Art and Environmental Struggle Curating an Exhibition About Place-Rooted Ecological Knowledge

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Abstract Inspired by ecological calendars, the Herbert F. Johnson Museum of Art organized the exhibition Art and Environmental Struggle to coincide with the international conference Rhythms of the Land: Indigenous Knowledge, Science, and Thriving Together in a Changing Climate, held at Cornell University in October 2021. The exhibition emphasized Indigenous ways of knowing and deployed the works of lesser-known artists from around the world to build greater understanding of and empathy for their communities’ often overlooked histories and perspectives. A collaboration of three Johnson Museum curators and an expert on global Indigenous art, the exhibition presented 20 works by artists responding to environmental challenges occurring in their countries and communities and was conceived as part of the program of conference events that culminated in the dance, music, and video work Blood, Water, Earth created and performed by Santee Smith. Emphasizing impacts of colonialism, neocolonialism, geopolitical forces, and industries, the artworks reveal the consequences of environmental damage on the food production, security, cultural independence, and general well-being of communities who have contributed the least to the current crisis but feel its effects most acutely. The concept of struggle for environmental justice binds together all the visual artists represented in Art and Environmental Struggle. When viewed in the context of the ecological calendar model, the compelling ways in which visual and performing artists confront these topics through an expression of Indigenous ecological knowledge, environmental stewardship, and place-rooted traditions, present a diverse but resilient perspective and offer a methodology of hope to address this most pressing of issues.

Plain Language Summary The Herbert F. Johnson Museum of Art’s exhibition Art and Environmental Struggle was offered while the international conference Rhythms of the Land: Indigenous Knowledge, Science, and Thriving Together in a Changing Climate, took place at Cornell University in October 2021. The exhibition showed 20 works by artists from around the world, that convey Indigenous knowledge and build understanding of the environmental changes in their countries and communities. In conjunction with the conference and exhibition the dance performance Blood, Water, Earth was presented at Cornell by Santee Smith. These visual and performing artists’ works reveal the serious effects of colonialism, industry, and environmental damage on the food security and cultural independence of their communities and address the struggle for environmental justice. Like the ecological calendar model, these artists’ expressions of Indigenous ecological knowledge, tradition, and care for the environment present a diverse but hopeful outlook.

1. Introduction

The exhibition Art and Environmental Struggle (Figure 1), open to the public from 26 August through 14 December 2021, was organized by the Herbert F. Johnson Museum of Art, Cornell University, as part of a collaborative effort of Cornell professor Karim-Aly Kassam (Department of Natural Resources and the American Indian and Indigenous Studies Program) and his students’ Ecological Calendars for Climate Adaptation Project (ECCAP), the Cornell Botanic Gardens, the Department of Performance and Media Arts and the South Asia Program, surrounding an international conference entitled Rhythms of the Land: Indigenous Knowledge, Science, and Thriving Together in a Changing Climate, held at Cornell University in October 2021. The conference culminated in a performance by Santee Smith of her dance, song, and video performance Blood, Water, Earth at Cornell’s Schwartz Center for the Performing Arts. This diverse and content-specific grouping of artistic expressions was conceived to set the stage for the work of the conference and the concept of a global struggle with environmental degradation.
Inspired by the approach of the ECCAP project, which emphasizes transdisciplinarity and communities of enquiry taking the role of learning agents in the development of the ecological calendars (K.-A. Kassam et al., 2021: 510, 521), the curators focused on presenting the works of Indigenous and other global artists who draw from the lived experiences of their local communities to visually express concerns about environmental change. In a similar way to the ecological calendars, the exhibition was designed as a space for the creation of knowledge—learning from individual artists and also synthesizing knowledge from a grouping of artworks. An important goal of the exhibition was to encourage audiences to gain awareness of perspectives they might not have encountered or considered before in thinking about global climate change.

As such, the first work sought and secured for the exhibition, Tlingit/Unangax̂ artist Nicholas Galanin’s *We Dreamt Deaf* (Figure 2) was designed to serve as a centerpiece—both literal and figurative—for an examination of struggle and hope around climate disruption. This work, in which a polar bear literally appears to melt, calls our attention to the diminishing of arctic sea ice and the forced adaptation of the Indigenous peoples of the arctic (Galanin, 2019). The work's expression of the precarious situation of both polar bears and the human species acknowledges human complicity in climate change, but also embodies the idea of continued struggle that indicates the persistence of hope. In this sense, this work expresses the unique ability of art to contextualize this discussion in visual and esthetic ways; the multiple forms of this expression and the development of the exhibition will be discussed in what follows.

