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**Community-University Initiatives for the Establishment of Urban Environmental  
Education Centers to Assist Stakeholder Communities Major Environmental  
Justice Issues Associated with Urban Colleges and Universities  
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# **Community-University Initiatives for the Establishment of Urban Environmental Education Centers to Assist Stakeholder Communities Major Environmental Justice Issues Associated with Urban Colleges and Universities**

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## **Abstract**

Urban colleges and universities should be afforded resources to assist their neighbors by housing centralized environmental justice education and research initiatives to qualitatively and quantitatively measure the impacts of inner-city environmental degradation. Empirical research findings from community-based studies can provide the leverage that stakeholders need for effective public participation in pushing responsible parties toward remediation or corrective action. Currently, there are numerous examples of individual faculty members working through loosely defined partnerships with community organizations. Unfortunately, support systems necessary for long-term sustainability are not plentiful. This paper will make policy-based recommendations to institutionalize community-university partnerships and significantly enhance their capacity to deliver substantive environmental information to residents of affected urban neighborhoods.

## **Introduction**

Due to various historical coincidences, many U.S. institutions of higher learning are located within or near people of color neighborhoods that are impacted by a broad set of environmental problems. Many of the more than 100 Historically Black Colleges and Universities (HBCUs) are situated in areas experiencing significant infrastructure challenges. Prominent examples include Tennessee State University in Nashville, Tennessee; Howard University in Washington, DC; and Texas Southern University, in Houston.

Predominantly white institutions (PWIs) located near stakeholder communities include the University of Southern California, in Los Angeles; Temple University in Philadelphia; and Georgia Tech, in Atlanta. A major discussion among college administrators is how to improve their “town-gown” connections. A recent issue of *Black Issues in Higher Education* focused largely upon “The Disconnect Between Colleges and their Communities (Ruffins, 2002). The interdisciplinary nature of environmental justice research provides much potential for outreach from the academic sector. Described below are “front-burner” environmental justice concerns and examples of college and university participation:

- **Brownfields Sites** – Contaminated and potentially contaminated abandoned and under-used properties are often adjacent to urban campuses. In some cases, the structures are owned by the colleges themselves. The sites can be aesthetically unpleasant and are likely to harbor potentially hazardous externalities for students. Jackson State University played a role in the City of Jackson’s Brownfield Pilot Program (U.S. Environmental Protection Agency (EPA), 1998), representing one example of how an urban college can work to affect change within their surrounding communities.
- **Transportation Inequity** – The decreasing commitment of municipal funds in many cities has led to a decline in service and accessibility in public transit. Many college students rely upon public transportation to travel to and from campus. The Environmental Justice Resource Center at Clark Atlanta University has initiated research and scholarly activism to address public transit accessibility issues in metropolitan Atlanta (Environmental Justice Resource Center, n.d.)
- **Greenspace Inequity** – As cities sprawl outward, the ratio of park and greenway area to population tips largely in favor of people residing outside of the urban core. The Whittier College (California) Environmental Justice Project examined spatial relationships between urban greenspace and people of color communities in Los Angeles (Wemett and Henderson, 1998).

- Environmental Illiteracy – Unfortunately, many inner-city k-12 children (and often their parents), for a variety of reasons, are not adequately exposed to earth and environmental sciences. This has been a persistent problem, which ultimately prevents and/or limits effective public participation in environmental decision-making. According to the National Science Foundation (NSF), “underrepresented groups” earn less than five percent of all bachelor’s degrees in the earth sciences (National Science Foundation, n.d.). Southern University at Baton Rouge (SUBR) has been actively involved in exposing young people to environmental science through its PIPELINES Project and the federally-sponsored Global Learning and Opportunities to Benefit the Environment (GLOBE) program (Ford, 2002). The GLOBE initiative is a federal interagency collaboration supported by the NSF, EPA, NASA and the State Department.
- Disproportionate Toxic Exposures – Numerous environmental justice studies have concluded that people of color are at greater risk to exposure to pollution emitted from industrial facilities (Bryant and Mohai, 1992; Bullard, 1994). Faculty at Occidental College have analyzed potential exposure risks faced by people of color communities from toxic waste treatment, storage, and disposal facilities (TSDFs) in Los Angeles (Boer et al, 1997). Health problems associated with ingestion of lead (Pb) continue to disproportionately impact children from low-income and African American communities. Dr. Howard Meilke, Professor of Pharmacy at Xavier University, New Orleans, has been actively engaged in assessing lead exposure risk at the neighborhood level (Meilke, 1999).

