Airlie House Workshop Report: Re-Imagining Environmental and Natural Resources Law

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MERIDIAN INSTITUTE

AIRLIE

THE GEORGE WASHINGTON UNIVERSITY
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Since 1969, ELI has played a pivotal role in shaping the fields of environmental law, policy, and management, domestically and abroad. We are an internationally recognized, non-partisan research and education center working to strengthen environmental protection by improving law and governance worldwide. We deliver insightful and impartial analysis to opinion makers, including government officials, environmental and business leaders, academics, members of the environmental bar, and journalists. ELI is a clearinghouse and a town hall, providing common ground for debate on important environmental issues.

ABOUT GEORGE WASHINGTON UNIVERSITY ENVIRONMENTAL & ENERGY LAW PROGRAM

The George Washington University Environmental and Energy Law Program has been at the forefront of its field for 50 years. The Program, which includes a leading-edge Sustainable Energy Initiative, offers a wide range of courses in environmental, natural resources, and energy law taught by nationally and internationally recognized experts. Students can work as externs with some of the most influential government and nonprofit environmental organizations in the world, including the Environmental Law Institute.

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Meridian Institute is a mission-driven, non-profit organization that has helped our clients and partners develop and implement solutions to complicated, often controversial problems—big and small, global and local—for over two decades. We do this by combining our deep understanding of the issues at hand, as well as the people, politics, and power dynamics that surround them; our dedicated, expert team; and our ability to foster constructive discussions, manage decisions, and support actions that shape the world for the better. We focus on five key services: collaboration, implementation, strategy, research, and philanthropic support. We bring our skills to bear on a diverse range of issues, including environment & natural resources, climate change, agriculture & food systems, forests, health, oceans & coasts, resilience, science & technology, and water.

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CONTEXT

This year, 2019, marks the 50th anniversary of the National Environmental Policy Act (NEPA), the Environmental Law Institute (ELI), and the environmental law program at George Washington University School of Law (GWU). In honor of these anniversaries, GWU and ELI set out to re-imagine environmental and natural resources law for the next 50 years in collaboration with leading environmental legal thinkers. This collaboration has taken place at two in-person meetings: the first at The Johnson Foundation's Wingspread Conference Center in Racine, Wisconsin in March 2019, and the second at Airlie House Conference Center in Warrenton, Virginia in November 2019. Meridian Institute provided facilitation support for both events. This report summarizes the context for, outcomes of, and next steps emerging from the 1.5-day November meeting at Airlie House.

WINGSPREAD CONVENING INPUTS TO AIRLIE HOUSE CONVENING

Though this report summarizes the outcomes of the Airlie House meeting, it is useful to understand the high-level outcomes of the Wingspread meeting, since the Airlie House participants built upon some of the premises and ideas that emerged from Wingspread event. The goal of the Wingspread meeting was not to reach consensus on major challenges or solutions, but rather to bring new ideas to the table, connect leaders in the field, and lay the foundation for the conversation that continued at Airlie House convening in November 2019.

At the Wingspread meeting discussions focused on opportunities to address four key environmental challenges: climate change, ecosystem degradation, non-point source pollution, and materials conservation and reuse. Participants broadly agreed that these four challenges are some of the most pressing environmental issues that have not been adequately addressed by current environmental and natural resources las and therefore will require focused attention in the years ahead. All discussions included recognition of the broad international context, but the meeting focused primarily on environmental and natural resources law in the United States.

Each of the four substantive topics had a working group determining the best possible methods to approach the challenge. Each working group summarized their outputs differently (some in tables, some in short white papers), and these outputs were shared with the Airlie House participants in advance of the Airlie House meeting.

Wingspread participants also identified a need to include a more explicit focus on environmental justice as a major environmental concern and private environmental governance as well as public governance as a key feature of environmental solutions. Therefore, the agenda and participant list for Airlie House were constructed to feature the cross-cutting issue of environmental justice and cross-cutting solution of private environmental governance more explicitly than as considered at Wingspread.