### 2. Methodology

The development of an art exhibition about place-rooted ecological knowledge culminated from over a decade of collaboration between Professor Karim-Aly Kassam and the staff of the Johnson Museum at Cornell around the methodology expressed in the research of the ECCAP project he has directed and published. The project's initial study (K.-A. Kassam et al., 2011) sets the tone for this collaboration through its expression of ecological knowledge as visually embodied in the traditional method used by villagers in Pamir Mountain Indigenous communities of counting the progression of the sun and tracking significant seasonal events by counting on the parts of the human body, from the toenail to the hairline and back again. Suppressed by the forces of colonialism, the calendar of the human body nonetheless retains relevance in cultural memory and serves to address anxieties brought about by climate change. Subsequently, Kassam and his research team articulated the usefulness of the ecological calendar model and expressed it as a transdisciplinary undertaking in which the social and biophysical sciences and the humanities can work with Indigenous knowledge holders to embrace local ecological knowledge (K.-A. S. Kassam et al., 2018). From this research, the Johnson Museum team adapted not only the truth that transdisciplinarity embraces Indigenous ecological knowledge, but that foregrounding the visual statements of Indigenous and place-based artists on ecological knowledge relating to their communities is an essential way to educate and elicit meaningful and motivating dialog. The ECCAP project's visual encoding of ecological knowledge as a series of seasonal rounds based carefully on field research and consultations with local and Indigenous agropastoralists (K.-A. Kassam et al., 2021) provided the Johnson exhibition team with a key point of departure for understanding modes of marshaling visual information in clear and aesthetically communicative ways and further understanding the visual expression of time and its cyclical nature. Additionally, in Indigenous and place-based communities in which ecological and sacred concepts closely overlap, anxiety, and uncertainty around the detriments of climate change (on those least responsible for its effects) need to be addressed, contextualized, and countered through “justly informed action” (Kassam, 2021). It is this sphere above all in which the exhibition's curators and the broader collaborative group sought to operate, recognizing this ongoing struggle and adding their efforts to the development of a transdisciplinary methodology of hope expressed in the exhibition.

Because of this longstanding collaboration with Professor Kassam's ECCAP research, the exhibition curators initially focused on finding works by artists from regions where the ECCAP project had been conducted in partnership with Indigenous and rural communities in the Arctic, Central Asia, and upstate New York. The curators also researched precedents, including exhibitions dedicated to (a) work by Native North American women artists (Silver et al., 2019), (b) work by global Indigenous artists (Hill et al., 2013), (c) contemporary climate-related art situated in the landscape of an outdoor sculpture park (Storm King Art Center, 2018), and Indigenous art from across a broad time span that charts the encroachment of climate change on Indigenous communities (Brooklyn Museum, 2022). In their review of potential works for inclusion in the exhibition, they sought out the advice of Cornell History of Art and American Indian and Indigenous Studies Program professor Jolene Rickard, who
recommended a broader geographical approach to include artists from the global south, including South America, Australia, and Southeast Asia. Further, they wished to include not only art treating the effects of climate and industry on land, but also on the earth's waters. Although of course the ultimate grouping was far from all-encompassing, the selection was designed to spark discussion around the struggles of peoples from a variety

**Figure 1.** Installation view of *Art and Environmental Struggle*. Photo credit: David O. Brown.

**Figure 2.** Nicholas Galanin (Tlingit/Unangaâ, born 1979 in Sitka, Alaska), *We Dreamt Deaf*, 2015 Taxidermied polar bear, polar bear rug 80 × 120 × 42 inches Courtesy the artist and Peter Blum Gallery, New York. Photo credit: David O. Brown.
of geographical and climate locations around the world. Whether they manifest as melting ice, erosion, less predictable growing seasons, loss of habitat for food species, climate-related migration, or a host of other challenges, these works demonstrate that all of the artists face related issues, highlighting the interconnectedness of Indigenous and place-rooted communities in the face of industrial and colonial legacies.

