

**Current Trends in Ecological Art**

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## **Abstract**

This study examines artworks of fifteen current ecological artists and ways in which their work remediates, reclaims, and restores ecologies. Art history reveals an evolution of this art from the onset of Land Art and Environmental Art in the 1960's to art as activism and an interdisciplinary approach to restoring blighted ecologies. The intent of the represented ecological artists is to address the well-being of ecosystems and to educate the public in the process. These artists must work in site specific areas that are in need of restoration or remediating. Many of the works fall into categories of water, land and soil, and public education, awareness, and participation although sometimes their processes involve all. Many of the artists collaborate with scientists and engineers in order to make all of their processes and visions work accurately and sustainably. These artists represent trends in ecological art processes and the research suggests their work makes significant and positive changes in ecologies and communities. As ecological and environmental issues are being brought more and more to the attention of society, the works of these artists can be seen as significant solutions to some of the ecological site specific problems.

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**Introduction:**

Throughout history, artists have created images as a means to communicate their relationship with nature. From the earliest cave paintings to the landscape painters of the nineteenth century, artists have shared their visions of the earth and their place in it. Contemporary artists from the 1960's to present day have also commented on this relationship not only creating artworks to be appreciated for aesthetic beauty, but also realizing that their role as an artist can be multifaceted. Environmental concerns have heightened artists' awareness of the significance of their voice and innovation in the reclaiming, remediation, and restoration of our natural environment<sup>1</sup>. Artists immersed in ecological and environmental concerns often collaborate with scientists and ecologists to create artworks that will benefit ecologies. Through processes such as cleaning up hazardous waste sites or restoring a polluted habitat, these artists make significant contributions to distressed ecologies and environments through their art. This thesis aims to introduce the reader to some of these contemporary artists who choose to make themselves art- activists, collaborators, and innovators.

**Statement of Research Problem:**

The purpose of this study is to: 1) determine artists who produce works in collaboration with scientists and ecologists, 2) examine artists who take an activist role regarding environmental concerns such as global warming and sustainability, 3) determine if artists have made an impact in the reclamation, remediation, and/or restoration of ecologies.

## **Statement of Research Questions and Objectives**

The questions for investigation are: 1) what defines an artist as an environmental or eco-artist? 2) who are some of the artists that are considered contemporary eco-artists and where are they working and exhibiting? 3) how do some of these artists believe they are impacting and contributing to the awareness of environmental and ecological issues? 4) how are some of these artists collaborating with environmental scientists and engineers in the creation of these works? 5) what are some forms of technology these artists are using to develop artworks?

## **Specific Considerations that may interfere with the response to research questions:**

- 1) The notion of global warming and climate change is a highly politicized debate and could interfere with gathering non-bias information.
- 2) The cultural context from which information is gathered and from which artists live could create bias.
- 3) The definitions and terms related to eco-art are varied and could skew results.
- 4) Some artists do not consider themselves ecological or environmental artists even if some of their work is defined as such by others.
- 5) The environmental movement has been exploited by some companies and they have commissioned artists to create works that are considered eco art, however, the carbon footprint for creating and exhibiting the work may be contradictory.

## **Significance of the Study:**

As a secondary art teacher in the state of North Carolina, the researcher is responsible for promoting environmental literacy into the curriculum as stated by the 21<sup>st</sup> Century skills document. Conducting this research will help the researcher synthesize the information to use in the classroom. The recommendations for environmental literacy are as follows:

- Demonstrate knowledge and understanding of the environment and the circumstances and conditions affecting it, particularly as relates to air, climate, land, food, energy, water and ecosystems

- Demonstrate knowledge and understanding of society's impact on the natural world (e.g., population growth, population development, resource consumption rate, etc.)
- Investigate and analyze environmental issues, and make accurate conclusions about effective solutions
- Take individual and collective action towards addressing environmental challenges (e.g., participating in global actions, designing solutions that inspire action on environmental issues)<sup>ii</sup>

The new North Carolina Essential Standards to be implemented in the 2012-2013 school year also state that students must “understand the relationship of the environment to art, including technology, preservation, and sustainability of resources.”<sup>iii</sup> This study will provide the information for the researcher to thoroughly delve into these themes with students.

#### **Assumptions and Limitations:**

The researcher assumes that finding resources relating to science and art as an interdisciplinary discourse will be successful. The researcher assumes that there are a substantial number of current artists working in this vein. The researcher assumes that the results of the study will be relevant to stakeholders. The researcher is a full time teacher and mother with many responsibilities and may be limited in time. The researcher may be limited by the politicized nature and ebbs and flows of environmental issues.

#### **Definition of Terms:<sup>iv</sup>**

**Art in Nature:** seems to find more inspiration in a type of Romantic Minimalism, reveling in the abstract beauty and decorative potential of ephemeral natural forms. As such, it usually lacks overt feminist, ecological or political content.

**Earth art and earthworks:** forms of "Land Art" which essentially use the earth itself as stage, material and canvas for conceptual art ideas.

**Eco-art:** is a contemporary art movement which addresses environmental issues and often involves collaboration, restoration and frequently has a more "eco-friendly"

approach and methodology.

**Ecological:** characterized by the interdependence of living organisms in an environment

**Ecology:** a branch of science concerned with the interrelationship of organisms and their environment.<sup>v</sup>

**Ecovention:** (ecology + invention) describes an artist-initiated project that employs an inventive strategy to physically transform a local ecology.

**Environment:** is the complex of physical, chemical, and biotic factors (as climate, soil, and living things) that act upon an organism or an ecological community and ultimately determine its form and survival.<sup>vi</sup>

**Habitat:** the place in which an organism lives; the place that is natural for the life and growth of an organism<sup>vii</sup>

**Land Art:** older term from the 60's and 70's that has survived in common usage and suggests art made outdoors on the land. This work tends to be more conceptual and symbolic than "Art in Nature". "Crop art", large images made in agricultural fields visible from the air, for instance, is a form of "land art".

**Restoration art:** refers to art which "restores" polluted or damaged ecosystems and landscapes. This would be considered a form of "eco-art".

**Watershed:** the land that surrounds and drains rain, snowmelt, and other water into a lake, pond, wetland, stream, or river.<sup>viii</sup>

## Literature Review

The focus of this study is to highlight several artists who, over the past few decades, have helped establish ecological art that strives to restore habitats, ecologies, or communities. This literature review introduces eco-art through an informative section of associated ecological artists and discussions of their work that have set the stage for current artists in this genre. This review is concerned with artists who have created or proposed works that provide solutions to problems facing urban and natural environments. The researcher will gather information pertaining to eco-art in a historical



context and use this information to develop lessons that will help students foster environmental awareness, a 21<sup>st</sup> Century Skills target.

A brief history of how nature became art is beneficial when discussing ecological art. Elements from nature become the medium in contemporary ecological art, which has inherited many terms and definitions over the years. Environmental Art is an umbrella



Robert Smithson, *Spiral Jetty*, 1970

for many types of works that use elements from nature as media.

Land Art, Earth Art, or Earthworks are examples of these works of art and range in scale and approach.

This approach to art developed around the 1960's and was a reaction

to the political and social climate at the time.<sup>ix</sup> Robert Smithson's *Spiral Jetty*<sup>x</sup> is one of the first examples of this type of work in which elements from nature were used as an artistic media placed in nature. This work was created in the landscape and was built using indigenous materials. The significance of this movement in art was that it once again called attention to nature though not necessarily with the intent to protect or conserve.

Another impact that Environmental Art had on artists was that it challenged the boundaries of where art could be exhibited. Because elements from nature are the media displayed in nature, the gallery was no longer needed by these artists to display their work. This paved the way for artists to start creating in new venues and in public spaces.<sup>xi</sup> Most of these environmental works varied in content. Many of the works were

created with heavy machinery with little or no consideration of the ecology of the site. Some of the artists, however, began to use natural materials to make a statement about the relationship between man and nature.

Artists who worked outside the traditional boundaries of art-making changed how art might function within or outside of the museum.<sup>xii</sup> In 1970, Helen and Newton Harrison created *Making Earth*.<sup>xiii</sup> This work explored more than just using nature for aesthetic or rebellious reasons. According to the Harrisons, they began to understand how topsoil was endangered world-wide. Using elements like sand, clay, sewage sludge, leaf



material, and manure over a four month period they literally made earth. According to their website, the largest making of earth was ArtPark in 1977. In an exhibition called, “Revered Earth”, they created the smallest making of earth.<sup>xiv</sup>

Helen and Newton Harrison, *Making Earth*, 1970

### **Intention of Eco-Art**

The type of art the Harrisons created has been coined eco-art and it is considered a contemporary art movement that addresses environmental issues and often involves collaboration, restoration and frequently has a more "eco-friendly" approach and methodology.<sup>xv</sup> One could say that the beginning of the environmental movement was heralded by the publication in 1962 of Rachel Carson’s *Silent Spring*, “...credited with no less than inspiring the modern global environmental movement.”<sup>xvi</sup> After this publication

artists and activists started to create art in order to communicate to the public how industry was creating pollutants that were detrimental to the environment. Holmes says:

Early experiments in generating environmental awareness through art were conducted in projects from the 1960s through the 1980s using a variety of strategies still utilized by artists today: real-time clean up, outdoor performances, community engagement, scientific collaboration, and perhaps most importantly, public education.<sup>xvii</sup>

Often artists work with many different specialists when creating these works. Artist Tim Collins states, “The interdisciplinary intention is to mitigate the affected environment and the values that radiate outward from the experience of post-industrial place. It is in the act of reclamation that the aesthetic experience is created.”<sup>xviii</sup> The intent of these artists is to respond to environmental issues in a variety of ways, including the above, and by framing the problem with traditional media such as photography, paintings, and drawings.

