

D I A L O G U E

THE ENVIRONMENTAL JUSTICE IMPACTS OF PLASTIC POLLUTION

SUMMARY

Plastic pollution is a global environmental problem with a disproportionate impact on marginalized communities and other vulnerable groups. On June 27, 2023, the Environmental Law Institute (ELI), ELI's Women in Environmental Law & Leadership initiative, the Monterey Bay Aquarium, and WilmerHale co-hosted a panel of experts who explored the environmental justice implications of continued production and disposal of plastics, and addressed key domestic and international policy efforts. Below, we present a transcript of that discussion, which has been edited for style, clarity, and space considerations.

Peggy Otum (moderator) is a Partner at WilmerHale.

Jonathan Black is Senior Director for Chemical Safety and Plastic Pollution Prevention with the White House Council on Environmental Quality.

Margaret Spring is Chief Conservation and Science Officer at the Monterey Bay Aquarium.

Carlton Waterhouse is a Professor of Law at Howard University School of Law.

Peggy Otum: Welcome to our panel discussion. I'm a partner at WilmerHale, and I chair the firm's Energy, Environment, and Natural Resources Practice Group. I'm also a very proud member of the Environmental Law Institute's (ELI's) board of directors. I want to point out that today's program emerged out of ELI's Women in Environmental Law and Leadership initiative, which aims to achieve complete gender parity in ELI leadership and overall membership. I am honored and delighted to welcome our phenomenal panelists to share their perspectives on how we should be thinking about environmental justice, as domestic and international policy and regulation to address plastic pollution develops.

I'm joined by Jonathan Black, who is the senior director for chemical safety and plastic pollution prevention at the White House Council on Environmental Quality (CEQ). Jonathan previously served as a special assistant to the President and U.S. Senate legislative liaison, where he worked on some of President Joseph Biden's signature legislative achievements, like the Bipartisan Infrastructure Law¹ and the Inflation Reduction Act.² Prior to that, Jonathan served nearly 20 years in the Senate working on important energy and environmental issues, including chemical safety and plastic pollution prevention.

My fellow ELI board member Margaret Spring currently serves as Monterey Bay Aquarium's chief conservation and science officer. She brings a wealth of experience to the position, having held senior leadership roles at the National Oceanic and Atmospheric Administration, The Nature Conservancy, and on Capitol Hill as a senior counsel and then general counsel to the Senate Committee on Commerce, Science, and Transportation, where she played a key role in advising members of the U.S. Congress on ocean and climate issues and developing legislation on major science and policy topics.

Carlton Waterhouse is an international expert on environmental law and environmental justice as well as reparations and redress for historic injustices. In 2021, he was appointed by President Biden to serve as deputy assistant administrator for the Office of Land and Emergency Management (OLEM) at the U.S. Environmental Protection Agency (EPA), and was nominated to serve as the assistant administrator for the office. During his two years serving in OLEM, Carlton oversaw the nation's programs for toxic waste site remediation; community revitalization and redevelopment through contaminated site cleanup; hazardous and solid waste materials management; chemical plant safety; and emergency response to toxic spills, fires, and explosions. He is a Fulbright research scholar, and a professor of law and the founding director of the Environmental and Climate Justice Center at the Howard University School of Law.

We will begin our panelist presentations with Jonathan, who will provide an overview of how the Biden-Kamala Harris Administration is approaching plastic pollution.

Jonathan Black: Thanks for having me for this timely panel as the links between plastic, environmental justice, and health are becoming increasingly evident in this country and all over the world.

We know that plastic pollution disproportionately affects communities with environmental justice concerns

1. Infrastructure Investment and Jobs Act, 135 Stat. 429 (2021).

2. Inflation Reduction Act of 2022, 136 Stat. 1818.

across the entire life cycle of plastics. The Biden-Harris Administration recognizes this connection, and is committed to ensuring that federal actions to address plastic pollution prioritize public health, economic development, and equity to guarantee that the benefits of combating this global crisis, including greener jobs, minimized exposure to harmful chemicals, and cleaner communities, are available to all.

Last year, CEQ hired me to lead the Chemical Safety and Plastic Pollution Prevention team. Toxics and chemicals have long been an issue that CEQ has worked on, but this is the first time that anyone within the Executive Office of the President has had “plastic pollution prevention” in their title. It makes for a long business card, but CEQ decided it was really important to establish a dedicated team to specifically work on plastic pollution-related efforts and demonstrate that plastic pollution prevention is a priority for the Biden-Harris Administration. CEQ is partnering within the White House, with the Climate Policy Office, Domestic Policy Council, and others, to address this issue.

We are also working across the federal government to coordinate through an interagency policy committee (IPC), which is a formal way of saying we convene various federal agencies and departments—like the U.S. Departments of Agriculture and Energy, EPA, the State Department, and other relevant administrative agencies—to coordinate on these policies and issues. The IPC that we’re convening on plastic pollution aims to enhance federal efforts to address plastic pollution prevention, recognizing that this really requires a broad and ambitious approach.

During his first week in office, President Biden launched the most ambitious environmental justice agenda in our nation’s history.³ On April 21, he signed Executive Order No. 14096, *Revitalizing Our Nation’s Commitment to Environmental Justice for All*, further embedding environmental justice into the work of federal agencies.⁴

This Executive Order seeks to deepen the Biden-Harris Administration’s whole-of-government commitment to environmental justice, better protect overburdened communities from pollution and environmental harms, strengthen engagement with communities and mobilize federal agencies to confront existing and legacy barriers and injustices, and promote the latest science, data, and research, including on cumulative impacts.

