Honoring Air Quality Achievements

Haagen-Smit Clean Air Awards

June 22, 2023

California Environmental Protection Agency
Sacramento, California

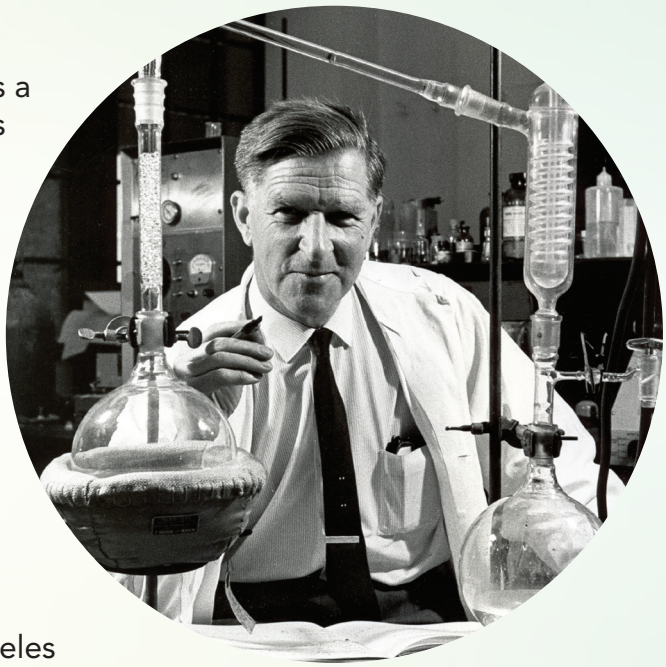
CALIFORNIA
AIR RESOURCES BOARD

The Haagen-Smit Clean Air Awards are given annually to scientists, policy makers, community leaders, and educators from California and around the world who have made significant lifetime contributions to the advancement of clean air and climate change science, technology, and policy.

"We should have learned by now that we cannot hope to change the laws of nature, but we can change human institutions. The road is not an easy one, but the reward … is worth the effort."

- Dr. Arie Haagen-Smit

Dr. Arie Haagen-Smit



Dr. Arie Haagen-Smit, a native of the Netherlands, was a leader in developing air quality standards based on his research efforts. Known by many as the "father of air pollution control," Dr. Haagen-Smit was a graduate of the University of Utrecht and a biochemistry professor at the California Institute of Technology (Caltech) in Pasadena for 16 years before beginning his air pollution research in 1948. At Caltech, Dr. Haagen-Smit studied the physiological aspects of natural products like rubber and pineapples. This work led to studies with his colleagues investigating the flavor components of wine, onions and garlic. His training and expertise in chemistry, along with his natural curiosity, brought him to the forefront of air pollution research when he was asked by the county of Los Angeles to investigate the chemical nature of what we now call smog. Noticeably different from earlier accounts of haze and dust in London, which was caused by coal, the eye-irritating haze in Los Angeles was brown and almost odorless. Dr. Haagen-Smit applied his technique of studying plant chemistry in enclosed clear chambers exposed to sunlight to figure out what caused smog in the Los Angeles air basin.

Through a series of experiments, he concluded that most of California's smog resulted from photochemistry–when substances in the exhaust from motor vehicles and the smokestacks of industrial facilities react with sunlight to create ozone. This breakthrough provided the scientific foundation for the development of both California's, and the nation's, air pollution control programs. In recognition of this contribution, Dr. Haagen-Smit received the National Medal of Science in 1973, the nation's highest scientific honor.

He became the CARB's first chairman in 1968 after serving eight years as an original board member of the agency's predecessor, the Motor Vehicle Pollution Control Board.

Dr. Haagen-Smit passed away in 1977, but his legacy lives on.

Since 2001, the the California Air Resources Board has annually bestowed the distinguished Haagen-Smit Clean Air Awards. The awards are given to extraordinary individuals to recognize significant career accomplishments in at least one of these air quality categories: research, environmental policy, science and technology, public education and community service. Over the years, there have been 72 acclaimed recipients. In light of the global connection between air quality and climate change, the scope of the program has now expanded to include an international focus and a focus on climate change science and mitigation.