Another term for the work these artists create is called an ecovention. The term ecovention (ecology + invention) describes an artist-initiated project that employs an inventive strategy to physically transform a local ecology.<sup>xix</sup>

Thomas Berry, author and theologian, writes in “Art in the Ecozoic Era” that artists have historically created images that have displayed human connection to the earth such as the romanticized paintings of landscapes created by the Hudson River School. In this article, he discusses that although this was significant we have now entered a new era in which the artist must play a significant role in awakening humanity to our communion and spiritual presence with the earth. He prescribes that “this presence and its connection to the surrounding universe are necessary for any authentic phase of the human, but are

needed in special manner by the artist.”<sup>xx</sup> His request of the artist is to provide us with deep connections and communion with the earth. He ponders how this realization will play itself out in the future and how the arts will be a part of a new aesthetic. In 1992, when this article was written, few artists were on the ecological art scene. Some of the artists reviewed in this article were encouraged and inspired by the writings of Thomas Berry and his philosophy of the necessity to change humanity’s consciousness and interaction with the planet.

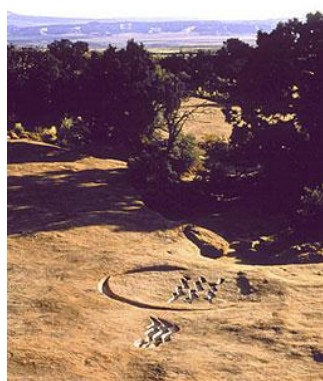
Other authors also speak of this ecological imperative. In the article “Eco-Art: Strength in Diversity”, Patricia Sanders states that the postmodern artist has a unique potential to raise awareness and advance the mind-set about our survival and well-being in regard to the earth. She critiques several of the artists included in this review as a means to show how their art affects audiences and restores “ecological sanity.”<sup>xxi</sup>

Art Curator and writer Adriana Bianco has stated that the ecological art movement is a worldwide movement based on ecological awareness and the harmonic coexistence of human beings and nature. She states, “It is a revitalizing movement in terms of materials used in works of art, which are in many cases, recycled and natural at the same time.”<sup>xxii</sup> The following artists will be reviewed for their ecological stance and their pioneering of these art forms. Some of them could be considered community activists and advocates. They vary in their approach and media choices. Some of them produce works that make an impact in the reclamation, remediation, or restoration of ecologies.

### **Pioneering Ecological Artists**

Suzi Gablik, art critic, writer, and artist, has written many articles and books

regarding the need for art to take on social, environmental, and moral issues. In her book, *The Reenchantment of Art*, she discusses that increasing numbers of artists are beginning to think, feel, and act more relationally to the earth. In 1991, she imagined that this new ecological sub-text for creating art may indeed be a new aesthetic tradition among artists.<sup>xxiii</sup> One of the artists she featured in her book is Lynne Hull. Hull is an artist who has always been appreciative of Earth art, but felt it to be egocentric and intrusive. In the 1980's, her medium became the earth and she started etching what she calls hydroglyphs into the desert. These glyph-like etchings collect rain water for desert wildlife. Recently, she has called her works ecoatonement. "Ecoatonement is my term for participating in habitat restoration as atonement for the damage we have done to the environment, the habitat lost to human use which has brought so many species to the brink."<sup>xxiv</sup> Over the past few years, she has designed sculptures for eagles and other birds of prey that were being electrocuted by power transmission lines. She collaborates with scientists and zoologists to help find the right migratory paths and sizes for her sculptures.



Lynne Hull, *Flowing Water Moon*, Utah, 1992-95



Lynne Hull, *Sculpture for migratory birds*

Like Hull, Patricia Johanson, another ecological artist has collaborated with scientists, engineers, and other specialists and has also produced several large scale projects. Johanson is considered one of the first artists to think of art as a means to restore



Patricia Johanson, *Leonhardt Lagoon*

ecologies. In 1981, she created *Leonhardt Lagoon*.<sup>xxvii</sup> This work was commissioned in order to restore a Lagoon in Texas that had become overgrown with algae and other forms of life not conducive to a healthy system.

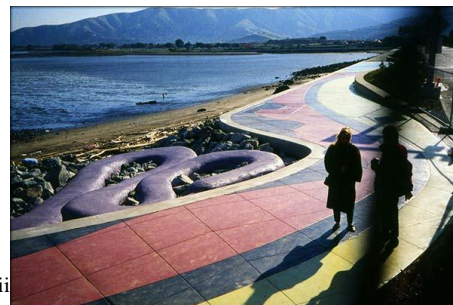
She created a series of flowing pathways that were organic in nature and used certain plant life to help with erosion and water purification.<sup>xxviii</sup> She worked closely with many different professionals including the Natural History Museum and scientists so that she was aware of all of the local flora and fauna. She utilized patterns from local vegetation as inspiration for the bridges and paths that enable visitors to view the local ecology. “This ecological yet aesthetic and functional landscape will extend the space of the Museum out-of-doors, providing a living natural history exhibit as well as contemporary sculpture garden.”<sup>xxix</sup>

Johanson says about public sculpture, “Artists should have the courage to move away from work oriented to money and power and use their creativity to help solve critical problems in the "real" world.” She also states that, “Monolithic thinking must be replaced by an aesthetic that stresses layering, overlapping, and interweaving. By developing a psychology and ecology of design, we might begin to move towards humanistic societal goals, while allowing the earth to live.”<sup>xxx</sup> In 1987, Johanson was

commissioned to design a linear park at Sunnydale Facilities which is titled *Endangered Garden*. This is a pump station and holding tank for water and sewage in San Francisco. The project allowed for habitat restoration while at the same time engaging the public in the ecosystem. The walkway is a sort of “baywalk” in which the endangered garter snake has been incorporated into the design.<sup>xxxii</sup> An article from 1992 in *Art Journal* includes Johanson as an artist who transforms sites for the benefit of the ecology. This article reviews artists that were fresh on the scene in helping to educate and enlighten people about environmental issues.<sup>xxxiii</sup>



xxxiv

Patricia Johanson, *Leonhardt Lagoon*, 1992

xxxiii

Patricia Johanson, *Endangered Garden*, 1987

Bonnie Ora Sherk, a well-known artist who has brought nature to the urban population through her art, is also considered an educator as well as an environmental architect. In 1974, she envisioned and created The Farm in San Francisco, California. “The Farm is the most ambitious urban or wilderness ecological art project to date.”<sup>xxxv</sup> The Farm created a space for learning as well as performance arts. A focus on learning about land use and sustainable agriculture, The Farm served as a resource, providing workshops on a variety of art media at this unique environmental and social art site. The site was, “...perched on five and a half acres that encompass a tangled freeway system, four different ethnic neighborhoods, and three water springs.”<sup>xxxvi</sup>



xxxvii

Bonnie Ora Sherk, *The Farm*, 1976

Betty Beaumont is another artist who has created works that solve environmental problems. Initiated in 1978-1980, her work titled “Ocean Landmark Project” has been reviewed again and again. This work is at the bottom of the Atlantic Ocean. Presently, this work is flourishing with life. Beaumont collaborated with many experts as well as researched the medium that defines this underwater work. The medium that she used and had to research was an industrial waste material of coal. She created, “17,000 blocks from 500 tons of stabilized coal fly ash, an industrial waste material made inert, which was control dumped in the Atlantic Ocean.”<sup>xxxviii</sup> She also investigated reef-building methods that were used in Japanese fish harvesting. Learning how to create open spaces that attract different species of fish was one of her goals.<sup>xxxix</sup> A film accompanied this work in order to document and create dialogue in a museum setting. Christopher Payne writes, “As an artist, she is not an isolated individual in a studio but an active participant in effecting change, confronting directly the physical, technological, and political forces that shape the making of the work and of the world.”<sup>xl</sup>





Betty Beaumont, *Ocean Landmark*, a simulation to-scale of the materials used for the armature has become a surrogate for the project, 1980.

