

Realizing the Vision: Designing a Community Science Collaboratory for the U.N. Sustainable Development Goals

Proposed Project and Potential Impact

Overview: Community-based organizations (CBOs) and Atlanta area higher education institutions (HEIs) form critical partnerships that address local-to-global issues through knowledge-sharing, problem identification, scientific collaboration, and public engagement. However, low coordination between HEIs to identify shared teaching and research interests, funding opportunities, student engagement opportunities, and other projects of interest to CBOs impedes the success and sustainability of CBO-HEI partnerships. CBO leaders (detailed below) have requested that HEI partners develop a structure to streamline CBO-HEI partnerships and initiatives to facilitate sustainable CBO engagement. This proposal addresses that widely articulated need.

The proposed project is a focused, collaborative effort to **design a sustainable model** for long-term HEI-CBO **community science initiatives** in Metropolitan Atlanta and **link globally to build partnerships** with like initiatives through the **Global RCE Network**—Regional Centers of Expertise (RCE) on Education for Sustainable Development. This initiative brings together six colleges/universities that are part of the RCE Greater Atlanta, three focal CBOs in Georgia, workshop participation from at least three additional CBOs, and at least two Global RCE Partners—the highly successful citizen science collaborations of the KwaZulu-Natal and Saskatchewan RCEs—to co-design ways to collaborate more effectively. This one-year project will result in a detailed plan and a major funding proposal to support a multi-HEI/multi-CBO infrastructure for global collaborative science—the **Community Science Collaboratory for the U.N. Sustainable Development Goals (SDGs)**.

This initiative is “grounded at home” through its focus on the Atlanta’s Westside, while also “connecting globally” by leveraging the Global RCE Network to partner with citizen science projects outside the U.S., including the Stream Assessment Scoring project in KwaZulu-Natal and the [Hannin Creek Education and Applied Research Centre in Saskatchewan](#). The RCE KwaZulu-Natal has developed a strong university-CBO model for citizen science and is looking for global partners to engage in projects associated with SDG 6. The RCE Saskatchewan brings expertise in university-community partnership through decades of location-based community and student engagement at the Hannin Creek field camp. These initiatives will strengthen and expand capacity for existing collaboration between Metro Atlanta partner institutions that advance the SDGs, such as the UrbanHeatAtl and Georgia Climate Projects, while initiating new global partnerships including collaboration with the RCE KwaZulu-Natal and RCE Saskatchewan.

The AGREC grant will enable focused CBO and HEI participation in two workshops to examine existing models for community science centers or networks globally, develop a set of design criteria for Atlanta’s network, and evaluate alternatives for structuring, housing, and funding the network. By “workshopping” design ideas with RCE initiatives outside the U.S., this project will also generate new, fruitful exchange between existing Atlanta networks and Global RCE Network leaders engaged in community science collaboration, enabling participants to learn from best practices in other regions. This design process will be followed by co-writing to develop a proposal suitable for applications to major foundations and in response to appropriate federal RFPs, along with research into those opportunities. The project will result in a **detailed plan** for a regional Community Science Collaboratory for the SDGs and a **viable funding proposal** that will be used to secure long-term support for the initiative from federal and/or foundation sources.

Outcomes/Deliverables: This initiative will produce deliverables that can serve as models for SDG education and research collaboration worldwide. Further, by centering CBO perspectives in the design of the model produced, this project also will serve as a model for existing university-community initiatives that may have struggled to represent the priorities and perspectives of their community partners. Finally, by building a funding proposal, this initiative will sustain the development of the envisioned Community Science Collaboratory in the long-term.

Specifically, this project will deliver a detailed plan for an equitably and collaboratively structured HEI-CBO community science infrastructure. Second, it will deliver a comprehensive (15-20 page, plus budget) funding proposal. Third, team members will complete a preliminary list of philanthropic and federal funding sources for the proposal. Fourth, the initiative will strengthen and expand existing cross-institutional and university-CBOs relationships in Georgia, and will build new relationships between the team, RCE Greater Atlanta, the KwaZulu-Natal and Saskatchewan RCEs, and possibly additional Global RCEs.