Past Winners

Stephen O. Andersen · 2019
Janet Arey · 2011
Roger Atkinson · 2004
David Bates · 2004
Timothy Belian · 2005
Leon Billings · 2004
John Birks · 2019
Donald Blake · 2014
James Boyd · 2006
Tom Cackette · 2012
Junji Cao · 2019
William Carter · 2005
Judith Chow · 2011
Paul Crutzen · 2018
William B. DeMore · 2019
Joan Denton · 2010
Anne Douglass · 2018
Bradley Edgar · 2010
Alex Farrell · 2008
Barbara Finlayson-Pitts · 2013
Chet France · 2016
Axel Friedrich · 2006
John Froines · 2010
Daniel Greenbaum · 2016
Hal Harvey · 2018
James Hansen · 2007
Jiming Hao · 2015
David Hawkins · 2017*
John Holmes · 2001
Andrea Hricko · 2012
Timothy Johnson · 2009
David Kittelson · 2020–21
James Lents · 2013
Kunsheng Li · 2020–21
Alan Lloyd · 2007
Ron Loveridge · 2012
Gina McCarthy · 2017*
Mario Molina · 2017*
Curtis Moore · 2005
Mary Nichols · 2002
Janice E. Nolan · 2019
Margo Oge · 2009
Teruyuki Ohno · 2013
Paul M. Ong · 2020–21
Fran Pavley · 2007
Joyce Penner · 2016
John Peters · 2009
James Pitts · 2002
Kimberly Prather · 2015
Michael Prather · 2015
Veerabhadran Ramanathan · 2016
Juergen Resch · 2020–21
Anumita Roychowdhury · 2016
Robert Sawyer · 2008
Arnold Schwarzenegger · 2017*
Stephen E. Schwartz · 2020–21
John Seinfeld · 2003
Jananne Sharpless · 2011
Byron Sher · 2001
Kirk Smith · 2014
Richard C.J. Somerville · 2020–21
Donald Stedman · 2015
Karl Taylor · 2019
John Wall · 2014
Barry Wallerstein · 2018
Michael Walsh · 2003
John Watson · 2018
Henry Waxman · 2017*
Henry Wedaa · 2008
V. John White · 2003
Joy Williams · 2019
Arthur Winer · 2006

** Legacy Award*

2022 Haagen-Smit Clean Air Award Recipients

Daniel L. Albritton, Ph.D.
National Oceanic & Atmospheric Administration (Former Director)
Policy

Prashant Gargava, Ph.D
India Central Pollution Control Board
International Leadership

Allen H. Goldstein, Ph.D.
University of California, Berkeley
Science & Technology

Shankar Prasad, M.B.B.S
Office of Environmental Health Hazard Assessment (Retired)
Environmental Justice

Bill Magavern
Coalition for Clean Air
Policy

Jonathan Samet, M.D., M.S.
Colorado School of Public Health
Environmental Health Research

Peggy Shepard
WE ACT for Environmental Justice
Environmental Justice

Daniel L. Albritton, Ph.D. (1936-2023)

Former Director, National Oceanic & Atmospheric Administration Chemical Sciences Laboratory (formerly Aeronomy Laboratory)

Policy

Dr. Daniel L. Albritton's legacy has left a lasting mark on air quality, climate, and stratospheric ozone research and decision-making, on both national and international scales. He spent nearly 40 years as a scientist, researcher, and public servant. He was head of the United States National Oceanic and Atmospheric Administration's (NOAA) Aeronomy Laboratory (now part of NOAA's Earth System Research Laboratory) from 1986 until his retirement in 2006. Throughout his career, Dr. Albritton led collaborative national and international research initiatives with scientific work that spanned the Earth's atmosphere from "top to bottom" while impactfully communicating the underlying scientific principles of Earth's atmosphere, climate, and air quality. For example, the research achievements and education-outreach efforts of Dr. Albritton contributed significantly to the crucial passages of the U.S. Clean Air Act and the related international agreements such as the United Nations Framework Convention on Climate Change/Kyoto Protocol and the United Nations Montreal Protocol on Substances that Deplete the Ozone Layer. Indeed, Dr. Albritton was renowned as one of the most effective communicators of science and climate change of our time, to both the public and governmental policy makers.

