



A2A: Awareness to Action

Science, Art, and Sustainability 2018 Workshop:

Briefing Materials





A2A: Awareness to Action, Science, Art, and Sustainability 2018 Workshop Briefing Materials (NewKnowledge Publication #NSF.156.414.01) by NewKnowledge.org is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Unported License

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Photographers from the Arctic Arts Project hike into an ice cave on the Vatnajokull ice cap, Iceland in 2015. The photographers work with scientists to understand and record the rapidly changing Arctic. The entrance of this ice cave had retreated by 400 feet, and the ice above the cave had thinned from 100 to 40 feet, since the previous year. Photo courtesy of Arctic Arts. © Kerry Kolpping Arctic Arts Project.



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NewKnowledge is a non-profit research institute working to advance social justice so all people can live life to the fullest in harmony with a thriving biosphere.

January 26, 2018

Dear A2A Participant,

Thank you for agreeing to participate in the A2A Planning Workshop funded by the National Science Foundation (Grant #1746106) held simultaneously in Boulder and Princeton, February 21-23, 2018.

We have an extraordinary trans-sector gathering of participants coming from the sciences, the arts, and a variety of sustainability-related fields. Our common goal is to establish an operational strategy for knowledge sharing across our various and different disciplines, networks, and associations. Outcomes from this workshop include the identification and preliminary mapping of successful evidence-based best practices in science-arts sustainability collaborations, a strategic vision for interdisciplinary collaboration across networks; and an initial framework for the dissemination of findings that can reach across disciplines.

Enclosed is a briefing booklet for you to read prior to your arrival. It includes bios, logistical information, meeting agenda, and a four-page introduction to the workshop that our facilitator, the New Knowledge Organization, has developed to contextualize our discussions. Also shared in the email transmitting this letter is a dropbox link to a treasure trove of resources that you collectively supplied in conjunction with your questionnaires. Thank you for your work selecting these.

We look forward to seeing you in February!

Sincerely,


Jim and Marda

Boulder Participants



Kim Abeles
arts, sustainability,
environment

Kim Abeles is an artist whose community-based projects explore biography, geography and environment. She has created projects with the California Science Center, air pollution control agencies, health clinics and mental health departments, and natural history museums in California, Colorado and Florida. Abeles received the 2013 Guggenheim Memorial Fellowship and is a recipient of fellowships from the J. Paul Getty Trust Fund for the Visual Arts, California Community Foundation and Pollack-Krasner Foundation. She is currently working on sculptural suitcases for Camp Ground: Arts, Corrections and Fire Management in the Santa Monica Mountains that embeds artists in the Los Angeles County Fire Department to work in collaboration with paid and inmate workforces. Her work is in public collections including MOCA, LACMA, Berkeley Art Museum, California African American Museum, and National Geospatial Intelligence Agency. Abeles' journals, books, and process documents are archived at the Center for Art + Environment, Nevada Museum of Art.



Max Boykoff
social science,
sustainability,
environment, policy work

Maxwell T. Boykoff (Max) is an Associate Professor in the Center for Science and Technology Policy, which is part of CIRES (Cooperative Institute for Research in Environmental Sciences) at the University of Colorado-Boulder. He teaches in the Environmental Studies program and is Adjunct faculty in the Geography Department. In addition, Boykoff is a Senior Visiting Research Associate in the Environmental Change Institute at the University of Oxford. He holds a PhD in Environmental Studies from the University of California-Santa Cruz and Bachelor of Sciences in Psychology from The Ohio State University. His interests include climate adaptation, cultural politics and environmental governance, science-policy interactions, and political economy and the environment.



