

EXHIBIT W

UNIVERSITY OF VIRGINIA



Real-World Solutions for Climate Restoration: Connecting Research to Action

Karen McGlathery, Director, Environmental Resilience Institute

Megan Barnett, Vice Provost for Academic Initiatives

FROM THE UNIVERSITY OF VIRGINIA

MARCH 2022

EXECUTIVE SUMMARY:

Climate change is a fundamental threat to people and the planet. Warming temperatures, increased weather severity, and rising sea levels will impact both the health of ecosystems and the stability of economies and societies. Cutting greenhouse gas emissions is essential, but inadequate, to fully address the impact of climate change. Carbon dioxide must be removed from the atmosphere to meet climate goals. Avoiding the worst consequences of climate change will require global-scale decarbonization – but the implementation of this solution will have to take place on a regional scale. This is particularly true for carbon removal, where regional and local regulations, preferences, and politics determine whether or not a carbon removal strategy is actually viable.

All state, national, and international plans for limiting the impacts of climate change rely on CO₂ removal, yet there are no examples of how carbon removal can be done at realistic scales for implementation. These “negative emissions” strategies for carbon removal range from natural processes like better land management and restoration of forests and wetlands to technological processes such as direct air capture and bio-energy with carbon capture. While we have developed the scientific tools behind nature-based and technology-based carbon removal, we do not have a good understanding of how to implement them at the scale necessary to achieve our goals. We need a full accounting of co-benefits and tradeoffs of carbon removal that includes ecosystem services (i.e., fresh water supplies, flood protection, food production, air quality), human wellbeing (disparities in health outcomes), economic competitiveness (workforce), and equity (housing, transportation costs). In addition, we need a policy framework that will incorporate all of this information and implement carbon removal effectively in light of the preferences, perceptions, and attitudes of local communities.

We propose to connect cutting-edge research to real-world action to address these needs by providing:

- data on the potential for carbon removal that will match the needs of leaders and policy-makers at the state and local level in Virginia;
- a web-based mapping tool to help them visualize and understand the data for their locale;
- information to help them understand the potential social, economic, and political obstacles to different approaches; and
- policy options and analysis to help them craft realistic solutions for their communities.

UVA’s project will be the first state-level tool of its kind to combine the scientific, economic, and policy perspectives needed to understand the feasibility and scale of carbon-removal strategies to inform policy and land-use decisions. This integrated assessment will be one of the first in the world implemented at a large but actionable scale. Our approach can be exported to other states and nations to create workable climate tactics for national and global strategies. We will also produce a series of reports that detail policy options for Virginia and other states to incentivize carbon reduction efforts, including offset credits, in ways that will benefit local communities and minimize negative impacts.

Our Project Proposal

The research: We will convene interdisciplinary teams of faculty, staff, and students with expertise in engineering, environmental science, data science, land-use/urban planning, law, public policy, economics, and environmental justice to focus on specific aspects of carbon reduction in Virginia—nature-based approaches, technology advances, economic and equity issues, policy and legal analysis, and social behavior and decision making. This will be a truly interdisciplinary effort that connects research to action by answering the following questions:

- What level of carbon removal will be needed to offset unavoidable carbon emissions to make Virginia's energy sector carbon neutral?
- What carbon removal strategies are feasible for Virginia, and what is their potential for carbon removal?
- What are the co-benefits of different carbon removal strategies that could incentivize and accelerate their deployment?
- What are the barriers to using different carbon removal strategies in terms of policy, social acceptance, equity, and economic viability, and how can they be overcome?
- Where in the state would different strategies be most effectively deployed?

The deliverables: We will use this research to produce

- A web-based mapping tool and interactive user interface that draws from multiple data sources to visualize where in the state different carbon removal strategies can be implemented and to help identify potential barriers – users will be able to view and integrate existing land use and land cover data (e.g., forest, wetland, agriculture, residential), socio-economic information (e.g., population size, demographics), and public policy information (e.g., zoning);
- An initial estimate of the state's capacity to remove carbon from the atmosphere;
- Policy options and analysis in a form that is accessible for both policymakers and the general public;
- In-person and virtual briefings and training sessions to share our results with Virginia policy makers, NGOs, and other entities; and
- Published research in peer-review journals.