Through the Executive Order, the President is calling on the federal government to bring clean energy and healthy environments to all and to recognize, undo, and mitigate harm to those who have suffered from toxic pollu-

tion and other environmental burdens like climate change. This should mean cleaner air and water; reduced risk for asthma, cancer, and other health burdens; better access to parks; safe and affordable housing; and clean transportation across the country, especially in communities that have been left behind for too long.

To do that, the Executive Order further embeds environmental justice into the DNA of federal agencies. It aims to do a few key things. For example, it makes clear that the pursuit of environmental justice is the responsibility of all federal executive branch agencies. It directs agencies to make achieving environmental justice a part of their missions, and it requires agencies to develop, implement, and periodically update environmental justice strategic plans. It creates a new Office of Environmental Justice in the White House to coordinate environmental justice efforts across the federal government. That office is housed within CEQ, so we work very closely with them.

It also directs agencies to address gaps in science and data to better understand and to prevent the cumulative impacts of pollution on people’s health. And it requires agencies to notify nearby communities in the event of a toxic release from a federal facility, and mobilizes agencies to confront barriers to community participation in government decisions.

Overall, it aims to ensure all of our nation’s children will grow up experiencing the vital safeguards of our foundational environmental and civil rights laws. Thus, under the President’s leadership, the Biden-Harris Administration is confronting long-standing environmental injustices and inequities to make a positive difference in people’s lives now and into the future.

Given the relationship between plastics and environmental justice, our work at CEQ is guided by several principles. First, we recognize that the plastic pollution crisis is an environmental justice issue, with disadvantaged communities in the United States and globally bearing social, economic, and public health burdens across the entire life cycle of plastics. Plastic emits pollution at every stage of its life cycle, from extraction of raw materials to manufacturing of plastics to pollution of post-consumer products, as well as disposal, whether it be landfilling or incineration. We believe we must address all of it.

Second, the United States should prioritize public health, economic development, and equity to ensure that the benefits of acting on plastic pollution, such as greener jobs, minimized exposure to harmful chemicals, and clean communities, are available to all.

Third, plastic product manufacturers should bear responsibility for addressing plastic pollution through product redesign, waste management, transparency, and education.

Fourth, there are many types of single-use plastics that are unnecessary, difficult to recycle, and cause harm when released into the environment. The reduction of these should be prioritized to the maximum extent practicable.

Last, we recognize the importance that effective recycling plays in addressing the plastic waste crisis, but

3. The White House, *Environmental Justice*, <https://www.whitehouse.gov/environmentaljustice/> (last visited Sept. 7, 2023).

4. Exec. Order No. 14096, 88 Fed. Reg. 25251 (Apr. 26, 2023), <https://www.federalregister.gov/documents/2023/04/26/2023-08955/revitalizing-our-nations-commitment-to-environmental-justice-for-all>; Press Release, The White House, Fact Sheet: President Biden Signs Executive Order to Revitalize Our Nation’s Commitment to Environmental Justice for All (Apr. 21, 2023), <https://www.whitehouse.gov/briefing-room/statements-releases/2023/04/21/fact-sheet-president-biden-signs-executive-order-to-revitalize-our-nations-commitment-to-environmental-justice-for-all/>.

acknowledge that we cannot work our way out of this growing crisis through recycling alone.

Based on these principles, CEQ is taking on and supporting a number of actions to address plastic pollution. First, we're looking to lead by example to make sure our federal buildings, our dining halls, and our events minimize single-use and waste generation. We're looking forward to working with the private sector to support those efforts across federal facilities, such as federal buildings and parks.

Our vision for a circular economy includes reuse, recycling, and composting infrastructure that creates benefits and opportunities for the many and not for the few. We want to see these systems not only in our markets, but also in our schools, our parks, our events, our government facilities, and more. And we seek to ensure that the benefits they create are available to all.

We also aim to support current federal actions, fostering cohesion and coordination among agencies, while also building on and enhancing those actions. For example, EPA recently released a draft national strategy to prevent plastic pollution.⁵ CEQ supports the three primary objectives of the draft strategy, which help show the path to achieve our vision of a healthy and safe environment for all. Those objectives are to reduce pollution during plastic production, to improve post-use materials management, and to prevent trash and microplastics and nanoplastics from entering waterways and to remove such trash from the environment.

Many of the proposed actions in the national strategy, which are draft at the moment as EPA is considering comments and working to release a final strategy, would be able to be taken by the federal government to meet these objectives. But others would require partnerships and solutions by the private sector, nonprofits, and state and local governments.

As such, the Biden-Harris Administration encourages solutions to the plastic pollution crisis that are not only innovative, but that also yield climate and justice benefits. Investments in reuse systems, for example, can reduce our reliance on fossil fuels and water and also generate local economic benefits by creating jobs and building resilience through local infrastructure.

Further, as many of you know, negotiations are underway to create a new international legally binding instrument to address plastic pollution.⁶ The United States is an active player in the negotiations, pushing for an innovative and ambitious agreement. We also want to be ambitious domestically knowing that what we do will have important implications for the world. We also want to see how our actions feed into and are guided by international discussions.

As the negotiations move forward, the Administration wants to make sure voices from communities with environmental justice concerns are heard in these deliberations and considered in the agreement's provisions.

