Advanced Urban Landscape Seminar:

Examining Contemporary Environmntal Issues through a Social Justice Lens

Vision Statement

" 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. "

As a future landscape architect, I aspire to promote safety, health and economic vitality through culturally relevant urban design. I will attempt to educate the public on sustainable lifestyle practices and facilitate smooth transition to a lifestyle that works in harmony with nature. I will strive to create moments of joy in everyday life through artfully built outdoor environments while creating safe places where prejudice is not welcome. I plan to do everything in my power to work diligently and efficiently with integrity and honesty with clients and all aspects of future projects. Most of all, I wish to create environments where people feel free to enjoy this beautiful life.

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History & Evolution of Environmental & Landscape Planning

Many milestones have shaped the development of landscape architecture and city planning throughout history. Some were more significant than others. For example, in ancient China, it was recognized that **man-made landscapes could be used to fulfill physical needs** by providing defense and necessary drinking water as in the case of the West Lake of Hangzhou. Over time, the Chinese realized that this man-made lake was thought to be "natural."

Another milestone was introduced in America when Thomas Jefferson superimposed a square grid system over the newly-purchased northwest territories. This grid **sectioned the wilderness into neat squares that disregarded existing systems like rivers, mountains and prairies**. It was a powerful example of men imposing their own power over the landscape.

In the 19th century, the industrial revolution caused the environmental quality of cities to deteriorate. Additionally, large surges of immigration put a strain on limited living space. These less than ideal living situations sparked the Urban Parks and Playground Movement, in which designers started **creating green refuges within the busy city**. Eventually, it became known that access to parks was not equal, so greenways or park systems were created. Reformers also decided to build playgrounds in slum neighborhoods thinking that it would somehow mitigate crime. Within this movement, Frederick Law Olmsted designed Central Park and countless other outdoor spaces. He invented the title of "Landscape Architect" to describe the profession.
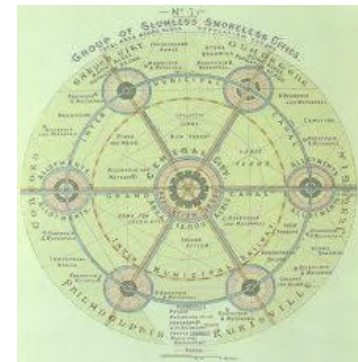

The West Lake of Hangzhou was one of the first functional, man-made lakes to appear "natural"

The Industrial Revolution changed the environmental quality of cities as well as increased the population

The lifestyle championed by the Garden City Movement was an early form of modern day suburbs

The introdution of the Garden City concept by Ebenezer Howard sparked a movement that **relocated people from cities to smaller "new towns" surrounded by green belts**. This utopian vision had damaging consequences since those ideals are still sought after in the form of suburbs. Later on, the way landscape architects and planners work was changed by the act of mapping, because it allows many aspects of a site to be seen at once. The practice was started by Warren Manning and continued by Ian McHarg. These comprehensive **maps showed that landscapes are systems of complex elements**.

Another major milestone for America was the implementation of **highway systems cutting through cities and across open lands**. Eventually, in the second half of the 20th century, environmental protection became an important part of city planning. People became more aware of the consequences of development with no checks and balances. Many clean up methods and preventative measures were taken. Awareness spread through the creation of earth day.

What is sustainable design?

John Muir mandated that **conserving wilderness and leaving it untouched was ideal** while Gifford Pinchot taught that environmentally degrading development would happen regardless, so **design strategies should adapt to retain some semblance of nature**.

Personally, I believe that whatever wilderness we have left in this day and age should be fiercely protected whenever possible. However, in places where the original ecology has been lost or plans to permanently alter the landscape are in place designers should strive to find ways to incorporate these new processes into the landscape in the least harmful manner. In this day and age, stresses on the environment have reached new heights, and it will be impossible restore the earth to any semblance of what it looked like before. Wild and vulnerable places must be identified and protected, in any way possible.

Today, landscape architecture has become focused on **developing artful designs sustainably**.