When researching eco-art, artist Tim Collins name appears often in the search engine. In 1997, Collins, along with various other specialists and consultants, devised the *Nine Mile Run Project*. “The intent of our expanded collective creative practice is to define and value a new category of urban environment, a new kind of urban aesthetic experience.”<sup>xlii</sup> The site in Pittsburgh was an industrial waste site in which slag was introduced into a stream and was in need of reclamation. The artists spent much time discussing and planning what could be made of the site and Collins and biologists decided in 1999 that the slag heaps offered more biodiversity than would introducing a lawn or park. Collins coated the slag with mulch that enabled grass seeds to flourish. “By later spraying mulch containing a mixture of nutrients and grass seeds onto this man-made landform, the NMR-GP team demonstrated how to transform this gray mountain into a slag garden.”<sup>xliii</sup> The site is rich in ecological and cultural benefits. The community has become more aware of the importance of watersheds and biodiversity.<sup>xliv</sup>



Tim Collins, *Nine Mile Run Project*, 1996

Artist Jackie Brookner is a sculptor and writer and for the past two decades has considered the relevance of art in the context of Thomas Berry's book *The Dream of the Earth*. She quotes Berry in her article, "The Heart of the Matter", and believes that art concerned with ecology is necessary in making imperative changes in our consciousness regarding how we interact with our planet. She believes that artists working with scientists, engineers, landscape architects, and municipal authorities are not just helping to solve real world problems, but are feeding humanity's "imagination with positive images of participation and regeneration."<sup>xlv</sup> Her closing remark in this article is: "It is time for us all to participate in the healing and regeneration of the earth. We can only do this if we can imagine it." Her sculptures over the past few years have done just that. She has trademarked the term Biosculptures which "are biogeochemical filters that demonstrate how natural systems have the capacity to use pollutants and toxins as nutrients and resources-cleaning the air and purifying water in the process."<sup>xlvii</sup>

One of her more recent projects is a collaborative effort with reclamation artist

Angelo Ciotti. In 2004, they created The Elder's Cove Biosculpture in West Palm Beach, Florida. The two artists worked together to construct a landscape complex that includes a fourteen foot biosculpture which utilizes wetland plants to filter water in a lake on the grounds. They also restored the area by planting native plants and have provided the public with viewing docks of the habitat.<sup>xlviii</sup> Lourdes Ferris, Executive Director of Keep Palm Beach County Beautiful, has said that ecoart like Brookner's educates the public on environmental concerns through functional and visually interesting sculpture.<sup>xlix</sup>



Jackie Brookner, *Biosculpture*, 2002

Brookner mentions artist Mel Chin's *Revival Field* in her article "The Heart of the Matter". In this installation, Mel Chin speaks about the use of plants as a carving away of metals much like Michelangelo carved away stone to reveal David. Using toxic earth as his medium, Chin changes the ecology of a place from one that is decaying to one that is thriving. Zinc, Cadmium, and other metals pollute the earth and special plants called hyperaccumulators are introduced into the landscape.<sup>li</sup> Once harvested, the plants are burned and the metals are drawn out of the soil. *Revival Field* was conceived in 1990 after Chin had researched the work of a professor interested in plants as a means to clean up toxic waste from soil. It consists of a sixty square foot section of a landfill and was planted in the shape of a circle. A fence outlines the square area as well as the circle of

crops.<sup>lii</sup> In *Provocative Eco-Art in Action*, an article by Victoria Vesna, the art of Chin is described as addressing issues of habitat devastation, restoration, and sustainability of the planet's biodiversity. According to this author, Chin's works of art ultimately benefit science.<sup>liii</sup>



Mel Chin, *Revival Field*, 1990-present

Another artist who uses nature and science to make a statement is Mark Dion. His work *Neukom Vivarium* is part of the reclaimed hazardous waste site in Seattle which is now a large sculpture park. Dion feels particularly connected to the Hudson River School of painters and their rendering of the wilderness. His work also focuses on the wonder, complexity and diversity of a natural system. In 1996, a large hemlock tree fell in a protected watershed near Seattle. Dion and a team of scientists, students, and advisors went to the forest and removed the tree along with living debris and organisms around the tree. He worked with architects to re-contextualize the tree into a greenhouse that is almost like a life support system for this tree. He takes a forgotten element and brings it back to the city. In many ways the work is a science project where many variables play into the sustainability of the artwork. He created a very technological

piece in which the greenhouse is part of the work and it is created so the forest is replicated with moisture and sunlight.

An educator is present at all times during visiting hours. Viewers learn about the ecology of the site and the different plants and animals that live in the forest. Clay tiles inscribed with drawings of plant life and wildlife adorn the casket-like structure in which the tree rests. The work is an ever evolving piece that in Mark Dion's eyes holds a mirror up to the present, a great test of our relationship with the earth. If we pass, the planet survives.



Mark Dion, Neukom Vivarium, 2006

Stacy Levy, an artist whom one might consider an activist and an advocate for environmental issues, involves the communities in which she works in the processes of her creations. Her interests lie in science and art, and she works with many specialists in other fields in order to respond to community and place as well as to reclaim distressed areas. In 1995, she began the AMD&Art Project. “In *Acid Mine Drainage & Art, Project for Vintondale* (1995–2005), she collaborated with a landscape architect, a geologist, and an historian on acid mine drainage in Vintondale, Pennsylvania. Levy explained the

effect of the coalmines on the environment, while restoring nature to its preindustrial state.”<sup>lvi</sup> In this project she treats the water and shows the process. Levy says:

The Litmus Gardens, hedgerows of native trees and shrubs vivify the process of the water treatment, reflecting the color of the water as it progresses throughout the treatment basins from deep orange, to yellow and then to pea green. The design of the water treatment wetlands brings the massive scale of the mining operation back to the site, with raised plinths of soil demarcating the footprints of the original mine buildings.<sup>lvii</sup>

She invested the community in her efforts by working with high school science classes and the boy scouts.

In the vein of ecological activism and land reclamation, Aviva Rahmani began Ghost Nets in 1991. Lucy Lippard, a world renowned author and critic of contemporary art, delivered a Press Release about Ghost Nets in the year 2000. She describes how Rahmani purchased 2.5 acres of land in Maine that connected 70 acres of a class-A migratory-bird fly zone. The project took place over a nine year period and each day Rahmani would house keep the land making small changes and documenting those changes through her art and visual journals. Lippard says, “Rahmani's journey as artist-cum-ecological rehabilitator has yielded not only a renovated salt marsh but a large body of documentary artwork, which includes paintings, photographs, videos, performance-art pieces, and formatted journals.”<sup>lviii</sup> Rahmani says about the early stages of the work, “Collaboration is essential to the Ghost Nets project. Each phase is marked by a cluster of planned actions that involve others. Each action is simple, performed as a humble daily housekeeping chore, such as tending a garden.”<sup>lix</sup>

The last eco-artist to be reviewed is actually a non-profit arts trust, including artists Ian Hunter and Celia Garner. Their work responds to social, environmental, and social change through collaborations, innovative art practices, and cultural strategies.<sup>lx</sup> Littoral is the name of the trust and since 1990 it has been engaged in environmental projects in conjunction with Agenda 21, the initiative created after the Rio summit in 1992. This summit included world leaders and their commitment to reaching attainable targets for ecological and environmental sustainability. The Projects Environment, *Crafts and Environment*, has worked in North West England to develop new employment opportunities and craft making in willow. The website includes the following information about the program:

The trust has worked with farmers, energy specialists, architects, artists, and engineers in promoting new applications for willow in: energy production (short rotation coppice for bio-mass energy); bio-engineering - riverbank reclamation and eco-friendly engineering; public art; architecture; and farming. We have organized conferences and workshops bringing together farmers, growers, artists, basket makers and engineers to explore economic, environmental and creative applications of willow and willow crafts.<sup>lxi</sup>

The organization also developed a classroom for learning in which a sculpture of a willow is the learning environment. “The Tree of Life Outdoor Environmental Education Project” has taught children the value of the willow and its uses. It has advocated the use of the arts in ecological sustainability. The use of the willows at this location also bridged into environmental sculpture and increased economic growth for the locals. New

initiatives include using the regional willow for bio-mass energy and sustainable farm-produced energy.<sup>lxii</sup>



Ian Hunter. Growing tree sculpture, summer 1990<sup>lxiii</sup>

## Summary

The artists above have been working in this vein for several years. Most of them have established websites where one can read about their site specific work. They have been widely recognized in publications and some have been featured on the PBS series Art 21. The nature of eco-art is that it is hard to exhibit. When exhibited, it can be judged as misguided as evidenced by an exhibit titled *Radical Nature* at the Barbican London and a show called *Earth: Art Changing the World* at the London’s Royal Academy of Arts in 2009. The Copenhagen Summit on climate change was taking place at the same time, and a pharmaceutical company sponsored the show at the royal academy. The art of the show “nominally dealt with climate change, but included no reflection on the causes, consequences or politics of global warming, dwelling instead on the way in which climate change is supposedly redefining our sense of beauty”.<sup>lxiv</sup> These exhibitions proved that for some “eco-artists” it is hard to let go of the market–governed gallery system. Many eco-artists, such as many reviewed above, have let go and are immersed in



their art becoming something greater than commodity.

