

Climate Action

Actor and environmentalist **Ian Somerhalder** shares how he believes young people are the future of sustainability

LEARN

more from WildAid about how we can influence the poaching epidemic that's wiping out wildlife

ONLINE

1% For The Planet discusses the role every individual can play in stopping climate change



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We Are Responsible for Fighting This Global Emergency



Joyce Msuya

Acting Executive Director,
United Nations Environment
Programme

It may be tempting to view climate change as a far-away storm or a problem to confront at some distant point in the future. But this year looks set to become the fourth hottest on record. Wildfires, extreme heatwaves, droughts and

floods have left a trail of death and destruction around the world.

When the world's leaders met three years ago in Paris, they agreed to keep a rise in temperature to well below 2°C. There was a real sense that the world was finally on track to avert calamity. But our latest research shows that the gap between where greenhouse-gas emissions are today and where they need to be is not only enormous, but growing. The majority of the top 20 economies responsible for about three-quarters of global emissions will fail to fulfill their commitments on time. And even if they do, the world will still heat up by 3°C.

A few degrees may not sound like a big deal, but it's worth considering what this means. The

difference between a 1.5°C and 2°C rise is the difference between coral in the ocean and no coral in the ocean. A half-degree rise means plunging several hundred million of people into poverty by 2050 and doubling the number of people who lack access to decent water. It means more floods, heatwaves, wildfires and drought. Raise the temperature by 3°C, and things start to spiral out of control.

We need action

If we are to stand a chance of sticking to 1.5°C of warming, we need to make emission cuts six times deeper than the pledges made in Paris. That means cutting emissions in half by 2030. The action required is unprecedented, but, as our report makes clear, it is still technically possible.

We all have a role to play. From the highest level of government to our kitchen table, it is the decisions we make every day that ultimately determine the future of this earth.

A global mission

We need to rapidly replace fossil fuels with renewable energy from the wind and sun and make smart transportation choices. Cities and buildings will need to be redesigned so they waste less energy. And we need to be aware of the climate footprint of our air-conditioning units and refrigerators. We must stop deforestation, plant new forests and restore degraded ones. And we must think about how our eating habits impact our earth.

The know-how exists. It is courageous decision-making, on every level, that is lacking.

Make no mistake, we are in the grip of a global emergency the scale of which humanity has never confronted before. But we all know how to tackle this crisis — cutting greenhouse emissions is our combined responsibility.

As we reflect on the 24th Conference of the Parties to the United Nations Framework Convention on Climate Change, this is our last chance to ensure that the world's climate ambitions match the scale of the global calamity that confronts us.

We have to lead by example because everyone is accountable. The deep changes that are urgently required are still possible. History may forgive a shaky start, but it will look back with despair and disdain if we continue on our current path. ■

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CALIFORNIA LEADS THE NATION IN PRESERVING OUR CLIMATE

Everyone who experiences California, even for a short visit, comes away with an appreciation of our abundant natural beauty. Generations have fought diligently to preserve it, from John Muir all the way to Jerry Brown. Learn more about climate successes in our field guide at EnergyUpgradeCA.org/climate



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How Personal Action Helps Our Planet

A shift to a green, circular economy is possible, but consumers and producers need to work together to get there.

“I’m only one person, what can I do to help our planet?” is the question I most often hear. I’m sure you’ve asked it yourself — I know I have.

Our environmental issues are thankfully becoming less out of sight and more in mind as social media makes our world a much smaller place. However, while exposing ecological problems to a global audience enacts change, it can also cause anxiety. Remember when your nudge to be green was seeing a piece of litter on the sidewalk? Nowadays, it only takes logging into Facebook to see a river of trash in the Philippines, an oil spill in the Amazon and a 30-year-old plastic yogurt carton on a beach in the United Kingdom. No wonder people feel overwhelmed and hopeless. The good news is they don’t have to feel that way.

The power of consumers

As consumers, we have more power than we realize. Companies listen to their market, and if they see a demand for less plastic, fewer emissions and safer ingredients, they will change. You only have to go to your local grocery store to see this power in action.

Not that long ago, organic food and plant-derived cleaners were squeezed into a tiny “natural” section, if they were stocked at all. Now, there are eco-friendly detergents next to brand name cleaners and organic products in every aisle. There is a demand, so companies listen.

Taking steps

Consumers can’t rely on companies waking up and deciding to help save our planet. That’s why we urge people to vote with their wallets and let companies know that sustainability and safer ingredients are important to them. We also have to make sure we don’t shun companies that are trying to do better. Corporate America has to be part of the conversation, which is why we started our EMA IMPACT Summit — a two-day sustainable business summit focused on solutions.