We're grateful to be on this panel and to be a part of open dialogue about how to advance efforts to address plastic pollution, including environmental justice concerns. We're honored to be among the public and private sectors, civil society, environmental justice groups, Indigenous and tribal communities, and the scientific community engaging in this dialogue. We are working to ensure that the voices of those marginalized and overburdened by plastic pollution are included in our domestic efforts and international dialogues. We remain committed to keeping the connections between plastic pollution prevention and environmental justice at the forefront of our work.

Peggy Otum: Margaret, why don't we turn to you to provide the international perspective and also to give a bit of the dimension and scale of the problem globally?

Margaret Spring: In my career as a lawyer, I worked in private practice in environmental law before working in environmental nongovernmental organizations (NGOs) and in federal government. So entering this space, I thought I knew a little bit about plastic and plastic pollution, but I didn't. If you're confused, it's because it's a fast-moving topic and it's an important problem for us to get organized to address.

While it seems every day several reports about plastic are released, I'm going to mention three that touch on this topic that I would encourage you to get to know. Some of these address either global or national issues, but they overlap, because all of these issues are simultaneously arising in the context of state, local, federal, and global policy.

The first one is called *Neglected: Environmental Justice Impacts of Marine Litter and Plastic Pollution*, produced by the United Nations Environment Programme (UNEP) in collaboration with the U.S. NGO Azul led by Executive Director Marce Gutiérrez-Graudiņš.⁷ This report, created to serve international discussions about creating a global plastics treaty, is the first I'd seen that's dedicated to this topic, and it goes into a lot of detail.

The second report, from the National Academies of Sciences, Engineering, and Medicine (NASEM), was released in 2022. *Reckoning With the U.S. Role in Global Ocean Plastic Waste* was a report called for by Congress to focus on the U.S. role in global marine debris and plastic waste.⁸ I chaired the committee that produced this consensus report, one of 10 experts on the committee.

5. See U.S. EPA, *Draft National Strategy to Prevent Plastic Pollution*, <https://www.epa.gov/circulareconomy/draft-national-strategy-prevent-plastic-pollution> (last updated Aug. 5, 2023).

6. See United Nations Environment Programme, *Intergovernmental Negotiating Committee on Plastic Pollution*, <https://www.unep.org/inc-plastic-pollution> (last visited Sept. 7, 2023).

7. UN ENVIRONMENT PROGRAMME, *NEGLECTED: ENVIRONMENTAL JUSTICE IMPACTS OF MARINE LITTER AND PLASTIC POLLUTION* (2021), <https://www.unep.org/resources/report/neglected-environmental-justice-impacts-marine-litter-and-plastic-pollution>.

8. NATIONAL ACADEMIES OF SCIENCES, ENGINEERING, AND MEDICINE, *RECKONING WITH THE U.S. ROLE IN GLOBAL OCEAN PLASTIC WASTE* (2022), <https://doi.org/10.17226/26132>.

Following on that was a report issued this March by the Minderoo-Monaco Commission on Plastics and Human Health.⁹ It is targeted at the global treaty discussions and focuses on the human health aspects of plastic pollution.

The first report does touch on those issues as they relate to environmental justice. The scope of the second report was really constrained by our statement of task. It didn't ask us to go into every single impact, but really to look specifically at the United States' role in the problem. But we did touch on both impacts and environmental justice, and the role of plastics in the climate change crisis. A lot of the things that Jonathan spoke about are definitely in that report, and I think it's a useful one to look at. The third report focused entirely on plastic pollution and health. This topic is where the global discussion on plastics is focusing today.

The NASEM report is for a U.S. audience largely. It was the first synthesis of information on the subject. Congress requested the report, and I'm glad they did. I learned a lot, and everyone on that report learned a lot—that really the United States has a large role. As Jonathan mentioned, vulnerable people are disproportionately impacted all along the product life cycle. There is no end to this unless we massively change our practices.

As an attorney and as a member of the ELI board, I was surprised that plastic is found not only in every ocean zone or “compartment,” but also in the air and the environment. Also, our review revealed that under our legal system, plastic is largely uncontrolled as an environmental pollutant. That was something we outlined in our legal appendix.

Essentially, while there are ways of capturing plastic pollution under our legal regime, because of its unique physical properties (e.g., as a particulate or a suspended solid), our assumption that harmful plastic releases to the environment are monitored or controlled are not accurate. Plastic is a useful product. But it is not just a useful product. It does create pollution, and everybody can agree that it shouldn't be found in the environment.

Our committee observed that this problem needed to be addressed by a continuum of actions (or “interventions”) across the life cycle of plastics, as noted in the diagram in the report. We as a nation have been spending most of our time in the cleanup phase (the end) of this continuum, and we're not doing such a great job. We saw the need to take action in each phase, and we recommended strongly in the 2022 report, that the United States needed a comprehensive national strategy to address the plastic problem in its entirety.

A U.S. strategy and leadership were also urgently needed because the global community was coming together around the global plastics treaty. A lot of these issues raised in the NASEM report were the same issues being raised by the treaty. At roughly the same time that report was completed, UNEP released its own synthesis report, *From*

Pollution to Solution: A Global Assessment of Marine Litter and Plastic Pollution, that dealt with these same issues.¹⁰ The work that Jonathan talked about is in response to what the experts were seeing. We're so happy to see this strategy in development, to have him there at the White House and to be thinking about these issues alongside us.