Sam Bower saw a need to recognize these artists and he established greenmuseum.org which is a database of environmental and eco-art. “This online museum emerged from our own experiences making environmental art and from seeing firsthand some of the challenges facing artists, community groups, nonprofit organizations and arts institutions when it came to presenting and discussing environmental art.”<sup>lxv</sup>

This type of network is a reaction to the art system that has ruled much of the 19<sup>th</sup> and 20<sup>th</sup> century. Suzi Gablik states, “The phenomenon of networks as a new pattern of organization is nowhere more evident than among the different “communities of practice” to be found on the internet.”<sup>lxvi</sup> She discusses the greenmuseum and how it produced an exhibition called Ecovention in 2002 at the Contemporary Art Center in Cincinnati. The show included artists like Jackie Brookner and Mel Chin. It invited collaborations with specialists in other fields to solve ecological problems creatively. Amy Lipton, the curator, has been very involved in the process of finding artists who “cross the line from traditional art production and institutionalism into the larger context of human and non-human communities.”<sup>lxvii</sup>

Gablik proposes that this type of collective is exactly what is needed to promote the change discussed by Thomas Berry. Twenty years after he spoke of an ecological imperative, we are faced with more environmental challenges than he knew at that time would exist such as finite natural resources, climate change and hyper-dependency on oil, to name a few. Many of the artists and writers in this review tend to rely on the philosophical and spiritual when talking about the need for change. They fail to delve into the real issues facing the earth and humanity such as water shortage and climate

change as well as population surge. The researcher expects to find more critical reviews as she explores contemporary artists using new technologies to face these challenges. New technology affords more artists the opportunity to produce collaboratively with a focus on multidisciplinary action in order to restore ecologies.<sup>lxviii</sup>

One can deduce from this literature that eco-art has encompassed many methods for implementing the remediation, reclamation, and restoration of ecologies and communities. Clearly, there are many positive transformations occurring through the interventions of artists and their collaborators. The artists reviewed are well informed and have diverse methods for creating and networking. Although questions arise whether some of these artists are bridging too far into other disciplines, they are no doubt fulfilling the need for social awareness and change that our ecologies and environment desperately need. More research is needed to discover how contemporary eco-artists are using new networks, collaborations, communities, and technologies to further their desires to implement positive change. New technologies will enable the researcher to find new innovators and artists who are working collectively and across disciplines to further the trend of eco-art.

### **Methodology**

The rationale for this study is creating a representation of some of the current trends in eco-art and how technology and social networking is impacting these artists' abilities to remediate, reclaim, or restore ecologies and educate viewers and others about environmental concerns.

### **Subject Population**

The primary population in this study will consist of approximately fifteen eco-artists who are currently working or have created eco-art from 2006 to present day. The

researcher will include both genders in the research. The researcher will not put geographical limitations on the artists studied.

### **Procedures**

The researcher will utilize online sources including the university's library sources, additional print media of the artists, the topic and the artists' artworks in order to discover how current eco-artists are reclaiming, remediating, and restoring ecologies. The researcher will document all information and sources in a journal with consideration of source validity. As the investigation continues, additional relevant information may be included. The researcher will describe how their art is impacting ecologies and/or educating viewers about environmental concerns. The researcher will describe how current technologies including social networking have assisted in the artists' creations.

### **Instruments and Data Collection**

The instruments for this study will include skype interviews, e-mail responses to interview questions, library sources, and web-based research on the artists and their work. The researcher will use greenmuseum.org to find out the names of current artists to establish a population of artists to study. From this investigation other sources for artists will likely emerge and be utilized if necessary.

### **Procedures for Data Analysis**

Using interview information, artifact collection, and data from investigation, the researcher will begin to code descriptively in order to see patterns and themes that emerge that will help answer the research questions. At this point, the researcher plans to gather the research for my population and then begin the coding process. As research develops and evolves, data analysis may likely need to be adjusted and revamped for

organization and categorical identification.

Interview Questions:<sup>lxix</sup>

1.	What defines you as an ecological or environmental artist? Describe your work.
2.	Where do you exhibit your art?
3.	How do you exhibit your art?
4.	How do you collaborate with others in the creation of your work? Have you worked with environmental scientists and if so what does this collaboration look like?
5.	How does your work affect the environment? How does your work reclaim or restore ecologies?
6.	How does technology impact your work? This question can include how social networking has promoted your work and collaboration as well as technological advances and innovation that help you solve artistic problems.
7.	If you promote environmental awareness through the creation or exhibition of your work, what does this education look like?

### **Timeline**

The timeline for this investigation is approximately two and a half years from November 2011 and will be conducted while the researcher attends the University of North Carolina at Pembroke online.

### **Summary of Research Intent**

A population of contemporary eco-artists will be investigated by the researcher to discover how they are helping raise awareness and solving real world problems dealing with ecological concerns. A focus on how these eco-artists are using technology will also be a concern for the researcher.

## Findings:

### 1) What defines an artist as an environmental or eco-artist?

The artists selected for this study meet the definition of an ecological artist that has become accepted in the art world. The most acclaimed definition has been created by Beth Carruthers who has spent the past 20 years exploring the relationships of humans and nature and has concentrated her work on defining the role of aesthetics in raising the awareness and initiating ethical sensibilities towards the environment.<sup>lxx</sup> In an email to the researcher, she shared her much published and cited definition from *Art As Ecology*:

Ecological Art, or EcoART, is not simply art about, or in, the environment, but is work that addresses the well-being of ecosystems, the impacts humans have within ecosystems, the kind of relationships we have with the places where we dwell, and the other species with whom we share these places.<sup>lxxi</sup>

The term eco-artist is often used synonymously with environmental artist; however, Sam Bower of greenmuseum.org likes to use “eco-art or “ecological art” to distinguish contemporary activist approaches from earlier land and earth art movements. “Environmental art” is an older term that best serves as an umbrella term that encompasses “ecological or eco-art,” “ecoventions,” “Land art,” “Earth art,” “earthworks,” “art in nature” and a few other less common terms. The term “environmental art” often encompasses ecological concerns, but is not specific to them.<sup>lxxii</sup> Needless to say, there are still some people who use the term environmental to describe artists that are truly affecting ecologies and are in fact eco-artists. For instance, Mrill Ingram uses the term environmental artist in her recent article *Sculpting Solutions: Art Science Collaborations in Sustainability*, although the artists’ works she describes

would better fit under the term eco-art. Ingram discusses several current artists whose projects “solve on-the-ground ecological challenges, take action in the context of social complexity, and further environmental science.”<sup>lxxiii</sup> Within this context, these artists reach across scientific disciplines and embrace information and technology to help design strategies and offer solutions to environmental problems.<sup>lxxiv</sup> Ingram’s description falls in to the definition of eco-art provided by Bower and Carruthers. Eco-artist Aviva Rahmani defines ecological art as “an art practice, often in collaboration with scientists, city planners, architects and others that results in direct intervention in environmental degradation. Often, the artist is the lead agent in that practice.”<sup>lxxv</sup> This definition tends to broaden the scope of what defines an aesthetic work and who is in dialogue when the creation of the work happens. As eco-artist Shai Zakai explains in her article *Changing Aesthetics, Creating Teams*, the artist is crucial in environmental teams because there is a need for artists to:

investigate environmental issues and channel their creative forces towards, “responses”, “investigations”, “actions” for solving environmental issues. These words replace the traditional words of an artwork process; painting, sculpting, photographing. These words daylight the process itself as an artwork, instead of the material which the artist is using.<sup>lxxvi</sup>

The artists included in this study fit within the definitions outlined above and are considered and referred to as eco-artists. Two of the artists interviewed are not necessarily concerned with labeling their work as eco-art. Betsy Damon says in her interview that she does not like labels, but she is an eco-artist and there is nothing more important to do than ecologies. In 1989, before eco-art had a definition, she decided she

was not going to create work she was going to have to sell or give to a museum. She says, “All of my work would be functional with ecologies.”<sup>lxxvii</sup> In an email response, artist Stacy Levy also commented on labels, saying she does not really think about labels, but would consider herself an eco-artist although she works primarily as a sculptor. She says, “it does not really matter to me what I call myself. It matters what my art does.”

lxxviii

## **2) Who are some of the artists that are considered contemporary eco-artists and where are some of them working and exhibiting?**

The process of selecting participants for the study and answering the questions who are some of these artists and where are they exhibiting began after the researcher learned of artist Angela Haseltine Pozzi on NPR. The Show eTown featured Pozzi during a segment titled the E-Chievement Award which enables listeners from around the country to nominate individuals who are making a positive impact in their communities and beyond.<sup>lxxix</sup> Artist Angela Hasaltine Pozzi was featured as having won the E-Chievement award for her remarkable work with creating The Washed Ashore Project. The researcher emailed the artist interview questions and discovered the artist has created a community engaged in cleaning up thousands of pounds of plastic debris from Oregon’s beaches and processing it into art supplies resulting in large scale sculptures of animal and marine life most affected by the plastics. In her interview responses, she explained that she exhibits the art at a variety of venues. The locations for the exhibit are not limited to art galleries, but are well received and highly productive being displayed in aquariums, zoos, marine animal rescue centers, science centers, and school/college campuses around the country. Office buildings with huge lobby areas have expressed

interest in hosting the exhibit and many of the pieces are built to withstand outdoor exposure and are great for drawing in passers-by.<sup>lxxx</sup>



lxxxi

Henry welcomes people to the Living Coast Discovery Center

Finding other eco-artists to include in the population of artists proved a bit more daunting. [www.greenmuseum.org](http://www.greenmuseum.org) was used as a place to start a purposive sampling. Many of the artists presented in the list were focused on environmental concerns, but their work did not necessarily meet the criteria and definition of eco-art. Through this investigation, the researcher found the work of Susan Leibovitz Steinman. Although she was unable to answer interview questions because of her work schedule, she led the researcher to Women Environmental Artists Directory, better known as WEAD of which she is the editor and co-founder. Through this directory, many artists were presented to investigate. Several of the artists included in the literature review were showcased on this website including Jackie Brookner, Lynne Hull, Stacy Levy, and Aviva Rahmani. These four women are still actively engaged in projects which help restore, reclaim, and remediate ecologies. Because these women have been invested in this type of art making



and collaborations for over twenty years, they also became paramount in helping find other artists working in this vein. Snowball sampling occurred when Aviva Rahmani emailed the researcher the names Lillian Ball, Frances Whitehead, and Shai Zakai. Artist Betsy Damon became a participant because of research on the WEAD directory. Damon agreed to a Skype interview and led the researcher to Christine Baeumler and Bob Bingham. The WEAD website also had a link to Florida eco-art where Michael Singer and Xavier Cortada were added. Through other searches, the researcher found Freya Bardell and Brian Howe whose site specific collaborations since 2005 have aimed to “provoke creative dialogue about deep ecological issues.”<sup>lxxxii</sup>