Dr. Albritton's research played a key role in better understanding the causes of pollution in the lower atmosphere, including the chemistry of acid rain and urban smog. Indeed, it was Dr. Albritton's work in air quality science that gave U.S. decisionmakers a sound scientific basis to inform new regulatory standards for ozone and particulate matter. He was also a leader in research on Earth's stratospheric ozone destruction and led the scientific assessments that helped develop international protocols for control of ozone-destroying chemicals. Under Dr. Albritton's leadership, NOAA scientists discovered that emissions from vegetation and intercontinental transport (factors previously not considered) could alter the effectiveness of air quality improvement efforts in some areas of the country, thus highlighting the need for new strategies. Similarly, Dr. Albritton led research initiatives and general research planning on climate, which included interagency efforts for the U.S. Global Climate Research Program.

In addition to influential research, Dr. Albritton was frequently at the forefront of policymaking on air quality and climate, using his masterful communication skills to inform all stakeholders and playing key roles in bridging the gap between research and policy. For example, he chaired the Air Quality Research Subcommittee of the White House Committee on Environment on Natural Resources, an interagency scientific group charged with identifying and addressing the key air quality issues of the nation. In 1995, Dr. Albritton become one of the founders and steering committee members of the North American Research Strategy for Tropospheric Ozone, which is a partnership of scientists, industry, and air quality managers in the U.S., Mexico, and Canada that charted the course of air quality research throughout North America. He was also contributor and leader of international climate-science assessments from the 1990s until his retirement from NOAA in 2006. In 2001, Dr. Albritton was selected by the international scientific community to lead the preparation, review, and presentation of the findings of the 2001 international climate-science assessment which he used to brief members of Congress and the Administration.

The CARB is honored to bestow Dr. Daniel L. Albritton with a 2022 Haagen-Smit Clean Air Award in the category of Policy, for his trailblazing and impactful research, unique ability to effectively communicate science, and a career that overall exemplifies the use of both science and outreach for the benefit of all.

Prashant Gargava, Ph.D.

Member Secretary, India Central Pollution Control Board

International Leadership

Dr. Prashant Gargava is being recognized for his tireless groundbreaking work and leadership to improve air quality in India and other Asian countries. After obtaining his doctorate in environmental engineering in 1994, Dr. Gargava rapidly rose through the ranks of India's Central Pollution Control Board (CPCB), the apex regulatory agency for prevention and control of pollution in India. He began as an Assistant Environmental Engineer in 1991 and ultimately reached the position of Member Secretary in 2018.

Early in his career, while working as Head of the Computer Division at the CPCB, Dr. Gargava led the development of the Environmental Data Bank (EDB). His work on the EDB led to India's first web-based repository of environmental data, influentially increasing public transparency and education on air pollution. In the early 2000s, Dr. Gargava, as part of the partnership with the World Bank Pollution Management and Environmental Health Program, worked towards better understanding the relationship between air pollution and adverse health effects. In addition, he investigated air pollution's effects on visibility, climate, and other ecological matters. During this time he conceptualized and led development of UrbAirIndia, a web-based decision support system with air pollution emission inventory data, air quality monitoring and modeling capabilities, and cost-benefit analyses of control strategies. Dr. Gargava was also instrumental in CPCB's well-known six-city source apportionment study that guided science-based policy for air quality in India.

In 2009 Dr. Gargava helped spearhead and revise India's National Air Quality Standards (NAAQS); he is now leading the next reforms of India's NAAQS, as CPCB Member Secretary and Steering Committee Chair. In 2015, to help disseminate air quality information in India, Dr. Gargava crucially contributed towards the development of India's National Air Quality Index.

