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| C:\Users\bjaco\AppData\Local\Microsoft\Windows\INetCache\Content.Word\SLS-Teaching-Toolkit-Logo_Stacked-Initials.jpg | Environmental Justice 101 |
| **Discipline:** All | **Type:** In-Class Exercise; Discussion; Reading  | **Time Commitment:** 50-100 min | **Category**: Equity, Justice & Sustainability |
| **Big Ideas:** [Equity and Climate](http://serve-learn-sustain.gatech.edu/big-idea/equity-and-climate);[Environmental Justice & Citizen Science](http://serve-learn-sustain.gatech.edu/big-idea/environmental-justice-citizen-science) ; [Inequality, Poverty and Sustainable Development](http://serve-learn-sustain.gatech.edu/big-idea/inequality-poverty-and-sustainable-development) ; [Understanding Local History and Context](http://serve-learn-sustain.gatech.edu/big-idea/understanding-local-history-and-context)  |
| **OVERVIEW:**Environmental Justice (EJ) is concerned with making sure that (a) no community takes on an unfair share of environmental burdens and (b) environmental benefits are shared in an equitable way regardless of race, class, gender, or orientation. The Environmental Justice Movement challenges environmental injustices, with a special focus on racial and class disparities, in the U.S. and around the globe. The purpose of this tool is to help students begin to understand: 1. What EJ is – and what environmental injustices are;
2. How the EJ movement works to address EJ issues (especially in the U.S. South, where the movement was born) with close attention to injustices related to race and class;
3. The different types of roles that scientists and engineers in particular can play in this work.

This tool was contributed by Jennifer Hirsch. We also want to thank Fatemeh Shafiei from Spelman College for contributing to this tool. |
| **INSTRUCTIONS:** The tool below provides detailed instructions for leading either 1 or 2 class periods. Rather than distribute the document to students, use it as a guide for designing your class.  |
| **SLS STUDENT LEARNING OUTCOMES & ASSESSMENT:**The Serve-Learn-Sustain toolkit teaching tools are designed to help students achieve not only SLS student learning outcomes (SLOs), but the unique learning outcomes for your own courses. Reflection, concept maps, rubrics, and other assessment methods are shown to improve student learning. For resources on how to assess your students’ work, please review our [Assessment Tools](http://serve-learn-sustain.gatech.edu/tool-category/assessment). **This tool achieves SLO 1 & 3. See the end of this tool for further details.** |

**Want Help?**

Jennifer Hirsch is the contact for this tool. You can reach her at jennifer.hirsch@gatech.edu.

Environmental Justice 101

**Overview**

Environmental Justice (EJ) is concerned with making sure that (a) no community takes on an unfair share of environmental burdens and (b) environmental benefits are shared in an equitable way regardless of race, class, gender, or orientation. The Environmental Justice Movement challenges environmental injustices, with a special focus on racial and class disparities, in the U.S. and around the globe.

SLS partners with organizations and associations in the Atlanta region (and across the South) that work in and with communities that have traditionally had very little power and voice on environmental issues and, more broadly, on sustainability issues and climate change. EJ partnerships provide special opportunities for Georgia Tech students and faculty to contribute their science and technology knowledge and skills to “creating sustainable communities” that are healthy and just.

The purpose of this tool is to help students begin to understand:

1. What EJ is – and what environmental *injustices* are;
2. How the EJ movement works to address EJ issues (especially in the U.S. South, where the movement was born) with close attention to injustices related to race and class;
3. The different types of roles that scientists and engineers in particular can play in this work.

This tool is intended to take two class periods of 50 minutes each. However, it can be adapted to take just one class period. Follow the guidelines below to learn how.

