOR DAIRY COMPANIES UNITE ON METHANE



## An unprecedented alliance of food and dairy companies, spearheaded by EDF, is stepping up to cut methane emissions from livestock.

Methane pollution is accelerating global warming. Globally, agriculture is responsible for nearly 40% of this climate pollution, the majority of which comes from livestock.

In December 2023, six of the world's leading dairy and food companies joined forces with EDF to establish the first-of-its-kind Dairy Methane Action Alliance. The companies committed to annually calculate and publicly disclose methane emissions from their dairy supply chains and create plans to reduce those emissions.

This spring, Starbucks and Clover Sonoma joined Bel Group, Danone, General Mills, Kraft Heinz, Lactalis USA and Nestlé in the alliance. Together, the companies represent \$230 billion in annual global sales.

In November 2024, Bel Group and Lactalis USA made good on their promise and disclosed their dairy methane footprints — a groundbreaking move toward transparency. More disclosures from other alliance members are expected in early 2025.

Danone and Bel Group have both conducted successful trials with Bovaer, the first feed additive for cutting methane from cow burps, and are now looking to scale its use. EDF is helping ensure farmers have financial support to use solutions such as Bovaer, which was cleared for market by the U.S. Food & Drug Administration in 2024 and can reduce methane emissions by up to 30%.

### WHAT'S NEXT?

In 2025, alliance members will publish their plans to drive down methane from dairy in their supply chains, and EDF will work to expand this historic alliance by calling other leaders to join.



**EDF has been a critical thought partner for Danone, providing us with guidance from the onset of our methane commitment and has now united our industry behind a common agenda to tackle methane emissions.**

#### Henri Bruxelles

Chief Sustainability and Strategic Business Development Officer  
Danone

### TACKLING METHANE EMISSIONS FROM COWS

EDF experts visited the Cornell Dairy Research Center in Ithaca, New York (*below*), where scientists are testing strategies that can help farmers reduce agricultural methane. Cows produce methane from enteric emissions (mostly burps) and from their manure, when it decomposes under certain conditions. Changing how it is stored and treated can substantially reduce methane from manure, while changing a cow's diet and supplementing it with feed additives has the potential to dramatically slash enteric emissions.



# SUPPORTING FARMERS AND FISHERS WORLDWIDE



**EDF worked with partners in 39 countries, helping millions of food producers access locally tailored, profitable, climate-smart practices.**

Farmers use nitrogen fertilizer to ensure a bountiful crop. But plants can't use every ounce of it, and adding excess not only eats into profits — it also creates the powerful climate pollutant nitrous oxide, pollutes water and causes other environmental harms.

EDF scientists developed the N-balance model as a user-friendly way for farmers to calculate the right range of fertilizer use for their crops. In the state of Bihar, India, 3,500 farmers used the tool to reduce their nitrogen use by an average of 25%, without affecting productivity.

Today, through partners in India, 40,000 farmers are using N-balance to save money and reduce pollution. EDF partners have also trained 20,000 agricultural consultants in this and other sustainable practices, extending the reach of money-saving, pollution-cutting tools to millions.

In the U.S., where N-balance can be used by farmers across 6 million acres of land, EDF is encouraging new streams of financing for climate-smart farming. A coalition EDF helped create this year will tap into \$7 billion in federal funding to reduce climate pollution. And CoBank, one of the largest private agricultural lenders in the U.S., worked with EDF to create a novel loan that will offer lower interest rates to support farmers who protect soil health and water quality — a model for other lenders to follow.

### WHAT'S NEXT?

A new climate and animal health initiative, announced by EDF, Global Methane Hub and others at the U.N.'s global climate summit, COP29, will accelerate research and ramp up on-the-ground support for small farmers worldwide. The work will focus on delivering improvements to livestock health that also reduce methane emissions and enhance human health and nutrition.

◀ THESE RICE FARMERS IN BIHAR, INDIA, ARE USING EDF'S N-BALANCE TOOL TO PRODUCE A HEALTHY CROP WITH LESS FERTILIZER.