The above are but a few examples of pertinent environmental justice issues that offer ample opportunity for academic research and community service. Several institutions of higher learning are noted for their application of “activist scholarship” in assisting stakeholder communities. While these are shining examples from among many less-known like efforts, they are for the most part driven by motivated individual faculty members and students working in the public interest. In several cases, the research projects have been discontinued due to lack of funding, and/or depletion of long-term support. Only a handful of academic environmental justice research centers appear to have the resources to maintain institutional status.

The primary objective of this policy paper is to develop strategies for the institutionalization of centralized environmental justice and education depots at colleges located in or near urban stakeholder communities. Once established, the centers will bring together academic researchers, college students, local residents, and grassroots activists. The nature of environmental justice issues requires an interdisciplinary research approach. Scholars and students from all fields of study will have ample opportunity to contribute to the centers’ mission. Student investigators, supplied with environmental sampling equipment, geographic information systems (GIS) software, and global positioning systems (GPS) technology, can gain “real world” experience by applying what they’ve learned in the classroom to qualitatively and quantitatively assess the nature and extent of various environmental problems. Impact assessments, maps, and other products developed at the centers will provide stakeholders with tangible evidence needed to push responsible parties toward taking corrective action.

### **Existing Academic Urban Environmental Justice and Education Centers**

There are several notable examples of existing academic environmental justice and education centers that have achieved institutional status:

- The Xavier University of Louisiana Deep South Center for Environmental Justice (DSCEJ) ([www.xula.edu/dscej](http://www.xula.edu/dscej)) – Founded in 1992, the DSCEJ has continuously assisted stakeholder communities throughout the South under the leadership of Dr. Beverly Wright. Outreach activities range from a “Pollution Prevention 101 Workshop,” to the “Environmental Justice Teacher Training Program.” Students are active in DSCEJ research and participate in the “Students for Environmental Justice” club.
- The University of Southern California Sustainable Cities Program (SCP) ([www.usc.edu/dept/geography/ESPE](http://www.usc.edu/dept/geography/ESPE)) - The USC Sustainable Cities Program is a multidisciplinary doctoral program funded by the National Science Foundation. The research

focus is upon the dynamics of urban environments, especially issues related to global trends in urban population growth. Several “Collaborative Projects” directly involve residents of low-income and inner-city communities in Los Angeles. Financial support is available for graduate and undergraduate students.

- Chicago State University Calumet Environmental Resource Center (CERC) ([www.csu.edu/cerc](http://www.csu.edu/cerc)) - The CERC, established in 1991, serves as a meeting place, library, networking node for community residents, government officials, and non-profit organizations. It is a cooperative effort among Chicago State University, the Center for Neighborhood Technology, and the Chicago Legal Clinic. The CERC is housed in Chicago State’s Geography Department and maintained by the Neighborhood Assistance Center. An array of services is available for stakeholders; they may conduct intensive research using environmental information databases, access thousands of library resources, and receive environmental education training.
- Clark Atlanta University Environmental Justice Resource Center (EJRC) ([www.ejrc.cau.edu](http://www.ejrc.cau.edu)) - The EJRC, founded in 1994 by Dr. Robert D. Bullard, is probably the best-known from among the small collection of college-associated environmental justice resource centers. It is also among the most comprehensive sources on environmental justice information. Outreach activities include, but are not limited to “race and the environment, civil rights, facility siting, land use planning, brownfields, transportation equity, suburban sprawl, and Smart Growth.” The EJRC is fully staffed and supports several undergraduate students. The EJRC’s government sponsors include, the U.S. Department of Energy (DOE), Agency for Toxic Substances and Disease Registry (ATSDR), and the U.S. Department of Transportation (DOT). Private supporters include, the Turner Foundation, the Ford Foundation, and the United Negro College Fund (UNCF).