*Note that there is an accompanying PowerPoint to use with this tool that you can access* [*here*](http://serve-learn-sustain.gatech.edu/sites/default/files/documents/Toolkit-Docs/EJ-Resources/ej101_ppt.pdf)*.*

**Class Session 1: Introduction to Environmental Justice**

To prepare for this class, have students read [this excerpt](http://serve-learn-sustain.gatech.edu/sites/default/files/documents/Toolkit-Docs/EJ-Resources/northwest_earth_institute-seeing_systems_peace_justice_and_sustainability.pdf) from *Seeing Systems: Peace, Justice & Sustainability*, including “Everyday Hero: Dr. Robert Bullard” and “Principles of Environmental Justice.”

**Part 1: What is Environmental Justice? (approx. 15 min.)**

Start off the class by facilitating a discussion about what EJ is:

1. Ask students what they already know about EJ – if anything. Ask, “Have any of you heard of ‘environmental justice’ or encountered EJ issues before – even if you didn’t think of them as EJ issues at the time?” If YES, ask them to share when, how, and what they understand EJ to be.
2. Next, share these two definitions (PPT slide 2). Ask two students to read them out loud:
	1. Environmental Justice is concerned with making sure that (A) no community takes on an unfair share of environmental burdens and (B) environmental benefits are shared in an equitable way regardless of race, class, gender, or orientation (SLS definition).
	2. “Environmental Justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies” [(EPA-Environmental Protection Agency).](https://www.epa.gov/environmentaljustice)
3. Show this 3.5 min. video on EJ and how it relates to communities: [Environmental Justice, Explained](https://www.youtube.com/watch?v=dREtXUij6_c) (presented by Grist, a nonprofit news agency).
4. Return to PPT slide 2 to review definitions, and facilitate discussion around the definitions and the video with these questions (PPT slide 3):
	1. What words, phrases, or ideas stand out to you from the definitions and the video, and why?
	2. How do the definitions compare? How are they similar or different? Do you prefer one over the other, or some combination – and why?
	3. How do these definitions relate to what we saw in the video?
5. Ask students to work in pairs to come up with their own EJ definition, combining the different pieces from the definitions and video that they find most compelling. Next, have a few pairs write their definitions on the board and facilitate a short discussion about what stands out as important overall.

**Part 2: EJ, Race, and Class in the U.S. South (approx. 25 min.)**

Explain that you’re moving into a discussion more specifically about EJ, race, and class (especially in the U.S. South).

Facilitate a short discussion about the reading, using all or some of these prompts (PPT slides 4 & 5):

1. What words, phrases, or ideas stand out to you from the article about Dr. Bullard, and why?
2. Fried writes: “The environmental justice movement has redefined environment to mean both the natural world and the places where we live, work, play, learn, and worship.” What does “environment” usually mean? Why is this expanded definition important?
3. What is “environmental racism” and how does it relate to environmental justice? Why is it important to focus on race as a key component of EJ?
4. “The ‘Principles of Environmental Justice’ were crafted in 1991. Do you think the text appropriately reflects the reality of today? Can you suggest issues that you would include in an update of the document?” (*Seeing Systems: Peace, Justice & Sustainability*, published by the Northwest Earth Institute, 2014, p.54)

Next, show this video discussing environmental justice in the U.S. South: [The Beloved Community, Environmental Justice, and the Green Movement](https://www.youtube.com/watch?v=ojiLPeKkVDs) (6 min). Filmed and shared with us by SLS partner [PURE](http://purecities.org/) (Project Urban Renewable Energy), this video includes short snippets of presentations by some of the founders and leaders of the EJ movement, presenting at a PURE event held at The King Center in honor of MLK Day in January 2016. The major themes of this video are environmental justice, environmental racism, and social equity in communities of color. The South has long been plagued with environmental injustices, and this video covers many of these issues.