Mapping revolutionized the way landscape architecture was done by allowing several aspects of a site to be viewed simultaneously
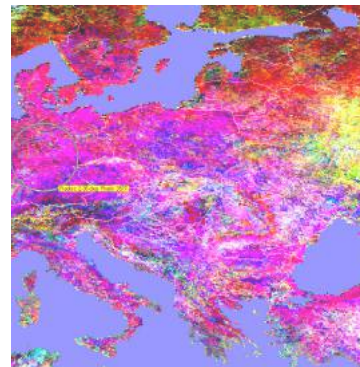
Highway systems placed emphasis on the automobile over the pedestrian, changing the funamental layout of cities
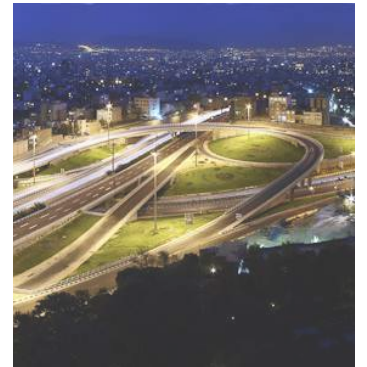
The LAF Declaration, New LAF Declaration, and Everything in Between

While many things have changed over the last 60 years, the messages of the declarations of the Landscape Architecture Foundation are essentially the same. However, the delivery of this message is quite different. In the 1966 declaration, it is apparent right away that the writers wanted to convey intense urgency. The words are lamenting the state of the world with vivid imagery and specific examples cited. Each example is presented as a tragedy. On the other hand, the 2016 declaration states similar concerns with a vague tone. **Clearly, the environment has not improved at all since 1966**. The way problems are presented in the second declaration seems as though environmental issues have grown so big that they can't even be named. It is like the authors are so overwhelmed by the long list of issues, they cannot pinpoint the worst.

Both declarations state hopes for the future. However, the 1966 version declares hope with optimism and gusto. They seem to really have hope that the state of the environment can be turned around. Not so with the current group. There is a sense of resignation in their words of hope. It feels like they are trying to be brave in the face of the impossible. Do they really believe that there is hope for the environment in the future? Are their words empty? Regardless, it is admirable that a profession would continue to work out solutions to the daunting task of saving the planet from human-inflicted destruction.

Although a greater number of people had become landscape architects in the time following the 1966 declaration (it went from a "small group" to "over 700"), they both still end with **a call for more people to join the profession**. They seek more people to educate about the state of the world and pass on the knowledge to others. One difference is that the 2016 declaration has broadened their scope to include the entire world. They have realized that even **if sustainable practices are adopted in the United States, it is meaningless unless the rest of the world follows.** The authors now recognize the relationship of people to the land when they say, "**what we do to our landscapes, we ultimately do to ourselves.**" Additionally, the 2016 declaration emphasized the importance of maintaining beauty and artistry in landscape design while being sustainable.

Personally, I think landscape architects have good intentions. However, clients are demanding, materials are scarce and money is necessary for society. **There are so many stressors pressuring designers to take short-cuts and make harmful environmental decisions.** I think we would also like to believe that there is something we can do. We believe that more awareness and persistence will change things. In reality, it's probably futile. But I think it's important that we still try to save the environment in any way we can. I'm sure that some of the efforts of previous landscape architects have paid off in ways we can't see. While it is easy to see the negative things happening in the world, **perhaps the work we are doing is having positive impacts that we will never know.**

Social Connectivity of Rivers

The Meremec...

is a freshwater tributary located in the state of Missouri that runs into the Mississippi River. Over time, urban and suburban development, mining and wrongful livestock usage have caused the river to fall victim to erosion and sediment buildup, habitat disturbance and nutrient loading. While it was once known for being the most polluted river in the state, over 40 conservancy plans have been drafted and enacted over the years. Currently, the Nature Conservancy is working on the Meramec River Conservation Action Plan which will provide a plan for how those in the future can protect the river against erosion, contamination and loss of wildlife. Thanks in part to these conservation efforts, the Meramec river is home to over 300 species of wildlife, many of which are rare and have global significance. A diverse group of fish make up the bulk of the river's unique wildlife profile.

People interact with the Meramec in many ways. Since development has spread over the banks, the river is a convenient source of drinking water for over 70,000 households in the St. Louis area. Recreationally, it is most known for floating, tubing or rafting, which can be done almost all year. Many people take advantage of numerous fishing areas that can be accessed by boat or from the bank. Additionally, the river runs through numerous state parks and forested areas with nearby trails that allow hikers to access the river. The sides are often characterized by rocky cliffs that allow adventurous folks the chance to jump from greater heights.