Two other centers, the Environmental Equity Information Institute (EEII), and the Community-University Consortium for Environmental Justice (CUCREJ) ([newarkwww.rutgers.edu/~gelobter/cucrej/html/home.htm](http://newarkwww.rutgers.edu/~gelobter/cucrej/html/home.htm)) appear to have become either less active or inactive over the past two years. Founded by Dr. Babafemi Adesanya at Hampton University in 1994, the EEII made significant contributions to the body of environmental justice research after securing substantial funding from the EPA and other sources. Its web page ([www.iece.org](http://www.iece.org)), is now inactive. The CUCREJ, founded at Rutgers University in 1995, was the host and organizer of “Community-Based Research for Environmental Justice: Workshops from the Field,” an extremely successful annual environmental justice workshop series that brought together activists, academics, and government officials. The CUCREJ web page does not appear to have been updated since about 1999.

### **Existing Opportunities for Support for Academic Urban Environmental Justice and Education Centers**

While the bulleted institutions in the above section have enjoyed consistent internal and external support, and are making tremendous contributions to stakeholder communities, there still remains room for expansion and improvement. However, college faculty seeking to emulate the achievements of the EJRC or DSCEJ today face a shrinking pool of resources, particularly from the public sector. To date, only a handful of states have official environmental justice initiatives. And of those that do, their resources are not nearly adequate to sustain an environmental justice information center on a long-term basis.

Under the administration of President George W. Bush, the EPA has significantly cut back potential funding opportunities (U.S. EPA, 2002b). The very popular Community-University Partnership (CUP) program, “established to help community groups and tribal governments effectively address local environmental justice issues through active and collaborative partnerships with all institutions of higher education,” is no longer funded. The Federal Interagency Working Group (IWG) on Environmental Justice-Environmental Justice Revitalization grant program, for which academic institutions are eligible, carries no guaranteed funding dollars (U.S. EPA, 2002c). The Environmental Justice Small Grant Program is primarily targeted towards community organizations and only offers a maximum award of approximately \$15,000. The Community Intern Program provides financial support and employment opportunities for students, but is not applicable in institution-building missions. The EPA appears to be continuing support

for the Minority Academic Institutions (MAI) fellowships program for graduate and undergraduate study (U.S. EPA, 2002a); however, funding for the Science to Achieve Results (STAR) program have been discontinued (Preuss, 2002). The EPA also terminated the Environmental Monitoring for Public Access and Community Tracking (EMPACT) program, which provided an excellent framework for long-term community-university-local government research collaborations (U.S. EPA, 2002). Given the numerous decreases in funding programs, in terms of potential sustainable support, the EPA does not show up as a viable option.

With the exception of the NSF-funded SCP, the aforementioned institutionalized resource centers above have managed to sustain themselves with a patchwork of funds from both public and private sources. There does not appear to be substantial support derived via consulting contracts from any of the centers, although that does not rule out the possibility that some monies have been raised in that manner. For the most part, the centers' sustainability seems to be very much dependent upon continued good fortune and success in proposal writing. While functional, the funding situation is not nearly comparable to that enjoyed by the NSF-backed Long Term Ecological Research (LTER) program (LTER, 2002).

In growing urban centers such as Houston, Texas; Birmingham, Alabama; Memphis, Tennessee; and Charlotte, North Carolina, there is a definite need for institutions to serve in the capacity that the EJRC does in Atlanta, the DSCEJ does in New Orleans, and the CERJ does in Chicago. However, under the present climate of limited funding and available resources, there will not soon be growth in the numbers of such facilities.