Alison Carey
art, social justice,
organizing

Alison Carey is director of American Revolutions: the United States History Cycle, the Oregon Shakespeare Festival's multi-decade program of commissioning and developing 37 new plays about moments of change in United States history, including Tony and Pulitzer winners and works that explore the history of the relationship between Americans and their environment. Carey is co-founder and former resident playwright of Cornerstone Theater Company, which creates work with and for communities across the United States. Her *California: The Tempest* explored the effects of climate change on the Golden State and her work has been produced at venues nationwide, including Arena Stage, the Public Theater, the Mark Taper Forum, the shuttered mother plant of Bethlehem Steel, and a dirt-floor cattle sale barn. She speaks nationally on the importance of the arts in undermining white supremacy, promoting environmental justice, and shaping healthy and equitable societies.



Ramón Cruz
sustainability,
environment, policy work

Ramón Cruz brings experience that intersects fields of sustainability, environmental policy, urban planning, energy and climate change. In his native Puerto Rico, he worked in the public sector as Deputy Director of the Environmental Quality Board (the state environmental regulatory agency) and as Commissioner of the Puerto Rico Energy Commission. Non-governmental work includes senior positions at the Environmental Defense Fund, the Partnership for New York City and the Institute for Transportation and Development Policy.

Boulder Participants



Frank Ettawageshik
arts, sustainability,
social justice,
environment, organizing,
policy work, business

Frank Ettawageshik lives in Harbor Springs, Michigan, with his wife Rochelle. He has four adult children and six grandchildren. He served in tribal elected office for sixteen years, fourteen as the Tribal Chairman of the Little Traverse Bay Bands of Odawa Indians in Harbor Springs. During his tenure as Tribal Chairman he was instrumental in the adoption of the Tribal and First Nations Great Lakes Water Accord in 2004 and the United League of Indigenous Nations Treaty in 2007. Now serving as the Executive Director of the United Tribes of Michigan, he also serves on the Environmental Justice Workgroup for the State of Michigan, the Michigan Water Use Advisory Council, and on the Executive Board of the Little Traverse Conservancy. In 2015 he attended the UNFCCC COP21 (United Nations Framework Convention on Climate Change, Council of the Parties 21) in Paris, France, as a delegate from the National Congress of American Indians.



Alexis Frasz
arts, sustainability,
social justice,
environment, digital
media/technology

Alexis Frasz is co-director of Helicon Collaborative, a research and strategy consultancy working for a more sustainable, equitable and creative future. She leads Helicon's work at the intersection of art and environmental sustainability, which seeks to understand, create, and share effective arts and culture based strategies for change, and amplify the role of artists in society. Selected recent work related to art and sustainability includes: Participating in and reporting for Beyond Green: The Arts as a Catalyst for Sustainability (at the Salzburg Global Seminar, a convening of 60 practitioners from 27 countries across the arts and sustainability sectors); developing a framework for understanding socially-engaged artistic practice; research on how place-based arts and cultural interventions are advancing sustainability outcomes for communities; and research into the state of funding at the intersection of art and environment (including convening 36 arts funders, environmental funders, and artists to discuss work at this intersection).



Johnny Fraser
social science,
architecture,
environment, social
action

John Fraser (Johnny) is a conservation psychologist, architect, and educator. His research focuses on how our experience with media and community influences learning, attitudes, and motivations for engagement with solving the problems that face society. He has formal training in environmental studies, experimental art and film, and worked in a variety of capacities on feature films and an Emmy winning environmental documentary. He is Adjunct Professor in Earth Science at Indiana University, Editor of *Curator: The Museum Journal*, and a founding editorial board member for *Museums & Social Issues*. He is President Elect of the American Psychological Association's Division 34, Society for Environment, Population and Conservation Psychology and a Bill and Melinda Gates Foundation Media Impact Fellow at the Norman Lear Center, Annenberg School of Journalism and Communication, University of Southern California.

Johnny will facilitate the program in Boulder



Anne Gold
climate change, natural
science, education

Anne Gold is Director of Education and Outreach at CIRES (the Cooperative Institute of Research in Environmental Sciences). A climate scientist by training, she received her doctoral degree in paleoclimatology from the University of Regensburg in Germany. Her science expertise focuses on glaciation patterns in European and Asian Mountain Ranges and landscape evolution. She focuses now on science education for educators, students and the general public around climate and general geoscience education.