We respectfully request \$1.55 million in funding over two years to support the research teams, development of the web-based mapping tool and user interface, and translation and dissemination of the findings to a diverse group of stakeholders. The project budget includes \$250,000 for ten part-time faculty fellows (\$12,500 each per year for two years), \$1 million to support Research Fellows (Post-doctoral Fellows, Law/Policy Fellows, Graduate Fellows) (\$100,000 each per year for two years, inclusive of salary and benefits), \$150,000 for the mapping tool technology and user interface development, and \$150,000 for translation and dissemination, including stakeholder engagement workshops, preparation of policy briefs, and public conferences.

We believe the return on this investment will be realized immediately across the Commonwealth of Virginia and we thank you for your consideration.

WHO WE ARE:



Karen McGlathery is Professor of Environmental Sciences, Director of UVA's Environmental Resilience Institute, and Director of the Virginia Coast Reserve Long Term Ecological Research program.

Karen has been on the UVA faculty since 1996. Her research focuses on the effects of climate and land use change on coastal ecosystems. She collaborates with NGOs, universities, and regional stakeholders to translate research into coastal adaptation and resilience strategies. McGlathery's group is an international leader on coastal 'blue carbon' sequestration as a nature-based solution to climate change. She teaches courses in Global Coastal Change, Coastal Resilience, and Estuarine Ecology. Karen received her B.A. from Connecticut College and her Ph.D. from Cornell University; from 1992 – 1996 she was a research fellow in Denmark at the University of Copenhagen and the National Environmental Research Institute.

Karen serves on Governor Northam's Technical Advisory Committee for the Virginia Coastal Resilience Master Plan and the Governor's Carbon Sequestration Task Force, the Research and Education Advisory Committee of Virginia Sea Grant, and the Executive Board of the National Science Foundation Long Term Ecological Research Network. She was elected a Senior Fellow of the College of Arts and Sciences Society of Fellows in 2019.



Megan Barnett joined the Office of the Executive Vice President and Provost in June 2020 as Vice Provost for Academic Initiatives.

Prior to returning to Virginia, Megan worked in the Office of the Provost at Yale University from 2015 - 2020, first as Associate Provost and Chief of Staff, and then as Vice Provost for Strategic Initiatives. She participated in all planning functions of the university, including budget, space, and people. She worked with the provost and other university leaders on strategic planning, academic priorities, and special projects.

From 2002 – 2015, Megan was a Senior Advisor to the Dean of Yale Law School and worked in a variety of Associate Dean roles with responsibilities including academic affairs, faculty governance, graduate programs, international programs, finance and administration, public service, and admissions and financial aid.

Before joining Yale, Megan was an associate at Gibson Dunn & Crutcher, where she specialized in advising high-tech clients on intellectual property litigation and licenses. Megan also served as a law clerk to the Honorable R. Lanier Anderson III on the Eleventh Circuit Court of Appeals, and as a financial analyst at Solomon Brothers. She received her B.A. from the University of Virginia and her J.D. from Yale Law School.

PROJECT DESCRIPTION:

REAL-WORLD SOLUTIONS FOR CLIMATE RESTORATION: CONNECTING RESEARCH TO ACTION

Vision and Impact

Climate change is a fundamental threat to people and the planet. Warming temperatures, increased weather severity, and rising sea levels impact both the health of ecosystems and the stability of economies and societies. Cutting greenhouse gas emissions is essential, but inadequate, to meet climate change mitigation goals. We must also remove carbon dioxide from the atmosphere to meet these goals. Avoiding the worst consequences of climate change will require global-scale decarbonization – but the implementation of this solution will have to take place on local and regional scales. This is particularly true for carbon removal, where regional and local regulations, preferences, and politics will determine what actually gets implemented.

All state, national, and international plans for limiting the impacts of climate change rely on CO₂ removal, yet there are no examples of how carbon removal can be done at realistic scales for implementation. These “negative emissions” strategies for carbon removal range from natural processes like better land management and restoration of forests and wetlands to technological processes such as direct air capture and bio-energy with carbon capture. For example, the state of Virginia has a goal of net zero carbon goal by 2050. Since there are some sectors that are difficult to run on renewable energy, such as transportation, aviation, and manufacturing, it will not be possible for Virginia to reach this goal without actively taking carbon dioxide out of the atmosphere and sequestering it to offset carbon emissions. Global efforts, such as implementation of the Paris climate accords, also contemplate negative emissions. These efforts use global assessment models, which do not yet incorporate local conditions, to calculate society’s capability to implement negative emissions strategies. **We are much farther along in understanding the science behind these negative emissions strategies than we are about how to implement them at the scale necessary to achieve our goals.**

Effectively deploying these carbon removal strategies requires not just understanding a wide range of technological and biophysical issues, but also societal issues. This interdisciplinary approach is needed because carbon removal strategies are affected by local-level policies, economic factors, and land use. They can invoke strong political reactions and exacerbate historical inequities in disadvantaged communities. Ignoring these issues creates the real risks that global-scale ambition will not be met because of regional-scale resistance to change.