### **Recommended Policies for Increasing the Numbers of Institutionalized Environmental Justice and Education Centers at Urban Colleges and Universities**

Where there are vigorous efforts being undertaken to provide greater access to environmental information to stakeholders through academic portals, there is much that could be done to deepen the pool. Most obvious is the reestablishment of EPA environmental programs that have either been weakened or discontinued. Below are several suggestions that could lead to increased opportunities for urban institutions and their affected neighbors:

- Develop Brownfields Partnerships with Academic Institutions – To date, there have been but a few formal partnerships involving brownfields remediation programs and institutions of higher education. The primary linkages are usually among federal agencies such as the U.S. Department of Housing and Urban Development (HUD), the EPA, DOT, and their state and/or local government counterparts. Real estate developers are becoming increasingly influential, with stakeholders and colleges being left out of the equation. Urban universities, with their multiple social and physical sciences specialists, could be natural partners in land use decision-making in brownfields remediation. A defined role for colleges and universities in close proximity to brownfields pilot programs should be included in the current remediation process from local to federal levels.
- Reestablish the EMPACT Grants Program with Colleges being Eligible to Participate as Principal Investigators (PIs), or Co-PIs – As mentioned above, the EMPACT Grants program offered an excellent opportunity for community-university collaboration in environmental monitoring. The program was an especially good fit for urban areas, and multidisciplinary community-based research. The one drawback of EMPACT was that only the local government itself could serve as a PI, and with the application process being rather complex, most local governments may not have been able to afford to have staff devote the time necessary to develop a viable proposal. A significant number of college faculty and administrators are experienced in research program development and proposal writing. Having a college serve as Co-PI on an EMPACT grant would significantly improve the effectiveness of the program. Of all the reductions made by EPA over the past year or so, the loss of support for EMPACT, in terms of its potential to support community-university environmental collaborations, is among the most significant.

- Increase the Number of Urban College Partners in the Global Learning and Opportunities to Benefit the Environment (GLOBE) Program - The GLOBE initiative is a federal interagency collaboration supported by the NSF, EPA, NASA and the State Department (GLOBE, n.d.). Its primary mission is to improve science education at the kindergarten through 12<sup>th</sup> grade (k-12) levels. The GLOBE program is literally global in scope, with university faculty and k-12 students from around the world working together on earth science investigations using standardized data collection and analysis methods. Implementation of the GLOBE program would bring teachers and students from neighborhood schools to urban campuses to participate in hands-on applications of earth systems experimentation. The GLOBE workshops are open to parents, school staff, and non-profit volunteers, providing a holistic community learning experience. Dr. Robert Ford, of Southern University, Baton Rouge, is currently leading an effort to increase the numbers of HBCU Partners in GLOBE (Ford, 2002). However, there is a need for GLOBE's federal collaborators to dedicate and support diversity initiatives as a permanent part of the GLOBE mission. Inequality in school funding is a significant barrier that prevents full participation by inner-city schools. Thus, the areas with the greatest need for improvement in environmental education, may not have access to this progressive program. The GLOBE program may also consider recruiting PIs from colleges with predominantly people of color enrollment to develop GLOBE-related activities designed specifically for urban environments. In many cases, inner-city schools lack the greenspace requirements for GLOBE experiments. However, there are innovative ways that air, soil, and water problems affecting urban communities can be studied using GLOBE program methods.
- Restore and/or Continue to Fund EPA Environmental Education Opportunities – The loss of the CUP Grants program has been a popular topic of concern to academics and activists wishing for support for their collaborative efforts. While the current climate does not bode well for the restoration of the CUP grants within EPA, perhaps another agency may consider creating a similar initiative. The loss of the STAR Research Grants program was a significant blow to the potential for urban researchers interested in improving the environmental quality of the communities surrounding their campuses. Many current and past STAR projects focus directly upon the assessment of pollutant impacts to human and environmental health. Reportedly, an appeal is being made to EPA leadership to restore STAR program funding. Hopefully, the effort will be successful. On the upside, the EPA has for now, continued to support the MAI graduate and undergraduate fellowships program.
- Establish a Funding Mechanism for the Federal Interagency Working Group on Environmental Justice, Environmental Justice Revitalization Projects – Again, with the IWG being one of the few programs for which colleges are eligible, it is of great interest that a definite funding schedule is devised. An obvious advantage for awardees is the potential access to non-competitive funds. However, in terms of gaining academic administrative support, programs with unknown dollar value are a difficult sell. Researchers, and stakeholders, for that matter, are much more likely to “sign-on” to a project with tangible reward potential. This is not a criticism of the IWG; it currently supports several successful Demonstration Projects. However, guaranteed funding would make the IWG significantly more attractive to potentially interested urban university researchers.
- Create for Urban Colleges a Large-Scale, Perpetually Funded Program Similar to the LTER – This is wishful thinking at best, but in an absolute best-case-scenario, an major, sweeping project at the LTER scale devoted to urban environments would be the ideal. The LTER does include large city projects at Phoenix, Arizona, and Baltimore, Maryland, but for the most part, its field sites are in rural and remote locations (LTER, 2002).