Although the artists in the exhibition predominantly hail from Indigenous communities, a final point of selection came in the decision to include other place-based artists drawing on extensive ecological knowledge of traditional homelands. In this sense, the curatorial process maintained continuity with the ECCAP research, which includes a non-Indigenous research site in Oneida, New York. As such, the exhibition was designed to present lived experience in a variety of geographical, sociopolitical, and climate locations, in tandem with the ECCAP field work which acknowledges the struggle associated with climate disruption and the place-based knowledge offered even among non-Indigenous communities.

Some artworks were borrowed from private collectors, museums or artists, but the majority were acquired for the museum's permanent collection, mostly through purchase. Simultaneous to the organization of this exhibition, the museum was updating its collection development plan to prioritize acquisitions by under-represented artists, including women and Indigenous artists. This exhibition provided an opportunity for the curators to immediately put this aspiration into practice. Departing from the conventional museum custom of relying heavily on borrowed artworks for exhibitions of contemporary art, the emphasis on acquisitions provided direct support to artists, strengthened the museum's permanent collection to further its educational mission over the long term and helped to reduce the carbon footprint of the exhibition. The Museum also decided to acquire and present a work by Indigenous artists from the Museum's own region (Figure 3), a statement about the dispossession of the Gayogohón:no people and their long journey to return to their homelands.

Figure 3. Jolene K. Rickard (Born 1956, Skarù:rę'/Tuscarora) …the sky is darkening…coming home… 2018–2021 Installation: digital print and beaded birds, 36 × 40 inches. Herbert F. Johnson Museum of Art, acquired through the John H. Burris, Class of 1954, Fund. With Skarù:rę’- beadwork collaborator: Janice Smith, born 1961 (Top left and top right), Anita Greene (born 1961 Middle left and bottom right), and Anita Ferguson, born 1975 (Middle right and bottom left). Photo credit: David O. Brown.
3. Content of the Exhibition

The curators chose artworks based on the compelling ways that artists presented their own and their communities' knowledge about and lived experience of their environment, as well as their expressions of hope. The way in which the exhibition was designed, with most artworks on or against the four walls of the museum's largest exhibition gallery and surrounding a large platform displaying Nicholas Galanin's *We Dreamt Deaf*, invited visitors to make their own connections among the exhibition's main themes: (a) the visual recording and expression of Indigenous knowledge, environmental respect and stewardship; (b) the struggle with environmental damage and climate change and their impacts on traditional ways of living in harmony with land and water; (c) the adverse effects of colonial histories and extractive industries on place-specific livelihoods and on the suppression of artistic and cultural expression; and (d) the commitment of artists to create awareness, convey hope, and reclaim the agency of their communities.

3.1. Visualizing Ecological Knowledge

Both the ecological calendars resulting from the ECCAP project research and the work of artists selected for the exhibition serve to visualize knowledge about the fluctuating natural world necessary for subsistence and thriving in our changing times. Specifically, ecological calendars incorporate “seasonal indicators that include physical phenomena, such as the first snowfall or last frost, as well as biological events, such as the flowering of certain trees or the arrival of a migratory bird species” (K.-A. Kassam et al., 2021). In the design and visual expression of this information, the project's calendars, such as that for the community of Savnob in the Bartang Valley of Tajikistan’s Pamir Mountains (K.-A. Kassam et al., 2022) incorporate references to local culture, spirituality, and tradition as well as the ecological information they convey (K.-A. Kassam et al., 2021). In the ecological calendar for Savnob (Figures 4 and 5), a seasonal round of octagonal shape features different colors for each season, and icons representing sequences, cues, and indicator species contributed by villagers enable an interrelational understanding of climate challenges and anticipatory requirements.