**Debbie Levin, President and CEO,
Environmental Media Association**



Philippe and Ashlan Cousteau Look to Our Youth as Future Environmental Leaders

Not all young people have the right to vote, but they do have the power to make a difference in the world. That’s the message of EarthEcho International, a nonprofit spearheaded by Philippe Cousteau Jr. and his wife, Ashlan.

Philippe Cousteau Jr. and his wife, Ashlan Gorse Cousteau, are spearheading an effort to encourage youth to get involved in their communities and help ensure that everyone has access to clean air and water.

“What we really see is the power of young people, and what we’re all about is: ‘How do we inspire these people to be change agents and leaders today, not tomorrow?’” Philippe says.

Starting with the youth

Through the organization’s Youth Leadership Council, people ages 15-22 are tasked with developing local environmental initiatives and then spreading the word to make that impact happen globally.

“We have a huge leadership council where we work with young people

from around the world and provide training on how to take their advocacy to the next level,” says Philippe. “We want to be a partner, not a controller, to young people.”

He references one council member who launched a political campaign in Miami for solar-panel installation and another in Australia who collaborated with an artist to repurpose and then sell plastic bags to donate back to the cause.

Spreading the word

The nonprofit has programs on workforce development in the STEM space and one of the world’s largest citizen-run water-quality programs. At the heart of EarthEcho’s mission, though, is conversation.

“It’s really important that we look to stop talking [only] amongst people

who care about the environment, but also talk to those people who’ve never recycled or gone to the beach,” Ashlan says. “Talk to those people who voted against the environment, and get them engaged, because at the end of the day, this affects all of us. And when we can diversify the groups that talk about it, that’s when we’ll really see change.”

Regardless of your age or how much you recycle, the Cousteaus say the understanding that every action counts is key.

“Every product you buy, every vote you cast — it all makes a difference,” Ashlan says.

Philippe adds, “Clean water and clean, healthy air are not givens that we can take for granted. We need to come together to solve these issues.” ■

Melinda Carter



The Journey Towards Deforestation-Free Commodities

One of the biggest drivers of deforestation is the use of palm oil, but boycotting isn't the answer. Instead, we need to focus on sustainable sourcing.

Deforestation accounts for 20 percent of all greenhouse-gas emissions. Whilst the causes are complex, it is widely acknowledged that the biggest drivers are the cultivation of soy and palm oil, paper and pulp and the rearing of cattle — all of which are major ingredients in the supply chains of most consumer-goods companies.

Should we ban palm oil?

Public awareness about the loss of wildlife through deforestation caused by palm oil crops is growing, and there is increasing pressure on retailers to boycott all palm oil, including sustainable palm oil. However, a ban would mean replacing palm oil with other types of vegetable oil to meet the current demand, and this would

put progress at severe risk. Compared with other sources — such as rapeseed and soya beans — palm oil crops yield 4-10 times more oil per unit of land. We must avoid confusing consumers and practitioners with conflicting messages and be very clear that the answer lies in the sustainable sourcing of palm oil.

Sourcing sustainably

Soybean farming is responsible for more than double the deforestation of palm oil. Worldwide, 85 percent of the soybean crop is fed to livestock, while the rest is “hidden” in processed food consumed directly by humans. It is therefore imperative that companies start understanding their soy supply chains.

Business, government and NGOs must work collectively to bring about lasting change. Certification is one part of the solution, but jurisdictional approaches are also worthy of increased focus and investment. These lie at the intersection of two existing strategies to reduce forest loss — landscape approaches by governments and voluntary corporate sustainability efforts.

A larger communications strategy must accompany business actions, and companies need to be ready to share their stories to empower consumers and help them to understand the need to support sustainable sourcing. ■

**Ignacio Gavlian, Director,
The Consumer Goods Forum**

Want to Help the Environment? Why One Percent May Be All It Takes

You know climate change is happening, but you're not sure how to help. Fortunately, certain organizations can take the guesswork out of the effort.

A strategy for everyone

“The thing we always think about and a personal belief of mine is everyone has a one percent,” says 1% For The Planet’s CEO Kate Williams. “We work really closely with businesses to bring their one percent to life, so an actual thing that businesses can do today is give back to the environmental nonprofits that are creating change on the ground.”

Considering only three percent of nonprofit donations go toward environmental causes, that one percent can make a difference.