Boulder Participants



Jeff Hohensee

sustainability, social justice, environment, organizing, business.

Jeff Hohensee has been a change agent for over 40 years. He has worked in corporate finance, public schools, nonprofits, and clean tech start-ups. Throughout his career he has helped catalyze breakthrough innovation, accelerate sustainability implementation and enhance human well-being. At TreePeople Hohensee helped build a statewide network for environmental education and led social mobilization campaigns that integrated media, service learning, leadership development and mentoring to inspire over 100,000 teenagers annually to lead service projects in their neighborhoods. At Natural Capitalism Solutions he built a consulting practice that guided sustainability planning and breakthrough implementation for corporate clients representing 3% of U.S. GDP. Hohensee oversaw concept design of the recent Alliance Center renovation which integrated space design, green building, workplace well-being and technology to improve tenant productivity and encourage innovation. He recently started working at a clean-tech start-up to scale deployment of their breakthrough technology to help feed the world.



Mark Kesling

natural science, arts, sustainability, social justice, environment

Mark Kesling is an artist and science educator who has worked in the field of museum education and design for more than 30 years. He has designed, created and managed major exhibits and installations in museums including The Children's Museum of Indianapolis, The Museum of Science and Industry in Chicago, The Carnegie Museum, The Exploratorium, and the Children's Museum of Wilmington. He is currently the Founder and CEO of the daVinci Pursuit. Kesling continues to provide leadership in art and science through the design of a "museum without walls." He works with neighborhood, city, institutional, artist and educational partners to create science installations in some of the most neglected neighborhoods in Indianapolis.



Jeff Kiehl

natural science, social science.

Jeffrey T. Kiehl (Jeff) is a senior scientist at NCAR (the National Center for Atmospheric Research) and an adjunct professor in the Environmental Studies Department at the University of California, Santa Cruz. He has published over 140 articles on climate change and is the author of the new book (Columbia University Press), *Facing Climate Change: An Integrated Path to the Future*. He was the 2012 recipient of the American Geophysical Union Climate Communication Prize. Kiehl also holds a master's degree in psychology from Regis University and is a Diplomat Jungian Analyst with the C.G. Jung Institute of Colorado, the Inter-Regional Society of Jungian Analysts and is a member of the International Association of Analytical Psychology. He is a Fellow of both the American Meteorological Society and the American Geophysical Union. Kiehl has given numerous talks nationally and internationally on the psychological dimensions of communicating the science of climate change.

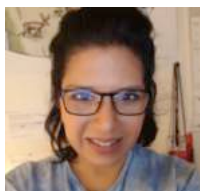


Marda Kirn

arts, sustainability, social justice, science-arts-sustainability collaborations

Marda Kirn is the founding director of EcoArts Connections (EAC), which brings the arts together with science, social justice, and Indigenous ways of knowing to inspire people of all ages to live more sustainably – environmentally, economically, socially/culturally, and personally. EAC commissions, produces, presents, and consults on collaborative activities including performances, exhibits, convenings, youth programs, and other events held in both traditional and non-traditional venues. Previous to EAC, Kirn was the founding director of the Colorado Dance Festival, which was considered one of the top three dance festivals in the US during her 14-year tenure (1982-96), bringing artists to Colorado from across the country and the world. She was also a founder and former director of the International Tap Association. Kirn has written for various publications, received numerous awards, and has been a speaker, panelist, and/or consultant for organizations in five continents.

Boulder Participants



Heidi McCann

social science, sustainability, environment, policy work, museum.