After watching the video, bring the class’s attention to this quote from the video (PPT slide 6):

“Black households with incomes between $50,000 and $60,000 live in neighborhoods that are more polluted than the average neighborhood in which white households with incomes below $10,000 live.” (2:21)

Next, facilitate a brief discussion about race, class, and EJ in the South, using these prompts (PPT slides 7 & 8):

1. What stood out to you the most from the video? A comment, slide, image, fact, story, idea?
2. What do we learn from the video about the relationship between environmental justice, race, and class?
3. What do we learn from the video about how the EJ Movement is trying to address environmental injustices?
4. Bring the discussion back to the students’ experiences: Think about low income or marginalized communities, either around Tech/Atlanta, or where you grew up. What is their racial/ethnic/socioeconomic composition? What are the environmental burdens in these communities that you don’t see in wealthier or non-marginalized communities? (*Seeing Systems: Peace, Justice & Sustainability*, published by the Northwest Earth Institute, 2014, p.54)

Note: As the instructor, if you feel you can speak to this point, share your own experiences and examples as part of the conversation. Some examples may have come up in the opening conversation, which you can then refer back to here.

1. Finally, tell the students: This has been a very quick introduction to EJ and its relationship to race and class in the U.S. South. Ask: What are you eager to learn more about moving forward?

**Part 3: Wrap-Up & Conclusion (approx. 1 to 10 min.)**

If you will continue talking about EJ in Class Session 2, tell the students about the next session, which will focus on a contemporary EJ example: The Flint water crisis, including the roles that scientists and engineers play in EJ work. If you will conclude today, use the prompts in the Wrap-up Discussion section below to facilitate a brief final discussion tying back what you’ve learned about EJ today to what you’re focused on in your specific course.

**Class Session 2: EJ Struggles Today – The Water Crisis in Flint, MI (approx. 45 min.)**

The Flint Water Crisis is one of the most significant instances of environmental injustice in the 21st century. For this second class on environmental justice, have students read the [SLS Case Study: The Flint Water Crisis](http://serve-learn-sustain.gatech.edu/sls-case-study-flint-water-crisis), during class or as homework, and then lead a discussion using the Discussion Questions at the end of the case study.

Leave five minutes at the end to wrap up the full EJ 101 discussion, tying Class Sessions 1 and 2 together, using the prompts in the Wrap-up section below.

**Wrap-up Discussion – for end of Class Session 1 or 2 (approx. 5-10 min.)**

Wrap up the discussion by offering some connections between the topic of EJ and the topic of your class. Ask students (PPT Slide 9):

1. How can our discussions today inform our thinking and work on [class topic] during the semester?
2. What questions should we keep in mind about [class topic] from an EJ viewpoint?

Help students shape their questions, and add some of your own, so the class ends with a concrete list of 2-4 questions. Tell the students you will distribute these (through the course management system or otherwise) so you can all continue to refer to them over the semester. Revisit them at different points to keep EJ questions at the top of yours minds.

**Further Reading and Resources**

Encourage your students to continue learning about environmental justice through some of our favorite EJ resources.

**Videos Exploring Environmental Justice**

[“Data-Driven Research for Environmental Justice: How Universities Can Help move Vulnerable Communities from Surviving to Thriving”](https://smartech.gatech.edu/handle/1853/55913)(video, 1.5 hrs)

Presented by SLS in September 2016, this videotaped presentation from Georgia Tech’s 6th annual Liam’s Legacy Symposium features the following guest speakers:

* Dr. Paul Mohai is an environmental sociologist, founder of the Environmental Justice Program at the University of Michigan, member of the U.S. Environmental Protection Agency's (EPA) National Environmental Justice Advisory Council (NEJAC), and one of the foremost and earliest scholars engaged in environmental justice (begins min 5.30). *Note: You can access Dr. Mohai’s PowerPoint for this talk* [*here*](http://serve-learn-sustain.gatech.edu/sites/default/files/documents/mohai_-_september_2016.pdf)*, as well other resources by him below.*
* Samantha Shattuck is an emerging leader in environmental justice and a member of the newly formed NEJAC Youth Perspectives on Climate Justice Workshop (begins min. 34.05).
* Mustafa Santiago Ali is the former senior advisor to EPA Administrator Gina McCarthy (begins min. 49.00).
* Panel discussion with Q&A (begins min. 1:11:05).