### **Recommended Action Plans for Increasing the Numbers of Institutionalized Environmental Justice and Education Centers at Urban Colleges and Universities**

In addition to making requests for public sector support, environmental justice activists and academics must create options for self-sustenance. Some “outside-of-the-box” thinking, while somewhat challenging in

collegiate settings, may be required in order to meet the needs of stakeholders. Below are some ideas for building a network of independent urban environmental justice and education centers:

- **Develop Capacity for Consulting and Contractual Work as a Means of Raising Funds** – Many colleges have begun to exploit the “intellectual capital” available among their learned faculty. A prime example of such is the Center for Geographic Information Systems (CGIS) at Towson University, just north of Baltimore, Maryland ([cgis.towson.edu](http://cgis.towson.edu)). The CGIS, housed within the Department of Geography and Environmental Planning, is a self-sustaining lab that provides GIS services to public and private sector clients throughout the Mid-Atlantic region. Recent contract amounts range from \$1,000, to well over \$1,000,000. Faculty in urban academic environmental programs are in an excellent position to provide services to develop solutions to a wide range of environmental problems in a for-profit capacity. Currently operating centers such as the CGIS may provide answers to legal questions, which may arise at public institutions. Other challenges include navigating university bureaucratic systems while remaining competitive, and convincing clients to have confidence in the work of student employees. Some may question whether applied contractual work is in line with the traditional interest of the academy. In any case, the CGIS model provides a convincing argument for at least considering for-profit services as a funding option.
- **Develop Consortia of Urban Academic Environmental Justice and Education Centers** – There are several examples of collegiate consortia that provide scholarly networking and collaboration opportunities. The Association for Black Culture Centers ([www.abcc.net](http://www.abcc.net)) is an organization that helps to maintain and establish Black culture centers on college campuses. Member institutions pay dues of \$200 annually. Membership is also open to students and individuals. Established in 1997 through a collaboration between the U.S. Department of Energy and the UNCF, the Building Environmental Stewardship (BES) program is a consortium of 10 HBCUs working to “integrate environmental sustainability concepts into all aspects of learning on college campuses across a multitude of disciplines” (United Negro College Fund Special Projects Corporation, n.d.). The BES is in the fourth year of a five-year funding cycle funded by DOE. The BES program should be replicated with support by EPA or other federal agencies involved in environmental and/or land use issues. Member institutions could be brought together based upon criteria such as regional location, enrollment, academic specialties, etc. An excellent model of cooperation among institutions in the interest of urban environments is the Universities Consortium for Geographic Information Systems’ (UCGIS) HUD-sponsored “Global Urban Quality: An Analysis of Urban Indicators Using Geographic Information Science” (Dueker and Jampoler, 2002). This UCGIS collaboration is exactly the type of community-based research that could be designed to fit the interests of a team of HBCUs or other urban universities. The lead authors from UCGIS should be consulted in order to learn how they were able to obtain support for the project from HUD.
- **Establish Cooperative Relationships with Private, Non-Profit, other Non Government Organizations (NGOs)** – The EJRC has been relatively successful in attaining support from private organizations such as the Ford and Charles Stewart Mott foundations (EJRC, n.d.). Billions of dollars are available annually from private sources; however, the solicitations tend to be very competitive, and likely to favor institutions with firm evidence of existing infrastructure. Lack of infrastructure is an issue faced by many urban colleges, especially those serving predominantly people of color students. However, faculty must make the to establish relationships by attending conferences and joining organizations such as the Urban Land Institute ([www.uli.org](http://www.uli.org)), the Smart Growth Network ([www.smartgrowth.org](http://www.smartgrowth.org)), Sustainable Cities ([www.sustainablecities.org](http://www.sustainablecities.org)), the Ecological Cities Project ([www.ecologicalcities.org](http://www.ecologicalcities.org)), and others. Many student opportunities are available through the Environmental Careers Organization (ECO). The ECO’s Diversity Initiative is an aggressive campaign to increase the participation on underrepresented groups in environmental science (Environmental Careers Organization, 2002). For the past three years ECO has sponsored the “National Roundtable on Diversity in the Environment,” inviting over 100 people of color to implement a strategy to reverse the lack of diversity in the environmental disciplines. Environmental career specialists from ECO are available for campus visits.