Project Structure: The initial phase of this project is already underway, led by faculty with Georgia Tech's Center for Serve-Learn-Sustain (SLS) in consultation with RCE Greater Atlanta and additional CBO partners. During Spring semester 2021 SLS began researching and compiling recommendations for strong models of university-community collaboration in community or citizen science. Through SLS engagement with the UrbanHeatAtl project and the RCE Greater Atlanta Community of Practice for Higher-Ed Community Partnerships, project participants began sharing and recording names of programs to investigate as potential models for the proposed Collaboratory. An SLS summer graduate intern is currently conducting further research.

The second phase of the project, included in this funding proposal and outlined in detail in the timeline, below, will consist of two half-day workshops. During fall 2021, participants will attend two workshops where they will review models in the U.S. and other nations of strong and sustainable university/community collaboration on a wide range of research initiatives (these may include air and water quality monitoring, health impact assessment, racial equity, gentrification, and more). The Co-PIs will identify several U.S. and non-U.S. models for in-depth review and invite leadership from those programs to share their experiences during these workshops.

The first workshop will include the Atlanta team and will result in draft design principles for the Collaboratory, based upon the team's evaluation of existing models and our varied experience with collaboration and institutional sustainability in the Atlanta region. The second workshop will expand the discussion to the Global RCE level through deep engagement with at least two RCE projects from outside the U.S. that have strong track records in community science collaboration. This workshop will both strengthen the Atlanta Collaboratory design and build relationships that can foster trans-national community science collaboration through the RCE Global Network.

Based upon learning from these workshops, the team will develop a set of design principles, values, and priorities for the Collaboratory, centering the needs and priorities articulated by the CBO team members in particular. During winter and spring 2022 the team will break into two teams: one will co-write a detailed funding proposal and the other will research potential funders.

Potential Significance, Relation to Current Programs, and Measures of Success

This project realizes a vision that sustainable development leaders within and outside academia have articulated for many years. This project will build upon and further long-standing efforts in

metropolitan Atlanta to support collaboration across HEIs and between HEIs and CBOs. Ten years ago, several Atlanta-area universities came together to build cross-institutional collaboration on community outreach through an initiative called the Atlanta Outreach Consortium (AOC). The AOC completed an inventory of community-engaged projects at participating universities. However, despite presidential-level commitment, the consortium was unable to move forward on a collaborative project and ultimately disbanded, due largely to concerns that each institution's community engagement work was not well documented and needed to be more firmly established before initiating cross-institutional partnerships.

In addition to addressing a widely articulated need, this project builds upon assets and partnerships developed through the RCE Greater Atlanta (RCE-GA). The Metro Atlanta region hosts a wealth of college and university-based expertise relating to the SDGs, and it is home to one of the highest concentrations of CBOs in the U.S., many of which work to advance equitable and sustainable development at the community level. The RCE-GA and its member universities and organizations regularly partner faculty, students, course projects, and CBOs on a wide range of projects in science, engineering, oral history, urban planning, and more. These partnerships tend to be structured semester by semester and focus on one issue or research question at a time. To address the challenges facing CBOs seeking to draw upon the expertise and engage in collaborative science with multiple universities, several years ago RCE-GA developed a Community of Practice (CoP) initiative for Higher-Ed Community Partnerships. Like the AOC, the CoP completed a mapping exercise to identify assets and interests across institutions and CBOs. Also like the AOC, the CoP has struggled to determine the best way forward toward a multi-institution, multi-CBO infrastructure that could significantly advance university-community collaboration in Atlanta. **This project is intended to move forward the vision of the AOC and CoP by directing focused attention of participating colleges/universities and CBOs toward clear and attainable deliverables—outcomes designed to support long-term sustainability.**