AIRLIE HOUSE MEETING AGENDA AND GOALS

The goal of the 1.5-day Airlie House meeting was to further the conversation on re-imagining environmental law and produce a set of ideas to be shared in a whitepaper (or multiple whitepapers) in 2020. These whitepapers would be intended as nonpartisan educational tools. One potential use of the whitepapers could be for both political parties to gain greater understanding of the current options for

environmental law and governance as they consider their 2020 platforms. Another potential use could be to inform resolutions to be proposed to the American Bar Association's section on the environment.

In terms of topics, the Airlie House meeting continued to focus on the four substantive issues that the Wingspread participants affirmed the importance of: climate change, ecosystem degradation, non-point source pollution, and materials conservation and reuse. However, the topics were reframed slightly for the Airlie House meeting in reaction to the Wingspread outcome that environmental justice should be included more explicitly in the consideration of all environmental issues. In addition to addressing environmental justice issues in the context of each of these topics a separate breakout group topic was added to focus on systemic obstacles to environmental justice that deserved focused consideration. Therefore, the Airlie House agenda was configured to ensure adequate discussion of the following five topics:

1. Climate change/decarbonization, climate justice, and equitable and sustainable climate solutions
2. Ecological and community health impacts of non-point source pollution
3. Ecosystem degradation and related health and justice concerns
4. Opportunities for and barriers to a just circular economy to achieve materials and resource conservation and eliminate disproportionate burdens on historically disadvantaged communities
5. Legal and institutional barriers to and opportunities for a just distribution of environmental benefits and burdens

The meeting began with a summary of Wingspread outcomes and framing presentations about governance frameworks and key scientific considerations. The remaining time in the 1.5-day meeting was spent alternating between plenary sessions and breakout group discussions to consider the five substantive topics noted above. Plenary sessions were an opportunity for breakout groups to report back on progress and compare discussion themes and potential emerging governance solutions. Breakout groups were asked to consider questions including but not limited to:

- What are the key legal tools and strategies for making tangible progress towards addressing if not eliminating the environmental challenge?
- Are there gaps and/or insurmountable impediments to applying "traditional" legal tools to addressing this challenge?
- What role might environmental justice (for topics 1-4), layered governance, private environmental governance, technology/monitoring, and soft law or policy play in shaping both the solutions and paths towards implementation of those solutions?
- Given the prior discussion on gaps and opportunities, what are some specific opportunities and pathways for action to make progress on and address each of the five challenges?
- What did other groups mention [in plenary report-outs] that you found particularly compelling? Did they identify types of action pathways (research, political, legislative, regulatory, communications, etc.) that we did not?
- How might we refine our suggested action pathways?

- What are some specific next steps that can be taken to begin implementation of these action pathways?