- Encourage the Enhancement of Environmental Science Curriculum at People of Color Serving Colleges and Universities – In spite the efforts made to open the doors of PWIs, predominantly minority serving institutions continue to produce a disproportionately large share of degrees awarded to students of color. For example, HBCUs, represent only three percent of all U.S. colleges and universities, but produce about 25 percent of all African American baccalaureate college graduates (U.S. House of Representatives, n.d.). The disproportionate productivity increases in the sciences and engineering (National Science Foundation, 1994). Therefore, it is imperative that environmental curriculums at HBCUs and like institutions be targeted for enhancement and improvement. Florida A&M University has established the Environmental Sciences Institute which serves as the home of the Center for Environmental Equity and Justice ([www.famu.edu/acad/colleges/esi](http://www.famu.edu/acad/colleges/esi)). In general, opportunities for study in environmental sciences at HBCUs have expanded significantly over the past three decades, but there remains much room for growth. The unique role these colleges play in people of color communities gives them a tremendous advantage in community environmental education and outreach. Faculty are encouraged to develop new courses, or include environmental science content in existing offerings. Schools with advanced programs such as Florida A&M periodically offer environmental curriculum development workshops. Many students of color are not exposed to environmental science at the k-12 level. Without making a concerted effort to attract these students, they will be much less likely to pursue environmental careers, or graduate study. Providing opportunities for applied research at the undergraduate level is a proven strategy for retaining students within disciplines. Environmental justice problems can be investigated by student researchers through cooperative efforts with neighborhood organizations, local governments, and non-profits. Students working in the Geographic Information Sciences Laboratory at Tennessee State University are applying GIS and GPS technology in research on brownfields site assessment, public transit accessibility, and fugitive dump site tracking ([www.gislabtsu.freehomepage.com/gislab.htm](http://www.gislabtsu.freehomepage.com/gislab.htm)).

## **Conclusion**

The findings presented in this policy paper make a strong argument for the need for the establishment of environmental justice and education centers at colleges and universities neighboring and serving stakeholder communities. The federal funding landscape is in flux in the wake of September 11, and subsequent homeland security concerns. Now may be the time to consider looking to for-profit strategies and private sources. Networking is the first step, followed by collaboration. The BES is a model for others to follow. K-12 science education improvement is a persistent concern that dovetails with effective public participation in environmental decision-making. Linking k-12 schools with colleges can serve to feed the entry to the pipeline for students of color in environmental careers. There are many avenues toward successful implementation and institutionalization of academic environmental justice centers, and there are many challenges; however, through innovation and cooperation across disciplines urban colleges and universities will be in a better position to deliver substantive environmental information to stakeholder communities.

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