[“The Economic Injustice of Plastic”](https://www.ted.com/talks/van_jones_the_economic_injustice_of_plastic) (video, 13 min)

American news commentator, attorney, and EJ leader Van Jones asks, “When we throw away our plastic trash, where does it go?” The answer forces us to consider the relationship between issues like throwaway culture, environmentalism, poverty, and the prison industrial complex.

**Articles Exploring Environmental Justice**

[Collins, Mary B, Ian Munoz & Joseph Jaja. “Linking ‘toxic outliers' to environmental justice communities” (](http://serve-learn-sustain.gatech.edu/sites/default/files/documents/Toolkit-Docs/EJ-Resources/collins_munoz_and_jaja-linking_toxic_outliers_to_environmental_justice_communities.pdf)*[Environmental Research Letters](http://serve-learn-sustain.gatech.edu/sites/default/files/documents/Toolkit-Docs/EJ-Resources/collins_munoz_and_jaja-linking_toxic_outliers_to_environmental_justice_communities.pdf)* [201](http://serve-learn-sustain.gatech.edu/sites/default/files/documents/Toolkit-Docs/EJ-Resources/collins_munoz_and_jaja-linking_toxic_outliers_to_environmental_justice_communities.pdf)6).

This paper explores “hyper-polluters,” a class of industrial facilities across the U.S. that “disproportionately expose communities of color and low-income populations to chemical releases.” The authors suggest that “substantial environmental gains may be made through selective environmental enforcement, rather than sweeping initiatives.”

[Executive Order 12898 - Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations](http://serve-learn-sustain.gatech.edu/sites/default/files/documents/Toolkit-Docs/EJ-Resources/executive_order_12898.pdf)

In 1994, President Clinton issued the first national policy response to environmental justice. Its purpose was “to focus federal attention on the environmental and human health effects of federal actions on minority and low-income populations with the goal of achieving environmental protection for all communities.”

[Mohai, Paul & Robin Saha, “Which came first, people or pollution? A review of theory and evidence from longitudinal environmental justice studies,” (Environmental Research Letters, 2015).](http://serve-learn-sustain.gatech.edu/sites/default/files/documents/Toolkit-Docs/EJ-Resources/mohai_saha-which_came_first_people_or_pollution.pdf)

In recent decades, quantitative research has “proved the existence of racial and socioeconomic disparities in the distribution of a wide variety of environmental hazards.” This article argues that fully understanding these disparities requires us to understand demographic characteristics at the time of facility siting, and then track those changes after siting. The authors’ goal is “to identify the direction future research should take in order to resolve confusion and arrive at a clearer understanding of the processes and contributory factors by which present-day racial and socioeconomic disparities in the distribution of environmental hazards have come about.”

[Toxic Wastes and Race and Toxic Wastes and Race at Twenty](http://www.ucc.org/environmental-ministries_toxic-waste-20)

 At this website, find a series of reports, including:

Bullard, Robert, Paul Mohai, Robin Saha, & Beverly Wright. *Toxic Wastes & Race at the Twenty* *1987-2007****,*** A Report Prepared for the United Church of Christ Justice & Witness Ministries, Cleveland, OH: United Church of Christ, March 2007

[Bullard, R.D.,& Wright, B.(2009). Race, place, and the environment in post-Katrina](https://serve-learn-sustain.gatech.edu/sites/default/files/documents/Toolkit-Docs/EJ-Resources/wright_bullard_-_raceplaceandtheenvironmentinneworleans.pdf)

[New Orleans.](https://serve-learn-sustain.gatech.edu/sites/default/files/documents/Toolkit-Docs/EJ-Resources/wright_bullard_-_raceplaceandtheenvironmentinneworleans.pdf) *[Race, Place and Environmental Justice after Hurricane Katrina: Struggles to Reclaim, Rebuild and Revitalize New Orleans and the Gulf Coast, 19-48.](https://serve-learn-sustain.gatech.edu/sites/default/files/documents/Toolkit-Docs/EJ-Resources/wright_bullard_-_raceplaceandtheenvironmentinneworleans.pdf)*