The report of the Minderoo-Monaco Commission on Plastics and Human Health is a very comprehensive and detailed report. It was put together to look specifically at our understanding of human health issues surrounding plastic because there has been confusion on the topic. The commission is largely made up of health professionals. The lead author, Dr. Philip Landrigan, is a pediatrician who's been involved in many chemical issues, including health impacts of lead in paint, lead in gasoline, and a number of issues in which doctors have had a very strong voice. I am neither a scientist nor a medical professional, but a number of health professionals, including medical doctors, contributed to this report.

The aim of this effort was to synthesize knowledge around the threats to human health. The commission looked not only with respect to the population at large, but also with respect to environmental justice. The life cycle of plastic is the same as my age, and that's alarming. That's a lot of plastic that we're seeing produced. What we saw in the National Academies' report is that the production and the waste rise together. There's a lot of leakage, and it's leaking from lots of places.

In addition, plastic is associated with harms to human health at every part of its life cycle. When we think about production, 99% of plastics come from fossil sources, but then there's also the disposal of these products. All along the plastic life cycle, there's “leakage” and leachate, including during use. This is a human health aspect that we should all be paying attention to. The Minderoo-Monaco Commission report noted that more than 10,500 chemicals in plastic are responsible for this. They include carcinogens, neurotoxicants, and endocrine disruptors. As mentioned, the harms fall primarily on some groups, including children and women, as well as other vulnerable or marginalized groups, but it harms all of us. I want to highlight that.

Many of us don't know anything about plastic. It's a string of monomers pulled together as a polymer. It has a carbon-carbon backbone that is pretty much unbreakable. In order to make it useful, chemical additives are used to keep it from blowing up, to keep it flexible, and so on. Many of those additives are now coming to light as major concerns. There's leakage and leachate from these plastics all during their life cycle, including recycling and other “end of life” phases.

The Minderoo-Monaco Report found that of the 10,500 chemicals they identified, 1,254 are of high concern and 1,232 were of medium concern, and that there are over 4,000 that we don't know anything about. There's a lot to

9. Philip J. Landrigan et al., *The Minderoo-Monaco Commission on Plastics and Human Health*, 89 ANNALS GLOB. HEALTH 23, 1-215 (2023), <https://doi.org/10.5334/aogh.4056>.

10. UNEP, FROM POLLUTION TO SOLUTION: A GLOBAL ASSESSMENT OF MARINE LITTER AND PLASTIC POLLUTION (2021), <https://malaysia.un.org/en/171922-pollution-solution-global-assessment-marine-litter-and-plastic-pollution>.

be learned. But what we do know is particularly alarming to medical professionals, which alarms me. These are areas where we have to pay attention. Some of these chemicals can actually leach out of food packaging, which is a concern that we hadn't really focused on before.

I co-led the chapter of this report on social and environmental justice, along with Dr. Adetoun Mustapha, an epidemiologist from Nigeria. What is social and environmental justice? We've learned from work done before, including at EPA years ago, with principles now enshrined in a number of EPA guidance documents. But right now, social and environmental justice means reversing burdens imposed by plastic pollution in the geographies and among the groups least responsible for it, who lack the political power or the resources to address the impacts.

Usually equity concerns can be addressed in two ways—distributive and procedural equity. Distributive equity is a recognition that some people are affected more than others by burdens and harms imposed by pollution and waste, and procedural equity means that those disproportionately affected must have access to and play a role in decision-making. There's an unequal impact, and the people who are gaining the benefits of plastic production are not the people who are experiencing the associated burdens. Equitable solutions seek to resolve this inequity.

Plastic and chemical pollution, which are tied together, are adding to and worsening the inequitable impacts from climate change, toxics and air pollution, loss of biodiversity in the ecosystem, and species decline. Plastic and chemical pollution affects people all along this continuum.

Many groups are disproportionately affected: Indigenous populations around the world, including in the United States, coastal communities, women, children, and future generations (that's all of us), people of African descent, fossil fuel extraction workers, residents of fenceline communities, and recovery workers, such as waste pickers.

These issues are the same and these groups exist everywhere, including waste pickers. For example, at the treaty discussions, the lead spokesperson of the waste picker groups was from the United States. This is not somebody else's problem. It's all of ours.

The inequitable impacts on vulnerable groups occur during the production phase: oil and gas extraction, petrochemical refining, and transportation. We've seen accidents and fires that have affected certain communities.

The impacts of plastic in the use phase are one issue that this report helps make clear. It is related to our overreliance on plastic. Plastic may appear cheap, but plastic is not cheap. We are not accounting for the full cost of plastic in how it's priced. Plastic is having extreme impacts on our ability to clean up our communities and protect our health, and there are health costs associated with it.

This is seen in the ubiquity of fast-food packaging containing plastics and chemicals in food deserts. Some areas are more affected than others. Dollar stores are another example: where you're seeing cheap or affordable things, they tend to be highly plasticized. In addition, women are often exposed to plastic products with harmful chemicals that are female-linked or gender-linked, often having to

do with reproduction, but sometimes having to do with household roles.

Finally, there's the disposal phase. We see harmful effects here, including in recycling. Plastic waste export is another way that we in the United States or in other global North countries create impacts in other countries. This is evident in many ways with impacts on ecosystem services, and it also affects the ability of communities to prevent flooding because of drainage clogging from plastic waste. All these activities adversely affect many different groups.

The Minderoo-Monaco report offered some suggestions and proposals. The report directly focused on actions to be taken through the treaty. First, plastic production must be capped. There is no way around that. We also have to reduce the risks inherent in what's being put into these plastics and simplify the products and have extended producer responsibility—meaning the financial and legal responsibility of those who create the harm. Those are the key procedural solutions.