#### **Artist Participants/Population for Study**

Angela Haseltine Pozzi	Susan Leibowitz Steinman
Jackie Brookner	Lynne Hull
Aviva Rahmani	Lillian Ball
Frances Whitehead	Freya Bardell and Brian Howe
Shai Zakai	Betsy Damon
Stacy Levy	Michael Singer
Xavier Cortada	Christine Baeumler
Bob Bingham	

These artists are all current eco-artists whose work is usually site specific installation or process oriented. 100% of the artists in the list have participated in some kind of public installation work that affects ecologies and strives to raise public

awareness about the degradation of the site and the work they are doing to revitalize it. Results and processes of these eco-artists are also highlighted and “exhibited” on several websites; however, the following seem to emerge as the most significant and most cited resources for eco-art resources and databases. They are [www.ecoartspace.org](http://www.ecoartspace.org), [www.ecoartnetwork.org](http://www.ecoartnetwork.org), [www.weadartists.org](http://www.weadartists.org), and [www.greenmuseum.org](http://www.greenmuseum.org). Eight out of the fifteen artists are on [www.greenmuseum.org](http://www.greenmuseum.org). Eight women out of the fifteen are also on [www.weadartists.org](http://www.weadartists.org).

Patricia Watts and Amy Lipton are two curators dedicated to environmental concerns. Since 1997, they have had [www.ecoartspace.org](http://www.ecoartspace.org) to promote, “a diverse range of artworks that are participatory, collaborative, interdisciplinary and uniquely educational.”<sup>lxxxiii</sup> Their “philosophy embodies a broader concept of art in its relationship to the world and seeks to connect human beings aesthetically with the awareness of larger ecological systems.”<sup>lxxxiv</sup> The researcher emailed the women to see how many of the population of artists on the list they have helped to exhibit or worked with in some capacity. 11 out of the 15 artists have worked with Watts and Lipton.

In addition to exhibitions online, most of the artists researched exhibit their results and/or processes in a museum setting or a more traditional art setting. An example of a more traditional exhibition space showcasing eco-art took place at Wave Hill in the Bronx. In [ecoartspace](http://www.ecoartspace.org)’s blog, curator Amy Lipton spoke about a 2010 exhibit titled *Remediate/Re-vision: Public Artists Engaging the Environment*. Two of the participant artists, Jackie Brookner and Lillian Ball, were included in this exhibit. Lipton describes the space:

The exhibition design provides each artist or artist team with a large wall presentation including text, photographic images, documentation, and in some cases videos. It's graphically crisp and clear to look at if somewhat bookish. Curator Jennifer McGregor explained to me that the entire exhibition will be very easy to travel as everything is designed on computer files that can be sent without shipping anything. Nice to see a "green" show with a green concept for travel! This exhibition focuses on current or recently completed projects with a few exceptions.<sup>lxxxv</sup>



lxxxvi

#### Remediate/Re-Vision Exhibit at Wave Hill

The interview with Betsy Damon revealed her efforts to exhibit her work at the Mattress Factory in Pittsburgh. The Mattress Factory is a contemporary art museum designed for installation work which is created on site by the artists participating in the shows.<sup>lxxxvii</sup> At the time of the interview, she was just getting ready for the opening at this venue of her installation *Water Rules-Life* which is part of a show titled "Feminist and..." She hopes that this installation will help change people's consciousness and invites them into the conversation of the issues of Pittsburgh and its issues with rain water.<sup>lxxxviii</sup>



Betsy Damon, *Water Rules-Life Installation*, 2012

Outdoor exhibition spaces which most often accompany indoor facilities are becoming prevalent and are hosts to eco-artists. These exhibition spaces are often on large tracts of land where the eco-artists can showcase their works and actually impact ecologies. An example of this type of contemporary exhibition venue is The Schuylkill Center for Environmental Education which is located in Philadelphia. The SCEE is located on an ecologically important watershed and since 2001 has been using their environmental art department to encourage the public to learn and embrace environmental awareness. In 2012, the center revamped this art department and has been focusing on projects that actually solve ecological problems. The vision is to have projects that result from collaborations between artists, scientists, architects, ecologists, engineers or urban planners and members of local communities.<sup>xc</sup> Susan Steinman and Stacy Levy are two of the artists researched that have utilized this space for site-specific installations. The exhibition titled *Down to Earth: Artists Create Edible Landscapes* featured six artists or artist teams and was co-curated by Amy Lipton. The work done by these artists focused on sustainability in regard to food, art, design, and agriculture.<sup>xci</sup>

Another exhibition site for artists such as Lynne Hull is *The Land: An Art Site*. The site is located in New Mexico along the foothills of the Manzano Mountains. Artists

use this off-grid land to explore their ideas regarding art in the environment. They also have a gallery in Albuquerque in which artists can showcase the work they have done in the environment at the site.<sup>xcii</sup> In the summer of 2009, Lynne Hull created “Water Songs, Bird Songs” at The Land/An Art Site. She realized that the arroyos would deplete quickly leaving few water sources for desert wildlife. At the site, she created hand built interventions of stone and native plants intended to create pools to hold water longer.<sup>xciii</sup>

Because the aim of these artists is to impact and remediate ecologies, most of their work is site-specific. When answering the question where do some of them exhibit, one can also turn to some individual works to find actual locations and sites. In the article, *Sculpting Solutions* by Mrill Ingram, she discusses Lillian Ball, Frances Whitehead, Jackie Brookner, and Aviva Rahmani’s works. In the article, Lillian Ball’s work that takes place along the Bronx River in New York is highlighted and discussed. Ingram moves us to Chicago to focus on the work of Frances Whitehead. She mentions Brookner in the article and says she “has taken on a number of ecological projects around the world.”<sup>xciv</sup> Artist Aviva Rahmani “has worked on environmental issues in Delhi, Copenhagen, and New Orleans” in addition to the work in Maine highlighted in the literature review of this document.<sup>xcv</sup>

In summary, all of the artists featured have exhibited in a museum setting. 14 out of the 15 artists have created site specific installations that help remediate or reclaim ecologies. 2 out of the 15 have created permanent architectural structures.

### **3) How do some of these artists believe they are impacting ecologies and contributing to the awareness of environmental and ecological issues?**

These site specific works provide a good segue way into answering the questions how do some of these artists believe they are impacting ecologies and contributing to the awareness of environmental and ecological issues. Each of the artists has a specific goal in mind when reclaiming and restoring sites and educating the public about environmental concerns. Site specificity and aims of artists can be categorized into water, land and soil, and public education, awareness and participation although the latter is generally part of all of their processes. The researcher will organize some of the artists based on these categories.

#### **WATER:**

Lillian Ball's project, WATERWASH ABC, goal is to "educate people about the metabolism of urban water and the causes of river pollution and familiarize them with the capacity of soil and plants to strip water of most pollutants."<sup>xcvi</sup> The water quality of the Bronx River is affected by overused sewer treatment facilities release of storm water and untreated sewage into the waterways occurring after heavy rains.<sup>xcvii</sup> Ball partnered with many during this project, including the local youth organization Rocking the Boat. The project provides a storm water mitigation system as well as serving as a public park. She, along with her collaborators, created a wetland and constructed a recycled glass permeable pavement technology that allows visitors to wind through the park while being educated by signs on how the creation of the wetland and pavement helps the polluted water "gently percolate through soil and plant roots."<sup>xcviii</sup> This process cleans the water

of hydrocarbons and other pollutants before joining the Bronx River.<sup>xcix</sup> The photo showcases the recycled glass pavement and the signs used to educate visitors.