**I manage to save 300-400 rupees [about \$4] per acre. I have used this money to buy more seeds as well as spend on my children's education.**

**Jay Prakash Prasad**

Rice farmer  
Bihar, India

### IN CLIMATE-SMART FISHING, WOMEN LEAD THE CHARGE

Across the world, more than 3 billion people depend on fish for nutrition. But climate change is upending ocean ecosystems and fishers' livelihoods. In Sumatra, Indonesia, Suwati (pictured) founded a women's organization that developed new markets and products derived from blue swimming crabs. In 2024, EDF worked with partners like Suwati in 12 countries to support fishing communities as they navigate toward a profitable, sustainable future. These communities also strengthen compliance with regulations to combat illegal fishing. "We're making sure the food we depend on will remain available for future generations," says Suwati.



# NEW SAFEGUARDS FOR PEOPLE AND PLANET



**EDF helped secure long-awaited health and climate protections in the U.S. The new rules, vigorously defended by our attorneys, will slash billions of tons of pollution and save thousands of lives.**

Communities will breathe cleaner air thanks to tougher limits on mercury and cancer-causing pollutants from smokestacks. New standards will dramatically reduce climate emissions from power plants and keep 1.3 billion tons of carbon dioxide from our atmosphere. And a suite of new tailpipe standards for cars, trucks and buses will slash climate pollution, create more jobs and save over 20,000 lives.

These are just a few of the new, lifesaving Environmental Protection Agency standards that EDF helped secure in 2024.

EDF's Executive Director Amanda Leland joined EPA Administrator Michael Regan to announce the clean car standards. "This is a day to celebrate American achievement," she said. "These standards will supercharge economic expansion and make America stronger."

We also helped win more protective limits on dangerous soot pollution and on toxic pollution from more than 200 petrochemical facilities. And, after a multiyear campaign, we helped secure a near total ban of the highly toxic chemical methylene chloride, as well as a stronger rule that lays the foundation for eliminating lead water pipes nationwide.

Throughout the year, EDF's deep bench of attorneys, scientists and advocates worked steadfastly to make the rules as enduring and protective as possible. Attempts to halt several protections have already been denied by the U.S. Supreme Court.

## WHAT'S NEXT?

EDF attorneys are working with public health groups, community organizations, states and many allies to vigorously defend these carefully crafted standards from litigation.

# 40,000+

**ADDITIONAL LIVES SAVED THANKS TO U.S. CLEAN AIR AND CLIMATE STANDARDS FINALIZED IN 2024**

## A SON'S LEGACY

Wendy Hartley's son, Kevin, died in 2017 after being exposed to methylene chloride while refinishing a bathtub. He was just 21. For years, Hartley worked alongside EDF to secure a ban on this toxic chemical found in paint strippers. In April, those efforts succeeded when the EPA announced it would phase out most uses of methylene chloride. Kevin, an organ donor who saved four lives, now continues to save even more. "That's his legacy," Hartley says.



# MORE 2024 MILESTONES





**WATER WINS FOR DRY LANDS**

In the Western U.S., vital reserves of fresh water below the Earth's surface are declining, and torrents of unmanageable rain can do more harm than good.

This year, EDF helped shepherd a wave of state efforts to better manage these extremes, securing billions of dollars for infrastructure improvements, protection of underground aquifers and more.

In Texas, a new \$1 billion state water fund will address critical infrastructure needs across the state. EDF worked with lawmakers to ensure the fund will prioritize rural communities, where water in wells is declining.

In Arizona, we helped defeat several proposals to undercut local groundwater protections. Colorado and Oregon authorized hundreds of millions of dollars for efforts such as ecosystem restoration, agricultural resilience and well repairs. And \$3.8 billion of California's \$10 billion climate bond will go toward increasing water resilience.

This raft of efforts brings millions of people under the umbrella of more sustainable, climate-resilient water policies and practices.