Heidi McCann is a graduate of the University of Colorado-Boulder (CU) Museum and Field Studies program and American Studies program. An enrolled citizen of the Yavapai-Apache Nation of Camp Verde, AZ, upon completion of her studies she worked as a Cultural Resource Specialist with the Yavapai-Apache Nation focusing on language preservation and revitalization. She is currently a research faculty member of CU Boulder, an Associate Scientist II at CIRES (the Cooperative Institute for Research in Environmental Sciences) and the Knowledge Exchange Coordinator for ELOKA (the Exchange for Local Observations and Knowledge of the Arctic Project) at the National Snow and Ice Data Center where she has planned cultural events for ELOKA partners and collaborators. She works closely with Arctic community members, Knowledge Holders and researchers from various parts of the Arctic region in North America and Northern Europe.



Frank Niepold

natural science, social science, sustainability, environment, organizing

Frank Niepold is Senior Climate Education Program Manager and the Climate Education Coordinator at NOAA's Climate Program Office in Silver Spring, MD, Climate.gov Education section lead, the U.S. Climate Action Report Education, Training, and Outreach chapter lead for the UN Framework Convention on Climate Change (UNFCCC), and a member of the Federal Steering Committee for the Fourth National Climate Assessment (NCA4). At NOAA, he develops and implements NOAA's climate goal education and outreach efforts that specifically relate to NOAA's climate goal and literacy objective. Niepold is the "Teaching Climate" lead for NOAA's Climate.gov web portal that offers learning activities and curriculum materials, multimedia resources, and professional development opportunities for formal and informal educators who want to incorporate climate science into their work. Additionally, he is a co-chair for the Climate Literacy and Energy Awareness Network (CLEAN) Leadership Board.



Beth Osnes

arts, sustainability, social justice, environment, organizing

Beth Osnes is an Associate Professor of Theatre and Environmental Studies at the University of Colorado-Boulder. She is co-director of Inside the Greenhouse, an initiative for creative communication on climate (www.insidethegreenhouse.net). She recently toured an original musical *Shine* to cities in the 100 Resilient Cities Initiative to facilitate local youth voices in resilience planning, and her book on this, *Performance for Resilience: Engaging Youth on Energy and Climate through Music, Movement, and Theatre*, was recently published. Open Source Materials for using *Shine* to engage youth are available at: <http://www.insidethegreenhouse.org/shine>. She is currently developing a method toward vocal empowerment for young women that she is researching in Guatemala, Tanzania and the USA. Her book *Theatre for Women's Participation in Sustainable Development* includes her work specific to gender equity in Panama, Guatemala, India, Nicaragua and the Navajo Nation. She is featured in the award-winning documentary *Mother: Caring for 7 Billion* (www.motherthefilm.com).



Paty Romero-Lankao

social science, sustainability, social justice

Patricia Romero-Lankao (Paty) is an interdisciplinary sociologist and has worked with scholars and decision makers at local, national and international scales. She is a Research Scientist at NCAR (the National Center for Atmospheric Research), and is currently leading the Urban Futures initiative there <https://ral.ucar.edu/csap/urban-futures>. Along with other scientists and stakeholders in the US and internationally, she is currently designing urban-scale interdisciplinary studies and art creations that inform and are informed by sustainability challenges at all levels. In addition to her research work, she has participated in global and local endeavors promoted by IPCC, UNEP, IAI and UN-HABITAT. She was co-leading author to Working Group II of the Nobel prize-winning IPCC Fourth Assessment Report (AR4). Born in Mexico, but considering herself a citizen of the world, she is passionately engaged in finding options to move humankind toward more sustainable, resilient and fair futures.

Boulder Participants



Shawhin Roudbari
social science,
sustainability, social
justice

Shawhin Roudbari is an Assistant Professor of Environmental Design at the University of Colorado-Boulder. He studies the activism of design professionals through political and community engagements. Roudbari uses ethnographic and qualitative sociology methods to examine the work of architects, landscape architects, urban designers, planners, and civil and environmental engineers as the professionals who design and construct our built environments. He is the principal investigator on two NSF awards investigating dissent in the design professions and the ethics of community engagement work by engineers in developing communities, respectively. Shawhin teaches interdisciplinary research methods, design studios, and histories and theories of political engagement in design.