In order to effectively combat global climate change, we need to understand the barriers and opportunities to carbon removal strategies on local levels. We need to link global models to local action. **We will address this need by evaluating the full potential for these carbon removal strategies to mitigate climate change and their costs and benefits for the state of Virginia and its citizens.** We will create an accessible mapping tool for carbon accounting, forecasting, and decision support to help leaders and policy-makers understand emerging carbon removal strategies and the barriers and benefits in their home region. The long-term objective is to develop full cost accounting of the co-benefits and tradeoffs of decarbonization to include ecosystem services (i.e., freshwater supplies, flood protection, food production, air quality), human wellbeing (disparities in health outcomes), economic competitiveness (workforce), and equity (housing, transportation costs). In addition, we will

develop a policy framework that will incorporate all of this information to implement carbon removal effectively in light of the preferences, perceptions, and attitudes of local communities.

Our work will be the first integrated assessment of carbon removal strategies for Virginia and one of the first in the world that will also be coordinated with stakeholders to produce research results that can inform policy and land-use decisions. Reducing Virginia’s carbon impact is a central policy issue for the state. In 2020, the legislature passed the Virginia Clean Economy Act, requiring power generation to be 100% from renewables by 2050. Carbon removal is a natural next step for Virginia’s path to net-carbon neutrality, and our analysis and report will be a critical part of the discussion.

Although our work will initially focus on Virginia, we will generate fundamental insights that will be valuable for other states and countries deploying negative emissions strategies. Our work will also contribute to global understanding and progress in at least two ways. First, we will use our results in Virginia to evaluate and plug gaps in global assessment models that do not currently factor in local conditions and preferences. This will improve global understanding of what is achievable and how best to achieve it. Second, our work will serve as a template for groups seeking to do similar research in other regions of the world.

This project will be the first of its kind to combine the full range of disciplinary and policy perspectives needed to understand the feasible scope of carbon removal strategies. It will bring together an interdisciplinary team of UVA scholars from environmental sciences, engineering, environmental planning, law, economics, politics, and environmental justice and equity. This team will explore a range of nature-based and engineering solutions, including reforestation, wetland restoration, direct air capture and bio-energy with carbon capture, and the feasibility of deploying these solutions given the political and economic situation on the ground. The team will start by analyzing local conditions in Virginia, and we anticipate the scholarship and tools generated by this project will be a model that can be used in other states and regions.

Project Outcomes

We will produce a variety of deliverables that can be put to use directly by leaders and policy-makers at the state and local level in Virginia to implement negative emissions strategies. **This will be the first state-level tool of its kind to combine the scientific, economic, and policy perspectives needed to understand the feasible scope of negative emissions strategies to inform policy and land-use decisions.**

- We will create a GIS-based mapping tool that will combine environmental, technological, and social data and make it accessible and usable in a variety of formats (like maps of specific counties). This will be an open-source data, modeling, and visualization platform that will support decision making and solution adoption. Users will be able to view and integrate existing land use and land cover data (e.g., forest, wetland, agriculture, residential), socio-economic information (e.g., population size, demographics), and public policy information (e.g., zoning). Users can use this integrated information to inventory carbon sequestration potential of alternative land uses and land management practices in different localities in the state.

- This mapping tool will include research relating to political and social resistance and opportunities for specific types of projects. The maps and data can be used by landowners, NGOs, local governments, and state agencies to determine the carbon removal and offset potential in different regions of the state. This aspect of the work will provide critical information that leaders need to chart a path to a net zero economy. It is the first step in developing a policy framework for predicting and verifying CO₂ removal that can be used for carbon offset markets.
- We will also provide policy options and templates for Virginia and other states to implement negative emissions strategies in a way that will benefit local communities and minimize negative impacts. The accompanying analysis will provide an estimate of the realistic potential CO₂ removal in Virginia, the impacts and co-benefits of implementing particular negative emissions strategies, and a set of policy tools for exploring, incentivizing, and governing carbon removal strategies. This will be done in collaboration with state agencies and other stakeholders and will be accessible to the public.