FRAMING PRESENTATIONS

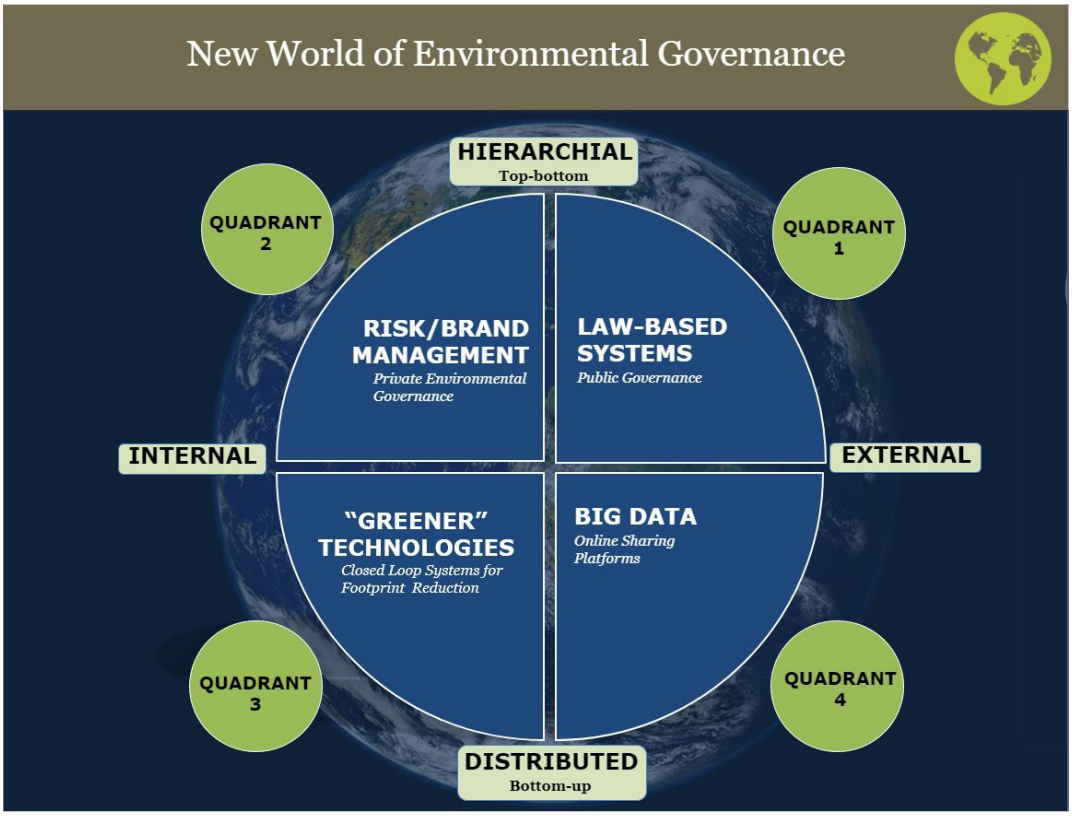
Multiple framing presentations were provided on the first day of the meeting to prompt discussion on the broad topic of re-imagining environmental and natural resources law. A brief summary of each presentation is provided below, and slides are included in the appendices noted below.

Governance Frameworks – Scott Fulton

Scott Fulton, President of ELI, provided an overview of his perspective on the new emerging governance context for environmental law. His premise was that the traditional governance framework for environmental law has been based in top-down federal and state systems. However, he and ELI Visiting Scholar Dave Rejeski, have developed a 4-quadrant framework to describe the emerging new governance context for environmental law, which is not limited to law-based systems alone.

The four quadrants of the new model (pictured below) are as follows. Each section of the model is identified as external vs. internal governance, as well as top-down vs. bottom-up governance.

- Law-based systems: in the model, these systems are considered public governance, that is both top-down and external (governing others).
- Risk/brand management: this quadrant describes the private environmental governance activities undertaken by companies intending to protect their brands and/or manage risk. This type of governance is top-down and internal to the individual companies.
- “Greener” technologies: the model includes this quadrant to reflect the development of greener technologies that reduce the environmental footprint of business. This type of governance is bottom-up, since it is not currently mandated, and internal to the group electing to use the technology.
- Big data: this quadrant focuses on the remote sensing technology and data computing capacity that permits the deployment of big data. It is bottom-up and external governance, the success of which is based in the public being able to see data reflecting the actions of companies.



The presentation also identified several recent developments in the environmental law community relevant to this discussion:

- Environmental Justice Roundtable: Environmental Justice leaders and ELI experts gathered to discuss the further integration of the environmental justice community and the traditional environmental law community. This represents the type of new collaboration that will be necessary for furthering environmental governance.
- GreenTech2019: The purpose of this meeting was to discuss the impact of technology. ELI will likely host a GreenTech2020 event as well.

The presentation encouraged Airlie House participants to consider new governance models in addition to traditional environmental governance models, as well as seek to create connections between new and existing approaches. Key points included:

- **Law-based systems**: in the model, these systems are considered public governance, that is both top-down and external (governing others).
- **Risk/brand management**: this quadrant describes the private environmental governance activities undertaken by companies intending to protect their brands and/or manage risk. This type of governance is top-down and internal to the individual companies.
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A Scientist's Perspective on Key Environmental Challenges – Jessica Hellman

Jessica Hellman, Director of the Institute on the Environment and Professor of Ecology at the University of Minnesota, provided her perspective on the "big ideas" that science requires law and policy will address. The big ideas, and commensurate impacts on law and policy, are summarized below:

- **Change is the new norm**: Future climate projections suggest that change is the new norm (the last time that carbon dioxide concentration was the same as what it will likely be in the future under business as usual scenarios, alligator ancestors lived at the poles). Some biomes will need to move at the rate of several kilometers per year to sustain themselves. The implication for law and policy is that it will be necessary to learn to govern that level of change. Currently, there are laws for landscape management, but none that are designed to address systems constantly in major flux.
- **Side effects and risk**: Climate change will raise new questions of risk that law and policy must govern. Though scientists are working hard to determine adaptation practices to address changing conditions (e.g., managed relocation – moving a creature from where it lived historically to a new place where it has not lived previously but might be able to live in the future), there are risks inherent in that (if a creature is moved and becomes a pest, who bears the liability for the unintended consequences?). Additionally, climate change will drive bankruptcy, so additional efforts will be needed to address that liability.
- **Big data and remote sensing**: Scientists and engineers can now share and store information at a scale and resolution that is unprecedented. This newly available data will need to be appropriately governed.

Dr. Hellman also shared several other key considerations for bridging conversations between scientists, lawyers, and policymakers. She noted that scientists are becoming more comfortable discussing societal values and the implications of scientific findings, which will enable faster progress on environmental governance. She also emphasized that forced international migration is an environmental justice concern, as the patterns of warming are distributed such that the places receiving the most change are the least responsible for climate change. This equity concern must be a fundamental consideration in any multi-stakeholder conversation.

OUTCOMES BY SUBSTANTIVE AREA

As previously noted, discussions centered around five major environmental topics that the group believes require further governance efforts to address sufficiently and appropriately:

1. Climate change/decarbonization, climate justice, and equitable and sustainable climate solutions
2. Ecological and community health impacts of non-point source pollution
3. Ecosystem degradation and related health and justice concerns

4. Opportunities for and barriers to a just circular economy to achieve materials and resource conservation and eliminate disproportionate burdens on historically disadvantaged communities
5. Legal and institutional barriers to and opportunities for a just distribution of environmental benefits and burdens

Throughout the 1.5-day meeting, participants worked through these topics in breakout groups and plenary and developed the following conclusions.

CLIMATE CHANGE

Climate change threatens communities across the planet and it very often intensifies, amplifies, or accelerates many other environmental and natural resource management challenges.

Some overarching goals discussed by the breakout group included reducing emissions to net zero by 2050, creating resilient landscapes, integrating equity and justice into climate policy deliberations and actions, and ensuring there are clear "fallbacks" for every goal to account for the possibility of failure. As such, it was recognized that "solving" climate change challenge is a huge and complicated task and the perception of failure may deplete political will and societal morale and lead to inaction.

Participants considered the discussions that took place at Wingspread, which focused extensively on the recent compilation of nearly 1,500 recommendations that are contained in *Legal Pathways to Deep Decarbonization in the United States* co-authored by Michael Gerrard and John Dernbach (both of whom were in attendance at Wingspread but were not at Airlie House). In advance of the Airlie House meeting, Gerrard and Dernbach shared a high-level summary of what they considered to be the top-20 most important recommendations from that body of work.

Participants began by acknowledging the important contribution to the field made by the book, and expressed appreciation for the fact that the co-authors had boiled down over 1,500 recommendations to approximately 20. In the early phase of their discussions, the group struggled with the breadth and scope of this topic, especially considering they did not want to duplicate the intensive effort that went into the publication of *Legal Pathways*, which included 34 chapters authored by 60 legal scholars. It was noted that *Legal Pathways* focuses primarily on deep decarbonization mitigation policies without consideration of the linkages between mitigation and adaptation. In addition, it was noted that many chapters focus heavily on public governance options, with a strong emphasis on top-down federal solutions with some consideration of state and local government actions and private sector efforts.