Connie Roser-Renouf
social science

Connie Roser-Renouf is an Associate Research Professor at the Center for Climate Change Communication at George Mason University. Her research focuses on understanding how diverse audiences use, interpret and respond to information on the issue of climate change. Since 2008, Dr. Roser-Renouf has served as Co-Principal Investigator (with Edward Maibach and Anthony Leiserowitz) of the Yale/George Mason University Climate Change in the American Mind audience research program. This research has identified six distinct audience segments that hold divergent beliefs and favor different responses to the threat – *Global Warming's Six Americas*. These segments are now used by a wide range of informal science educators in government agencies, museums and zoos to improve their climate change communication. Roser-Renouf has a PhD in Communication Research from Stanford. Prior to her career in social science, she received a BFA in dance and performed with a modern dance company.



Jennifer Tabanico
social science,
sustainability,
environment

Jennifer Tabanico is President and owner of Action Research, a firm that specializes in changing behavior for the public good by applying marketing and social science research to outreach programs that promote clean, healthy, and sustainable communities. Tabanico has a Master of Arts degree in Experimental Psychology from California State University and more than a decade of experience developing and implementing community-based social marketing programs for public and private agencies. Her work has spanned a broad range of social issues including water quality, waste and recycling, litter prevention, energy-efficiency, water conservation, and sustainable forestry. Recent clients have included the City and County of San Diego, the New York State Energy Research and Development Authority, the Urban Sustainability Directors Network and the American Forest Foundation. Her work has been published in a variety of outlets including the *Journal of Environmental Psychology*, *Social Influence*, and *Social Marketing Quarterly*.



Tony Tapia
arts, social justice,
business

Tony Tapia, President of Bridging Worlds Philanthropic Advisors, advises on global philanthropy, economic development, corporate giving, performing arts, immigration, Latino, and aging issues. He has worked in the nonprofit, foundation and corporate sectors for over 30 years. He also serves as Director for the Colorado Latino Age Wave and is Program Director for The Conference Board's Corporate Social Responsibility and Philanthropy & Engagement Councils. Prior to his current work, Tapia was the Senior Program Director for the Western Union Foundation leading global-giving programs. Previously, he was Director of Grantmaking at the Gill Foundation and Program Director of Cultural Programs at the Association of Performing Arts Presenters. He currently serves as a board member of Borealis Philanthropy and the Bright Mountain Foundation and as a member of the Colorado Strategic Action Planning Group on Aging. He has served on numerous boards and National Endowment for the Arts review panels.

Boulder Participants



Monique Verdin

arts, social justice,
environment, organizing

Monique Verdin has been intimately documenting the complex interconnectedness of environment, economics, culture, climate and change in southeast Louisiana for decades. Her indigenous Houma relatives and their lifeways at the ends of the bayous, enduring the realities of restoration and adaptation in the heart of America's Mississippi River Delta, has been the primary focus of her interdisciplinary work. Verdin is the subject/co-writer/co-producer of the award-winning documentary *My Louisiana Love* (2012). She is a member of the United Houma Nation Tribal Council and director of The Land Memory Bank & Seed Exchange; an experiential project engaged in building a community record through cultural happenings, strategic installations and as a digital archive. She is part of the Another Gulf Is Possible Collaborative core leadership circle of brown (Indigenous, Latinx and Desi) women from Texas to Florida working to envision just economies, vibrant communities and sustainable economies.