In 2019, after the Government of India launched the National Clean Air Program with the first ever clean air targets, Dr. Gargava played a pivotal role in supporting its implementation. He has helped to develop a monitoring, reporting, and a compliance framework for assessing progress in cities that has further contributed towards initiation of performance-linked funding. This has involved organizing regional workshops to educate and motivate stakeholders, providing necessary technical assistance and inputs, and guiding development of city-specific action plans that are now in place for 131 non-attainment cities in India. Dr. Gargava has also contributed significantly to the framing of a series of rules and regulations related to pollution sources, as well as the Graded Response Action Plan for emergency action during smog episodes in Delhi and the National Capital Region.

Dr. Gargava has an impressive bibliography of peer-reviewed publications, technical reports, and publications aimed at educating and encouraging enforcement of pollution emission standards and making progress towards environmental improvements in India and throughout Asia. His work informed a cornerstone document of the Integrated Program for Better Air Quality in Asia, which supports implementation of targeted air quality interventions, including knowledge-sharing platforms to strengthen regional collaboration and capacity building at both national and subnational levels. Indeed, Dr. Gargava's experience, expertise, and leadership has been a pivotal resource for many Asian countries; he recognized early on that air pollution emissions know no political borders and that regional efforts are strengthened by joint efforts.

For all his accomplishments, the California Air Resources Board is honored to bestow Dr. Prashant Gargava, a true and highly accomplished visionary in the field of air quality, with a 2022 Haagen-Smit Clean Air Award in the International Leadership Category.

Allen H. Goldstein, Ph.D.

Professor and MacArthur Foundation Chair
University of California, Berkeley

Science & Technology

Professor Allen Goldstein was trained as a chemist at both the University of California, Santa Cruz, and Harvard University. After a postdoctoral appointment at Harvard, he joined the faculty at the University of California, Berkeley, in the Departments of Environmental Science, Policy, and Management and Civil Engineering. Throughout his career Professor Goldstein has applied this background in chemistry to the study of organic matter (i.e., all forms of carbon) in the Earth's atmosphere, primarily drawn toward the most complex and least-understood compounds. He has dramatically transformed the understanding of, and capabilities for quantifying and mitigating, air pollutants that pose serious health risks in California and throughout the world.

Professor Goldstein initially studied the organic compounds emitted by trees, quantifying their emission rates. He has since broadened the scope of his research to include vehicular, urban, agricultural, and wildfire emissions, and indoor air pollution. His research importantly addresses comprehensive questions related to air quality and climate change such as: What controls atmospheric concentrations of greenhouse gases, volatile organic compounds (VOCs), photochemical oxidants, and aerosols? How do biological systems interact chemically and physically with earth's atmosphere? What controls the composition of indoor air where people spend 90% of their lives?

Professor Goldstein's work has provided answers to numerous perplexing questions about the atmosphere, such as the impacts of biogenic emissions on the climate and of anthropogenic emissions on fog formation in California's Central Valley. He has also made many exciting and transformative discoveries about VOCs that have been fundamental to developing optimal control strategies. His diverse work involves conducting field campaigns, controlled laboratory experiments, and computer modeling–covering indoor, outdoor urban, rural, regional, intercontinental, and global scale studies of ozone, aerosols, and their gas phase precursors. Thus, his innovative research is far-ranging, encompassing highly polluted urban areas through to remote regions of the Earth, with findings that have impacts at both global to local scales.

Moreover, Professor Goldstein has pioneered the development of new instrumental methodologies and their applications for air pollution research. These include proton-transfer reaction mass spectrometry which allows for rapid detection of hundreds of individual organic compounds, thermal desorption aerosol gas chromatography which samples and analyzes ambient organic matter on a continuous basis, and two-dimensional gas chromatography which separates organic compounds more fully than conventional gas chromatography (allowing previously uncharacterized compounds to be identified).

In addition to his outstanding and ground-breaking research, Professor Goldstein has contributed to many influential advisory committees and boards, providing key guidance to policy makers addressing air quality and climate change. These include the U.S. National Academy of Sciences and Department of Energy committees, the International Global Atmospheric Chemistry Scientific Steering Committee, and international committees around the world including Finland, Germany, and China. He is also well-known as an outstanding academic teacher and mentor of early-career research scientists.