Given this initial discussion, the climate change group participants at Airlie House decided to explore the following topics: governance pathways that are different from top-down federal solutions (e.g., state and local actions governance and private sector governance solutions); linkages to international efforts, including the Paris Agreement; roles for nature-based solutions that address mitigation and adaptation; and options for governing adaptation. Though breakout group participants did not develop a firm consensus on a set of recommendations, they identified the following main ideas for future consideration:

1. ***Promotion of paradigm shift through increased transparency:*** Addressing climate change may well require a broad societal paradigm shift. This could include creating a federal climate agency, reforming campaign finance law to limit the influence of money in US

politics, redefining national success to include well-being rather than just economic output (i.e., GDP), and/or requiring corporations to have a clearly (i.e., legally) defined social license to operate, including creating a legal obligation for corporate Boards to be responsible for ensuring environmental as well as financial performance. These paradigm shifts would require legislation and legal backing, which in some cases could include Constitutional Amendments. However, there is insufficient political will to enact such significant shifts in the public laws governing private governance, campaign finance, and political speech. The group considered whether increasing transparency about the reality of climate change through mass media efforts, K-12 education, improvements to attribution science, using big data and mapping efforts, etc. might increase public outrage that could lead to the major paradigm shift that seems to be needed. However, many participants were not confident that raising awareness through increased transparency will be either sufficient or result in timely outcomes to solve the climate crisis, as education about climate change has been going for quite some time, yet the problem persists and the U.S. is particularly "stuck" at the moment.

2. ***Simultaneous and parallel efforts to decarbonize the transportation and electricity sectors:*** Participants identified the combination of focusing on electrifying the transportation sector while decarbonizing the electricity grid could help to focus efforts to achieve a major turning point in climate policy. To accomplish this, simultaneous work must be done with the different stakeholders for the transportation, electricity, and fossil fuel sectors.
    - *Decarbonize the transportation sector:* Options include focusing on light duty rather than heady duty vehicles, prioritizing international air transportation solutions under CORSIA, investing in alternate low-carbon fuels (not only electrification), and creating infrastructure incentives.
    - *Decarbonize the electricity sector:* Options include creating infrastructure incentives and extending FERC jurisdiction of interstate transmission to include storage (current litigation on this topic is pending).
    - *Transition the fossil fuel industry:* Options include eliminating fossil fuel subsidies, creating positive feedback loops for transition via private governance, and developing new infrastructure and technologies.
3. ***Exploration of under-developed solution spaces:*** There are many undeveloped opportunities to reduce emissions from U.S. agricultural production (e.g., reimagining land use practices, promoting dietary changes, etc.). Additionally, nature-based solutions (e.g. tropical forest protection) are gaining ground on the international level as a complement to the expansion of renewable energy and associated improvements to electricity grid.
4. ***Additional focus on non-CO_2 emissions (methane):*** The climate conversation remains focused on CO_2 mitigation. However, methane emissions are clearly a more potent contributor to climate change and efforts to control methane emissions might be more amendable to solutions that can be achieved through changes in laws and regulations.

Broadly, the group identified a need to explore how federal, local, and state regulatory approaches (all top-down governance approaches) can be complimentary rather than contradictory to market-based private governance approaches. In short, there should be an "all of the above" approach to advancing solutions to the climate crisis.

"UNCONTROLLED POLLUTION" (AS AN ALTERNATIVE TO "NON-POINT SOURCE" POLLUTION)

In the past five decades, the environmental community has made major strides towards addressing point source pollution. However, non-point source pollution, which was recognized in federal law as a concern in 1972, remains a problem. The Clean Water Act has provisions to address pollution that might not be managed by the point source controls. The water quality program, including establishment of total minimum daily loads for waters, was intended to capture **all** sources that impacted water quality. The non-point sources, however, were left exempt from regulation largely because their management and control could impinge on local land use authority. Thus, the problem is not new, but the serious ecological and public health consequences – hypoxic zones, toxic algal blooms, beach closures, fisheries closures, boil water advisories, contaminated well water – remain to be addressed.

The group advocated referring to this topic moving forward as "uncontrolled pollution" rather than "non-point source pollution" to emphasize the prevalence of this challenge and the importance of addressing the variety of "uncontrolled" sources of pollution in the future. The adverse impacts are very severe to local and regional communities. Uncontrolled pollution is a major environmental justice concern because the communities drinking unclean water and breathing toxic air as a result of these uncontrolled sources are often both the rural poor and historically disadvantaged urban communities.

