



In Collaboration for Restoration: The Intrinsic Role Artists Play in Developing Effective Scientific Soil Solutions

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Abstract

Many artists are increasingly acting as interlocutors between the Arts and Sciences to promote and develop real solutions to challenges including soil restoration through interdisciplinary collaboration. Individually and in collaboration, artists play an intrinsic role, unique to the 21st century, as contributors to effective environmental soil management solutions beyond visual representation. The broadened 21st century definitions of art have allowed the discipline to grow past awareness work, and into projects related to soil restoration, agricultural biodiversity and permaculture solutions, and nature-based-solutions. The projects that I will survey include both artists who are trained scientists as well as artists in collaboration with scientists specifically addressing soil replenishment and innovative solutions for arability. As an artist, writer, and chef, who has held a vertical integration practice related to ingredients and materials, interviewed many prominent contemporary environmental-artists, and contributed to academic work on contaminated vacant-land restoration through Nature-Based-Solutions, it is clear to me the relevance and effectivity of STEAM frameworks related to soil. Artists' role as innovators who base their work on a bottom-to-top process based on observation, acts in informative contrast to the scientific 'top-to-bottom' hypothesis approach, which like ying and yang complete each other in developing holistic solutions for soil and beyond. Faced with growing challenges from past contamination and malpractice, these frameworks will be pertinent in resolving climate and soil solutions.

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Abbreviations

AEAPEC Framework: Accessible Expanded Art Practice Framework for Effective Collaborations

STEAM: Science, Technology, Engineering, Art and Math

BSSS Conference 2025: British Society of Soil Science Conference 2025, Manchester, UK

Introduction

Artists' practices have expanded beyond traditional medium-based confines and have integrated stakeholders, environments, and research in order to build community, collaborations, and even non-profits that missions of environmental justice that parallel the needs of environmental scientists and other stakeholders seeking collaboration. The following article presents a direct correlation between my own research and framework articulating this range of creative practices and their large-scale effects to the unique tasks artists can offer expressed by scientists at the British Society of Soil Science Conference 2025 (BSSS Conference 2025). This correlation between existing contemporary environmental artistic practice and cross-disciplinary collaboration needs with soil scientists articulates well the existing role artists play and the need for an organized system to aide in the effectivity and success of future collaborations.

This article will first present the mission of my own research as well as my practice. Then my framework will be defined as will the participatory poster that I presented at the BSSS Conference 2025 an analysis of the soil scientists' responses from the conference will follow. From there my AEAPEC Framework will be applied to the soil science context by surveying some artists who work within each theme. Once the correlation between the responses and the framework is articulated, the final section of this article will apply best practice to use this method. Concluding with a short overview of this work, areas of further investigation will be explored.

Materials and Methods

Working within my personal studio practice which integrates research-based environmentally focused artistic and culinary practices with a focus on 'whole systems' circular design, I have applied by own framework (AEAPEC – under "Framework") toward soil science related artistic practices specifically. My specific overarching research interest relates to the roles artists play and how they contribute to policy

and research development. The framework and my research defines itself within historical materialist (Engels) and 'Just Sustainability' (Agyeman) frameworks and within ongoing work in environmental art and its contexts [1-3]. This work has been applied beyond traditional artistic spaces, to integrate research into soil decontamination for Brownfield restoration and Nature-Based-Solutions [4]. These areas of research and practice have led me to investigate soil sciences specifically.

In conjunction with my independent studio work, EcoArtSpace (of which I am a member and a regular contributor) has recently published its book *Soil Turns*, which surveys a wide-range of soil specific artists' practices [5]. As a contributor to this member base, I have interviewed a range of ~50 contemporary environmental artists, many of whom work within the intersection of policy, science and art. Resulting from this interview work paired with independent further research an increasing and important tendency for creative-practice involvement in influential policy and scientific decisions has become clear. In conjunction, as my own practice expands beyond the traditional curative confines of an antiquated definition of "art", I have observed a parallel trend in interest by parties in policy and scientific research (especially environmental research) in collaborating with artists as both specialists in communication and engagement as well as community-representatives at decision-making tables. Considering these interviews and observations as a qualitative representative survey, I have taken it upon myself to develop the AEAPEC Framework to better aide in promoting fluid and effective cross-disciplinary work.

In order to better understand the interests of scientists in the soil science field, I created a participatory poster (Figure 1) to survey soil scientists' responses for qualitative research. The poster invited soil scientists (Figure 2) attending the British Society of Soil Science Conference (soils.org.uk) 2025 in Manchester, UK, to respond to the following two questions: what unique role can art play in the soil science field? and what

issues in soil science should be addressed by artists? The poster also included a number of examples of artists working at the intersection between soil science and Art (to be understood through the definition which follows).

My inclusion of basic qualitative analysis in this paper is based upon the primarily urban planning (Balsas etc) and participatory methodologies (Freire) for integrative research. This approach is therefore based upon the goals of empowerment education (Freire) and integrative social justice research in sustainability, which are central to my personal practice and the effectivity of sustainable development [6-8]. I am applying this construct to expand my AEAPEC Framework research “with those who are typically the subjects of research, rather than on them”, where the ‘community partners’, in this case, are the soil scientists (Vaughn,) who are empowered to contribute to the development of this framework through their direct (voluntary) participation at the conference according to the definitions set in place by the International Association of Public Participation [9-11]. I find this particularly important in the continual development of this framework, to ensure that it is relevant and reflective of a range of stakeholders in order to be best applied in real-time with the goal of procedural fairness [12]. Though in the case of the BSSS conference, the participatory element could be said to play the role of a focus group, the analysis of these responses will inform the continual development of this research in future contexts. My ultimate goal for this project is to continue to invite participation, and expand this participation to often non-included stakeholders who are affected by environmental issues, and I welcome readers to contribute their insights [13].

In this section, I will first outline my own practice to contextualize this research-interest (though it is not currently affiliated with an academic institution). Then, I will define the term Art, as I understand it within a contemporary post- & de-structural (Saussure, Derrida) and socially-engaged (Helguerra) perspective [14,15]. Next, I will outline my AEAPEC framework within the criteria of each category: bridging, collaborating, activating, building, and changing. This framework will be applied to soil science trends specifically in the

“discussion’ section.