As a global leader with a lifelong commitment to providing accurate and insightful data on the important air quality and climate change problems of our time, combined with reliable translation of research into forms useful for policymakers, Professor Allen Goldstein is highly deserving of the CARB's 2022 Haagen-Smit Clean Air Award in the category of Science and Technology.

Bill Magavern

Policy Director
Coalition for Clean Air

Policy

Mr. Bill Magavern has been a steadfast clean air advocate, having tirelessly dedicated over twenty years to affecting change in clean air, via California legislation, regulations, and investments to improve air quality and support renewable energy. The depth and breadth of great respect he has earned throughout his career has enabled him to create an extensive and strong network of strategic partners. Mr. Magavern has leveraged these networks, together with his vast knowledge, to build broad-based coalitions that have proven persuasive during pivotal decision-making processes. When testifying before the Legislature or before the CARB, he is always on point and succinct, and his advocacy is fact-based, logical, and strongly anchored in the never-wavering principle that every Californian deserves to breathe clean air. In this way he has substantially influenced advancements in public health and environmental justice (EJ).

For example, Mr. Magavern was instrumental in the passing of California Assembly Bill 1550 (Gomez, 2016), which was designed to expand and improve existing laws that increase clean energy, reduce smog, and bring jobs and investments to communities most in need and impacted by pollution, via the use of fees paid by polluters. A further testament to Mr. Magavern' s dedication and efficacy on impacting policy has been his work on the implementation of California Senate Bill 535 (De León, 2012), which directs that a proportion of proceeds from California's Cap-and-Trade Program go to projects within and benefitting disadvantaged communities.

Mr. Magavern also has a tested track record of constructively supporting and improving CARB diesel emission reduction legislation and regulations including the Innovative Clean Transit Rule, Ships-at-Berth Rule, Heavy-Duty Omnibus Rule, and Advanced Clean Trucks Rule, as well as advancing transportation equity programs like the Clean Cars 4 All Program. For example, Mr. Magavern vitally led a coalition of organizations to pass California Senate Bill 210 (Leyva, 2019), one-of-a kind legislation that established CARB's Heavy-Duty Inspection and Maintenance Program. This law and its resulting CARB implementation program will result in significant reductions of diesel and criteria pollutant emissions from the worst polluting heavy-duty vehicles in California.

Beyond advocating for clean air legislation and CARB regulatory actions, Mr. Magavern has also worked alongside the California Energy Commission to steer billions of dollars in California climate protection investments to disadvantaged and low-income communities. Additionally, he helped found the Green California network of environmental, public health, and environmental justice organizations that have been dedicated to supporting clean air, climate protection, and other priority environmental policies and legislation since 2005. Since 2014, Mr. Magavern has served on the Board of Directors of the Center for Energy Efficiency and Renewable Technologies, a non-profit organization known for its leadership in improving California's renewable energy portfolio and advancing clean technology solutions and policies within the state. He has also served as the Policy Director for the Coalition for Clean Air since 2013, and as the Director (2008–2011) and Senior Legislative Representative (2001–2007) of Sierra Club California.

For his countless and highly respected contributions to EJ and environmental policies, CARB is honored to bestow Bill Magavern with a 2022 Haagen-Smit Clean Air Award in the category of Policy.

Shankar Prasad, M.B.B.S.

Retired
Office of Environmental Health Hazard Assessment
Environmental Justice

Dr. Shankar Prasad, a physician by training from India, initially pursued a career in the health effects of air pollution, and later served as a pioneer in the development of the environmental justice (EJ) movement. As a toxicological researcher at UC Irvine, he was among the first to publish on the immunological effects of ozone and diesel exhaust in rats, which were later also observed in human studies. Next, Dr. Prasad worked for CARB's Research Division, where he was instrumental in securing funding for impactful research projects inflammation and respiratory health effects due to air pollution exposures. He left CARB for the South Coast Air Quality Management District to initiate and direct an air quality health program that continues to thrive. During his tenure at the district, Dr. Prasad recognized that air quality was not only a regional problem, but also an EJ issue in which lower income communities of color continued to bear a disproportionate burden of pollution exposures and the resulting harmful health effects.