The research, mapping tool, and policy options address two important knowledge gaps that are barriers to effective carbon removal strategies:

1. The need to assess social, economic, and political barriers to negative emissions strategies. Current models only assess relative marginal costs of these strategies along with environmental feasibility. To implement them effectively, we need a clear understanding of the economic and social impacts of these strategies on communities and the local barriers to implementing them.
2. It is currently difficult to predict how much carbon sequestration will actually take place when we employ a particular technology or nature-based strategy. This makes it difficult for carbon offset markets to accurately price and trade offsets and for entities buying offsets to determine what and how much to buy. Our research will include cost-effective monitoring programs to understand the efficacy of individual projects and the extent of carbon sequestration across the landscape.

In addition to the deliverables meant for leaders, policy-makers, and the general public, we will publish results in peer-reviewed journals.

Project Plan

The project goals are to: 1) identify the carbon removal strategies that are deployable in Virginia; 2) assess their realistic potential for carbon removal in the state; and 3) develop a GIS-based mapping tool to help determine where such strategies could be implemented.

Knowledge and perspectives from different disciplines and sectors are needed to accurately assess the potential for carbon removal strategies in a particular location. We will bring together faculty, staff, and students from across the University with expertise in environmental sciences, engineering, land-use planning, law, policy, economics, and environmental equity to work in interdisciplinary teams to assess how to implement these strategies in Virginia. Each team will be led by two Faculty Fellows and a Post-Doctoral Fellow.

The work of the teams will be guided by these research questions:

1. What level of negative emissions will be needed to offset unavoidable carbon emissions to make Virginia's energy sector carbon neutral?
2. Which negative emissions strategies are feasible for Virginia and what is their potential for carbon removal?
3. What are the co-benefits of different negative emissions strategies that could accelerate and incentivize their deployment?
4. What are the barriers to deployment of different technologies in terms of policy, social acceptance, and economic viability, and what incentives can be used?
5. Where in the state would different strategies be most effectively deployed?

Five teams will collaborate to develop an integrated plan for the state:

1. Nature-based Approaches

Natural ecosystems remove carbon dioxide from the atmosphere and sequester it in plants, soils, and sediments. Nature-based approaches include restoring or better managing ecosystems through reforestation, wetland restoration, and modified agricultural practices. They also provide a range of co-benefits, such as cleaner air and water, improved food production, and increased biodiversity. Globally, nature-based approaches could contribute up to 20% of the mitigation needed between now and 2050 to keep global warming below 2° C, but this estimate is highly uncertain due to competing land uses in different regions and to inadequate information on carbon removal rates. This team will assess the potential for natural carbon removal for the Virginia landscape, and the tradeoffs and co-benefits, given realistic competing land uses in the state.

2. Technology Approaches and Integrated Modeling

This team will assess the potential for two approaches that rely on engineered solutions for carbon removal: bioenergy with carbon capture and storage (BECCS) and direct air capture (DAC). BECCS relies on growing biomass (e.g., switchgrass) and converting the energy to heat, electricity, or fuels, and capturing the carbon emissions during this process and storing it in geological formations. There are several issues to be considered when deploying BECCS at large scales. For example, devoting large areas of land to bioenergy crops competes with other land uses such as food production and residential development, and in some regions may lead to displacement of underserved communities. Another approach, direct air capture (DAC), uses mechanical systems to scrub the air to remove carbon dioxide, and then injects it into geological storage or binds it in products, such as cement. The potential scale of DAC for carbon removal is high because it doesn't require large amounts of land; however, both costs and energy requirements to run the process are currently also high. This team will integrate realistic assessments of the potential to deploy BECCS and DAC in Virginia with the full energy cost of these carbon removal processes into integrated assessment models that consider demographic, political, and economic variables affecting carbon removal scenarios.

3. Economics and Equity Issues

Understanding the full-cost accounting of climate restoration at the regional scale requires the development of regional economic models. These models can capture the complex interplay of market, regulatory, and social factors that influence our land use choices. These models are also important for understanding the environmental justice dimensions of carbon removal on marginalized communities in the state. For example: How will the use of certain lands for carbon dioxide removal impact those communities already using the land? How can communities access benefits from carbon removal? This team will engage with public-facing partner organizations to understand how community priorities for climate mitigation relate to other concerns such as poor air quality, water contamination, and food insecurity. In addition to race-based dimensions of environmental justice, we will also consider the socio-economic dimensions that often frame urban-rural divides.