With growing recognition of disproportionate vulnerability of many communities of color to the impacts of climate change, many environmental justice scholars and advocates have turned their attention to the impacts of severe weather events as well as inequity in disaster response. This chapter introduces an edited volume that chronicles EJ and equity considerations as New Orleans and its Gulf Coast neighbors work to rebuild and revitalize their communities.

**Environmental Justice in the U.S.**

Urban EJ – [Environmental Justice: Peggy Shephard](https://www.youtube.com/watch?v=zJX_MXaXbJA) (*TEDx Harlem*)

This TEDx talk (7:52 mins) tells the story of Harlem communities organizing to challenge a sewage treatment facility and multiple diesel bus depots associated with localized air pollution that have made Harlem a “sacrifice zone.” Activist and elected official Peggy Shephard explains how community organizing, mobilization, and the use of scientific evidence and legal challenges won significant health and environmental improvements in Harlem’s communities.

[Cancer Alley, Louisiana – Victims of Environmental Racism (*NowThis*)](https://www.youtube.com/watch?v=aCT6BO7wlDs)

 This short video (10:56 mins) explores the colloquially named Cancer Alley, a stretch of land along the Mississippi River which is saturated with industrial plants. The low-income parishes in this area, which stretch from Baton Rouge to New Orleans, report various health problems, including a disproportionate number of cancer victims.

[The Flint Water Crisis](http://serve-learn-sustain.gatech.edu/sls-case-study-flint-water-crisis)

The Flint Water Crisis is one of the most significant instances of environmental injustice in the 21st century. In this SLS case study, read about the impact of the crisis on the natural world, as well as the residents of Flint, Michigan, and learn about how we can use technology to create a safe, sustainable water system

“ReGenesis – A Practical Application of the CPS Model.” Chapter 4 of [EPA’s Environmental Justice Collaborative Problem-Solving Model](https://www.epa.gov/sites/production/files/2016-06/documents/cps-manual-12-27-06.pdf)

This case study explores Spartanburg, South Carolina, whose residents experienced higher levels of health issues due to chemical plants and other polluting factors in the area. ReGenesis, a community-based organization led by community member Harold Mitchell – now a member of the South Carolina legislature – worked with the EPA to use their Collaborative Problem-Solving methodology to expose the inequity and turn the community around. If this case study interests you, consider two other SLS tools that respond to ReGenesis:

* [ReGenesis Case Study: Creating a Sustainable Community through Collaborative Problem-Solving](http://serve-learn-sustain.gatech.edu/regenesis-case-study-creating-sustainable-community-through-collaborative-problem-solving)
* [ReGenesis Case Study: Chemical Safety & Ethics in Relation to Communities](http://serve-learn-sustain.gatech.edu/regenesis-case-study-chemical-safety-ethics-relation-communities)

[Sullivan, Will, "Too Much Pollution for One Place" (PBS, 2017).](http://www.pbs.org/wgbh/nova/next/earth/too-much-pollution/)

This article discusses the Delaware Valley Resource Recovery Facility, “one of the country’s largest municipal waste incinerators,” and a significant site for the generation of dangerous pollutants. The facility is located in Chester, Pennsylvania, where “a third of residents live below the poverty line, and 75% of the population is African American.” Chester is a crucial example of how the consequences of waste management disproportionately threaten minority communities.

**Environmental Justice in Atlanta, Georgia**

[Deganian, David and Justine Thompson. *The Patterns of Pollution: A Report on Demographic and Pollution in Metro Atlanta* (GreenLaw, 2012)](https://greenlaw.org/pdf/PatternsofPollutionFINALGreenLaw3-26-2012.pdf)

This report analyzes eight types of air, water, and land pollution (called “pollution points”) in the metro Atlanta region, cross-referencing them with seven demographic characteristics. In doing so, Patterns of Pollution reveals that a person’s race, income, and language have a direct correlation to their distance from pollution points.