“It’s the smallest chunk of the philanthropy pie that goes toward our big, beautiful planet,” Williams says. “We’re trying to engage businesses and individuals in giving more because nonprofits play a really important role in driving a lot of change in terms of advocacy and addressing issues where there isn’t a market.”

These numbers matter

Companies that partner with 1% For The Planet receive a third-party donor certification, which can be good for more than just the environment, Williams says.

She says that 87 percent of consumers reported they would purchase a product because a company advocated or invested in an issue they cared about. The number was even higher among millennials at 91 percent.

“These are huge numbers that companies need to pay attention to,” Williams says. “It really matters that companies are not just modifying their logo to look a little greener or changing their language; it ultimately needs to be real and authentic because consumers are savvy.”

When companies and individuals make the leap — as have the 1,800 members in 1% For The Planet’s network — the results can have a domino effect. Business partners educate one another on sustainability practices, and consumers use their purchase power to increase their donations to influential nonprofits.

“Stepping forward to giving that one percent is a powerful action,” Williams says.

Melinda Carter

Surviving in an Industrialized Ocean: A Historic Species on the Brink

Rarely do we truly perceive the fact that some species are under pressures so great that the loss of even one individual reverberates with devastating consequences on the population at large.

The North Atlantic whale, *Eubalaena glacialis*, is one of the most endangered whales in the world. Its population hovers around 411 individuals, a cataclysmic decline from tens of thousands in the early 1900s.

America's whale

The migratory routes of the right whale span from New England and

Canada to the coasts of Georgia and Florida, giving this iconic marine mammal the endearing nickname of "America's whale." A population once rich in abundance now lies barren and sparse, which is the result of unintended ship strikes (when a ship hits a whale) and chronic entanglement in commercial fishing gear.

With no new calves born last year and an unprecedented 20 mortalities

over the past 18 months, it is clear that America's whale will not recover without immediate and fundamental change. The removal of vertical rope lines from fishing gear will literally clear the way, forging a key path forward for survival of this species.

Taking action

Success will not be achieved without an engaged public that

demands the survival of this species — a public that embraces the fundamental change needed to ensure its continued existence. To allow the mortal grip of extinction when a solution is within reach would be to deny the intrinsic value of the right whale, a species which has accompanied our society and culture through centuries of history.

Let us take bold action together and face headfirst one of the most pressing conservation challenges of our time. Let us remove the North Atlantic right whale from its current path towards extinction and place it on a path towards recovery. ■

Rodger Correa, U.S. Communications Director, International Fund For Animal Welfare



Every animal matters.

Only 411 North Atlantic Right Whales are left on earth today. Take action at ifaw.org/rightwhale

How Consumers Can Help Create Better Lives for Farm Animals

The food industry has the power to create better lives for farm animals and urges consumers to demand it.

“Two-thirds of the world’s 70 billion farm animals are farmed intensively,” says Alesia Soltanpanah, executive director of World Animal Protection, a non-profit whose vision is a world where animals live free from cruelty and suffering. “They

endure unacceptable suffering, crammed by the thousands into giant sheds to provide the meat, eggs and dairy products people demand.”

Factory farming

Higher-welfare farming, which addresses the needs of livestock, is better for animals, people and the planet. Under the current system known as factory farming, animals such as cattle, pigs and poultry are

confined indoors under controlled conditions.

“Factory farming is the largest source of animal cruelty and environmental pollution in the world,” says Soltanpanah, who explains 3 out of 4 of the world’s mother pigs spend their lives in steel cages, no bigger than the size of an average refrigerator.

Every year, 60 billion chickens are reared for meat. Soltanpanah says the poultry live in over-

crowded sheds or cages, often without natural light and fresh air.

She also says animals on factory farms are routinely given antibiotics to promote growth and help prevent the spread of disease. According to Soltanpanah, this has caused antibiotic resistance in both animals and humans.

There’s a big environmental impact of factory farming as well.

“Animal agriculture is accountable for producing the equivalent

of 7.1 gigatons of carbon dioxide per year, or 14.5 percent of greenhouse-gas emissions,” Soltanpanah says. “This is more than all cars, planes and other forms of transport put together.”

A call to action

World Animal Protection calls on consumers to eat less meat. When you do eat meat, choose higher-welfare meat.

Consumers can also call on businesses, including fast food restaurants and supermarkets, to source higher-welfare meat. The industry will respond to public demand.