Dr. Prasad then decided to dedicate the remainder of his career to the pursuits of EJ. He was among the first to call attention to the fact that while air quality had improved significantly in California, the benefits were not shared equally. Moving back to CARB, Dr. Prasad's efforts helped initiate the very first EJ program at the CalEPA, garnering hard-won support from within the agency as well as from community, environmental, and industry stakeholders.

Notably, Dr. Prasad also advocated for the eventual adoption of, the term "cumulative impacts" that helped lay the foundation for today's continuing progress toward achieving EJ both in California and across the nation. The "cumulative impacts" definition helped drive the development of California's Office of Environmental Health Hazard Assessment CalEnviroScreen, which is now the national gold standard of geospatial data tools used for driving more equitable decision-making. Before his recent retirement, Dr. Prasad also played a significant role in developing the latest versions of CalEnviroScreen. This work was in line with his vision to further uplift EJ in California.

Dr. Prasad recognized the need for more long-term funding to reduce emissions and their impacts in EJ communities and saw an opportunity with California's State Bill 32 (2006) that would generate cap-and-trade funds. He joined the Coalition for Clean Air to advocate that a percentage of these greenhouse gas reduction funds go towards benefiting low-income communities of color. He worked tirelessly for over four years to get this innovative concept passed as legislation and signed into law as SB 535 (2012). To date, over a billion dollars have been allocated under this law, with Dr. Prasad being called "the Father of SB 535."

Dr. Prasad's influence extends far beyond California. For example, he played an integral part in the conversion of New Delhi's public transportation fleet from diesel to natural gas, which has influenced other Indian states to move in the same direction.

Dr. Prasad is broadly and greatly admired for his tenacity to fight for what's right, even when not popular. He fought especially hard for CalEPA and CARB to begin to recognize the need to incorporate EJ in all policies. For all of this, CARB is honored to bestow Dr. Shankar Prasad with a 2022 Haagen-Smit Clean Air Award in the category of Environmental Justice.

Jonathan Samet, M.D., M.S.

Dean & Professor, Colorado School of Public Health

Environmental Health Research

For more than four decades, Professor Jonathan Samet's work has focused on the environment and health, initially motivated by the notorious and visible pollution of the past plus his personal clinical experience with patients suffering from environmental diseases. To an undergraduate foundation in chemistry and physics, he added a medical degree with specializations in internal and pulmonary medicine, plus training in epidemiology. During his training he undertook a fellowship with pioneers in air pollution epidemiology in the U.S., completing one of the earliest time-series studies of air pollution and illness.

At the start of his academic career, at the University of New Mexico (UNM) Professor Samet engaged in pioneering research on indoor air pollution that included studies of the health effects of secondhand smoke, nitrogen dioxide, and radon. This work included an important cohort study designed to inform the U.S. National Ambient Air Quality Standards (NAAQS). Since early in his career, Professor Samet has also notably and regularly engaged in many other influential activities at the research and policy interface. For example, while at UNM he joined the U.S. EPA Indoor Air Quality and Total Human Exposure Committees, served on committees of the National Research Council, and authored and edited the Surgeon General's reports on smoking and health.

After moving in 1994 to Johns Hopkins University as Chair of the Department of Epidemiology, Professor Samet launched a highly collaborative research program focused on ambient particulate matter (PM) pollution. Importantly, he collaborated on the first use of U.S. Medicare data for large-scale studies on air pollution and mortality, trailblazing this crucial approach and its methodologies for studying health. He also led a research center that took a multidisciplinary approach to characterizing PM toxicity. Professor Samet's collaborative research work produced a steady series of seminal health papers on methods, plus publications on the health effects of PM and ozone, many influential for the NAAQS assessments.

At the University of Southern California Professor Samet continued to work extensively at the research and policy interface, chairing U.S. EPA's Clean Air Scientific Advisory Committee (CASAC) during the critical years of 2008-2012 when revisions were considered for the PM and ozone NAAQS. He advocated for changes in the methods for synthesizing and integrating evidence for criteria pollutants, an approach that was recently validated by a distinguished committee on causality. Additionally, he chaired the National Academy of Sciences Committee on Research Priorities for Airborne PM, which provided a framework for research to shore up evidence while also giving rise to extensive new research supporting future NAAQS and air quality control decisions. He also chaired the Working Group for the International Agency for Research on Cancer (IARC) that crucially classified ambient air pollution as a Group 1 carcinogen.