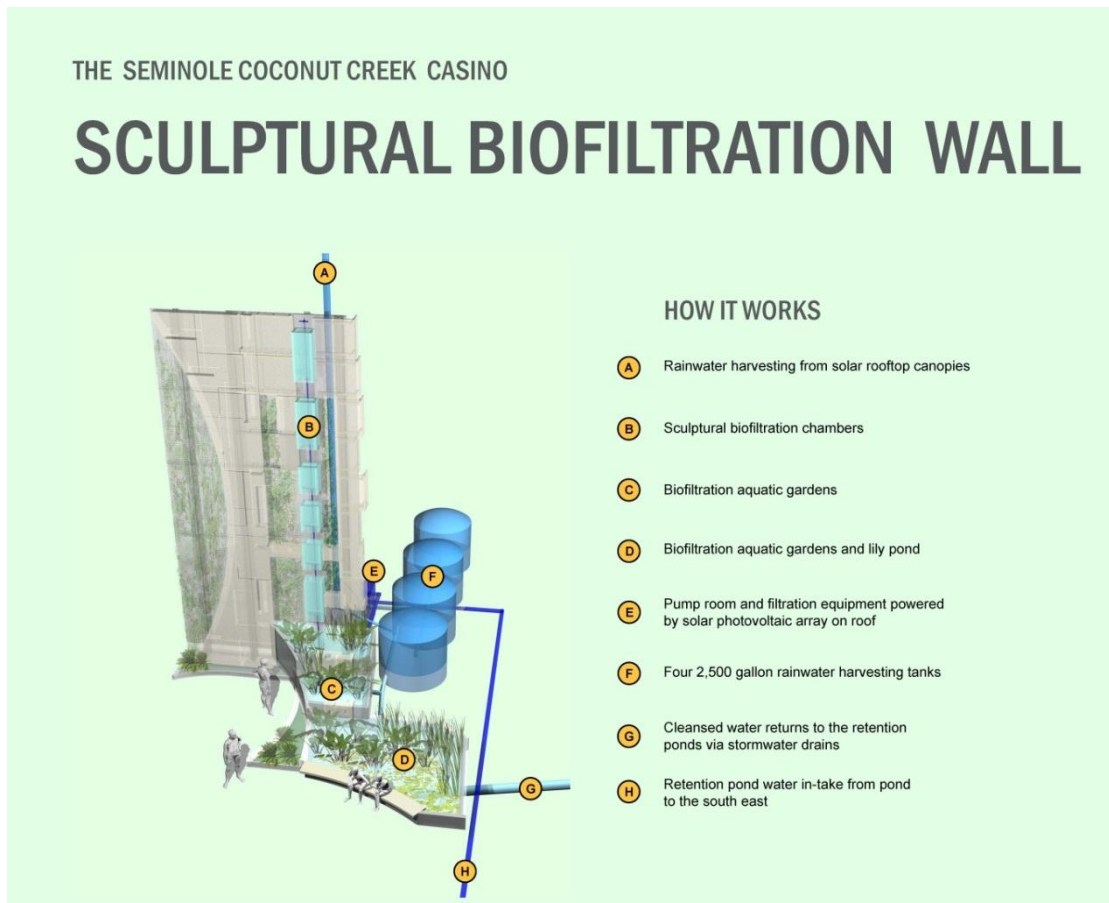
Lilian Ball, *WATERWASH*, 2007-2009

In 2012, artist Michael Singer created the Sculptural Biofiltration Wall (SBW) for the expansion of the Seminole Coconut Creek Casino. Singer says that everything is infrastructure and it is part of our lives helping us to deal with waste and water. He says that often in our culture what is out of sight is out of mind and part of his goal as an artist is to keep infrastructure in the minds of people helping to connect communities.<sup>ci</sup> The SBW puts this kind of infrastructure into the public's eye as it is at a highly populated intersection and is 25 feet wide and 40 feet tall. The City of Coconut creek wanted a conspicuous display of green technology for its new parking deck. The SBW seeks to improve water quality, inform the public about ecosystems, enhance habitat viability, and filter and harvest rainwater.<sup>cii</sup> The wall uses a range of biofiltration and aeration systems to filter over 150,000 gallons of water a day which will be used to irrigate all of the vegetation on site which includes native vines, groundcovers, aquatic plants and fish.<sup>ciii</sup>

The wall also has the potential to harvest up to 10,000 gallons of rainwater which is filtered and held in four large tanks along the wall. On the top floor of the structure, solar canopies were designed to power the project.<sup>civ</sup>



Michael Singer, *Biofiltration Wall*



Drawing by Jason Bergman courtesy of Michael Singer Studio.



## LAND and SOIL:

Frances Whitehead a sculptor and professor at The School of Art Institute of Chicago has recently become committed:

to sustainability issues on both personal and professional levels. Trained as a sculptor, she has always been interested in the intersection of art and science, but over the past decade she's moved away from the modalities of art world institutions in favor of direct interactions with complex, living systems.<sup>cvii</sup>

Her own house, which has been called The Green House, is an indication of her commitment to sustainable projects. She helped design the architectural wonder with as many sustainable technologies as possible. In 2004, she and her husband bought an old warehouse “sitting on a plot once contaminated by an underground gasoline storage tank.”<sup>cviii</sup> The couple researched ways to make their house “by the book” environmentally friendly. “It uses a geothermal heating and cooling system and two rotating wind turbines along with photovoltaic and thermal panels located on the roof — all of which provide the house with roughly 50% of its energy.”<sup>cxix</sup>

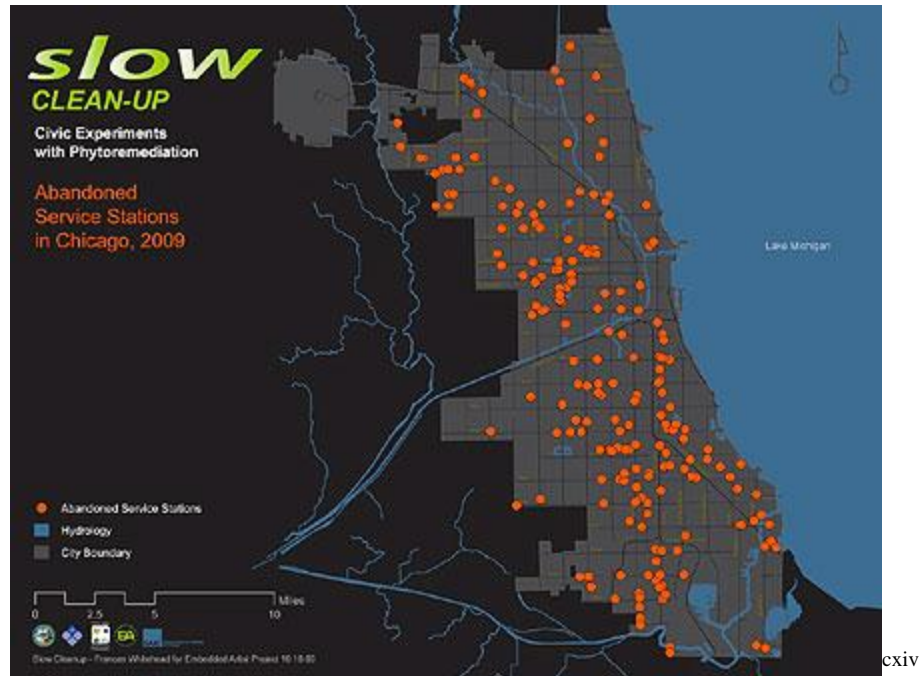


Frances Whitehead, *The Green House*

In the summer of 2011, Whitehead teamed up with the city of Chicago to create a project called Slow Cleanup. Her aim with this project is to remediate abandoned gas station sites with sustainable options. These sites are often fenced off areas with contaminated soil that will unlikely be redeveloped because of the lack of resources.<sup>cxix</sup> She collaborated with a soil chemist as well as a geologist to study and collect data on phytoremediation using native horticultural plants that have not been tested before for this process. A project that is funded by the U.S. National Science Foundation and U.K. Arts and Humanities Research Council involving international, collaborative research on artist- scientist collaborations has studied her work and concluded the following:

Slow Cleanup is a whole systems approach to site remediation designed to increase the net environmental benefits from plant based remediation processes. The designed plantings will contribute to the aesthetics and passive economic revitalization of the site areas, while simultaneously adding environmental value by creating habitat, green corridor connections, reduced heat islanding, carbon sequestration and biofuel generation.<sup>cxii</sup>

Whitehead has encouraged public awareness of these sites with the intent of making people cognizant of her aims. She did not want the fenced off areas to deter people from finding out about the processes being researched that are slowly cleaning up neighborhoods. She has divided up the plots where different plants are being tested and these radiating lines come to points where passersby's can read signs telling them about the project.<sup>cxiii</sup>