Own Practice

The Edible Nest Studio specializes in Sustainable Artistic and Culinary Practices and Whole Systems Circular Design through a vertically integrated research-based studio and instructional practice. Integrating environmental, social, economic and educational concerns into an understanding and practice based on implementing sustainability, resilience, and low-to-no impact design solutions, the studio is constantly evolving.

Edible Nest Studio focuses on informed and proven design solutions that effectively approach many twenty-first century challenges such as food access, local small business and farm promotion, regenerative practices and economy, artistic implementation in policy and planning, community and cultural resilience, nature-based-solutions, and participatory education and individualized mentorship.

Practicing as well as preaching, the studio’s methods are integrated into its framework and continually tested and expanded through research, experimentation, and collaboration. Both artistic and culinary practice are a namesake of the studio, which continually provides resources, products, and works while orienting itself toward community building and effective impact.

Definitions

Art: My definition of art is intentionally broad and fully embraces the potential of an expanded 21st century understanding of expression and how the creative practice permeates many facets of our communities [16]. Art in the sense I use it here, exists as intentional space and community as well as physical ‘artwork’. Though some of the included pieces and projects may seem strange to consider Art for those whose definitions of Art are primarily medium based (sculpture, drawing, video, etc) my intention is to demonstrate and promote a more integrative role for artists to play in decision making spaces such as policy and planning [17]. In order to do this, the role of artists will need to jump off of the page and into our streets, where it already exists, but is often left undiscussed in artistic discourse and the broader public. Expanding the definition of Art in these pages is not meant to challenge the validity of medium-based practice.

In fact, the opposite is true. By opening the gate and revealing how artists live, build, collaborate, activate, and change our communities is to honor the idealistic lives and goals of many artists, especially those whose focus expands beyond their own visions and into the social, economic, cultural, and environmental work necessary for collective thriving. Stating that all art is political is beyond cliché, but it lives in these pages [18].

Framework: Accessible Expanded Art Practice Framework for Effective Collaborations (AEAPEC Framework)

In response to calls for better collaborative communication (a shared-language) in committees like ECCA (and by scientists i.e. at the BSSS (soils.org.uk) conference- results below) and my exposure to artists and collaborators who are working at the intersection of policy/research and creative practice, I have developed a definitive framework to help practitioners better decipher artists' processes and better understand how to implement constructive pairings.

The work of this structure is to provide a cross-disciplinary and practical guide that emphasizes the integral work of artists in our societies by highlighting the existing practices of artists and makers from around the world. The goal is to provide a reliable framework to ease future collaborations with artists by demystifying the often illusive contemporary practices that cross the traditional medium-based definitions of artistry. By defining and structuring different ways socially-engaged and research-based art practices already exist and effect policy and research spaces, I hope to aide in the search for cross-disciplinary collaborations to increase their effectiveness [19]. The ultimate goal is to visibilize artist's intrinsic role in these fields and integrate creative practitioners in decision-making spaces through a better understanding and appreciation of the applications of their work [20].

By surveying a number of activated creative practitioners under criteria specified under "Bridging", "Collaborating", "Activating" "Building" and "Changing", the existing and intrinsic correlation between effectivity and cultural development becomes clear. However, there is desperate need for designs that both remediate the land and offer longer-term

solutions for disadvantaged populations. This is challenging without an available common language and recognized bridge between creative practitioners and policy makers and researchers. My hope is to create space for artists and other creative practitioners in positions of influence and decision-making beyond traditional curative and critic roles. The AEAPEC Framework seeks to amend this communication gap and aide in fostering effective cross-disciplinary collaborations.

Bridging

Criteria for Art as Bridge

- Work or project that acts as an interlocutor between expression and action.
- Explores an urgent challenge and/or visibilizes an invisibilized community.
- Draws from personal experience to bring awareness and understanding.
- Seeks novel avenues for expression, often existing in non-traditional art spaces.
- Integrates constructive resolution in the practice and in the work.

Collaborating

Criteria for Collaborative Art

- Emerges directly out of the community it represents.
- Bases itself on a democratically organized decision-making process.
- Often produces work in groups or as collectives.
- Emphasizes approach and its ideals as an integral part of the work and culture.
- Though results and people may vary over time, these spaces stay consistent in their vision and, often, form.

Activating

Criteria for Art that Activates

- •Semi-) Permanent intervention often a space, or a thought-provoking installation.
- Provokes further curiosity and questioning rather than providing outright answers.
- Incites independent action on the part of the viewer and/or the participant.
- Often delivers direct policy shift and new governmental implementations.
- Works within existing frameworks to create novel solutions.

Building

Criteria for Art as Building Method

- Active and integrated community participation.
- Promote independent development, often offering strategic frameworks rather than outright directions.
- Existing in space and in conversation, informed by research, but focused on practice.
- Can take the form of intentional community, object, or craft that promotes awareness and transforms a negative impact into constructive outcome.
- Solution driven that benefits disadvantaged communities and environments.

Changing

Criteria for Art as Change Maker

- Corrects misconstrued histories and cultural systems of oppression.
- Research based and fact driven.
- Uproots assumptions about disproportionately disadvantaged communities.
- Empowers and promotes voices and stories from peoples and circumstances often left out of traditional narratives for the purposes of erasure.
- Highlights actionable solutions for equitable and safe living, environmental, economic, social and/or cultural sustainability.