The success of our initiative will be indicated by the following outcomes and deliverables:

- workshop participation by at least six CBO organizations, with workshops co-lead by CBOs and HEI partners
- consensus process for CBO engagement, including descriptions of CBO needs/preferences for types of engagement, compensation, and process for requesting new projects
- academic partner inventory of existing projects and engaged researchers' capacity and areas of expertise
- compilation of model structures from other university-community efforts including at least two additional RCEs outside the U.S.
- compilation of funding agencies to whom a full proposal can be submitted
- a formal proposal to a funding agency (or multiple) co-written by academic and community partners to build infrastructure to carry forward the ideas generated in the workshops

PIs, Other Collaborators, and Roles

Co-PIs Dr. Rebecca Watts Hull (Georgia Tech), Dr. Carolyn Keogh (Emory), and Dr. Christina Hemphill Fuller (Georgia State) will organize this initiative with significant input from leaders in three focal community-based organizations by whom this need was articulated: West Atlanta Watershed Alliance (WAWA; Dr. Na'Taki Osborne Jelks and Darryl Haddock); Truly Living Well Center for Natural Urban Agriculture (TLW; Carol Hunter), and Eco-Action (EA; Dr. Yomi Noibi). These three focal CBOs all lead community-based, globally connected initiatives in sustainable development centered in equity, and are currently engaged in collaborative work with the HEIs involved in this proposal. While the work of all three is grounded in equity, environmental justice,

and sustainability, their missions and areas of expertise are diverse and complementary. The three Co-PIs also represent different, yet interrelated, areas of expertise connected to education for the SDGs: ecology, environmental health, and environmental sociology.

Additional CBOs beyond the three focal CBOs will be identified collaboratively. At least three additional CBOs will be invited to participate in the two fall workshops but will not have the “homework” and writing responsibilities of the three focal CBOs. Democratic participation of six CBOs and six HEIs in Atlanta will ensure that the resulting infrastructure for university-community collaboration embodies the values, principles, priorities and expertise of CBO leaders as well as academic research agendas and areas of expertise. Workshop participation of faculty collaborators from the KwaZulu-Natal RCE and Saskatchewan RCE will enrich the Community Science Collaboratory design while building relationships to support future global partnerships in community science for the SDGs. Additional consultation on CSC design drafts with Emory’s long-running project [HERCULES Stakeholder Advisory Board](#) and affiliated faculty will further strengthen the CSC design and broaden Atlanta community leader input to the project.

Additional faculty collaborators:

The following faculty collaborators also have committed to participation in the project:

Vialla Hartfield-Mendez, Emory (faculty collaborator)

Na’Taki Osborne Jelks, Spelman College and WAWA (faculty collaborator)

Scott Lipsit, Saskatchewan Polytechnic and RCE Saskatchewan (faculty collaborator)

Richard Milligan, Georgia State University (faculty collaborator)

Melanie Pearson, HERCULES (faculty collaborator)

Allen Roberts, Kennesaw State University (faculty collaborator)

Jim Taylor, University of KwaZulu-Natal and RCE KwaZulu-Natal (faculty collaborator, see Letter of Intent)

Monty Whitney, Morehouse College (faculty collaborator)

Pegah Zamani, Kennesaw State University (faculty collaborator)

Community Engagement

Three nonprofit organizations with deep connections and long-term initiatives in Atlanta’s West side communities have engaged in partnerships and conversations over several years that have shaped this proposal concept. These CBOs have strong existing relationships with Georgia Tech’s Center for Serve-Learn-Sustain and programs and faculty at Emory, Georgia State, Kennesaw State, Morehouse College, and Spelman College. While the Co-PIs will take responsibility for facilitating research and coordinating workshops and collaborative writing, the three focal CBO partners and faculty collaborators will share responsibility for shaping the design principles, the infrastructure plan, and the funding proposal and funding plan. Provision of robust partner stipends is intended to ensure full and sustained participation by the CBOs so that the deliverables strongly reflect community as well as academic perspectives, priorities, and constraints. In addition, all three CBOs represent or are closely tied to community leaders and members where they are located as well as nonprofit professional networks spanning agriculture, nutrition, energy, transportation, housing, watershed management, and public health. For that reason, these community collaborators will be able to share ideas and perspectives of CBOs interested in community science that extend beyond their own initiatives. To further expand the diversity of community-based perspectives, a minimum