Frances Whitehead, *Slow Clean-up*



Frances Whitehead, *Slow Clean-up*

Xavier Cortada is the artist behind The Reclamation Project: Coastal Reforestation. His project began on Earth Day 2006. The impetus for his work was the desecration of Mangroves along Florida's Biscayne Bay coastline. Mangrove seedlings have had trouble taking root because of developments and manmade sea walls. The Mangroves are important because they protect the shoreline from erosion as well as provide an ecosystem for small fish. Cortada's work involves many volunteers and local businesses. In 2006, 2,500 mangrove seedlings were collected and showcased at a month long installation at the Bass Museum of Art. They were then planted at a coastal

restoration site. His site claims that the reclamation project plants thousands of mangroves along the bay helping to rebuild ecosystems.<sup>cxvi</sup>



cxvii

Xavier Cortada, *The Reclamation Project*, 2008

## **PUBLIC EDUCATION, AWARENESS, and PARTICIPATION**

Artists Brian Howe and Freya Bardell work collaboratively to create installations and art that educates the public as well as gaining their participation in remediation of sites. Their aim as artists at their studio in Los Angeles called Greenmeme is to engage people in conversations about environmental and cultural issues surrounding specific ecosystems.<sup>cxviii</sup> In 2005, they created a project titled “River Liver” in the Los Angeles River. This community event seeks to restore polluted waters through functional sculptures.<sup>cxix</sup> Bardell says, “We encourage people to create their own River Livers, based around developing community strategies for culturally and ecologically reclaiming their water resources.”<sup>cxx</sup> Their current work includes a plan for a traffic roundabout in Los Angeles which will be installed sometime around 2015. The design will implement a

water catchment that will collect runoff and be reclaimed for a native landscape intertwined in a series of stone sculptures.<sup>cxxi</sup>



cxxii



cxxiii

Brian Howe and Freya Bardell, *River Liver*

Angela Pozzi's Washed Ashore project is one that depends on the community to gather debris for the creation of sea creature sculptures. An interview with one of her staffer's, Melissa Berg, provided much information about the role of community for the Washed Ashore Project. One of their collaborators is an organization called SOLVE and they organize beach cleanup days. The plastics found on the beach are then brought to their warehouse where community members wash the debris and sort pieces into colors. These twice-weekly free community art workshops allow all to participate in the creation of the artworks. Berg says:

Volunteers drill, cut, weave, twist and tie debris that has been processed into art supplies. The final sculpture is constructed using large recycled rebar frames that have been welded by a local high school shop class. The entire project is a shining example of collaboration. This process ties directly to the message that we all use plastics and we all play a part in the problem of pollution.<sup>cxxiv</sup>

Participation by the community is paramount to the Washed Ashore project as well as educating them about plastics pollution. Their work is displayed all over the country in an effort to teach about plastics pollution and to create a dialogue about how we as consumers can make a difference in the choices we make when buying plastics. Each artwork is displayed with educational signage that describes the work and includes research on how the specific animal represented is in danger because of the debris.<sup>cxxv</sup> Her website provides slideshows of her community outreach and education. It is <http://www.washedashore.org/slideshows.php>.

The work that Pozzi does affects the environment because it removes marine debris and repurposes it. They have collected over seven tons of debris that has been used to create art that educates. Berg says:

Our work assists in the reclamation and restoration of ecologies through the use of art as an educational tool that teaches about plastics pollution, creates an atmosphere open to dialogue and inspires change in the way we see plastics in relation to our consumer habits. This physical change that individuals make in

their everyday lives is most crucial in protecting these ecologies and moving in a more sustainable direction.<sup>cxxvi</sup>



cxxvii



cxxviii

Angela Pozzi's Washed Ashore Project

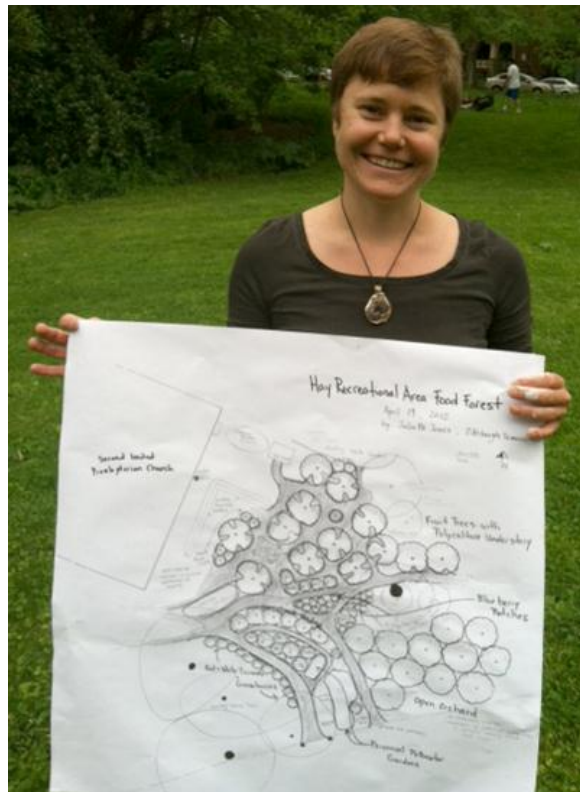
Artist Bob Bingham is considered an eco-art specialist and studied with the Harrison's in the 1970's.<sup>cxxix</sup> He "creates community based projects that involve working directly with local citizen groups to involve them as participants in the process of creating artistic venues."<sup>cxxx</sup> In 2012, the Carnegie Mellon University professor teamed up with a non-traditional art student named Lazae LaSpina. The two of them also collaborated with the Fruit Tree Planting Foundation(FTPF), Pittsburgh Permaculture, and the Second United Presbyterian Church of Wilkinsburg to create an ecological art project called the Community Engagement Gardens. The two artists envisioned their art project could move beyond aesthetics to something even more valuable and sustainable. They decided to create the gardens for three reasons. The function of the gardens are to be used as organic gardening for local food production and storm water management, an orchard forest garden and bioswale rain garden, and community grazing garden.<sup>cxxxi</sup> Cem Akin, the director of the FTPF says the following about the project:

Our goal is to provide communities with fruit tree orchards that will increase access to healthy foods and, in the process, clean the surrounding air, soil and water — creating critical green spaces that all residents value.<sup>cxxxii</sup>

Bingham notes that these types of projects begin dialogue about how people can improve the neighborhood and its aesthetic value as well as have a productive fruit and vegetable harvest.<sup>cxxxiii</sup>



cxxxiv



cxxxv

Community Engagement Gardens

#### 4) How are some of these artists collaborating with environmental scientists and engineers in the creation of these works?

Most of the projects these participant artists create and which are described above depend on collaboration. Mrill Ingram states in her article that artists such as Whitehead



and Ball must work together with engineers and scientists to help create their visionary works. She says:

These projects sit within a broad, diverse, and expanding area of participatory ecological art in which artists engage with scientists and local community members to intercede in specific examples of environmental degradation and injustice.<sup>cxxxvi</sup>

Examples and descriptions of some of these artists' collaborations will follow and in keeping with the categories above the researcher will use the same headings to elaborate.

### **WATER:**

Betsy Damon's art has revolved around water for the past 27 years. She has been involved in numerous projects that have helped remediate and reclaim water. She has created Keepers of the Water whose mission is to, "inspire and promote projects that combine art, science, and community involvement to restore, preserve, and remediate water sources."<sup>cxxxvii</sup> Throughout her work, she has worked with engineers and scientists to help her artistic visions come to life. She says in her interview, "If the project is right, collaborations happen. If you cannot work this way you are not going to address complex ecosystems."<sup>cxxxviii</sup> She works with government, engineers, and citizens.<sup>cxix</sup> One of her recent collaborations includes artist Bob Bingham. When preparing for her show mentioned above at the Mattress Factory in Pittsburgh, Damon became familiar with the neighborhood Larimer and witnessed terrible flooding when Bingham drove her around. They are collaborating with the Larimer Green Team, the Kinglsey Association and the Larimer Consensus group to create a conveyance system that would help to collect rainwater. The project is titled, *Living Larimer, 101 Infiltrations* and the water would be

collected and reclaimed for community use in a variety of ways including community gardens and an aquaponics greenhouse and water park. Bingham is in the process of writing a grant that would help fund the project.<sup>cxl</sup> Her website describes; “This would prevent the pervasive and sometimes catastrophic flooding in the surrounding areas and provide multiple amenities in a desecrated environment.”<sup>cxli</sup>

In order for artist Lillian Ball to create and bring to fruition WATERWASH in the South Bronx she had to collaborate with several organizations and an engineer. She first partnered with Adam Green who is the program director for a youth organization called Rocking the Boat(RTB). RTB helped to construct the wetland habitat and provided funds for this project. The organization received grant monies which were raised from violators of laws regarding environmental pollution.<sup>cxlii</sup> She also needed the help of engineer Eric Rothstein of EDesignDynamics. He was critical in helping create a scientific way to create the wetland. Another collaborator is Bob Governale who is a contractor and geologist. He helped to grade, excavate, and install the pervious pathway.<sup>cxliii</sup> Lillian also relied on a local business in order to gain access to the riverfront in which they created the work.<sup>cxliv</sup>