The group proposed four potential action pathways to address uncontrolled pollution:

1. ***Implement under-utilized existing environmental laws:*** Existing laws with provisions for addressing cumulative impacts could be a tool for combating uncontrolled pollution. Currently, cumulative impacts are viewed narrowly, but expanding working definitions to include non-point source pollution would enable the control of these currently uncontrolled pollutants.
2. ***Provide key actors with the power to create change:*** Many localities and NGOs have engaged in local consensus processes to address pollution (e.g., consensus creation of community watershed management plans). These efforts, though effective, could be more powerful if backed by financial support and legal frameworks. There may be opportunities to provide local communities with grants to identify and implement locality-specific solutions. In the long-term, laws might create local and state level inventory systems to promote addressing uncontrolled pollution.
3. ***Capture "escapees" from pollution discharge:*** There are entire economic sectors, such as the agricultural sector, that are not fully regulated to account for public exposure to pollution. This is likely due to longstanding political and economic factors in the US, and therefore short-term pathways may not be effective. For example, in the past 25 years, the Department of Agriculture has begun to enhance its conservation programs, but they are miniscule in comparison to the magnitude of the pollution problem. EPA and other federal agencies have worked cooperatively in certain locations to focus land and farm "best management practices" on priority watersheds, so there is some experience to build on. The group did not reach a solution for this issue but acknowledged it as one important to continue considering.
4. ***Increase risk to culpable actors:*** Introducing more risk to corporate actors responsible for non-point source pollution could be helpful. This might include leveraging traditional legal tools such as trespass and nuisance laws. Private sector governance, corporate voluntary

commitments, and increased public awareness due to big data may also help promote change.

ECOSYSTEM DEGRADATION

Ecosystem protection laws must evolve along with the ecosystems they are intended to preserve. Environmental laws focused on ecosystem protection are typically based on "managing to the brink": providing only so much protection as to prevent the species and the ecosystems on which they depend from collapse. Given the increased variability and unpredictability of future ecosystem management due to climate change, the breakout group determined it will be key to move away from "managing to the brink" because thresholds and tipping points will be significantly less clear. Additionally, the group identified a clear need to account for the fact that ecosystems will continue to change at a rate that will be faster than previously experienced when reconsidering methods for their protection. There are multiple international examples of addressing ecosystem management by providing nature with legal standing to encourage a broader view of ecosystems. This may be a potential option for the United States but is likely to require a long time horizon to achieve.

The discussion group identified several potential near-term action items for improving ecosystem protection, as follows. In so doing, they acknowledged that these solutions lend themselves to paying people to protect ecosystem services, thus reinforcing the very strong property rights regime already existent in the United States. Property rights may become more challenging in the Anthropocene. This reality should remain a consideration when evaluating and promoting the following action pathways:

1. ***Create legislation to encourage local ecosystem management***: Habitat conservation plans are legislated under the Endangered Species Act (ESA), but those plans are aimed at single species and do not consider ecosystems as interdependent entities. To address this gap, the discussion group proposed creating legislation encouraging the development of local ecosystem management plans. This legislation would probably best be developed at the state rather than federal level, since it may need to be altered due to specific geographic needs and development may be more politically feasible at the state level. Current environmental law frameworks typically rely upon penalties for non-compliance and creating the basis for legal suits. This approach is time consuming and expensive, and rarely results in better outcomes for ecosystems. Providing grant funding for development of multi-stakeholder consensus-based ecosystem management plans could help avoid this typical outcome.
2. ***Promote "no net loss" of ecosystem services***: Environmental law typically considers ecosystems as the sum of their parts, requiring specific protections for specific components of a given ecosystem. However, due to the interdependent nature of these systems, it is more appropriate to protect the net ecosystem services provided. This could be achieved by building on existing programs. For example, federal projects under the National Environmental Policy Act (NEPA) could shift focus from considering project impacts to ecosystem services impacts. Local and state land use decisions could build upon precedent set with mitigation banking under the Clean Water Act. Though no net loss is the most scientifically sensible approach to environmental protection, it is critical to emphasize that this approach could become a major equity concern if mismanaged. Communities must be involved in determining what damage is permissible under a no net loss framework, so that the damages and benefits are spread justly across community members. The discussion

group suggested that making these decisions and processes more local provides an opportunity to protect communities from this potential concern.