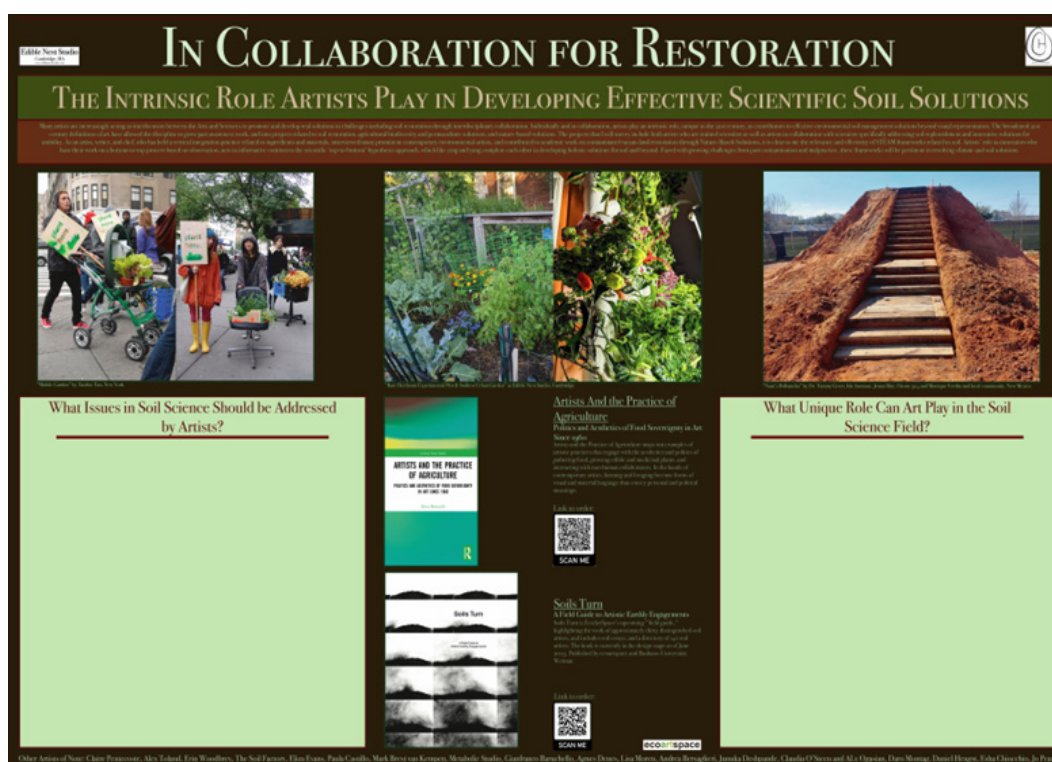


Figure 1: “In Collaboration for Restoration” Poster for the BSSS Conference 2025
(Photo of the Arts and Soil Science Poster at the BSSS Conference 2025, OAC Hallstein 2025)



Figure 2: Photo of Participants at the BSSS Conference Interacting the Arts and Science Poster (Photo of Participants Responding to the Arts and Soil Science Poster (figure 2) at the BSSS Conference 2025, OAC Hallstein 2025)

	What Unique Role Can Art Play in the Soil Science Field?	What Issues in Soil Science Should be Addressed by Artists?
1	Helping the public recognize soil as a valuable resource	Engaging more people with the materiality of soil
2	Engagement and communicating Innovation and Possibilities	Bringing soils to life (they can't be seen)
3	Inter-Soil-Scientist Interactions?	Making science more accessible to non-science stakeholders
4	Translating Research results into meaningful packing/system changes for real impact	Unexpected approaches to experimentation & results
5	Color of soil – Beauty in functionality	Presenting disseminating soil information in a very unique way that (is) more appealing
6	Soil contamination and pollution	Engaging people! For example- a lot of soil maps are attractive looking, artists can help to make soil resources visually interesting
7	Making scientific process visible	Connectedness with Nature
8	Help soil scientists appreciate that science isn't the only of knowing or valuing soil	Giving voice to the emotional connection between people + soil (+ wider environment)
9	Help viewers find meaning in valuing soil	Helping to make scientific papers engaging + interactive (like this one!)
10	Accessibility in communication	Making people understand soil role, purpose (wanyu)
11	Soil is not dirt	Can explain topics usually not communicated really (sawath)
12	Visualizing variability	

Figure 3: Table of the Responses on the Arts and Soil Science Poster from the BSSS Conference 2025.
(Note: Words in *italics* are my interpretation of difficult to read words)

Engagement	Communication	Appreciation	Visibility	Collaboration	Innovation
13	16	10	15	10	5

Figure 4: Table of Response Topics by Times Mentioned

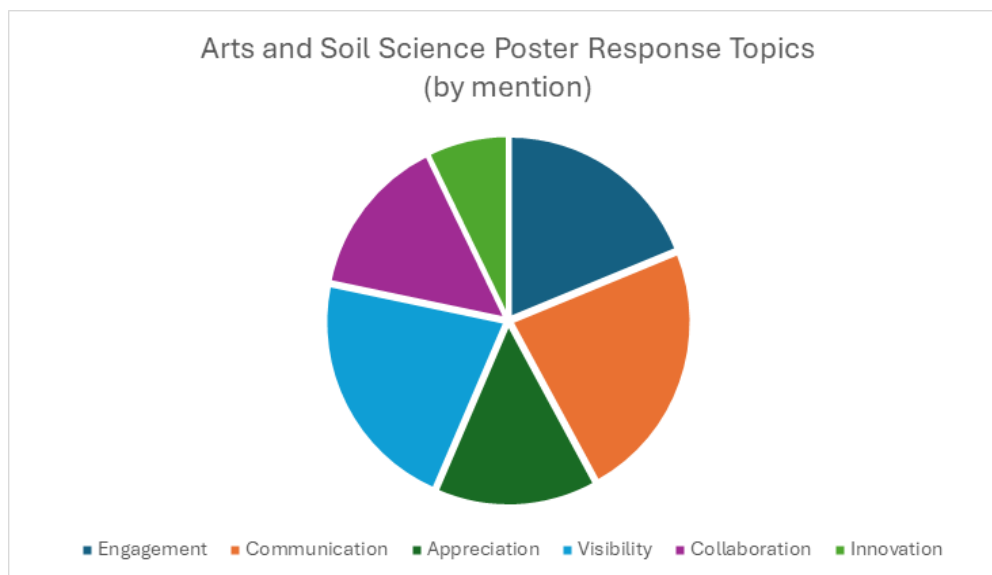


Figure 5: Pie Graph of the Arts and Soil Science Poster Response Topics by Mention