In a less specific but no less important way, works of art in the exhibition, such as Walter Tjampitjinpa's *Rainbow and Water Story* (Figure 6), encode Indigenous ecological knowledge in visual terms. A Pintupi man who contacted Euro-Australians only in adulthood, Walter was senior custodian of ceremonies surrounding the important waterhole site of Kalipinypa in the Western Desert of Australia (Johnson, 2008). He began painting during a seminal moment in the interchange between Indigenous culture and the Western formats of art making at Papunya in 1972 (Benjamin et al., 2009). Walter's painting expresses the sacred nature of water as resource, drawing on millennia of orally and visually transferred ecological knowledge. It celebrates the infrequent but violent thunderstorms of the region (the yellow hatching at the corner representing lightning) and their life-giving runoff (the radiating, wavy black lines) that collects in waterholes whose locations and seasons are known only to the initiated. The mirrored black crescent shapes form a rainbow, while the waterhole itself is shown by the circle with concentric red and black rings near the top. Benefiting from these sudden rains, the land undulates with “the movement of growth under the soil after rain” (Benjamin et al., 2009) expressed in a pattern of feathery white strokes.

As with the inextricable links between ecological phenomena and the communities developing ecological calendars for the ECCAP project, Indigenous works in the exhibition also express a oneness of humans and the environment. In the case of the ecological calendar of Savnob, the calendar of the human body is employed as the measuring framework and timekeeper of the cyclical calendar (K.-A. Kassam et al., 2021). Likewise, in Walter's painting, humanity and ecology blend in the form of the curved shapes that simultaneously represent rainbows but also the forms of men painted to enact ceremony that honors and brings rain. Further, as Kassam observes, “the notion of an ecological calendar is universal and simultaneously particular.” This can be seen in the cases of Savnob and its neighbor Roshorb, communities separated by perhaps only a dozen kilometers as the crow flies, but that experience unique microclimates, water temperatures, and, accordingly, different crop varieties—and divergent effects of climate disruption (Ullman et al., 2022). Likewise, Kalipinypa, the native well area over which Walter Tjampitjinpa holds familial responsibility, behaves according to a specific set of characteristics in its flora, fauna, geology, and climate, detailed knowledge of which makes all the difference for survival in a harsh environment.
Another important aspect of the ecological calendars research has been the careful and extensive recording of individual and collective memory in localized communities of pastoral and agricultural practices and variations, and climate history (K.-A. Kassam et al., 2021). In much the same way, Abel Rodriguez’s large-scale drawing *The Tree of Life and Abundance* (Figure 7), 2018, expresses the stewardship of ecological knowledge, and demonstrates the power of memory to overcome the loss of connection to homeland and assert the variety and vibrancy of ecological systems. A respected elder and knowledge keeper exiled from his homeland in the Amazonas province of Colombia by political violence, Don Abel began to systematically catalog the plant and animal life and the ecological cycle of the Amazon basin in a series of watercolors drawn purely from memory. His efforts have secured a legacy for the visual presentation of a highly specialized ecological knowledge. The great tree represents the spirit of the universe (López, 2020), raining down fruits and seeds for all living things below, represented by forest animal species. The tree’s canopy is an amalgam of many different plant species known to Don Abel, including a variety of trees, but also some foods, like pineapples, that normally grow on the ground.

### 3.2. Impacts of Environmental Change on Traditional Ways of Living

The struggle to bring a healing presence to the earth’s climate predicament is perhaps nowhere better expressed in the exhibition than through the 2017 art installation *Stitching My Landscape* by Inuvialut artist Maureen Gruben, who lives and works in Tuktoyaktuk in the Northwest Territory of Canada. This work, presented in the exhibition in the form of a documentary video (Figure 8) chronicles Gruben’s intense physical undertaking to stitch three...
hundred yards of red broadcloth in a zigzag pattern of holes in the ice near the sacred site of Ibyuq Pingo. Through this act of stitching, Gruben attempts a symbolic mending of a homeland wounded by the effects of receding sea ice and shoreline erosion (Johnson Museum, 2021). But the red on white contrast also references familial memories such as the stretching of seal intestines on the ice after the hunt, and the stitching patterns of Inuvialut needlework, referencing a generational handing down of knowledge.

Similar to an ecological calendar recording environmental conditions and related socio-cultural activities at a particular place as observed and experienced by the local community, Tenzin Norbu Gurung’s *Crossing the Pass, Bringing Home the Salt* (Figure 9), portrays a specific seasonal activity that relies on the interactions and

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**Figure 5.** Ecological calendar key for Savnob, Bartang Valley, Tajikistan. Courtesy of Anna Ullman.
interdependence of people, animals, land and climate for its success in the artist's home in Dolpo, Nepal. Sustaining Dolpo's traditional way of life has for many generations depended on the annual trek to gather salt, an arduous journey by caravan into remote mountains to harvest and then trade the commodity for grain and other needed supplies at the Tibet/Nepal border. Hailing from a lineage of Tibetan painters dating back four hundred years, Norbu was trained by his father in the art of Buddhist thangka painting, but has innovatively deployed the techniques and style of this classical genre of Tibetan sacred art to convey vivid narratives of activities central to the pastoral life of his community.