At the Colorado School of Public Health since 2017, Professor Samet has continued with a voluminous level of air pollution research. But beyond research, he has also continued to contribute to improving air quality through his thoughtful engagement with key committees including EPA's Science Advisory Board, the IARC, and the World Health Organization's Air Quality Guidelines working group.

Professor Jonathan Samet's research and leadership has been consistently prodigious and exceptional. Moreover, he exemplifies how a researcher can engage in assuring that research evidence is appropriately considered for decision-making. For all this, the California Air Resources Board is honored to bestow Professor Samet with a 2022 Haagen-Smit Clean Air Award in the category of Environmental Health Research.

Peggy Shepard

Co-Founder & Executive Director
WE ACT for Environmental Justice

Environmental Justice

As the Co-Founder and Executive Director of WE ACT for Environmental Justice, based in New York, Peggy Shepard has been an instrumental force for more than thirty years in reducing air pollution, addressing climate change, and improving health -- with a focus on the lives of people of color. Under her leadership WE ACT has established a notable legacy of both local and state environmental justice (EJ) legislation, including New York's decade-in-the-making Child Safe Products Act and recent landmark Cumulative Impacts Bill. WE ACT also helped pass New York's Climate Leadership and Community Protection Act (CLCPA), which is one of the most ambitious climate laws in the world. The influence of Ms. Shepard via WE ACT extends further, to the federal level of the United States, for example with the CLCPA forming the basis of the current national Justice40 Initiative. Additionally, Ms. Shepard has conducted a national-level campaign to educate EJ communities about the Justice40 Initiative to ensure that this substantial federal funding goes to the intended and deserving communities.

Indeed, Ms. Shepard is a leader at the U.S. national level in advancing environmental policy and the perspective of EJ, after having been one of the early pioneers of the environmental and climate justice movements. For example, in 1991 she participated in the first National People of Color Environmental Leadership Summit and helped create its Principles of Environmental Justice. Ms. Shepard then began serving as Co-Director of the Community Engagement Core in the National Institute of Environmental Health Sciences, and as a Co-Principal Investigator of Columbia University's Center for Children's Environmental Health. In 2001 she was the first female chair of the National Environmental Justice Advisory Council to the Environmental Protection Agency, and in 2008 she led the creation of the Environmental Justice Leadership Forum–a national coalition of 54 environmental justice organizations working together to advance climate justice and impact policy to ensure the protection of communities of color and lower-income throughout the U.S.. Realizing early the importance of federal policy on the communities she serves, Ms. Shepard was the first and only EJ leader to invest in opening a Federal Policy Office in Washington, DC; since 2012, this rapidly growing office has been critical in its influence and shaping of federal programs and policies.

Ms. Shepard has become a highly sought-after voice on climate and EJ issues. She has served as a member of the National Institutes of Health's Advisory Environmental Health Sciences Council, and of the National Academy's Committee on America's Climate Choices. She is now co-chair of the White House Environmental Justice Advisory Council and serves on the Executive Committee of the National Black Environmental Justice Network, as well as the Boards of the Columbia Mailman School of Public Health and the New York City Environmental Justice Advisory. Additionally, Ms. Shepard is tirelessly dedicated to developing and uplifting other leaders in the EJ movement, frequently meeting with the media, government officials and agencies, business leaders, academic partners, and students who she hopes will become future EJ leaders. She recently gave her second TED Talk, and while co-hosting the groundbreaking Climate Justice Pavilion at COP27, she helped "deliver the most important outcome" at the United Nations annual climate conference.

The 2022 Haagen-Smit Clean Air Award in the category of Environmental Justice is tremendously fitting for honoring Ms. Peggy Shepard, a pioneering figure who has dedicated her life to service, justice, and positive change, with a bold vision, longstanding commitment, and vast impacts.