Stand up for animals when voting. For example, California voters recently passed Proposition 12, which requires all mother pigs, egg-laying hens and veal calves farmed in California to have cage-free housing and more living space by 2022. ■

Kristen Castillo



Factory farming is bad for animals, human health and the environment.

Animals on factory farms suffer enormously in confined, barren conditions.

The UN recently branded meat the “World’s Most Urgent Problem” due to the impact of animal agriculture on climate change, pollution and water usage.

This is animal cruelty. End it.

Higher-welfare farming is better for pigs, people, and the planet.

Find out more at
▶ www.worldanimalprotection.us/endit

Forests Could Be the Solution to Climate Change

The nation's first and most trusted forest organization, American Forests, has vaulted to a leadership position in the mission-critical race to identify and implement climate change solutions. Under the organization's new CEO, Jad Daley, American Forests has assumed leadership of the Forest-Climate Working Group and is delivering new innovations through science, policy and on-the-ground forest restoration. The mission is to capture and store more carbon in resilient forests that can withstand climate change.

The impact of our forests

America's forests already capture and store nearly 15 percent of our annual carbon emissions, and analysis from American Forests suggests that our forests have the potential to capture as much as 30 percent of emissions if we follow through on planting millions of new trees.

However, our forests could just as easily become a source of carbon emissions if we can't overcome the impacts of climate change. These two competing futures are why our forests hold the critical "swing vote" on climate change.

Looking ahead

American Forests has centered the future strategy on delivering forests as a solution to climate change, from city street trees to vast forest landscapes. We are sharing our breakthroughs and shaping powerful new forest-climate policies leading the 46-member Forest-Climate Working Group and working in partnership with the 17 states of the U.S. Climate Alliance. And we are leading the call to action through #Forests4Climate.

Working with on-the-ground partners from the U.S. Forest Service to local community tree-planting groups, and supported by diverse financial contributions from corporate sponsors to individuals and foundations, American Forests is putting forests to work for climate action.

Lea Sloan, Vice President of Communications, American Forests



AMERICAN FORESTS

- SINCE 1875 -

America's most trusted forest organization is leading the movement to deliver forest-climate solutions, from planting climate-resilient forests to science and policy breakthroughs.

Join the movement.
#Forests4Climate

Support the mission.
AmericanForests.org

Actor and Environmentalist Ian Somerhalder's Call for Sustainability

UN Environment Goodwill Ambassador Ian Somerhalder has been connected to nature his whole life. He spent his childhood in Louisiana exploring the outdoors and wanted to be a marine biologist. Today, he uses his platform to spread the importance of sustainability.

Ian Somerhalder's parents taught him everything he knows about giving back to the environment. "It definitely set a tone for my life," he says.

Somerhalder, who started modeling at 10 and acting as a teen, has never lost his passion for the environment. Now 40, the humanitarian, who's known from his work on the TV series, "The Vampire Diaries," is founder and president of the Ian Somerhalder Foundation (ISF), which he started eight years ago to empower and educate people on caring for animals and building compassion in the community. His wife, actress Nikki Reed, is the vice president of the foundation.

Investing in youth

"Ultimately, our young people are our greatest untapped natural resource," says Somerhalder, whose goal is to build a sustainable farm to teach children about soil, air and water.

The recent fires in Northern and Southern California are on Somer-

halder's mind, as well as fires he saw in Northern Ontario and British Columbia, Canada when he was filming over the summer.

Quoting his friend and mentor Deepak Chopra, the actor says, "We are not separate from the environment, we are literally the environment."

He compares trees to human lungs and water systems to our cardiovascular system.

"If you cut and burn all of the trees, you're taking away the world's lungs," he says. "And if you dam, pollute and destroy the river systems and water systems, you are preventing the organism from using those systems to push around all the vital nutrients the organism needs to live. What's going to happen? The organism starts to die."

He calls on millennials and Gen Z to demand environmental responsibility and live mindful, green lives.

"I think it's time for sweeping, massive change," says Somerhalder, who encourages youth to become conscious



PHOTO: GLASS JAR PHOTOGRAPHY

consumers and vote with their money by only buying sustainable products.

Beacon of change

Somerhalder has many entrepreneurial projects. He’s launching a wine brand as well as a chemical-free, organic nutraceuticals line, both in China. Plus, he’s in post-production as a director and executive producer on V-Wars, a vampire drama series for Netflix.

Despite that packed schedule, family comes first.