And there is the need for transparency and access to information. How do these people who are exposed every day to these products know how to protect themselves? How do they know what's in it? The full economic and social cost estimation is critical. We can't even recycle our way out of things because it's cheaper to produce plastic from fossil fuel than to create recycled plastic. These are areas where the economics are really out of whack.

Other solution areas include equitable siting, making sure that safety and health measures are in place, and that people have health care. We need to develop benign alternatives so we have safe options. Other recommendations include restricting toxic plastic imports, banning open burning, and acknowledging and addressing the societal roles. That means the people who are engaged in waste shouldn't be thrown out of a job. They should be accommodated in whatever the new thing is.

These are only a few of the findings relevant to environmental justice and plastics in the Minderoo-Monaco Commission report, which I think is helpful. *Neglected* also has a very good discussion of the threats and solutions.

So, what do some of these solutions look like in practice? Can this be done in the United States? Well, it certainly has been done in California. In source reduction, California passed a bipartisan bill, unanimously, with support from industry.¹¹ The bill established not only source reduction targets for plastic packaging and other packaging, but provided for producer financial responsibility for the infrastructure needed to manage the packaging and waste.

In addition, it established a new fund—the \$5 million Plastic Pollution Mitigation Fund—paid for by producers of single-use plastic packaging over 10 years that will be available starting in 2027 to fund mitigation, and the majority of the funds will go to low-income and disadvantaged communities. That is not a small amount, and California's Department of Resources Recycling and Recovery

11. Plastic Pollution Prevention and Packaging Producer Responsibility Act, S.B. 54, 2021-2022 Reg. Sess., ch. 75 (Cal. 2022).

is having to work through what that would look like. The regulations or new infrastructure must avoid causing disproportionate harm to these communities. This is a start. California is also looking at human toxicity thresholds for microplastics and so on. The state has embarked on a number of risk-based approaches to plastic pollution.

What's on the table of the global plastics treaty is devising something that would work globally, because this is a globally traded and produced commodity. The first negotiating meeting was in Uruguay at the end of last year. The second was just held in Paris. The third will be this year in Kenya. The fourth, in the spring of 2024, will be in Canada. The fifth and final meeting will be in the fall of 2024 in South Korea, and then the treaty is slated to be open for signature by 2025. This is the fastest-moving treaty anyone in international law will have seen.

We are simultaneously developing our own U.S. domestic strategy as we're negotiating the treaty, which makes Jonathan my hero because it's quite a balancing act, and he did come to the Paris discussions. So, it's a very unique moment in time. A lot of information is coming to the fore. Many experts—lawyers, scientists, and ethicists—are all trying to work on what this should look like.

What I've seen also is that, when we first started this treaty, it was regarded as a waste and environment treaty. It is now seen as a human rights treaty. It is now seen as a human health treaty. The World Health Organization (WHO) has recently thrown itself into the ring. This is a very dynamic space. I look forward to being part of the discussions and working with scientists to bring those voices to the table.

Lastly, Dr. Mustapha was my co-author. She's an epidemiologist based in Nigeria. She brought to our awareness that much of what we do know about plastic and chemical exposure and epidemiology, and human health impacts, comes from science in the global North. In Africa in particular, but also other countries of the global South, very little funding is provided for science or exposure studies, even though plastic waste and pollution levels are very high in those countries. This is another example of inequity. I want to give a nod to her, since she couldn't be here today.

Peggy Otum: Carlton, I invite you to give some remarks on your perspectives on global and domestic environmental justice and what environmental justice means for crafting solutions.

Carlton Waterhouse: I want to take a moment and acknowledge where we are: the fact that we just had these significant presentations about plastics globally and domestically and how significant environmental justice was in each of those conversations. They reflected both the U.S. government's position, as well as the way NGOs have integrated environmental justice deeply into their analysis of significant environmental problems.

This is not the way this would have happened maybe five years ago. Certainly not 10 years ago. You would have had government policy that might have talked about envi-

ronmental justice or nonprofits that would have talked about it, but we wouldn't have seen this level of detailed and thoughtful integration.

President Biden, with the multiple executive orders on environmental justice, has reflected a new day in the way that we see the United States and federal government thinking through environmental justice, and also the way nonprofit organizations are moving into an in-depth analysis of environmental justice rather than a superficial one. That's something for those of us who are interested in this issue to celebrate.

It's also important for us to acknowledge, and to recognize, and to give credit to the President for his leadership around this issue. His willingness to really lean in on this issue has, in many ways, caused others to lean in more substantially in the ways they address this. I want to begin by acknowledging that. I say that not as a member of the Administration. This is genuine, coming from my heart.

I also want to acknowledge the way that this conversation has advanced in a global context. In many ways, the discussion of environmental justice as a global matter has not been clearly understood in the same ways that we are talking about it today. In global conversations, environmental justice has often boiled down to a different way of thinking about problems from a sustainability context, rather than thinking about the disproportionate impacts that different communities face from the problems that we are working to resolve.

Seeing that, global development says to us that we have a responsibility to take the same way we're thinking about and integrating environmental justice in our domestic work more deeply into our global work. Even though the touch points may be different as we move around globally from those in the United States, where we're going to talk about race, class, and gender. As we go globally, maybe we'll have to talk about religion. We'll have to talk about tribe. We'll have to talk about geography.