**DATA DRIVES ACTION IN TEXAS**

EDF's award-winning Climate Vulnerability Index maps which U.S. communities stand to be most harmed by climate change. Now, it's helping lawmakers design policies and allocate funding where it is most urgently needed.

In 2024, city planners in El Paso, Texas (*pictured*), used the map to identify a heavily trafficked location where new air quality monitors were needed. Measurements from the monitors will inform actions to reduce pollution in neighboring communities.

EDF has also piloted a program to provide officials in Texas and Louisiana with personalized, step-by-step guidance on using CVI data to inform policy and make funding decisions.

The CVI, created in partnership with Texas A&M University, overlays climate data with socioeconomic, health and other indicators to assess a community's vulnerability to the impacts of climate change. The tool is available to all.

### A GLOBAL NETWORK OF SUSTAINABILITY LEADERS

When Piyasi Mitra ended her 2024 summer fellowship at Blue Dart Express, one of India's largest logistics companies, she'd developed a blueprint for nearly eliminating waste-related climate pollution at company headquarters.

Mitra is part of a global network of fellows from EDF's Climate Corps®, a program that places high-performing grad students at leading global companies to help them chart a path to greater sustainability.

Launched in the U.S. in 2008, today Climate Corps has embedded almost 1,900 fellows at more than 700 top-tier organizations around the world, including Lenovo, Tata Steel and Google. Today, at least 80% of U.S.-based Climate Corps alumni work on energy and sustainability as part of their full-time jobs.

Mitra, a student at the Indian Institute of Management Lucknow, in the state of Uttar Pradesh, is similarly inspired. "I am dedicating my career to climate change because addressing it is one of the most critical challenges of our time," she says.



### REDUCING TRUCK POLLUTION NEAR WAREHOUSES

Diesel pollution, which is linked to asthma and other health issues, is about 20% higher near warehouses. A single warehouse can generate hundreds of truck trips a day, bringing pollution and traffic to communities.

EDF worked with advocacy groups South Bronx Unite, Warehouse Workers for Justice and others on research that revealed a stark injustice: Warehouses are disproportionately located near Black and Hispanic communities, exposing them to more pollution from trucks. Our experts mapped this pattern in several states.

Now, new legislation has been introduced in New York and New Jersey to tackle truck pollution near warehouses. EDF experts and local partners are working to introduce similar legislation in Illinois. New clean air rules could help accelerate the rollout of electric trucks in these communities.

**NEW TECHNOLOGY BOLSTERS CLIMATE-SMART FISHING**

Fishing communities face declining catches as warming oceans drive fish to cooler waters. EDF and partners are leading the Fishing Vessel Ocean Observing Network, which works with small-scale fishers in 12 countries, including the Bahamas (*pictured*), to collect data on ocean conditions from hundreds of boat-mounted sensors.

This data can provide valuable insights to inform climate-smart fishing practices. In 2024, the U.N. approved FVON as a component of its CoastPredict program, which seeks to revolutionize the world’s ability to observe and predict ocean dynamics and improve hurricane prediction models.



**IMPROVING AIR QUALITY IN BRAZIL**

In 2024, record-breaking wildfires and agricultural burning in the Amazon sent smoke billowing for hundreds of miles, darkening Brazil’s skies as far away as São Paulo.


It was a vivid illustration of the urgency of EDF’s work with the Brazilian federal government to establish a new national air quality law that will deliver cleaner air to Brazil’s more than 200 million residents. Air quality standards play a crucial role in shaping policy governing everything from industrial pollution to transportation to forest management.


EDF has also deployed its Air Tracker technology in both São Paulo and Rio de Janeiro. The tool, already in use in several U.S. cities, shows regulators and the public both where air pollution is highest and the sources of those hotspots.


**YOUR GENEROSITY DROVE VITAL  
ENVIRONMENTAL PROGRESS IN 2024.**

# THANK YOU!


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