Recently, the Meramec has experienced several enormous flood events that have damaged the surrounding areas. The river is free flowing and does not have any engineered dams or flood control systems. The U.S. Army Corp of Engineers is working on creating plans for people in the floodplains to deal with these events.

Historically, the Meramec river was used as a transport route for iron, lead and timber. The products were taken on flatboats and shallow steam boats to the Mississippi. Currently, there is no formal means of transportation on the river- only recreational. People take river boat cruises, rent kayaks or bring their own boats, rafts and tubes.

The Meramec river is home to boundless longitudinal activities such as floating, canoeing, boating or biking/running/hiking along the banks. The possibilities in this area are endless. Vertically, swimming, fishing and cliff jumping are all popular attractions. However, the river does not provide much in the way of latitudinal access. Most areas are surrounded on both sides by dense forests or suburban developments, allowing only visual access across the stream. Some areas provide bridges for vehicles but not people.

While the Meramec has many wonderful qualities, there are necessary improvements that can be made. Certain stretches of the river can be extremely dangerous for swimmers. For instance, at one junction of the Meramec with Castlewood State Park, a person drowns on average once a year despite no-swimming signs. Most of the victims are teenagers from the city who are not strong swimmers. However, the warning signs don't prevent people from staying out of the dangerous water. Better signage and education in the park could possibly prevent these deaths. Additionally, measures should be taken to reduce flooding during major storm events. These measures don't have to be engineered- rather, a look should be taken at the natural processes of the water to assess where floodwater could be diverted. Lastly, more education on how to keep the river clean and free from contamination would benefit nearby residents.

Unpacking the Built & Natural Environments

Throughout history, humans have been shaping their environment according to their needs and desires. Some of this development has been based on natural processes while most has disregarded the functional needs of the earth. Now, it is becoming clear that this behavior cannot continue if the world is to succeed. Two significant environmental factors that must be addressed are population growth and deforestation.

World population is currently at 7.5 billion people and is predicted to reach 9 billion by 2050 (1). At this rate, the earth is simply running out of resources to feed and house everyone. With so many people joining the planet, more food needs to be produced which means more land must be cleared for farming and animal meat production. This leads to large tracts of land being used for unsuitable purposes, erosion, water waste, pesticide contamination and deforestation among other things. There is also a shortage of space. With more people living on earth, they all need places to live. Cities must densify immensely in order to accommodate the influx. The move towards building out must stop in place of building up. Additionally, a larger population means more waste generated. Excess waste leads to pollution and sickness since many places do not have adequate treatment procedures. The rise in population is also causing a rise in emissions which accelerates climate change. Throwing climate change into the mix stirs the already uncomfortable pot that is the growing world population. This issue is more important than other environmental factors because it affects a wide range of categories. More people means less food, water and space to go around.

Deforestation is another factor that negatively impacts the environment. Natural forests are often cut down for agriculture and logging purposes. Regardless of the reason, deforestation destroys natural ecosystems. Without a forest, many organisms would go extinct.

Deforestation also causes erosion since tree roots are no longer there to prevent it. Additionally, climate change is hastened by the loss of trees since they absorb greenhouse gases and hold moisture in the soil. Furthermore, forests purify the air, ridding it of toxins that make it difficult to breathe. This issue is important in the environmental argument since these ecosystems are irreplaceable and being lost as a rapid rate (2).

With the rise in population and the loss of natural ecosystems, it is important that people have access to nature for their health and well-being. It is debated whether preserving dense natural areas or splitting up green spaces into smaller chunks is more desirable. In my opinion, I think it is critical to have both. Places that are ecologically stable and close to their original state should be maintained and protected as much as possible. This is what is best for the environment and people across the world. However, it is not right to limit access to park space to a few people. New approaches need to be invented. The garden city ideal of putting small park spaces within reach of everyone needs to be put to rest. There are other ways of incorporating nature into cities such as green roofs and vertical farming. Lessons along this vein can be learned from Singapore. This tiny country is completely urbanized yet covered in almost 50% green space. They are committed to sustainability and having access to nature. They are also proponents of vertical gardens and farming which cover the insides and outsides of buildings (3). If cities in the United States placed a real priority on protecting existing natural areas while still providing place-specific green spaces in cities, they could come up with solutions easily. The problem is not in what should be done, it's in the attitude of those in charge. Sprawl needs to be put to an end immediately. Maybe it's idealistic to claim that both dense and fragmented natural areas can coexist, but I believe if more people were coming up with new ideas to face the coming