There will be different identity factors that impact whether or not a community finds itself marginalized and vulnerable, but the same phenomenon is replicated even though the identity factors might change that lead to that. That is critical for us to be able to work on with local communities, to understand that more specifically and to be able to work within those contexts. I want to thank Margaret not only for the wonderful report that's been developed, but also for her presentation and pointing out some of the different framing of environmental justice as it exists, from a distributive context to a procedural context.

I want to pick up where she left off, to highlight something and add something. I want to highlight, even though she mentioned looking at the disproportionate harms associated with the life cycle of plastics, that environmental justice as she noted is also about the disproportional benefits.

It's important as we think about environmental justice to not just think about who bears the burden of pollution, but who carries away the profits. That's not insignificant because what we're talking about is profit-making industries. And in light of how profitable they are, there's also

a big resistance to change because that change will impact that profitability.

When we are thinking about profitability and the justice of it, we also should recognize that the marginalized community members are disproportionately underrepresented in the beneficiaries of the profits from those corporations. Underrepresented on the boards of directors, underrepresented in the chief executive officers in the C-suites, underrepresented in terms of those who are shareholders.

Really the equation is almost a complete inverse. Those who are most harmed and least respected in terms of their participation and their decisionmaking are those who benefit the least from these practices. There's an inverse curve that should cause us to think hard about what we really want to accomplish when we talk about justice.

Is it really just a matter of saying, less pollution for me, hooray? Or should it also be fewer profits for you and less pollution for me, because some of those profits should go to address the harms that I'm suffering? If we look at it in a big picture, there's more to it than just decreasing pollution. There also should be some equity brought into this equation about the profits and how they're used.

I also want to note that there's a third frame that I would add to the discussion of environmental justice in addition to distribution and procedure, and that's justice as recognition. When we talk about justice as recognition, in some ways we're talking about something a little different than process, but it's related. That's recognizing whose voice counts. Sometimes, even though you have a public participation process and a 30-day public notice that's required by law, that doesn't mean that everybody who attends is actually going to have the same weight to what they say. Or that everybody's cultural or religious practices or beliefs are going to be equally valued in the decision-making process.

One of the things that I saw when I was working in OLEM was how massive the legacy pollution is with regards to Indian Country. There are just massive amounts of legacy pollution that we have from uranium waste in the Southwest, to all kinds of different pollution experiences for native tribes and villages in Alaska.

One of the things that I constantly heard as I went around the country talking to members of these communities was how their cultural practices were not reflected and protected in the Agency's regulations and/or their policies. Justice as recognition says that we don't just look to protect people in the ways we'd want to be protected, but we want to protect people in the ways that reflect their values and principles in the same way we want our values and principles to be protected and recognized.

When we think about plastics in a global context, we're not just thinking about cancer risk. We're not just thinking about harm from acute impacts of being a trash picker. We're also thinking about disruptions of natural ways of life. Is it agriculture? Is it fishing? How does this disrupt your religious practices where you live? How does life-cycle plastic impact your total quality of life? As we get outside of the U.S. context where we have more common cultural practices and norms, we

really have to be attentive to that because some of these impacts can be substantial in ways that we may not recognize or appreciate.

That means we have to lift up the voices of those members, of those marginalized communities, and in some ways give them an outsized opportunity to be heard, because it requires that we listen more attentively than we might otherwise engage.

When I think about the life cycle of plastics, I come back to some basic issues that we dealt with in OLEM. One of them being risk management plans. That has to do with the safety risk associated with certain kinds of chemical production processes, and the fact that there's a draft plan right now that the Agency is going to make final in the next few months.

Too much of that is located in the "Cancer Alley" area of Louisiana. There is significant risk from petrochemical plants. This is a risk that can be a matter of life and death from explosions and from fires. And when we think about plastics production and risk, we have to consider everything from immediate threat to life and limb all the way to inability to engage in a trade and practices, to engage in fishing practices that may be necessary to sustain a life, or a family, to being littered with trash—a mountain of garbage in a community—and bearing all of the adverse impacts of the truck traffic that comes through certain neighborhoods to move this waste from one place to another.

Across that lifeline, it's critical for us to amplify those vulnerable voices. I want to acknowledge and recognize the federal government's work and nonprofits' work, and to say we need to carry that same kind of deep commitment into all of our global conversations and advocate for that. To ultimately accomplish that, we have to remove things that are major barriers to success, like saying we can't address the beginning of the pipeline. In other words, we can't reduce. EPA says, reduce, reuse, recycle.

Reducing and reusing are the first two priorities. Recycling is a third. If we reduce, it means we have to go to the production of plastics. We have to be willing to see a reduction in production in order to make this a manageable problem. We didn't grow up effectively with this being a problem. But it's a massive problem for everybody who's born today, and we have to reverse that.

We can't reverse that simply from reusing and recycling. There has to be a decrease in the massive volume that we're facing. If we don't push to see that decrease, at least some ability to start to slowly tamp down on that well, we can't really start getting at all of the problems. Some things have to be on the table that some people don't want to have on the table, but we've got to advocate and push to make that happen.

That's something I can say now that I couldn't have said when I was with the Administration, because that may or may not be consistent with the Administration's position and the negotiations, but I can say it should be. That's something the White House and EPA need to make sure is a priority, to see that we are addressing this problem fully across the pipeline, including volume.

Peggy Otum: I want to open it up to questions. I'm going to throw this first one to each of you, picking up on each of your opening remarks. I think you've each noted the role that the Biden-Harris Administration has played both domestically and really allowing the United States to have some moral authority and influence in our global treaty negotiations. And we talked about NGOs.