CIRCULAR ECONOMY

Current production and waste management practices consume and pollute the Earth's finite resources and necessitate ever-growing landfills, which burden disadvantaged communities across the globe. The vision of a circular economy is to rethink every step of the materials lifecycle to address these challenges by internalizing as many externalities from materials usage as possible. The difference between traditional waste management and the circular economy vision is further explained in this graphic from the World Resources Institute, which the circular economy discussion group referred to extensively.

Though the group discussed potential amendments to the Resource Conservation and Recovery Act (RCRA), participants determined that touching RCRA would require longer time horizons than is practical. The group attempted to identify pragmatic solutions that could be implemented in the relatively near-term. These pragmatic options are as follows:

1. ***Develop model municipal ordinances***: The traditional waste management hierarchy is so established that a community seeking to transition to a circular economy approach may lack the tools necessary to do so. Development of a model state law/policy or municipal ordinance that would move from focusing on the waste management hierarchy to focusing on the circular economy hierarchy could provide communities with critical support.
2. ***Invest in research and development***: Investing in research and development to create materials with greater reuse potential than currently used materials could facilitate a transition to a circular economy. Small businesses are often the best test grounds for new ideas, as large companies' supply chains are too complex to test ideas and fail. However, small businesses need support and incentivization to be the hubs of innovation. When carbon dividends are created through tax or cap and trade mechanisms, it may be helpful to use some of the dividends to support research and technical assistance for small and medium size businesses in waste and carbon-reducing materials techniques such as additive manufacturing.
3. ***Expand state take-back programs:*** Take-back programs (e.g. state electronics and drug return programs) support the circular economy. Examining the possibility of expansion and wider adoption of these programs at the state level could be helpful and may eventually lead to the development of national programs.
4. ***Redefine procurement specifications:*** Procurement specifications - detailed descriptions of goods and/or services required - determine how governments and other procurement entities (e.g., universities) select the items they will purchase and the entities they will purchase from. There may be opportunities to work with state and local governments, as well as other procurement entities, to incorporate circular economy criteria into procurement specifications.
5. ***Redefine "materiality":*** Consider regulatory or statutory change in the definition of "materiality" that would require companies to report to the SEC on materials related issues such as lack of access to raw materials or product stewardship risks.
6. ***Explore "fate labelling":*** Explore the possibility of fate labelling for consumer products, so that consumers can make informed purchasing decisions. The group considered the

possibility of developing a QR code but determined that consumers may not take the time to scan QR codes.

7. ***Create a multi-stakeholder dialogue:*** Consider convening a circular economy dialogue, perhaps initially at a state or regional level, to bring the business, investment, government, NGO and other communities together to discuss how to move to a more circular economy including such issues as incentives for reuse, repair, remanufacturing, and waste exchange (potentially including some of the big consumer companies such as Walmart, Target and Amazon). This would require discussing the circular economy in terms that are understandable and relevant to the various stakeholders – currently, companies consider waste management in terms of efficiency, while NGOs are discussing development of a circular economy.

Prior to pursuing any of the above action pathways, the group determined it would be necessary to conduct a thorough "landscape analysis" on circular economy. This landscape analysis would determine what states and companies are currently doing on this topic and help determine opportunities to add value to the existing conversation.

ENVIRONMENTAL JUSTICE

Though environmental justice was considered in the context of all the other substantive discussions, one breakout group was designated to discuss structural inequities causing environmental injustices in a wide variety of circumstances. In the United States, there is growing environmental and social inequality, declining opportunities for public participation in decisions impacting communities, and a growing prevalence for a "check-box" approach to community participation. Internationally, there are growing concerns about forced climate migration.

The group established that the key component of environmental justice is self-determination for communities. With this in mind, the group emphasized that all their discussion outcomes and associated recommendations would require input and refinement from the members of environmental justice communities - who were not adequately represented at this meeting to ensure broad agreement - before the ideas are further considered.