People's Right to the City

While the two only met a handful of times, Robert Moses and Jane Jacobs are remembered for their famous fight over the urban fabric of New York city. Moses was a politician and was known as a "master builder" because of his many civil projects. He planned to build an expressway that would cut through lower Manhattan and displace thousands of people. The road would additionally divide Greenwich Village, a culturally and historically significant neighborhood. Jacobs, a resident of Greenwich Village, wrote a book called The Death and Life of Great American Cities that shared her knowledge on how cities function. Because of this book and her fearless attitude, Jacobs became a leader for the people who were already unhappy about the expressway that would ruin their neighborhood. In simplified terms, the fight was a classic underdog story: the people fighting for the right to have a say in what was done to them.

Robert Moses had very strong ideas about what was best for the city of New York. Five of these characteristics are: favoring private vehicles over public transportation, creating parks, having an idealistic vision, making big moves and getting things done quickly. He believed that it was best to focus on vehicular circulation at the expense of public transportation. His plans included many expressways that were intended to move cars more efficiently. Moses was also a fan of implementing parks throughout the city. While this idea might seem beneficial at face value, Jacobs criticised the building of parks that were single use and did more harm than good by allowing vagabonds a place to gather. Moses also had an affinity for Idealistic visions like the Garden City movement. His designs favored a decentralized unit with ideal communities in a suburb-like setting. To Jacobs, this type of idealism was naive utopia thinking. Moses also valued getting things done fast. He completed hundreds of projects over his lifetime and believed that if he could start a project, the funding would follow. His ability to get his ideas on the ground as fast as possible is admirable even if it was harmful in some instances. All in all, Robert Moses was a man who got many things accomplished. Whether the bulk of his work was harmful to New York is debated, but it is clear that without the leadership and knowledge of Jane Jacobs, the city would be a different place.

Jane Jacobs, had equally strong and opposing opinions about the ingredients to make a successful city. Five of her core values, which were formed by her personal observations of daily life, were: having eyes on the street, diversity, social capital, practicality, and slow change. Her conception of eyes on the street refers to the safety that is created when many people are watching the streets at all times. In order for this phenomena to take place, people must have reasons to be on the street, whether it be the street where they live, shop, work, play or socialize. She recommended designing for people first and then the automobile. This idea was in direct contradiction of Moses' expressway design, which would have created a place for cars only. This ties in with another value of hers which was fostering diversity on city streets. She encouraged diversity of uses, sizes and ages of buildings, and users. She wrote that a city street is more safe when there are people on it, and to get people on the street at all times of the day, there must be a reason for them to be there. Jacobs also advocated for the importance of social capital, which is the trust and equality that neighbors and neighborhoods show each other. This social capital is only formed when people are given the chance to interact informally. Jacobs had a knack for understanding practicality as well. She gives advice about urban renewal that she knows will work because she's seen it work before. Additionally, Jacobs understood that successful change in a city is a slow, gradual force. Change cannot be forced all at once by tearing down neighborhoods in an idealistic dream. This is the thing that breaks cities down. In the end, Jacobs' level-headed leadership helped protect lower Manhattan from Moses' hasty decision.

By looking at the ideals of Robert Moses and Jane Jacobs, it is clear to see why they did not get along. Nothing about their world views are compatible. However, their conflict of interests is still alive in other cities today. City planners still make rash decisions and people still fight them. In the future, we would be wise to take the more practical approach. While grand gestures and big plans look better, are they really helping cities? Time-honored solutions that actually improve the lives of people living in the city should be trusted before new-fangled ideas. Mayors and city planners should read Jacobs' book and never forget who it is that will feel the effects of their decisions.

# Social Movement + New Social Movement + Environmental Movement

Social Movement: FIRM: Fair Immigration Reform Movement
Location: United States
Time: 2000-present

The Fair Immigration Reform Movement was created to give people coming into the United States more power over their lives. It brings together people of all economic, ethnic and social backgrounds to give them more of a collective voice. The goal is to reform "inhumane and unworkable immigration laws pushed by Congressional leaders." The movement's original goals were to establish help for immigrants to gain citizenship, address the mental and physical needs of people who have been displaced from their home countries (often as a last resort), reunite all families, prevent abuse in the workplace, have a border plan that will protect people living nearby, stop detaining immigrants and recognizing humanity. Immigrants simply want the goal of every social aamovement: respect and recognition of humanity.