Topic	Challenge	Action
Communication	Miscommunication	Translation
Visibility	Lack of Visibility	Representation
Engagement	Disengagement	Participation and Outreach
Appreciation	Lack of Appreciation	Interest, Passion
Collaboration	Dissociation	Openness, Adaptivity, Trust
Innovation	Stagnation	Creative Solution Development

Figure 6: Interpretation of Poster Response Topics into Challenges and Actions

Commu- nicate/ Present	Engage	Valuable/ Apprecia- tion	Recog- nize/Ac- cess	Innova- tion/im- pact	Help	Visualize	Connec- tion/Ap- peal	Interac- tion/tive
7	5	5	4	4	4	3	3	2

Figure 7: Table of Repeated Words in the Poster Response by Amount

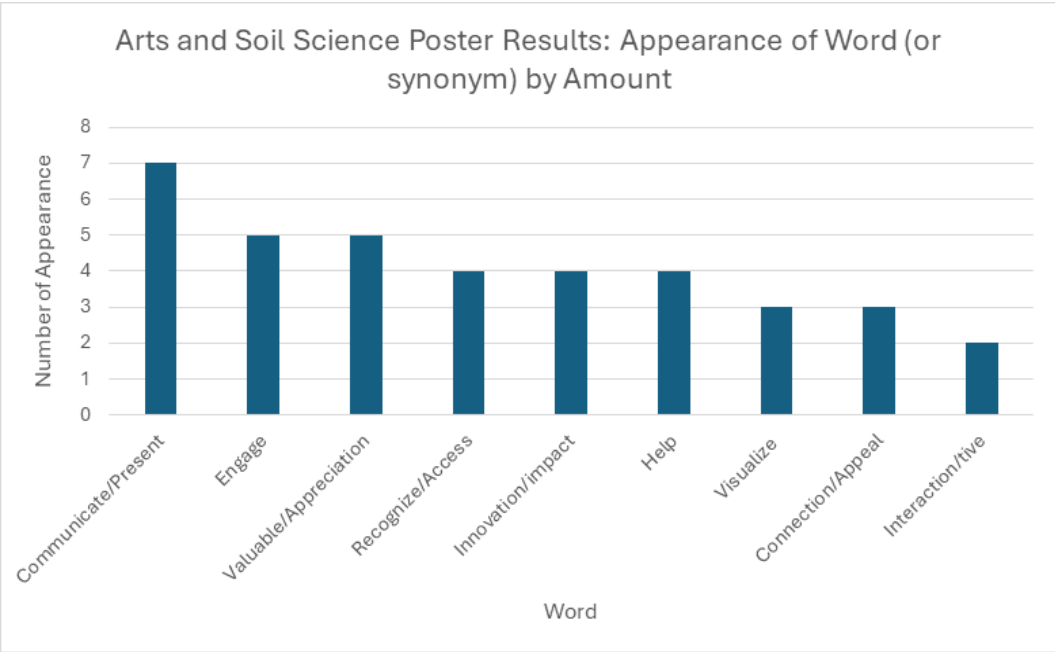


Figure 8: Bar Graph of the Repeated Words in the Poster Responses by Amount



Figure 9: Example Photo of Artwork in Category “Bridging”
(From “Jardins de Monde – Gardens of the World”, digital photograph, Esha Chiocchio 2000-2025)



Figure 10: Example Photo of Artwork in Category “Collaborating” (“Gaia Glossary/ We are Compost /// Composting the We”, Exhibition Still with participants, Alex Reagan Toland, August 5, 2022, Photo credit Alan Dimmick)



Figure 11: Example Photo of Artwork in Category “Activating” (“Relic: Sculpture to Transform Culture to Nature”, Street Fragment sprayed with recycled water allowing moss and ferns and other plants to grow, Mark Brest Van Kempen)

Un-development 1 - Reduction of Lead Data

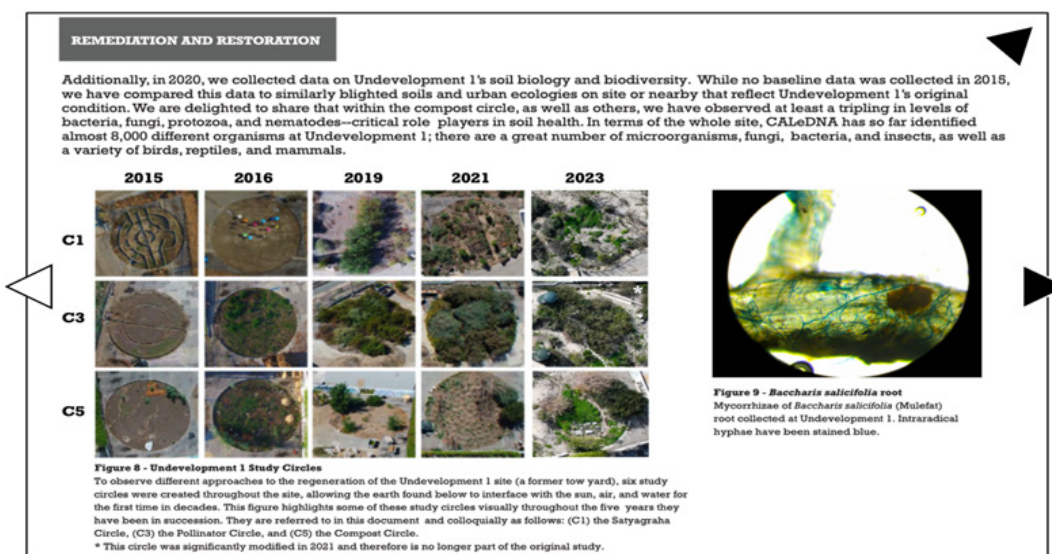


Figure 12: Example Photo of Artwork in Category “Building” (“Un-Development 1- Reduction of Lead Data: Remediation and Restoration”, Farmlab – community focused activation of an acre of land within the Los Angeles State Historic Park, Metabolic Studio, 2006- present)



Figure 13: Example Photo of Artwork in Category “Changing” (“Hellfire Holdings: Suing Big Oil for Fun & Profit – Own a Lawsuit – Invest in Justice- Stick it to Climate Criminals”, Promotional poster, Eliza Evans and collaborators, ongoing)