Commissioned by the Johnson Museum when Norbu was a visiting artist at Cornell in 2002, the curators included this painting in the exhibition because it provides a place-based perspective for understanding the environmental struggles and changes that have occurred in this particular community over the last two decades.

In 2002 the annual trek to gather salt was already under threat, but research conducted in order to re-interpret this artwork for the 2021 exhibition revealed how the community of Dolpo has grappled with economic, political, social and environmental changes severely affecting the trade that has historically been critical for Dolpo's livelihood. The availability of cheaper iodized salt, a burgeoning market for yarchagumba (a caterpillar fungus that commands high prices as “Himalayan Viagra”), more frequent closing of the border by China, and noticeable climate change could spell the end to this tradition (Eede, 2015). Locals and outsiders have harvested yarchagumba in Dolpo to near extinction and each spring leave behind waste and environmental damage to fragile pasturelands that the Dolpo-ba rely on to raise their yaks. Accelerating glacial melt and increasingly erratic patterns of snowfall and rain have resulted in more floods, drought, avalanches, and landslides that the already economically stressed community is struggling to adapt to (McChesney, 2015).

3.3. Colonial Histories, Environmental Degradation, and the Suppression of Culture

Dilyara Kaipova's textile hanging (Figure 10) speaks to the long-term consequences of colonialist endeavors in Central Asia such as natural resource extraction, use of the land for environmentally destructive activities, and the suppression of local culture. The pattern of the textile's central field includes universal symbols of warning such as those appearing on signage in Uzbekistan and other Central Asian countries where there are lingering effects of radioactive and toxic environmental degradation resulting from the Soviet use of the region as a nuclear testing ground and site of factories making chemical and biological weapons, as well as from extractive activities such as uranium mining and production (IAEA, 2010 1–2, 87, 91).

Kaipova's artistic practice incorporates contemporary and global pop culture iconography into the traditional textile technique of ikat (or abra as it is termed in Uzbekistan). Ikat involves dyeing the warps or wefts before the textile is woven, resulting in slight misalignments that give a pixelated appearance to the motifs. Along the millennia-old trade routes known as the Silk Road, Central Asian ikat textiles became widely admired and distributed across Asia. Under Soviet rule, suppression of local Uzbek customs would have wiped out the ikat tradition there altogether except for a few weavers who preserved this textile technique in the remote Ferghana Valley. Kaipova, who lives in Tashkent, works with traditional weavers in Margilan, Uzbekistan to execute her designs (Jahn, 2020).

The works in Meryl McMaster's series As Immense as the Sky (Figure 11) draw inspiration from the myths and history of the nêhiyaw (Plains Cree), part of the artist's cultural inheritance. As in earlier series, she plays multiple roles in realizing the final, highly cinematic tableau: photographer, performer, customer, prop maker, and location scout. In this work, McMaster stands at Lake Diefenbaker, Saskatchewan, as the Buffalo Child Stone,
Figure 7. Abel Rodriguez (Mogaje Guiju) (Amazonas/Colombia, born 1941) *Arbol de la Vida y la Abundancia (The Tree of Life and Abundance)*, 2020 Ink on paper. Sixty × sixty inches. Herbert F. Johnson Museum of Art, acquired through the Warner L. Overton, Class of 1922, Endowment, and through the David M. Solinger, Class of 1926, Endowment, with additional support from Malcolm Whyte, Class of 1955, and Karen Whyte 2020.026. Photo credit: Laumont Studio, New York.

Figure 8. Maureen Gruben (Inuvialuk, born 1963 in Tuktoyaktuk, Northwest Territories, Canada), *Documentary Photo from Stitching My Landscape* 2017 Video (6:10 min) Image courtesy of the artist. Photograph: Kyra Kordoski.
the protagonist of a story about a human infant who is lost when he falls from his parents’ sled. The child is discovered by a herd of buffalo who raise him as one of their own. In adulthood he learns that he is human, but he does not wish to choose between his human and buffalo families. Unable to occupy both worlds at once, he chooses instead to be transformed into a tremendous stone (Ahenakew, 2012).