New Social Movement: Black Lives Matter
Location: United States
Time: July 13, 2013- Present

The Black Lives Matter social movement was created to protest the acquittal of George Zimmerman, the killer of black teenager Treyvon Martin. While the movement began in response to the acquittal, it was really the straw that broke the camel's back. African Americans have been dealing with oppression for longer than most would care to admit. The BLM movement brings attention to the issue and is a call for everyone to examine the way they treat those different from them. The fire was fed with the killing of unarmed teenager Michael Brown by a white officer in Ferguson Missouri. On labor day 2014, BLM leaders and members rallied in Ferguson to show support for the community. The BLM community wanted to intervene when injustice was served. From there, people began starting BLM chapters in their own states. The official Black Lives Matter website says, "our goal is to support the development of new Black leaders, as well as create a network where Black people feel empowered to determine our destinies in our communities." BLM connects people across the country.
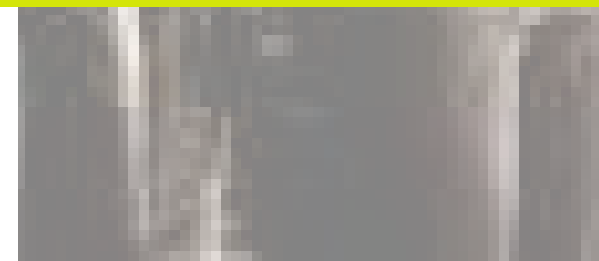
Environmental Movement: Navdanya
Location: India
Time: 1987-present

Navdanya is a movement that promotes earth democracy and is based on the belief that the earth is one family. The movement creates seed banks (storage unit for seeds to preserve genetic diversity) throughout India and distributes them to farmers in the wake of natural disasters. They are also proponents of ecological education and teaching people how to live in harmony with nature. More than 6,000,000 people are members of Navdanya. They have also organized over 50 courses on biodiversity, food, biopiracy, sustainable agriculture, water, globalization, and business ethics. The movement has spurred more than 2,000,000 famers to switch to organic farming.

Deforestation & Urbanization

Rapid urbanization poses threats to cities that are not prepared to handle a large influx of people. This is especially detrimental for marginalized and vulnerable populations.

Urbanization is also a large contributor to deforestation. However, there are ways to reduce deforestation without denouncing urbanization. First:

encourage vegetarianism. Those who live in rural areas tend to eat mostly starches and vegetables while wealthier city-dwellers consume more meat. Economic prosperity and meat consumption go hand in hand. Since meat consumption and wealth are so closely connected, developing countries like China and Brazil place value on their citizens' access to animal products. According to Tom Prugh, meat consumption is less desirable in general because, "it is far more efficient for humans to consume plant calories directly (via vegetarian diets) than to require livestock to consume plants and then to consume the meat in the livestock, because this second step entails serious additional energy losses" (Prugh 264). He goes on to say that, in Europe, "the amount of food produced relative to total plant production- the efficiency of production- is 78 percent for cereal grains but only 20 percent for poultry, 18 percent for pork, and 2 percent for beef" (Prugh 264). The inefficiency of poultry, pork and beef means that more land is needed to produce these products. Basically, it takes more land to produce meat than vegetables. To produce all this meat, forest land must be cleared for grazing livestock. Encouraging city dwellers to eat less meat and animal products will greatly cut down the need for deforestation for animal agriculture purposes.

> **As the world becomes more populated, the earth's forests dwindle causing a host of environemental problems.**

Additionally, cities are growing quickly, causing their borders to **cut into natural forests.** This negatively affects the environment when "expansion destroys wildlife habitat and threatens biodiversity (especially in "hotspots" that are particularly rich in species)" (Prugh 265). Furthermore, expanding urban fabrics can take up farmland which perpetuates the need to cut down forest for agriculture. To remedy this, urban areas should look critically at where they are expanding. Occasionally, **urbanization can develop vertically, rather than horizontally**. This is especially true in western United States where natural ecosystems are destroyed for urban sprawl. Everyone can participate in regenerating forests through innovative ideas like **urban forests** and planting trees within the city. People can also make sure to take better care of wild places like national and state parks that often have untouched forests.