Discussion

Poster Responses

The two questions 1. What unique role can art play in the soil science field? And 2. What issues in soil science should be addressed by artists? Received 12 and 11 responses respectively as seen in Figure 3. From these responses I was able to observe 6 recurring topics which I then organized by times mentioned (Figure 4). They are Communication (16), Visibility (15), Engagement (13), Appreciation (10), Collaboration (10), and Innovation (5). Under communication is to be understood: the translation of soil science research into a commonly understood language or representation. Under Visibility is to be understood: the presentation of findings or soil-related topics to a broader public. Under Engagement is to be understood: participatory elements, which engage a broader audience through activity and workshops. Under Appreciation is to be understood: the promotion of a deepened connection to the soil (also: nature connection) through activities or visual representation. Under Collaboration is to be understood: artists working together with scientists and other stakeholders to create cross-disciplinary work often with the goals of reaching a broader public. And lastly, Innovation is to be understood: collaborative co-development of innovative solutions to soil science topics and research.

In order to most inclusively organize my qualitative poster response analysis, some of the terms presented include response wording that were synonyms of the given category. Many responses include multiple terms and topics, which are included based on interpretation. For example: “unexpected approaches” is included in “innovation”, “presenting” and “appealing” are included under “communication” and/or “engagement”, etc. It is important to note that most responses have elements that fit into multiple of the categories included, and the analysis of these poster responses reflect this.

Figure 5 shows a pie graph which organizes the poster response topics by mention in correlation to one another. Out of the 69 topic mentions recorded: Communication represented 23.2% of the responses (almost ¼), Visibility represented 21.7% of the responses (slightly more than 1/5), Engagement represented 18.8% (slightly less than 1/5), Appreciation and Collaboration each represented 14.5%, and

Innovation represented 7.2%. An overarching theme to the mentioned topics could be represented by collaboration and translation. There was a lot of discussion at the poster about the need for ‘translation’ between the soil science field and both public and artistic ‘cultures’ and ‘landscapes’. Linguistic and methodological differences were cited as key challenges that created misunderstandings and confusion that inhibited public engagement, understanding, and collaboration with artists and other stakeholders.

Overall, the interest in collaborative work with artists was positive and excited. Many hopes represented in these responses reflect the potential for broader awareness, understanding, new methods, and establishment within a larger public sphere that collaborating with artists would provide. The table in Figure 6 interprets most mentioned topics of ‘communication’, ‘visibility’, and ‘engagement’ shine light on some potential frustrations currently facing soil scientists. Furthermore, these terms were converted to their opposite’s “miscommunication”, “lack of visibility”, and “disengagement” to reflect exactly what those spaces for improvement are that soil scientists are facing and further interpreted into actions (Figure 7). Based on these responses, it becomes clear that the focus group at the BSSS conference consider artists’ unique role to revolve around engaging and communicating with the public, promoting visibility and awareness to non-science stakeholders, building emotional connections, and, lastly, developing novel solutions in the field. As a result of these finding, these topics could be interpreted further into specified necessary traits or actions related to Communication: Translation, Visibility: Representation, Engagement: Participation and Outreach, Appreciation: Interest and Passion, Collaboration: Openness/Adaptivity/Trust, and Innovation: Creative Solution Development.

Certain words were repeated throughout the responses as represented by number of appearance in Figure 6 and 7 as a table and bar graph respectively: communicate/present (7), engage(5), valuable/appreciation (5), recognize/access (4), innovation/impact (4), help(4), visualize (3), connection/appeal (3), interaction/tive (2). These choice words could be interpreted to specify the specific role that artists play in collaboration with soil science and the tasks they are called to do by this focus group. In other words, foremost important in the minds of these scientists seems to be that their

work and interests are communicated and presented to a broader public. The second most important task is that this work and interest should be engaging (tending to draw favorable attention or interest (definition from Merriam-Webster online)). The artist is tasked then to create a sense of value and appreciation for the soil and its related topics, which could take the form of emotional connection or promoting recognition of its specialness. From there, recognition and access are asked for, which could take the form of participatory work and/or new platforms for engagement and education. Here, I interpret “help” as a collaborative term rather than a call of emergency due to its context, representing some of the limitations soil scientists may face reaching beyond their faculty and as a call for work that is in conjunction with the existing research and their methods. Next, visualize, is a task that involves aesthetics, but could be translated to mean representing otherwise dense and inaccessible information and results to be better understood by a public and stakeholders. This is connected to connection and appeal through tasking artists to find ways that draw and hold public interest and helpful collaborators. Lastly, interaction and interactive is only mentioned twice, but it does serve as an important correlation to more used terms such as ‘engage’, ‘communicate’, ‘accesses, because it does allude to participatory practice, which is integral to many of the other tasks.

Artistic Developments in Soil Science

The following is a survey of soil-science related artists’ practices organized within the AEAPEC Framework. Artists in each category offer their own unique set of tools and audiences that collaborators may be interested in reaching depending on their independent research topics, forums, and goals. As a Framework, the artists’ practices outlined below often progressively engage and activate more traditional and less traditional spaces with goals that range from awareness and visibility work to public engagement and direct regional government policy shifts and grassroots organizing.

Bridging

The artist as bridge-builder includes artists who use traditional spaces such as exhibitions and publications in order to promote their activism and, in this case, soil-related nature connections. This is likely the category of artistic practice which comes to mind

as ‘art’ for the majority of collaboration seekers. It is also the category most artists would likely fall into as it is closest in keeping with traditional medium-based and individually-reflective arts training and it is in some ways limited to engagement with viewership who are already interested in the topic they present and/or artwork in general. These are some examples of artists who work within these spaces to advocate for soil restoration and health:

A dedicated cross-disciplinary advocate, Claire Pentecoste (publicamateur.org) presents her research-based collaborative practice through photography, drawing and installation work. With work such as “our bodies our soils” she explores industrial and bioengineered agricultural systems and their repercussions, she is a critical voice that challenges viewership to reconsider the underlying destruction agricultural systems that deplete the earth’s soils.