“Being a dad is really important,” says Somerhalder, who, with Reed, has a toddler daughter. “I want to raise my children, simply be happy and be a really, really positive beacon of not just light, but of real quantifiable change. ■

Kristen Castillo

We Need a New Approach to Fighting Environmental Crime

Preventing wildlife crime

The vigilance required from international organizations to prevent wildlife crime is hamstrung by a lack of resources and a growingly complicated criminal-trafficking structure. International syndicates that operate in the world of wildlife crime are dark and vast. Traffickers work with businessmen and corrupt government officials to ship enormous quantities of illegal wildlife products, illegal timber and live animals through well-known ports and smuggling routes, with profits going to very dangerous criminal and terror organizations.

Too many moving pieces evade the traditional watchdogs, and the international attention and resources are only focused on the same few pieces of this mechanism, such as poaching, with costly awareness campaigns.

The future of environmental crime

The traditional reactive model is failing, and the future of preventing environmental crime is a more proactive investigation and intelligence-driven approach led by non-governmental organizations like the Elephant Action League. Decentralized, intelligence and investigative organizations that prioritize information gathering can infiltrate groups and paint a fuller picture of the issues at hand.

An on-the-ground approach to environmental crime, run by intelligence and security professionals, is the future in the war against the destruction of our planet. Illicit traders and businesses operating with impunity in the dark can only be stopped by shining a light on their organizations. The complexity, sophistication and financial scale of environmental crime requires a system-wide strategy that is international and collaborative, and this is our blueprint.

Andrea Crosta, Executive Director and Co-Founder, Elephant Action League



Elephant
Action
League

FIGHTING WILDLIFE CRIME REQUIRES AN INTELLIGENCE- LED APPROACH

Human Intelligence
Undercover Investigation
Supplying Intel to Disrupt
Wildlife Criminal Networks

elephantleague.org



The Million Waves Project Is Offering a Sustainable Solution to Our Current Plastic Problem

The use of plastic is having a disastrous effect on our planet, but new technology is giving hope for a more sustainable future.

Single-use plastics like straws, water bottles, soda bottles and plastic shopping bags have proven to be more harmful to the environment than anyone ever imagined. We all feel a collective sense of remorse over our plastic use, but for most, plastics are such a part of daily life that it feels impossible to go without.

Recycling statistics are dismal, and while more and more people are moving to reusable items, it will be a slow process to make a dent in our collective plastic use. The Million Waves Project believes there is a way to transform the unacceptable global-waste problem into a global resource while also meeting the needs of some of the most underserved people in the world.

It is estimated that 40 million people in the developing world are in need of prostheses, and only 5 percent have access due to lack of trained doctors and the steep costs of traditional prostheses.

3Dprinting technology allows for the customization of basic prostheses without the need of specialized doctors, and the device cost between \$45- \$130 to print, assemble and deliver anywhere in the world.

The Million Waves Project's mission is to bring together two unacceptable global conditions and offer a practical and sustainable solution. We take plastic cleaned from the ocean and turn it into 3D-printed prosthetic limbs for anyone, anywhere free of cost. We strive to promote awareness of the need for prosthetics and the need to close the loop on plastic use worldwide.

Laura Moriarity, Co-Founder and Chief Operating Officer, Million Waves Project

Transforming Recycling for the Good of the Planet

Consumer interest in recycling is strong, but the ease of recycling needs to be improved. Currently less than half of recyclables in United States households are recycled

A national recycling expert is calling on consumers, communities and businesses to change their behaviors and commit to green habits.

"There's enough left in the trash bins that if we started recycling it tomorrow, it would have an immediate carbon impact for our planet," says Keefe Harrison, CEO of the Recycling Partnership, a national nonprofit that leverages corporate-partner funding to improve recycling in communities nationwide. "If every family in America recycled all that they could, we would avoid 50 million metric tons of greenhouse gas — the equivalent of taking 10.5 million cars off the road annually."

Making it easy

Always check locally to see what your community recycles.

Harrison says that of the people who recycle, only half of their recyclable household items are put in their recycling container. The ultimate

goal is to recover all of these materials, including paper, plastics, aluminum, steel, cardboard, cartons and glass.

Good recycling programs make it easy for consumers to recycle, telling them things, such as what day of the week their community recycles and what items can and can't go in the bin.

"Guessing results in 'wishcycling' — putting just about anything in the bin," Harrison says. "Pizza boxes are recyclable, pizza is not. Throw the crust and greasy liner out, and then you have a beautiful recyclable cardboard box."

Garden hoses and holiday lights aren't recyclable, while empty plastic bottles with caps on are. Harrison warns bagging recyclables before putting them in the cart can cause problems for the recycling system.