[Gaither, Cassandra Johnson and Eric Kuehler. "Seminar: Environmental Justice and Atlanta’s Urban Forest" (The University of Georgia)](https://www.warnell.uga.edu/research/news/seminar-environmental-justice-and-atlanta%E2%80%99s-urban-forest)

 In this video (57:37 mins), Dr. Cassandra Johnson Gaither and Eric Kuehler of the USDA Forest Service Southern Research Station discuss urban forestry in Atlanta as a resource disproportionately available to middle and upper class white neighborhoods.

[Vales, Kristen G., "BANKHEAD VERSUS BUCKHEAD: Analyzing the Environmental Justice Issues in Atlanta" (Scholarworks @ Georgia Tech, 2017).](https://scholarworks.gsu.edu/cgi/viewcontent.cgi?article=1056&context=iph_capstone)

 This Masters thesis examines environmental justice by comparing food and park access in two areas in Atlanta: the majority white Buckhead district, and the minority-populated Bankhead district. The study confirms that in Bankhead, residents have low access to healthy food, as compared to Buckhead, and that while both districts have access to parks, Buckhead parks are considerably better maintained. This disparity typifies a pattern in many cities like Atlanta, where low-income and minority populations have access to fewer resources than white communities.

[Johnson, R., Ramsey-White, K., & Fuller, C. H. (2016). Socio-demographic differences in toxic release inventory siting and emissions in metro Atlanta](https://serve-learn-sustain.gatech.edu/filebrowser/download/953). *International journal of environmental research and public health*, *13*(8), 747.

This Atlanta EJ study investigated the relationship between race, class, and the location of Toxic Release Inventory (TRI) sites. The researchers found that TRI facility presence was directly associated with moderate to low income, and was inversely associated with college degree attainment. Air toxic releases were also inversely associated with college degree attainment. In addition, researchers found there was a higher number of complaints for tracts with higher Black populations, and that complaints were resolved more slowly in tracts with high Hispanic populations.

**SLS partners doing EJ work in Atlanta**

[Center for Sustainable Communities](https://csc-atl.org/)

Empowers organizations to execute sustainability initiatives. This includes providing technical assistance, tools, systems, projects and programs to support local communities.

[EPA Southeast Region](https://www.epa.gov/aboutepa/about-epa-region-4-southeast)

Serving Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and 6 Tribes, EPA Southeast works on issues such as hurricane preparedness and response, and environmental cleanup.

[Partnership for Southern Equity](http://partnershipforsouthernequity.org/)

Focuses on various issues related to justice and sustainable communities. Together with a City and Regional Planning faculty member at Georgia Tech, PSE published an important report about racial equity and our public transportation system, demonstrating links between racial discrimination and sustainability: [Opportunity Deferred: Race, Transportation, and the Future of Metropolitan Atlanta](http://serve-learn-sustain.gatech.edu/sites/default/files/documents/2017_pse-opportunity_deferred.pdf).

[Proctor Creek Stewardship Council](http://www.proctorcreek.org/) & [West Atlanta Watershed Alliance](http://wawa-online.org/)

Focuses on environmental justice and environmental stewardship in Tech’s backyard, on the Westside.

Interested in learning more about our partnerships? Email our Service Learning and Partnerships Specialists: Ruthie Yow and Rebecca Watts Hull.

SLS Student Learning Outcomes

1. Identify relationships among ecological, social, and economic systems.
2. Demonstrate skills needed to work effectively in different types of communities.
3. Evaluate how decisions impact the sustainability of communities.
4. Describe how to use their discipline to make communities more sustainable.\*

\* *Note:* SLO 4 is intended to be used by upper division, project-based courses such as Capstone.