The story resonates with McMaster, whose dual heritage—Indigenous and European—is central to her personal identity and artistic explorations. The stone of the myth was a four-hundred-and-forty-ton glacial boulder that once stood near to where McMaster stands in the photograph. It was sacred to the nêhiyaw and a gathering site. In 1966, the stone was destroyed by the Canadian government in order to progress with the construction of the man-made Lake Diefenbaker, in spite of protests to preserve it (National Post, 2014). In embodying this lost object, McMaster both revives it and points to its destruction, a little-known incident in the long history of colonial dispossession and cultural genocide in Canada. The artist’s eyes peek out of the mask she has created for the Buffalo Child Stone, giving it life, and a rope trails from one of her hands to the water where the actual stone is submerged in pieces, perhaps signifying a resuscitation. It draws out connections between colonization, industrial development, environmental change, and cultural loss. At the same time, it provers a form of reclamation, or at least a way to continue to engage with a part of the earth—a sacred place—that no longer exists, through the assertion of what was lost and its creative reimagining.

As noted above, the Johnson Museum’s collection development plan has recently been updated to prioritize the acquisition of works by under-represented artists; especially given the Museum’s siting on the traditional homelands of the Gayogo̱hó:nǫ (Cayuga) people, one of the six nations of the Haudenosaunee Confederacy which predates the United States of America, the exhibition thus provided a logical opportunity to acquire and present “…The Sky is Darkening…Coming home…” (Figure 3) a work created by Tuscarora artist Jolene Rickard along with three Tuscarora beadwork artists. This piece acknowledges the American Passenger Pigeon, a bird once so plentiful in North America that its migrating flocks would sometimes blot out the sun for days, but which was hunted to extinction by 1914 as a food source and as a pest by Euro-Americans. Against a backdrop of photographs of Passenger Pigeon specimens in the Cornell Lab of Ornithology, six beaded birds stand for the six nations of the confederacy, and also as a memorial to the passenger pigeon, whose legacy has been preserved in Haudenosaunee social dances since the species became extinct. This memory and resilience also stands as a metaphor for the return of the Gayogo̱hó:nǫ people to their ancestral homelands after centuries of dispossession. As such, like the return of traditional farming practices after the Soviet collectivization in the Pamir Mountains, and like the return to traditional weaving techniques as expressed in Dilyara Kaipova’s textile, Rickard’s work represents ongoing struggle and hope in the face of loss. The exhibition’s outreach included a program with Professor Rickard and the three beadwork artists which served as an important opportunity for direct learning about Indigenous knowledge and history.

In expressing the importance of Indigenous knowledge toward addressing the effects of climate disruption, ECCAP project director Karim-Aly Kassam speaks of “seeking to develop a meticulous and grounded methodology of hope” (Gashler, 2021). The word “grounded” plays across overarching ideas of hope in the Rhythms of the Land conference and finds its way immediately to dance, where the body is inescapably grounded: after a jump, the body

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Figure 9. Tenzin Norbu Gurung (Tibetan, born 1971), Crossing the Pass, Bringing Home the Salt, 2002, gouache on canvas, 39 3/8 × 39 3/8 inches. Herbert F. Johnson Museum of Art, acquired through the George and Mary Rockwell Fund. Photo credit: Julie Magura.

Figure 10. Dilyara Kaipova Uzbek, born 1967 Danger Signs, 2017. Cotton and silk, handwoven ikat, 82 × 67 inches. Herbert F. Johnson Museum of Art, gift of Raushan Sapar. Photo credit: David O. Brown.
always returns to the earth. As such, the conference and the Art and Environmental Struggle exhibition found a fitting culmination in the dance, music, and video work Blood, Water, Earth (Kaha:wi, 2021) created and performed by Santee Smith at Cornell's Schwartz Center for the Performing Arts on 12 October 2021.