Stacy Levy, introduced in the literature review, is also an artist that works in a collaborative vein to educate the public and remediate ecologies. In her work *Springside Rain Wall and Garden*, she collaborated with the Philadelphia Water Department and the Pennsylvania Horticultural Society to treat storm water and prevent it from being wasted. A series of pipes echoing the watershed is placed on the side of this building. Some of the pipes are clear allowing viewers to see the rainwater flow through while others are blue. The pipes lead to a grated swale where native plants help to slow the water allowing it to

penetrate into the soil.<sup>cxlv</sup>

Levy's recent work requires her to interact with scientists to discover pertinent information about sites. Researching hydrology, tides, and zoology have also become aspects of these works.<sup>cxlvi</sup>



cxlvii

Stacy Levy, *Springside Rain Wall and Garden*

In an online video interview with artist Jackie Brookner, she describes Veden Taika (The Magic of Water). The work involved some intense collaboration with local ecologists, 20 high school students, community members, hydrologists, limnologists, and engineers. This artwork is located in Finland and consists of three floating islands. The islands were created for specific purposes on this polluted lake which was a former sewage treatment plant. Two of the islands are used for phytoremediation which helps to take the toxic pollutants out of the water and the other island serves the purpose of providing a habitat for nesting birds that migrate over the water. In this work, there is also a misting event that is aesthetic in nature to call attention to the work and raise awareness. Brookner says she depends on scientists and others for this type of work because data drives the criteria for which things are created. For instance, she needs

ecologists to help decide which plants to help with remediation. For this project, she also relied on limnologists and hydrologists to discuss the implications on the lake and water system and how much of the water is polluted. She also relies on scientists after the work is in place to monitor and collect data on the system to see if her work is making a difference. <sup>cxlviii</sup>



cxlix



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Jackie Brookner, Vedan Taika Images

Shai Zakai, an ecological artist who is the Director and Founder of the Israeli Forum for Ecological Art developed a plan to reclaim a stream that had been lined with concrete. The project titled The Concrete Creek helps raise awareness and serves as a model for reclaiming and rehabilitating other rivers and streams. She wanted to make people aware of what had happened and resolve the ecological problem through art and collaboration. She says:

The mode of work involved documented hikes along the stream, focusing on the sources of pollution; forming an interdisciplinary team of professionals who would follow through on the reclamation from different angles (an ecologist, botanist, hydrologist, representatives of the Ministry of the Environment, Green activists); conversations with cement-mixer drivers.<sup>cli</sup>

Matan Vilnai the Israeli Minister of Science, Culture and Sport speaks about her work and the collaboration between artist and scientist. He says that these two groups are ones that “possess a sense of social responsibility and both strive to bring about change in society and the world.”<sup>clii</sup>

## **LAND and SOIL**

Artist Frances Whitehead’s project *Slow Cleanup* described above relied heavily on collaborations with scientists. She worked with chemist A. Paul Schwab of Purdue University and geologist David S. Graham of Chicago. She and her team realized that only a small amount of plants had been tested for phytoremediation and that more research needed to be done.

She discusses in a scholarly setting the need to connect the dots between disciplines.<sup>cliii</sup>

Artists like her work to help bridge disciplines to solve problems. She mentions Edward

Wilson's book *Consilience: The Unity of Knowledge* in her talk and describes that without the unification of knowledge there is only specialization and this creates roadblocks to the kind of work that needs to be done to better our world.<sup>cliv</sup> Whitehead now partners with The School of the Art Institute and the City of Chicago whose program goal is to, "embed" practicing artists into city government in order to "bring new perspectives, mindsets, and processes" to planning projects that revolve around the city's future."<sup>clv</sup>

### **PUBLIC EDUCATION, AWARENESS, and PARTICIPATION**

Collaboration is central to the work of Christine Baeumler. Her recent project involved collaborating with engineer Kurt Leuthold and ecologist Fred Rozumaski. At the entrance of the Minneapolis College of Art and Design, Baeumler and her team created a tamarack bog on the roof in order to educate and call notice to this type of ecosystem.<sup>clvi</sup> Her collaboration led to a greater understanding of cutting edge practices in water quality management; while her teammates learn that art is not always about aesthetics and the creative process can lead to solutions to ecological issues. She believes this type of integrated contemporary art provides an avenue to explore things that have not yet been tried that may help people solve ecological problems.<sup>clvii</sup> The infrastructure is designed to capture water, but its real impact has been educating the people that view the work. She wants people to step back and engage in sites like the bog that are primarily unseen, but are important ecosystems. The exhibit and installation allow people to look through binoculars through upstairs windows to the roof below. Signage describes the animals of the landscape and maps are given out of the local tamarack

ecosystems.<sup>clviii</sup> When thinking about how her work impacts people and ecologies, she says:

Can art really inspire behavioral change? I think that may be even more challenging than creating changes in infrastructure, or changes in the way we approach city systems. How can artists participate in the process to motivate people to have significant behavioral changes in their own lives?<sup>clix</sup>



clx



clxi

Christine Baeumler, *Rooftop Bog*

##### **5) What are some forms of technology these artists are using to develop artworks?**

Most of the artists researched have websites that explain their work and have links to their various projects. Shai Zakai says that her preliminary knowledge of Eco-Art as a discipline comes from using the Internet and she has created online communities worldwide through this resource. These technologies help them to promote their work,

but the researcher was specifically concerned with technological systems they may implement to create the works. An example of a technology used to help create a work is evident in Freya Bardell and Brian Howe's 2008 River Liver project in Stowe Lake in Golden Gate Park, San Francisco. The work was interactive and could be towed by a paddle boat. Participants would paddle about in order to find out different PH levels and toxins evident in the water. When the water quality changed, a LED light served to alert the participants allowing them to know where to cast off the River Liver in an attempt to remediate the lake. This caused them to become illuminated and translated water quality and other environmental data into coded light and color.<sup>clxii</sup>



Freya Bardell and Brian Howe, *River Liver*

Jackie Brookner created the term Biosculpture for her own design which uses natural-systems technologies to help purify and remediate polluted waters. These are basically living filtration systems. Brookner describes these as “living sculptures...plant based systems that clean polluted water, integrating ecological revitalization with the conceptual, metaphorical and aesthetic capacities of sculpture.”<sup>clxiv</sup> In trying to discover specific technologies used for these systems, the researcher found information primarily regarding the materials used.



## Discussion

The researcher discovered the definition of eco-art has evolved from environmental art to include artists' works that solve ecological and environmental problems and seek to educate the public about these issues and ways to create more sustainable ecological systems. When beginning this research, the goal was to find fifteen current eco-artists whose works help remediate, reclaim, and restore blighted environments. The researcher focused on the following eco-artists and their work created from 2006 to present day which will appear here in alphabetical order by their last names. The list consists of: Christine Baeumler, Lillian Ball, Freya Bardell and Brian Howe (a collaborative team), Bob Bingham, Jackie Brookner, Xavier Cortada, Betsy Damon, Lynne Hull, Stacy Levy, Angela Haseltine Pozzi, Aviva Rahmani, Michael Singer, Susan Liebowitz Steinman, Frances Whitehead, and Shai Zakai. The researcher discovered where the artists exhibit and how their works solve ecological problems. Most of the artists' works have been displayed in both a traditional museum setting as well as in site specific installations that typically respond to specific environmental problems at the site. Categories seem to emerge for the artists' works. Among those are: Water, Land and Soil, and Public Education, Awareness, and Participation. Some of the artists' works do not fit neatly into these categories and often they work in several venues to help the environment. The results of the comprehensive study indicate the overall goal for all of them is to create art that serves the purpose of helping ecologies and communities to become more sustainable and healthy systems. They believe that they create art that raises awareness to ecological issues and they pose solutions to the problems.

The study finds preliminary results that most of the artists work in a collaborative way with people such as city planners, scientists, and engineers. The research suggests

that disciplines must merge and dots must be connected in order for the vision of the artist to bear witness. In an online video regarding her rooftop bog, artist Christine Baeumler speaks about how scientists and artists have a reciprocal relationship when creating eco-art. Artists learn new and cutting edge approaches to various scientific inquiries and scientists learn from artists about this “contemporary and new definition of art so that art is not just about decorating a system or making something more aesthetic, but how art can be more deeply integrated.”<sup>clxv</sup>

The researcher expected to find information regarding new types of technologies that might be needed to create eco-art. The preliminary results indicate that there is some evidence to suggest that technologies are being created such as those used and created by Jackie Brookner, and Freya Bardell and Brian Howe.

## **Conclusion**

The ecological artists’ works presented in the findings successfully document answers to the research questions developed. These artworks represent solutions to ecological problems and pose solutions to help reclaim, remediate, or restore ecological systems. Each artist selected is represented in the research. The research suggests that Eco-Art has evolved over the years into a more collaborative form of art that bridges the disciplines of Art and Science like never before. The evidence suggests that this current in art is gaining ground. New works in this vein are being described in recent publications that were printed after this research was completed. In the new National Geographic magazine titled *Rising Seas: How They Are Changing Our Coastlines*, the work of Pam Longobardi is introduced. She is on a collaborative team working with scientists and artists on a project highlighting the North Pacific Gyre and the plastic

collecting in our seas.<sup>clxvi</sup> In future studies, more ecological artists such as Longobardi can be studied to establish ecological art not only as a current, but as a new role for artists to take in helping to establish sustainable ecological systems.

Research on the data collected over several years regarding how these artworks are truly affecting ecologies could be a quantitative study in the future. In this research, the focus was not on data collection of evidence supporting true remediation. Land and soil samples could be taken to support this type of study as well as studies on how much water is actually be reclaimed and recycled in the works of Betsy Damon and Stacy Levy, for instance.

The researcher was unable to find significant information on new technologies that may be present in the works of ecological artists that help solve some of the ecological problems we face. As ecological and environmental issues are being brought more and more to the attention of society, further research on teams of artists and scientists could reveal new technologies being developed to solve these problems.

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