Could you speak to where corporate responsibility fits in for industry, for companies who want to address this issue? And where does it fit in with all of the public disclosure risks that are inherent in being very transparent about sustainability, where you are, and where you want to be? How do you fit industry in here when you think about who needs to come to the table to address these issues?

Jonathan Black: Industry is going to be extremely important to this conversation. I think what we've heard in the discussions today is that so much of this attention has been downstream, and it has not happened upstream with the product design—thinking about the cost once it goes post-consumer. That makes virgin plastic and a lot of different products appear cheap. But as Margaret said, the cost is quite high.

Trying to engage with industry about embedding those costs upfront, trying to engage industry to embed sustainability and environmental justice throughout its product design and life cycle, is really important. What we're doing in the Administration to advance environmental justice is much more than an office. Since the beginning of the Administration, we have been embedding environmental justice within each of our teams and our agencies. You can think about industry and how a lot of companies have a chief sustainability officer or a sustainability team. Well, they should have sustainability in the product design or in the product marketing. It's not enough to have one office thinking about this.

But if a company is not thinking about sustainability further upstream, for example during the design stages, and it decides that a product is going to be better with multilayer packaging, it's already too late. I think it's really important for companies to think about upstream. We're going to be thinking about a range of actions, including potential rules, and we're working through that process, but engaging with industry on things that they can do is really important.

Margaret Spring: In the National Academies report, we were very clear that everyone has to be at the table to have successful solutions. But that doesn't mean industry designs the solutions. They have to come to the table with the honest understanding of what the science is saying and what the data are showing. A number of industry groups are starting to make their voices known largely because of people—customers—expressing concern about impacts. We're seeing for the first time some industry-sector companies publicly saying in the global plastics treaty that we should reduce production.

That was not imagined a year ago. The issues are clear once you get beyond this official sustainability talk.

Regrettably, a number of companies use sustainability as a marketing tool, not an actual data-driven decision process. Every company is different, but it is important that industry take a serious look and understand the risks posed by plastic. In this treaty process, we've been peeling back the onion on all the different risks, and participants are still having a hard time keeping up. There's a lot of information to digest.

Transparency around what is going into plastic products is another area in need of attention. We in the National Academies report had a hard time getting data on plastic production. A lot of the data are behind paywalls. But if we want to honestly take on this issue, we have to ask how we de-risk production and use, to Carlton's point. What is the worst-case scenario? How can we get rid of those harmful and problematic chemicals in plastic? That's on the table in the global negotiations. What is the list of chemicals we need to get out of the products that are going into babies' mouths or going into our food? How can we start ratcheting down the risk?

Some industries unfortunately are not in that space. I hope that they will be. The concern from groups involved in these treaty processes is that there's too much emphasis on selling solutions versus identifying and seriously considering the problem. Industry is arrayed across a huge spectrum. If you care about future generations and your future customers, you should be looking at this as a way forward.

I said that our environmental laws do not directly address plastic pollution. However, common law, tort law liability is viable—it's coming, so pay attention. You're also seeing that shareholders are bringing shareholder actions and suits. In 2022, the Carbon Disclosure Project announced it would expand to include plastic disclosure, beginning this year.¹² People care about transparency and disclosure. Plastic action has moved so fast because it matters to people. So whichever companies are going to be at the table talking, understanding the real issues and talking to scientists to understand the issue and work together on solutions, are going to be probably the most well-positioned to be leaders.

What we're seeing with the global plastics treaty is increasing advocacy from industry to establish global rules to level the playing field or we can't compete well, because low riders can skim the system.

There's a lack of transparency for many reasons of what is going into products because what goes into plastic is not controlled by one company. It's not just "Joe Acme." Millions of companies are involved in formulation and production. So, the demand has to be also from the consuming side, and that's where you're seeing a rift and a good one.

Carlton Waterhouse: I would add that we need some legislative action, because this is a bigger problem than the executive branch can solve alone. We need some action at the legislative level to really lean in on this issue to help address it along the pipeline.

12. CDP, *Plastics*, <https://www.cdp.net/en/plastics> (last visited Sept. 7, 2023).

We also need action by state and local governments to address the issues. Some have banned single-use plastics. Those efforts are helping to draw attention to the problem and getting the attention of manufacturers. That's important. But I also think it's critical that industry really take ethical responsibility for their products. They can't distance themselves from the very known realities of the harm that their products cause.

I should note I use plastics every day. I woke up and used plastics in my house. I had plastics in the car that I drove. I probably walked with some plastics on the way here. Plastics are all over. As a consumer, I haven't said I'm not going to buy it if it has plastics. I also have my own part, which is to educate myself and become aware of where I can make decisions that are going to distance me from plastics, the most harmful plastics, and to communicate that to companies.

But also to push companies to acknowledge and recognize that there's a sea of plastics in the middle of our ocean that is causing massive disruption to ecosystems; even though they might not have thrown the bottle there, they produced the bottle that got thrown there. They're aware of that. They have to take some accountability and responsibility for that. So, extended producer responsibility is going to be a critical part of addressing this as well.

Peggy Otum: I'd like to open it up to any other questions.

Audience Member #1: My question is about labor justice on the producer side, because labor justice is a huge part of the broad umbrella of environmental justice. A lot of the plastic products that we have are produced and imported to the United States. I was wondering, on the global treaty end of things, how are we marrying that aspect of labor justice and health and safety in the workplace with the broader plastic pollution discussion? What lessons can we learn from our past efforts to alleviate a lot of the human rights violations that occur at that production level?