Through a scientifically informed research lens, Emily Woodbrey (erinwoodbrey.com) examines soil restoration through her work *Gardeners for a Geologic Afterlife*. This work presents garden plans, and installation of living organisms that aide in soil health, while inviting viewers to directly engage with the work communicating these best practices.

Daro Montag (Microbialart.com) developed a photographic imaging technique specifically for the visualization of soil’s microbiome. Presented as captivating and colorful imagery, viewers engage perhaps initially with the aesthetics of the work and are led to learn about and retain information about the biodiversity and lively world within soil itself.

As a ceramicist, activist, and animator, Jo Pearl (jo-pearl.com) uses her exhibition forums to communicate soil ecosystem life and restoration necessities. Through animated videos using ceramic ‘characters’ such as “Dirty Secret” that excite viewers and engage them to learn more. Esha Chiocchio (eshaphoto.com) is an environmental photographer and National Geographic explorer who has presented her work in a range of publications and for non-profits such as National Geographic, Newsweek and Jardins du Monde. Through dramatic imagery she using her talents in these influential forums to promote environmental justice. Figure 8 shows a piece by Esha demonstrating an artwork which can be described as “building”.

Collaborating

The artist as collaborator is someone who steps beyond traditional curated exhibition space and individually-reflective practice in order to incorporate other stakeholders and forums from other disciplines and practices to promote themes and information. They act as innovators in communication in order to engage audiences beyond arts-worlds to promote awareness work. These are some examples of artists working collaboratively with nontraditional stakeholders and forums in order to broaden the audience for soil-related restorative themes:

Alex Reagan Toland (artoland.com) specializes in relationships with soil, focusing many projects (like Soilkin, Sky inside the Soil, and Gaia Glossary) with goals of soil science accessibility and building nature connections. Her work has expanded beyond traditional exhibition spaces to take the forms of Choir songs, Journal Articles, and establishing trans-disciplinary communication avenues that invite and ease collaborative projects between soil science and art/humanity disciplines. Figure 9 shows a piece by Alex demonstrating an artwork which can be described as “Collaborating”.

Paul Granjon (zprod.org) works within schools and universities to promote and develop eco-electronic technologies that focus specifically on engaging the public and inspire them to get exciting about the living ecosystem beneath their feet. Through mud-based electro-magnetic battery systems he has shown participants the life within the soil through independently moving and singing objects in work like Mud Machine and Electric Wildertree “Wrekshops”

Daniel Hengst (danielhengst.de) has applied a background in theater with interactive and virtual spaces that address peat-land plant and environmental degradation and ‘blindness’ with pieces such as ‘Blooming Love’ and “Paludicon”. In order to work across traditional disciplinary and practice boundaries, he works with a myriad of stakeholders from creative, funding, environmental research and government institutions to inform and promote soil-science related topics.

Activating

Artists as Activists and Activators have mission-based practices and experimental and/or innovation

solution-driven work that necessitates collaboration across disciplines and stakeholders. Though these works are also presented in traditional exhibition-centered forums, the art presented are often documentation of existing strategies, interventions, experiments and/or organizing efforts that activate spaces and land beyond the studio practice directly. The following are a few examples of artists activating spaces and acting as activists within soil-science related-topics.

Tattfoo Tan (Tattfoo.com) has developed an artistic practice that is often participatory and works with wide-reaching stakeholders within regional government bodies, non-profits, schools, gastronomy, etc like DUMBO improvement District, other artists and elementary schools in the piece Nature Matching System Mural. He promotes Urban Green Space Developments and creates activated spaces for both educational and effective grassroots organizing that, by working with regional government and public institutions, begin to shift perspectives and promote fertile ground for shifts in perspective and policy.

Mark Brest van Kempen (mbvkstudio.com) uses his artistic practice sometimes as an experimental forum for environmental research (such as in work like “Land Exchange” where soil from USA was switched with soil from China to observe the exchange’s conditions on the soil) or as innovative grassroots activism directly working to organize for water and land rights. Differently from artwork that is reflective of individual sentiment, Mark’s exhibited artworks are primarily documentation of this performative and experimental environmental practice. Figure 10 shows a piece by Mark demonstrating an artwork which can be described as “activating”.

Claudia O’Steen and Aly Ogasian (TSOEG.org) use art to innovate environmental field work and research work in order to activate and engage the public directly. Work such as “Keweenaw Observing Station” are site specific and responsive pieces that both act as observational stations/instrumentation that gather information and community engagement recording the effects climate change is having on the Great Lakes.

Building

Artists who Build are meant to be understood less as individuals, but as founders and developers of spaces for community, thinktank work, and discussion forums

that promote public engagement as well as platforms for other creative, scientific, and/or public participants to develop and present work themselves. Not attached to any individual practice or maker, these spaces act as creative organizations that move beyond one perspective and build upon a mission in order to foster cross-disciplinary practices in community and in others. Here are some examples of forums and spaces, which do this:

The Soil Factory (thesoilfactory.org) is a community space in Ithaca, NY, USA that invites all interested stakeholders with a focus on artists, students, scientists, entrepreneurs, farmers, etc in an experimental learning and collaborative environment with a environmental and sustainable justice mission. The projects at the Soil Factory include interventions, installations, publications, courses, and environmental research that build avenues for practitioners and amateurs alike to engage and grow in a myriad of ways.

“Nanih Bvlbancha” (nanihbvlbanch.net) is a community driven and built land-art site at the Lafitte Greenway in New Orleans, Louisiana, USA focusing on promoting regional indigenous culture and relationships to the earth. Not only does the work of this community project draw attention to the microbiome and connective experience with the soil, it is a built space for people to engage in traditions and regenerative practices with the land that have faced potential erasure and promotes land rights activism in the South.

Metabolic Studio (metabolicstudio.org) builds forums and collaborative think-tank-like projects that foster innovative ideas and create art interventions aimed at progressing and establishing a strong creative counter to the destructive forces and effectively challenge ‘critical social and environmental issues... aimed at reparation’. Directly engaging with infrastructure and policy with interventions like “Farm-lab” and “Bending the River”, Metabolic Studio expands the traditional scope of exhibited artwork and begins to build solutions and grassroots activism beyond arts practice per se. Figure 11 shows a piece by Metabolic Studio demonstrating an artwork which can be described as “Activating”.