The work of the conference revealed that humans are indeed grounded, that they stand on this planet. Being true to the earth is the bedrock of scientists, scholars, and members of Indigenous and rural communities working together, but art also has an important role to play. Art challenges us to think of what is true, right, and precious. Art also serves as a forum for negotiating differences. Dance in particular carries an immediacy and authenticity which words and intellectual argument can only partially access. Santee Smith's production of Blood, Water, Earth, a collaboration of video and dance artists from Turtle Island (Canada) and Aotearoa (New Zealand) viscerally communicated the vibrancy and richness of real people as well as the environmental and socio-cultural struggles they are encountering. Smith's solo dance performance of this work at Cornell immersed the audience in the land of her home of the Haudenosaunee people, providing a glimpse again of another way of understanding history—the story of power and colonial legacy, of violence, but also a means to rediscover the truth of what is beautiful.

Like the calendar of the human body used by the peoples of the Bartang Valley, which is corporally and inexorably linked to the seasonal round (K.-A. Kassam et al., 2021), dance likewise constantly returns to the body as originating principle. The body makes us capable of physical, emotional, political, and cultural experiences; without the body there would be no sensation, no experience. The body itself is a sign, at once material and abstract, and the performance of dance turns on this paradox. Santee Smith's performance of Blood, Water, Earth merges the body and its messages with the rich imagery of cinematic video and the haunting music of Semiah Smith's singing. The dance fills every possibility of the moment, but it is only a moment, an instant that passes into the next. In today's world in which struggles compress time in its forward push, dance expresses each moment into the present sensation. In this experience of each exquisite moment, Santee Smith endeavors to recognize commonality and celebrate the possibility of community.

4. Outreach and Educational Strategies

Throughout the exhibition planning process, curators worked with museum educators and campus collaborators to develop the exhibition and its programs in order to reach various audiences, including the international conference participants; Cornell University and area college students; university faculty across arts, humanities
and science disciplines; public school groups; and the general public. Forty university classes from Cornell and area colleges visited the exhibition, representing a wide range of academic disciplines including Environmental Studies, History of Art and Visual Studies, Design and Environmental Analysis, Museum Studies, Comparative Literature, Natural Resources, Ecology and Evolutionary Biology, English, Anthropology, Psychology, Art, Nutritional Science, Labor Relations, Human Development, Archaeology, Fiber Science and Apparel, Science and Technology Studies, Government, and Horticulture. Following the close of the exhibition, the many works of art acquired by the museum for its permanent collection will continue to engage audiences going forward, especially as museum attendance returns to pre-pandemic levels. And, since museum exhibitions are by nature fleeting entities, the Museum also developed a robust and lasting online presence for *Art and Environmental Struggle* that will continue to offer access to the works of art it assembled, and further the questions they raise. In addition, the website includes a 360-degree virtual tour that enables online visitors to experience the exhibition and the interrelation of works of art, replicating in some form a physical visit.

Children and adolescents are crucial interlocutors in the conversations raised by the exhibition; like many of the artists whose work was displayed, they bear the least responsibility for contributing to the current crisis, but have the most at stake. Therefore, despite pandemic-imposed limitations on in-person visits, the museum prioritized giving K-12 audiences access to the exhibition through synchronous remote tours, and asynchronous online resources.

In order to furnish students a space for discussion, while also delivering accurate and substantive information about the artists, artworks, and issues they raised, museum educators developed a synchronous virtual tour curriculum. Joining a classroom through a video conferencing platform, educators would display photographs and details of each artwork, supplemented by views of the gallery through the 360-degree virtual exhibition tool. Educators structured the exploration of each artwork with questions that gradually moved from the general ("What do you see?") to the specific ("Where do you think this polar bear came from?"). This progression allowed students to share their observations with a sense of personal discovery ("I found some tiny writing next to the tree!"), and to offer ideas and theories about the possible meaning of each detail ("I think the pattern is meant to look like a crack"). Asking open-ended questions gave students the opportunity to share their thoughts and speculations without fear of saying the wrong thing. At the same time, supplementing open-ended inquiry with concrete background information ensured that students were aware of the particular struggles, intentions, or lived experiences of each artist and the unique local environment to which their work relates.