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Causes of Rapid Urbanization

Population increase. Industrialization. Social/political factors.

"Urbanization refers to the population shift from rural to urban residency, the gradual increase in the proportion of people living in urban areas, and the ways in which each society adapts to this change."

"Deforestation is the removal of a forest or stand of trees where the land is thereafter converted to a non-forest use. Examples of deforestation include conversion of forestland to farms, ranches, or urban use."

International Development Project: Assessment & Suggested Improvement

Project: **Global Sustainability Initiative**

Location: **Dublin, Ireland**

Theme: Support sustainable practices across the world and improve quality of life

The Global Sustainability Initiative in an international independent standards organization composed of entrepreneurs and experts from across the world. Their global headquarters is located in Dublin but they also have offices in Geneva, Douglas, Washington DC, Lisbon, Perth, Brussels and Cape Town. Their overall goal is to work towards implementing sustainable practices through food, water, health, energy, education, and technology. Each category contains sub-projects that the organization is working on. To encourage countries to make these sustainable changes, GSI developed a virtual currency called BioCertz. This currency is similar to carbon pricing or an Emission Trading Scheme. It works by paying money to countries/organizations that hit certain sustainability quotas such as planting a large number of trees in an urban environment. BioCertz can be traded for other currencies, assets, retired, or donated. The topic we focused on was food and nutrition, specifically, "ready to use foods".

The Good:

The food initiative goals are to provide food security to those suffering from malnutrition by developing and mass producing ready to use foods. These foods are oil based, made from locally grown materials and high in calories and nutritional content. GSI uses village, community, and city farms to maximize production efficiency. Vertical farms are more profitable because they are capable of producing more food for the same amount of area, increasing productivity and reducing the overall cost. The Village farm produces approximately 500 servings of food a day, the Community Farm produces 5,000 and the City Farm provides a permanent location while distributing produce across multiple regions. This idea helps people across multiple countries by providing low-cost nutritional food. GSI is constantly experimenting with new ideas to create ready-to-use foods that are healthy, affordable and easily accessible. accessibility. This organization mitigates many of these issues if it is done successfully and people are educated.

The Bad:

While the GSI's initiatives are noble and seemingly well-thought out, the website is lacking some crucial information. This reduces credibility and raises questions about the foundation of their organization. There is not a date provided to show when the organization was created or who the founders are. Judging from the technology and projects listed on the website, GSI appears to be founded recently. This also raises questions about possible unintended outcomes that may result from their experiments. This appears to be a successful organization, but possibly needs more time to really get going. If the initiatives are already in place, better documentation of the results should be posted on the website. If they are simply in the idea stage, that should be clearly stated as well. Much of the wording on the website is vague, for example this statement taken from the page on ready to use foods sounds nice but raises questions as to how it would actually work in the field: "GSI regards malnourished people as legitimate customers and not as passive victims or mere beneficiaries. We are endeavouring to tailor nutritional products (recipes, formats, sourcing and delivery) to their needs as opposed to those of the agencies involved in supply." The organization seems to be tackling more than one group can handle. They also ask for donations to support the initiatives. If they are going to ask for money, more precise information should be shared.

Our Vote:

If we were given the opportunity to encourage the GSI project, we would. It seems to provide many creative incentives to help people and the environment in new ways. The initiatives support environmental sustainability as well as social sustainability by creating products that promote equality and well-being for everyone. If the intentions could become reality they would make a substantial positive impact. GSI needs to work on educating people about the organization and the opportunities it promotes to allow people to become more knowledgeable.

Three Actions to improve the project-

1.) People need to be more aware of this project. It provides many great opportunities that are supposed to help people, but they can't take advantage of their resources if they don't know they are there. A way to do this could be to increase advertisement and develop small interactive groups that would allow people to socialize and spread information.

2.) Checks and balances should be implemented so that people know their money is actually going towards the promised outcomes, not just someone's pocket.

3.) More information is needed in general on the website.

Kate Larkin + Mack Yeager

"Environmental injustice recognizes that economically disadvantaged groups are adversely affected by environmental hazards more than other groups.

To remedy this dilemma, environmental justice seeks to address these unfair burdens of environmental health hazards on poor communities."