Margaret Spring: It's a work in progress. As I said, WHO just came to the table through a resolution a month ago.¹³ The International Labour Organization (ILO) has been called out as a group that should be more involved. The waste picker issues are probably the leading voice on labor and protections. There's a just transition movement that's organized by Kenya and South Africa, and a number of other countries.¹⁴

But it's been mostly in that context so far. However, the United Nations high commissioner for human rights has definitely identified plastic as a major human rights issue. The human right to a healthy environment is of course

connected with that. This will be embedded, but I think there's been a challenge in trying to prioritize what to work on first. Now, health and chemicals are bubbling to the top because many things flow from them.

The most important thing is to have these expert organizations at the table. Because if we try to solve the problem without the experts, we're going to address it inadequately. A good development is that some are getting involved. For example, the Basel, Rotterdam, and Stockholm Conventions¹⁵ Secretariats are now getting involved. They have a lot of information about chemicals and waste. You're seeing WHO involved. ILO probably needs to come in. But I think if they're not invited in or brought in quickly, there will be some lost opportunity.

Audience Member #2: My name is Jackie Nuñez. I'm the founder of the Last Plastic Straw. I'm originally from Santa Cruz, California, and I'm really excited that Monterey Bay Aquarium got involved in this issue. I've worked with them for many years, with the teachers in education.

I'm also now the advocacy and engagement manager for Plastic Pollution Coalition. My first statement is that at the height of the whole plastic straw ban, I got yelled at on Fox News. I did get the last line in and that was that plastic never was and never will be disposable and neither are we. These are some of the concepts, I think, that we really need to look at and to really be able to speak truth to plastic in real ways.

So, my question is, what's next? What are you looking at, what are the next steps, and how can we help?

Jonathan Black: In terms of our process, we're involved in coordination to understand the different policies and programs going on. So much work is being done. I think we also want to coordinate to help make sure that we're all working in the same direction. That teams are learning from and taking advantage of things that other agencies are doing.

In conjunction with EPA's strategy of saying, here's a draft national strategy with voluntary actions that the federal government can take, that states and local governments can take, that industry can take, we're also asking, who's going to take on those voluntary actions and how are we going to implement them? Those are some of the next steps for us.

Margaret Spring: We've been waiting for the specific strategies to be developed. Yes, we have to start somewhere. It was great that a bipartisan group of senators and representatives asked for a report to understand the real deal in the United States. We told them the real deal, and they're thinking about it. Now, there is a lot of opportunity, as we

13. See Stefan Anderson, *Landmark Resolution on Chemical Pollution Passes World Health Assembly*, HEALTH POL'Y WATCH (May 29, 2023), <https://healthpolicy-watch.news/landmark-resolution-on-chemical-pollution-passes-world-health-assembly/>.

14. International Alliance of Waste Pickers, *Kenya and South Africa Announce Just Transition Initiative for Waste-Pickers & Other Workers in the Plastic Value Chain*, INT'L ALL. WASTE PICKERS (Dec. 2, 2022), https://globalrec.org/2022/12/02/kenya-south-africa-just-transition_wastepickers_plastic/.

15. Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, Mar. 22, 1989, 1673 U.N.T.S. 57; Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade, Sept. 10, 1998, 2244 U.N.T.S. 337; Stockholm Convention on Persistent Organic Pollutants, May 22, 2001, 2256 U.N.T.S. 119.

talked about, for the Administration to do something and start moving the ball.

We need to demystify this set of problems. Plastic pollution is a bipartisan issue, and it shouldn't be a partisan issue. I can't stress that enough, and it's one of the ways we at the Aquarium approach it. Now, we have to take sides sometimes to push for a needed solution if people are not really for what you're for. But the California bill was, in the end, bipartisan because it was very clear what the people wanted and what made sense. So, it's not just what certain groups want, not just NGOs, not just scientists.

The unified coalitions that are forming are critical and also taking the temperature down in terms of helping people learn their way into this issue without being negative. I do think that there's a "jobs versus us" issue, which should not be there. One of the things that Dr. Landrigan likes to talk about is that it's a false dichotomy to say that it's going to cost money to save lives. It saves money to save lives.

Due to the Clean Air Act (CAA),¹⁶ we've actually reduced air pollution emissions, and it's helped us reduce costs. So, it's best not to think about this as: if you take care of this

problem, you're going to kill my business. Of course, that is going to be a concern, which is why the Administration is looking at the economic opportunities associated with change. What's interesting is that some of the most popular bills on Capitol Hill are bottle bills because people remember those and how reuse worked in practice—I did that, or I know how to do that.

This is not scary. De-scarifying the opportunity is a good thing for coalitions to do because there's still some fearmongering. There are problems and challenges, there's no doubt about it, but showing a unified front is important.

Carlton Waterhouse: Making comments on the draft strategy that EPA has put out is an important step.¹⁷ Second, if you are working on draft legislation or you have model legislation, get that widely distributed across states. There are certain state legislatures that might be interested in passing legislation that has already been successful in another place. Third, partner with us at the Environmental Justice Center at Howard. Let's talk about ways that we can work together to help advance this issue as a matter of policy and law.

16. 42 U.S.C. §§7401-7671q, ELR STAT. CAA §§101-618.

17. The public comment period closed on July 31, 2023.