1. ***Develop constitutional rights***: Including environmental equity and justice as a constitutional right would provide a firm mandate for legislation to protect communities. The group suggested beginning with inclusion of environmental justice in state constitutions, as already done in Pennsylvania. Environmental rights could be included within constitutional clauses on equal protection. One concern with this approach is that any right would be subject to jurisdictional approval. To address this, it may be appropriate to take a narrower approach (e.g., include a "right to clean water" instead of a "right to environmental services"). This constitutional approach is informed by international examples.
2. ***Create new environmental legislation***: New legislation could be designed to fill justice gaps in existing environmental legislation. Bills could include requiring cumulative impact analysis within the Clean Air and Clean Water Acts, providing funding to support environmental justice communities, instituting mandatory emissions reductions, etc.
3. ***Utilize big data and new mapping tools***: There are several potential avenues for using big data. First, communities can make use of existing mapping tools. In California, there is an

"enviro screen" mapping tool that helps identify vulnerable communities to target with enforcement resources. Though typically, communities may object to being labeled as "disadvantaged," research has shown that when this label enables mobilization of resources for community support, communities are comfortable with the designation. This approach could be introduced in other states, though more efforts will be needed to clarify the constitutional issue of using racial data in decision-making. Second, community-based science could be utilized more effectively. Currently, there are assumptions that the data produced from community-based science efforts are unreliable. Third, communities and consumers should have greater access to existing data sources to inform their self-advocacy. Market-sector leverage is based on consumer access to information about the origins and end-of-lifecycle realities of available products.

4. ***Explore private sector approaches***: Environmental justice communities have an understandable skepticism of voluntary efforts within the private sector, given their history of mistreatment by corporations. However, as private sector governance continues to evolve as an important component of environmental governance, and as some companies become truly well-meaning, there may be opportunities for companies to support community-based efforts.

NEXT STEPS

ELI, with support from colleagues at GWU, seeks to publish whitepapers in spring 2020 to further develop and share the ideas generated at this convening. Ambitiously, these could be incorporated into processes informing development of political party platforms in advance of the 2020 United States elections. While ELI is a non-partisan, non-advocacy group, it is well-positioned to produce non-partisan educational products for use in political processes. Multiple Airlie House meeting participants have volunteered to assist with this work, but other voices are certainly welcome. Please contact ELI if you are interested in participating in white paper drafting.

Some meeting participants strongly encouraged that prior to publication of whitepapers on any of the substantive topics discussed at the meeting (not only environmental justice, but also climate change, ecosystem degradation, etc.) – communities that are facing environmental justice issues should be given opportunities for engagement and input. Such engagement should aim to bridge the historical gap between top-down environmental law approaches and bottom-up environmental justice approaches and seek to ensure that the legal solutions proposed are not inadvertently contradictory to community objectives.

Coming out of the meeting, the current status of each substantive discussion topic is as follows:

- ***Climate Change:*** The discussion of this topic proved challenging for the Airlie House participants due to breadth and scope of the challenge and the need for multiple pathways, not just legal pathways. They identified a clear need to merge multiple lenses of solutions (top-down legal approaches, private sector governance, community-based efforts, etc.) and balance mitigation and adaptation priorities. However, further work is necessary to find consensus between the advocates for these different solutions and ensure the approaches are complimentary rather than contradictory. This consensus-building work can be done

through whitepaper development, building on the discussion had by participants from both the Wingspread and Airlie House meetings.

- ***Uncontrolled Pollution:*** As noted in this meeting summary, multiple concrete recommendations emerged from the meeting, which provide a strong foundation for white paper development.
- ***Ecosystem Degradation:*** As noted in this meeting summary, multiple concrete recommendations emerged from the meeting, which provide a strong foundation for white paper development.
- ***Circular Economy:*** Though multiple concrete recommendations were developed the group determined a landscape analysis of existing efforts to promote a circular economy is necessary to determine whether the recommendations are timely and pragmatic.
- ***Environmental Justice:*** Multiple concrete recommendations emerged from the meeting. However, prior to pursuing any of these recommendations, it will be necessary to engage with environmental justice communities to ensure these recommendations are valid.