Bethany Wall

arts, sustainability,
social justice,
environment, policy work

Bethany Wall is a development and strategy consultant whose practice centers on helping communities gain strength culturally, environmentally and politically. She spent 20 years in philanthropy at the NYC-based Mertz Gilmore Foundation (MGF), working largely in civic and cultural spheres, typically with equity and access at the core. Subsequent development experience with environmental, civic and arts organizations informs her ongoing work. While at MGF, she managed a portfolio of approximately \$7 million, split between Human and Built Environment, NYC Arts, and a pool of named beneficiaries of the LuEsther T. Mertz Charitable Trust. Regularly bridging silos of environmental and arts grantmaking, she developed funder sessions about the benefits of working at the intersection of art/culture and environment. In 2009, Wall project-managed *Our Lady of Detritus*, an interactive portable performance about trash and transformation that traveled to public spaces across NYC.



Jenny Wells

natural science, social
science, arts,
sustainability, social
justice

Jennifer Wells (Jenny) is a San Francisco based humanities scholar and activist, focused on utopia and transition studies. She received a PhD from Berkeley and the Sorbonne, Paris IV, in critical social and environmental theory and philosophy. Her work interweaves theory, art, activism, geopolitics, and geopoetics, as tools for change. In particular, she focuses on real utopias and how the humanities and arts help inspire transformation of pressing challenges, such as: climate justice, transcultural cooperation, and economic transition. She draws on transcultural voices on global change: marginalized and privileged, arts and sciences, indigenous and modern. Wells' book *Complexity and Sustainability* (Routledge 2012), examines how complexity theories contribute to systemic transition towards climate stabilization. She is working on a book on art, theory, and praxis of real utopias and global transition, and is Associate Professor of Transformative Studies at the California Institute of Integral Studies.



Jim White

natural science,
sustainability, environment,
organizing, policy work,
business, climate change

James W.C. White (Jim), PhD, is an internationally known paleoclimatologist and Dean of the College of Arts and Sciences at the University of Colorado-Boulder, as well as a Professor in the Department of Geological Sciences and the Environmental Studies Program. White served as Director of the Institute of Arctic and Alpine Research (INSTAAR) from July 2008 until August 2017 and was founding director of CU Boulder's Environmental Studies Program. During decades of cross-campus service, White has broken down barriers between the natural sciences and social sciences, humanities, journalism, arts and business, engaging the broader CU community in the study of sustainability and environmental change. As one of the top publishing researchers in geoscience, White's highly cited work has appeared in high-profile journals such as *Science* and *Nature*. He has appeared as climate expert in multiple documentaries, such as the critically-acclaimed 2012 film *Chasing Ice* and the recently released *Bill Nye: Science Guy*.

Boulder Participants



Guy O. Williams

sustainability, social justice, environment, organizing, policy work, business, environmental justice

Guy O. Williams is President & CEO of Detroiters Working for Environmental Justice. A graduate of Bucknell University, Williams is the 2017 recipient of the Great Lakes Leadership Academy William Milliken Leadership for the Common Good Award, as well as Bucknell's prestigious Alumni Board of Directors Award for Service to Humanity. Named 2014 Michigan Green Leader by the Detroit Free Press, he is known locally and nationally for his work as an advocate for environmental justice. Williams, the author of the *Detroit Climate Action Plan*, is a Director on the Boards of the Rails-to-Trails Conservancy (Chair 2013–2016), and Pesticide Action Network North America. He also serves on the Advisory Board for the Center for Urban Responses to Environmental Stressors and the External Advisory Board of the Center for Sustainable Systems at the University of Michigan School of Environment and Sustainability.



Patrick Chandler

note taker

Patrick Chandler is an Environmental Education Consultant with the Washed Ashore Project, Earth Science Information Partnership Fellow, and Master's of Environmental Studies Candidate based at the University of Colorado-Boulder.



Sarah Fahmy

note taker

Sarah Fahmy is a first year University of Colorado-Boulder Theatre MA student from Alexandria, Egypt whose research and creative work focuses on the use of applied theatre to empower women to participate in sustainable development.



Erin H. Leckey

note taker

Erin H. Leckey is an education and outreach specialist working at CIRES (Cooperative Institute for Research in Environmental Sciences) with a background in Earth and life sciences, helping people understand climate impacts and build resiliency.