Good business

The Recycling Partnership is the only organization in the United

States that engages the full recycling supply chain from retail to reuse.

"Our funding partners see the value and impact we're having on communities, cities and states to help their residents recycle more and recycle better," says Harrison. Over the past five years the partnership has worked with over 40 funding partners, including Target, Unilever, WestRock, Amcor and Heineken, to improve recycling in 900 communities nationwide.

Harrison says good design and production, as well as a commitment to sustainability, are important.

"More and more, consumers are expecting companies to do their part to ensure that we have a waste-free future," says Harrison. "Companies like Coca-Cola, PepsiCo, Keurig and Dr. Pepper, fund us because they understand we must work together to create lasting recycling solutions. But we have much more to do to transform recycling for the good of the planet and people's lives." ■

Kristen Castillo



What are we wasting for?

Every home has the power to keep **800 lbs** of recyclables out of the landfill every year.

Improve your recycling by taking our quiz at recyclingpartnership.org/recyclebetter



How Innovative Roofing Solutions Can Reduce Smog and Cool Communities

Communities focused on air-quality improvements or addressing the impacts of urban heating should consider roofing materials with unique performance properties.

Not only have asphalt shingles been a steadfast building material since the early 1900s, they make up 80 percent of the roofing materials installed on residential structures each year. The industry continues to enhance roofing materials to meet consumer preferences for new colors, dimensional looks and better protection for the biggest investment we make as homeowners. Most recently, the interest in sustainability has risen to the top, and traditional roofing materials are being transformed into performance surfaces that can reflect sunlight to reduce urban heating or harness the sun to transform smog gases to improve local air quality.

“There are cool-roofing solutions — materials that can help with urban heat-island mitigation — and then smog-reducing

granules that can help be part of the solutions for air pollution,” says Frank Klink Ph.D., senior laboratory manager at 3M.

These roofing innovations are a game changer.

“With the new roofing materials on the market, you can be more comfortable in your home, safer in your home and doing your part for the environment,” says Jonathan Parfrey, founder and executive director of Climate Resolve, a climate advocacy and environmental organization.

Cooling down

The Environmental Protection Agency defines a “heat island” as an urban area that’s hotter than nearby rural areas, noting a city with a million or more people can annually be 1.8–5.4°F warmer than surrounding areas. Temperatures are often over 20°F warmer in these areas at night

than during the day. Heat-island impacts can include higher summer peak energy demand, increased air pollution and more greenhouse-gas emissions.

Los Angeles has been aggressive in targeting the problem. Their “cool roof” ordinance, which was implemented a few years ago, requires new roof installations and remodels to be solar reflective and thermal emitting. Cool-roofing solutions reflect more sunlight, absorb less heat than a typical roof and can help consumers save on cooling costs year-round.

“You’re going to start making an impact,” says Klink, noting the cumulative effect of cool roofs can really add up.

“Everybody can do a little bit,” says Gregory B. Malarkey, senior vice president of Malarkey Roofing Products®. “The number one thing that speeds the aging of the asphalt is ele-

vated temperatures. If we can reduce the aging rate of the asphalt and protect it from the sun by using roofing granules with higher reflectivity, we can create a shingle that will last longer and perform better.”

Fighting smog

Forty-one percent of Americans live in counties with unhealthy levels of ozone or particle pollution. That’s according to the American Lung Association’s “State of the Air 2018” report, which ranks Los Angeles as the No. 1 city with the worst ozone pollution. That’s one of the cities where smog-mitigating building and construction materials can make a big impact. By integrating smog-reducing technology into a common material like asphalt shingles, it makes it easier for communities to adopt.

“Smog-reducing technology uses a catalyst activated by the

sun to decrease NOx, a significant contributor to smog,” says Klink. “A photocatalyst coating will be activated by UV sunlight and can react with the NOx that has landed on the roof, removing it from the air and converting it into water-soluble ions that wash away over time.”

“People are really concerned about their health,” says Parfrey. “This is a way — just by choosing the right kind of roof — you can do things to protect your health. We think that’s a great win-win.”

Both solar reflective shingles and shingles with smog-reducing properties are an affordable approach to mitigating urban heating and reducing smog gases in the local environment. ■

Maureen Tholen,
Sustainability Director, 3M



Imagine if your trash could clean the environment.
We are integrating the technology to transform waste into energy.
This means reduced climate change emissions for California. It also
means cleaner air for all of us.

Learn more at socalgas.com/RNG

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