additional three CBOs will be invited to participate in the two workshops. Additionally, input from the HERCULES program's Stakeholder Advisory Board, which includes representatives from local neighborhoods, community-based and national nonprofits, academia, and local, state, and federal government who have an interest in environmental health, will be sought on the preliminary design(s) produced in the first workshop. The Co-PIs and CBO leads will employ workshop facilitation practices that support equity and inclusion, such as Technology of Participation (ToP) approaches, to support full engagement of all participants.

Program Sustainability

The structure of this proposal reflects learning over many years about how to sustain community-academic partnerships and building the sustainability of existing partnerships is the key goal of the proposed initiative. Each university included in this proposal has demonstrated the capacity to build and maintain long-term relationship with CBOs. In addition, all have developed partnerships with colleagues at other institutions through networks including the RCE Greater Atlanta. However, due to insufficient infrastructure, dedicated attention, and funding, these partners have struggled to build an infrastructure like the proposed Collaboratory. By focusing 100% of the attention and funding of this proposal on Collaboratory design and on development (funding research and proposal writing), this proposal puts sustainability at the forefront of its objectives. The timing of this new initiative capitalizes on existing momentum between focal partners who are engaging together on a current set of projects focused on global climate change. Importantly, these current projects involve some of the same partners who are engaged in the discussion of sustainable partnerships within the RCE GA and thus will serve as a focal case study for the collaborative design of structures for sustained work.

Project Timeline

July-August 2021: Research: Co-PIs and SLS GRA will complete in-process review of U.S. and global models for university-community collaboration (UCC) that advances science supporting progress toward the SDGs. Report will be shared with the project team.

September 2021: First workshop: This workshop will facilitate a process by which participants identify and evaluate design characteristics of UCC models, select and prioritize design elements desired for the Atlanta Community Science Collaboratory, and prioritize those design principles. The draft design(s) developed during this workshop will be shared by faculty collaborators with the HERCULES Stakeholder Advisory Board for input and critique.

November 2021: Second workshop: This workshop will include participants from the Global RCE Network identified during the research phase, along with the Atlanta team. Team leaders will present an initial sketch of the Collaboratory design resulting from the first workshop. Participants will compare the design principles with those of the global RCE partners' community science initiatives. This deeper analysis of the initial Collaboratory plan and comparison with global models will inform modifications of the initial design.

January-March 2022: In mid-January the Co-PIs will circulate an updated draft of the Collaboratory plan and invite team participants to choose one of two work groups for the remainder of the project: 1) funding research; or 2) proposal development. In late March, each work group will complete and share its results with the full team for feedback and revision.

Budget

One-half of each stipend will be disbursed following the first workshop in September 2021. The second disbursement will occur in March or April 2022, following community partner submission of detailed plan and proposal input.

Community Partner	Phase One	Phase Two
Eco-Action	\$2,500	\$2,500
Truly Living Well Center for Natural Urban Agriculture	\$2,500	\$2,500
West Atlanta Watershed Alliance	\$2,500	\$2,500

Total budget requested: \$15,000

In-Kind contributions:

Additional three CBOs x 2 workshops x \$350 = \$2100 (provided by Georgia Tech's SLS)

HERCULES Stakeholder Advisory Board consultation (\$600 provided by Emory)

Event planning and materials:

 Two fall 2021 workshops:

 Meeting space provided by Georgia Tech

 Meeting refreshments provided by Emory (estimated \$800)

Total in-kind contributions: \$3,500