Changing

Lastly, Artist as Changemaker integrates many of the above practices (individual reflection, collaboration,

education, activism, and community) to have directed influence on policy and land rights. By changing the way that these interactions and perspectives are held, the following and similar practices are changing the political landscape and stakeholder dynamics with innovation solutions using art practice. These are some examples of collaborators who implement change in policy through practice:

With a data-driven practice and unapologetic tactics, Eliza Evans (eevans.net) has been widely recognized as an important voice in innovative climate and environmental justice work. Her focus on land rights and environmental protection (especially from destructive oil extraction in Texas) and her background in economic sociology has placed her in a unique position as an artist to directly (and successfully) protect portions of the land from “Big Oil”. She presents innovative and collaborative solutions that work to move beyond activism and education to stop soil destruction by industry. Figure 12 shows a piece by Eliza demonstrating an artwork which can be described as “Changing”.

An arts project that has expanded into an internationally implemented greenspace mapping tool and non-profit, Wendy Brawer’s “Green Maps” (greenmap.org) have engaged communities of all ages all around the world. Though she created the mapping system, by inviting the public to apply the tool themselves, the project has had a large influence in both promoting awareness for existing greenspace, public engagement with greenspace and soils, and furthermore, these maps have been used globally to help make cases in law cases and regional planning committees that have protected and created new greenspaces. As an art practice that changes the way people look and promotes visibility of greenspace and soil, GreenMap is a tool and global community that has shifted how and that environmental protection is approached.

Junuka Deshpande’s artistic practice is expansive and includes artwork, writing, music, and film that works with and documents social movements, organizations, publishing houses, while teaching to promote Indian indigenous culture, practices, and rights toward land and soil restoration with films like “Moseti” and “Ghar Bachao, Ghar Banao Andolan”. As an influential voice promoting environmental protection, she uses her many talents as communication tools to actively change public perceptions on the land and indigenous practices with specific focus on governmental

shifts in policy and legislature.

Summary

Artists play a growing range of roles from entrepreneurs to activists to educators and experimental researchers. Traditional medium-based assumptions about artistic practice are increasingly misinformed, often overlooking the expansive potential of contemporary environmental artistic practice to engage the public and successfully shift both perspectives and policy. There is huge often untapped potential in collaborations of these kinds with interested parties that are open to more experimental, innovative, and unexpected practices, methods, and resulting ‘art-work’.

Correlation

The soil scientists’ responses at the BSSS Conference refer specifically to tasks related to engagement, communication, visualization, appreciation, collaboration and innovation. These are all tasks that speak to a broader public and involve both collaborative and participatory elements. To apply the AEACEP Framework to each of these topics, I would suggest that the following categories refer best to the above-mentioned terms.

If searching for “visualization and appreciation” the category of “Bridging” would be a likely place to look because these would be creative individuals who are engaging specifically with their personal connection and interpretation of soil in order to reflect that to a viewership. The benefit here would be a more emotive and exploratory representation and practice, which would allow a certain flexibility and intimacy to a chosen topic.

On the other hand, those searching to work with artists to achieve “engagement, and communication” are more likely to find these traits in artistic practices that fall under the categories “Building”, and “Activating” because these are practices defined by public intervention, activation of space, and community building and, which often include forums for discussion and other forms of participation. These practices are able to offer broader public platforms and invite new voices to participate and investigate themes.

The task of ‘collaboration’ logically corresponds to the category of “Collaborating” though this is an element of other categories as well. Collaborating in the AEACEP framework however is more focused and individualized, and often tailored specifically to a subject with a specific goal in mind. For example, many practitioners included in this category work within educational contexts to focus engagement, and are individuals rather than organizations would could be most responsive to a specific project with a set goal. If a stakeholder (in this case a soil scientist) were interested in flexible and controlled work environment, individuals open to and centered around collaboration, would be best suited. Within larger scale or organizational projects, collaborators may find either a rigidity or a lack of goal-oriented project development, as either the project is set up within an existing framework (example GreenMap) or is organized to be organic (like Metabolic Studio or The Soil Factory).

“Innovation” is a broad reaching task, best achieved by cross-pollination between a range of people. So, I would suggest categories such as “activating”, “building”, and even “changing” if there is a genuine goal for innovation. Each of these categories stands at a different degree of potential application and impact for this innovation and should be kept in mind. Where ‘activating’ will focus on innovative methods of awareness and communication, ‘building’ could help in brainstorming and development of innovative ideas, and lastly, practices under the category ‘changing’ are likely to have the most impact, but are often existing innovations in the field that can be implemented by the stakeholder (in this case soil scientist) in an innovative way (for example, using the Green Map to map soil health across a landscape).

Results

Based on the correlating response themes to practice definitions in the AEAPC framework, there is evidence for an intrinsic role that artists play to fulfill the needs that soil scientists have articulated. Demonstrated by the range of applications contemporary creative practices exhibit between the bridging, collaborating, activating, building and changing AEAPC categories, there is a fruitful range of creative practitioners who can provide the tasks of communication, visualization, engagement, appreciation, and innovation revealed in the responses at the BSSS conference. Specific to soil science, there are plenty of creative

practitioners who have dedicated themselves to collaborative research-based art-making, which, in their range, are well suited to these tasks. The challenges of “miscommunication, lack of visibility, and disengagement” revealed through the soil scientist’s responses, directly correlate with the specializations environmental soil-related contemporary artists prioritize.

Applications

At this time, there is not an archive of artists organized within the AEAPEC Framework. In order to apply the framework to find artists that would best suit the goals and aspirations of a project with an artist or creative organization, the definitions of each category can be applied during the search process to better decipher a range of artistic practices to find what is best suited. For example, if a stakeholder (in this case soil scientist) were interested in an artist who could collaborate well, they could use the criteria of ‘collaborating’ while researching artists and their practices to focus on assets beyond aesthetics that would best suit a collaborative process. This way, it could be an aide in a successful collaborative project.