4. Policy and Legal Analysis

The Virginia legislature recently passed three bills that together have advanced the state's climate change mitigation policies and set the stage for implementing carbon removal strategies:

- The Virginia Clean Economy Act that requires all electricity generated in the state be carbon-free by 2050;
- The Clean Energy and Community Flood Preparedness Act that authorized Virginia to join the Regional Greenhouse Gas Initiative, a greenhouse gas emissions offset program that currently includes ten other eastern states; and
- A bill that established a task force to study carbon sequestration in the state and report back to the legislature.

This team will address how carbon removal strategies can be integrated into state policies for carbon accounting and climate mitigation. For example, through carbon offset markets, carbon removal strategies can lower at least the short-term cost of climate mitigation. Offset markets allow regulated greenhouse gas emitters to assess whether to cut their own emissions or to seek more cost-effective means of mitigating those emissions by paying for emissions reductions or carbon removal strategies elsewhere (e.g., reforestation). Carbon removal projects allow carbon emitters to reduce their carbon footprint by purchasing voluntary carbon offsets.

5. Social Behavior and Decision Making

Removing carbon dioxide at scale will require extensive transformations to social and economic systems that will need wide social support and policy incentives. Many stakeholders and citizens do not fully understand carbon removal. To build this understanding, communities need platforms and tools that: (a) allow them to spatially and conceptually explore the costs and benefits of transformations, and (b) allow them to communicate different scenarios to each other and to the wider publics. The collaborative mapping tool will be used by this team in stakeholder engagement for designing carbon removal roadmaps and policies that are grounded in science.

Once the mapping tool is developed, an initial estimate can be made of the state's capacity to remove carbon from the atmosphere. It will also enable us to identify how deploying carbon removal strategies may have either negative or positive impacts on communities. Identifying potential negative impacts of a particular strategy, such as tying up land in forests that a community may wish to develop economically, will help us realistically assess the feasibility of that strategy. Positive co-benefits, on the other hand, could help incentivize adoption of certain approaches. For example, restoring forests and changing timber management has potential to remove CO₂ from the atmosphere and may also have ecosystem and water quality benefits. If we can identify these benefits and

trade-offs, we can design policy incentives for owners to monetize the value of their timber and land, as well as additional environmental benefits.

The specific project tasks for the teams include the following:

- Engage with policy makers, community leaders, and others to ensure that our research is structured to be usable for decision making.
- Create a mapping tool to visualize where in the state different carbon removal strategies can be implemented.
- Evaluate the feasibility of deploying technology-based and nature-based carbon removal strategies and their carbon removal potential, including tradeoffs and benefits.
- Assess the existing social, legal, policy, and economic factors that will influence the deployment of carbon removal strategies.
- Conduct workshops in the spring of 2023, with representatives of state agencies, the legislature, NGOs, and community leaders to share our results and get their feedback on the potential co-benefits and negative impacts of different carbon removal strategies.
- Provide policy options, templates, and analysis in a form that is accessible for both policymakers and the general public in late 2023.
- Conduct in-person briefings and training sessions in Richmond and elsewhere to share our results provide training for open-source web-based mapping tool.

Partnerships

UVA Partnerships: This project will bring together faculty from five schools at UVA (Law, Engineering, Arts & Sciences, Architecture, and Public Policy) into integrated teams to share their research expertise in developing the mapping tool and the policy guidelines for the state.

- Nature-based approaches
 - Profs. Deborah Lawrence and Karen McGlathery, Environmental Sciences, carbon sequestration in forests, wetlands and seagrass
 - Prof. Larry Band, Environmental and Systems Engineering, co-benefits of natural carbon sequestration

- Technological Strategies and Integrated Modeling
 - Prof. Andres Clarens, Environmental Engineering, carbon sequestration using direct air capture and biomass + carbon capture, modeling
 - Prof. Scott Doney, Environmental Sciences, carbon sequestration modeling
- Economics and Equity issues
 - Prof. William Shobe, Economics, Batten School of Leadership and Public Policy,
 - Prof. Ellen Bassett, Urban and Environmental Planning, School of Architecture
 - Prof. Kimberly Fields, Environmental Justice, Carter G. Woodson Institute
- Policy and Legal Analysis
 - Prof. Leon Szeptycki, School of Law
 - Prof. Ellen Bassett, Urban and Environmental Planning, School of Architecture
 - Prof. Kimberly Fields, Public Policy, Carter G. Woodson Institute
- Social behavior and Decision Making
 - Prof. Ben Converse, Social Psychology
 - Prof. Jay Shimshack, Batten School of Public Policy