A wide range of school groups participated in these tours, from third graders at a local, rural elementary school, to high school students in elective art classes. Background knowledge varied widely between groups; sometimes, a class would have no prior knowledge of climate change. Live tours allowed educators to adapt material to each group's level of previous knowledge. Teaching about environmental degradation and change using the work of these artists allowed educators to lead classes through a structured progression: first, exploring and learning about different local environments and climates, then examining the ways these can change or decay as a result of human activity, and finally discussing how these changes have different effects on each place, including land, ecosystem, and human community.

In conjunction with synchronous remote tours, museum educators created asynchronous materials for K-12 classes to use independently; these resources continue to be publicly accessible through the exhibition's website. One resource, *A Guided Look*, was designed to give students (particularly in grades 3 through 6) a self-driven learning experience that combines close engagement with the visual details of a work of art with complementary background information. The online format enriches a student's understanding of a particular artwork and the ecological knowledge on which it hinges, in part by collecting and curating resources external to the museum. For example, in the *Guided Look* activity for Maureen Gruben's *Stitching my Landscape*, a student is introduced to information about Ibyaq Pingo, a geological feature of significant to Gruben and her community. The *Guided Look* activity leads students through a process of observation and learning, ending with a short video taken atop a pingos near the site of *Stitching My Landscape*. This level of detail, while difficult to weave into live classes, allows for a sense of personal investment and empowered expertise when students are able to discover it independently and at their own pace.

In several instances, especially with older, middle-school aged groups, teachers assigned their students the online materials in anticipation of a self-guided museum visit. When they arrived in the gallery, students who had learned
about an artwork beforehand presented their findings to their peers, allowing for an entirely student-centered and student-led experience of the exhibition.

Engagement with the exhibition through these synchronous and asynchronous methods allowed a K-12 group to experience the works on view in a guided, interactive, and highly personal manner. Each artwork puts the abstract phenomenon of global climate change in visible terms, by representing a localized and culturally specific experience of environmental change. Each artist's personal stake in the ecological surroundings they represent fuels personal investment on the part of the young learner. At the same time, where conversations about environmental struggle often fall back on encouraging young students to “do something” about the current crisis, in ways that put undue burden on individuals to take action, these artworks emphasize that no individual is solely responsible for causing or solving the problem of environmental degradation. Instead, creating, preserving, and engaging with ecological knowledge through art can allow an individual or community implicated in the struggle to kindle hope and communicate agency.

5. Conclusions

At the outset of the Rhythms of the Land conference in October 2021, Professor Karim-Aly Kassam asked the question “what if knowledge is not in our heads, but in the relationship we have to our habitats and to each other?” Based on this concept of the inclusion of different ways of knowing, Art and Environmental Struggle has resulted from the contributions and collaborations of artists, curators, collaborative researchers, and knowledge keepers of many backgrounds, as well as the lessons learned from previous exhibitions of Indigenous art and others addressing the topic of climate change more broadly. The authors hope to have demonstrated that, as with the visualization of knowledge found in Ecological calendars, an art museum exhibition can offer an environment for the creation of knowledge in which informed stakeholders and new visitors alike can learn from the experiences of individual artists but also synthesize new knowledge from a grouping of artworks in a manner not possible in another setting. With lasting exhibition accompaniments and teaching strategies, as well as works of art that can be brought into ongoing discussion, Art and Environmental Struggle, like its important predecessors, may also continue to inform a wide variety of audiences.

In his talk for the ECCAP Rhythms of the Land conference, Mr. James Ross, Teetl’it Gwich’in, former Chief of Fort McPherson in the Northwest Territory, Canada, observed that the current need for climate adaptation in Indigenous communities is hardly a new concept; instead, Ross views it as just another in a long history of necessary adaptations of Indigenous peoples to outside forces and governmental assimilationist policies. He stresses, in summation, that “we are still here.” (Ross, 2021). Instead, underscoring the importance of recognizing Indigenous peoples’ contributions to stewardship of lands and waters for millennia before the current moment of climate crisis, he observes, “Indigenous knowledge is there—you just have to find it” (Ross, 2021). Art and Environmental Struggle has played a role in foregrounding just a few of the many ways in which Indigenous and place-rooted ecological knowledge can be expressed in visual art, and thus brought to bear on this most pressing of issues.

Conflict of Interest

The authors declare no conflicts of interest relevant to this study.

Data Availability Statement

Data were not used, nor created for this research.

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