Conclusions

The focus group at the BSSS conference 2025 has articulated a direct correlation between contemporary environmental artists’ specializations and missions to the scientist’s needs. Still, there is a lack of visibility and education on the wide-ranging practices and their applications that artists can provide. Therefore, the AEAPEC framework can be a helpful tool for scientists and other stakeholders who are looking to collaborate with artists to help decipher contemporary creative practices in order to find the best suited project partners.

Further Investigation

There are several areas of further research necessary in order to aide in these cross-disciplinary environmental collaborative efforts with artists. For example, this current work does not address the expressed need for communication between project partners (though the artist Alex Reagan Toland has begun to address this ‘translation’ project with the Gaia Glossary). Furthermore, due to the overarching research topic that I am investigating that includes a broader definition of environmental and social justice creative

practitioners and spaces in my AEAPEC Framework, the focus group at the BSSS Conference has only scratched the surface of this investigation. I intend to continue this and similar work with various participants and stakeholders in order to suit a social and participatory research process. And to do so by including not only those who are part of resulting project, but also voices of peoples who are affected by the results of such cross-disciplinary collaborations (indigenous peoples, displaced peoples, amongst others). Another aspect of further investigation is the continued research into and documentation of artists and creative practitioners who act within the criteria of the AEAPEC Framework, with the goal of providing access and to aide in future effective cross-disciplinary environmental and social justice initiatives.

References

1. Bottinelli, Silvia (2023) Artists and the Practice of Agriculture: Politics and Aesthetics of Food Sovereignty in Art since 1960. Routledge <https://www.routledge.com/Artists-and-the-Practice-of-Agriculture-Politics-and-Aesthetics-of-Food-Sovereignty-in-Art-since-1960/Bottinelli/p/book/9781032527208>.
2. Agyeman, Julian, Robert Doyle Bullard, Bob Evans (2003) eds. Just sustainabilities: Development in an unequal world. MIT press <https://mitpress.mit.edu/9780262511315/just-sustainabilities/>.
3. Engels, Friedrich (1990) Introduction to the English Edition (1892) of Socialism: Utopian and Scientific. Marx/Engels Collected Works 27 <https://www.wsws.org/en/special/library/socialism-utopian-scientific/01.html>.
4. Rui Zhu, Galen Newman (2025) Vacant Land Regeneration. Taylor & Francis <https://www.taylorfrancis.com/books/edit/10.4324/9781003628064/vacant-land-regeneration-galen-newman-rui-zhu>.
5. Watts Patricia L, Toland Alexandra Toland (2025) Soils Turn: A Field Guide to Artistic Earthly Engagement. Zabriskie, Berlin <https://zabriskie.de/products/soils-turn>.
6. Freire Paulo (2017) Pedagogy of the Oppressed. Penguin Classics https://ebookland.in/products/pedagogy-of-the-oppressed-penguin-modern-classics-paperbackfreirepaulo?srsId=AfmBOoqln_6tDhnbmr1TffXiKp-3GUBMxY0OBmgTicq7Q80LkVwVXHUWx.
7. Gimenes TC, Machado MK, Vernalha EBR (2019) Empowerment in Sustainability. In: Leal Filho,

- W. (eds) Encyclopedia of Sustainability in Higher Education. Springer, Cham. https://doi.org/10.1007/978-3-319-63951-2_314-1.
8. Martin A, Dawson N, Rodríguez I (2025) Towards just and transformative social–ecological restoration. *Nat Sustain* <https://doi.org/10.1038/s41893-025-01702-w>.
 9. Vaughn L M, Jacquez F (2020) Participatory Research Methods—Choice Points in the Research Process. *Journal of Participatory Research Methods* 1.
 10. Reason P, Torbert W (2001) The action turn: Toward a transformational social science. *Concepts and Transformation International Journal of Action Research and Organizational Renewal* 6:1-37.
 11. International Association of Public Participation (IAP2) (2018) IAP2 Spectrum of Public Participation https://cdn.ymaws.com/www.iap2.org/resource/resmgr/pillars/Spectrum_8.5x11_Print.pdf.
 12. Beersma B, De Dreu CK (2003) Social Motives in Integrative Negotiation: The Mediating Influence of Procedural Fairness. *Social Justice Research* 16: 217-239.
 13. Abma T, Banks S, Cook T, Dias S, Madsen W, et al. (2019) Participatory research for health and social well-being. Springer <https://link.springer.com/book/10.1007/978-3-319-93191-3>.
 14. Saussure F de (1983) Course in General Linguistics. Translated by R. Harris. London: Duckworth https://ia600204.us.archive.org/0/items/SaussureFerdinandDeCourseInGeneralLinguistics1959/Saussure_Ferdinand_de_Course_in_General_Linguistics_1959.pdf.
 15. Derrida Jacques (2016) Of Grammatology. Translated by Gayatri Chakravorty Spivak, Johns Hopkins University Press <https://philpapers.org/rec/DEROG>.
 16. Graves James Bau (2005) Cultural Democracy: The Arts, Community & the Public Purpose. University of Illinois Press Urbana and Chicago <https://www.press.uillinois.edu/books/?id=p072086>.
 17. Borrup Tom, Sitzer Andrew (2025) Democracy as Creative Practice: Weaving a Culture of Civic Life. Routledge <https://www.routledge.com/Democracy-as-Creative-Practice-Weaving-a-Culture-of-Civic-Life/Borrupt-Zitcer/p/book/9781032758725>.
 18. Nance Kevin (2008) The Spirit and the Strength: A Profile of Toni Morrison. *Poets & Writers Magazine* https://www.pw.org/content/the_spirit_and_the_strength_a_profile_of_toni_morrison.
 19. Montmann Nina (2002) Art as Social Space / New Edition 2017. Art as Social Space
 20. Helguera Pablo (2012) Education for Socially Engaged Art. New York: Jorge Pinto Books https://www.sholetteseminars.com/wp-content/uploads/2018/01/Helguera-Pablo_Socially-Engaged-Art.pdf.