External Partnerships: Our UVA team will engage partners in the state government, industry, NGOs, and community organizations. These include:

- Virginia Department of Energy - lead agency implementing the Virginia Clean Economy Act and related legislation to decarbonize Virginia's economy.
- Virginia Department of Conservation and Recreation - state's lead conservation agency that oversees soil and water regulations and programming.
- Virginia Department Environmental Quality - administers state and federal laws and regulations for air quality, water quality, water supply and land protection.
- Office of the Virginia Secretary of Natural and Historic Resources - advises the Governor on natural resources issues and advances the Governor's environmental priorities.
- Office of the Virginia Secretary of Agriculture and Forestry - advises the Governor on promoting rural and economic development, forest and farmland retention, and food security.
- Dominion Energy and American Electric Power - power and energy companies headquartered in Virginia.
- Southern Environmental Law Center - environmental nonprofit organization working at the local, state, and federal level to protect the environment and health of the Southeast.

- Rural Planning Caucus of Virginia - organization dedicated to identifying, publicizing, and satisfying the unique planning needs of small towns and rural areas.
- American Planning Association, Virginia Chapter - provides policy advocacy and professional development opportunities for local land use and urban planners.
- Appalachian Voices - environmental organization focused on pollution reduction and promoting renewable energy and energy efficiency.
- Virginia Association of Counties - non-profit advocacy organization that supports county officials to effectively represent, promote, and protect the interests of counties.
- The Nature Conservancy (Virginia Chapter) - environmental nonprofit that promotes nature-based solutions to climate change.
- Piedmont Environmental Council – non-profit organization that promotes and protects the Virginia Piedmont’s rural economy, natural resources, history, and beauty.
- The Virginia Association of Planning District Commissions - organization of the 21 Planning District Commissions/Regional Councils in Virginia that brings diverse resources together at the regional level in partnership with local, state, and federal entities to strengthen regions and the Commonwealth.
- Virginia Farm Bureau Federation - represents farmers’ positions on issues and connects farmers with candidates who can best represent those positions on issues.

Budget and Timeline

Budget:

We request \$1.55 million in funding over two years to support the UVA research teams, the development of the decision-support tool, translation of the scientific and technical findings into accessible language and useful formats, and dissemination of the information and tools to a diverse group of stakeholders.

The budget includes:

- \$250k for 10 part-time Faculty Fellows for two years @\$12.5k each per year
- \$1 million to support Research Fellows (Post-doctoral Fellows, Law/Policy Fellows, Graduate Fellows), \$100,000 each per year for two years, inclusive of salary and benefits
- \$150k for developing the mapping tool, including data integration and user interface development
- \$150k for translation and dissemination, including written materials and web-based materials, stakeholder engagement workshops, training sessions, policy briefs, and public conferences

The University of Virginia is providing salary support for the core faculty and undergraduate students who will work on the research teams, as well as administrative support and infrastructure through the Environmental Resilience Institute for the research teams, the mapping tool and data management, and the dissemination efforts.

Note: In 2019, the University of Virginia Board of Visitors adopted President Jim Ryan's *2030 Plan* as the guiding strategy for the next decade (<https://strategicplan.virginia.edu/>). This strategic plan identifies environmental resilience and sustainability as one of the University's top five research priorities. This proposal was developed with the full support of the University's Office of the Executive Vice President and Provost.

Timeline:

January 2023: Hire post-doctoral fellows and identify faculty fellows

February – December 2023: Conduct research and begin developing GIS-based mapping tool
December 2023 – Deliver beta version of GIS-based mapping tool

January 2024: Stakeholder workshops to train users and test GIS-based mapping tool

February – December 2024: Continue research; refine GIS-based mapping tool; develop policy options, templates, and analysis

December 2024: Delivery of Policy Report and final version of GIS-based mapping tool; Stakeholder workshops to translate findings and train on use of the mapping tool

Ongoing: Disseminate findings and materials as widely as possible through traditional and social media, on-line and in-person events, and academic journals and conferences.