

From Problems to Possibilities: The Power of Systems Thinking for Environmental Educators

March 26, 2026

Link to the recording: <https://www.youtube.com/watch?v=4yUhbBbVZeQ>

eePRO post: <https://eepr.naaee.org/learning/problems-possibilities-power-systems-thinking-environmental-educators>

Speakers:

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Presenter Resources

- Compass Education: <https://compasseducation.org/>
- Gitanjali Learning Design: <https://www.gitanjalilearningdesign.com/>
- Introduction to the Compass Tools Workshop Series, Systems Thinking for Sustainability in the Classroom and Beyond:
<https://form.jotform.com/compasseducation/ict-registration-form>

Highlights of the chat transcript:

Welcome!

- Anne Umali, NAAEE: Hi! Great to see folks join early 😊
- Victoria Loiacono: Vicky Loiacono from the Children's Environmental Literacy Foundation in NY
- Anne Umali, NAAEE: Hi! I'm part of the NAAEE Team, supporting our webinar today. Joining from North Carolina
- Deborah Curtis: Deborah Rogers Curtis - coming from St. Louis, MO and I run school sustainability programs across Missouri and Southern Illinois
- Gustavo Requena Santos: Gustavo Requena (He/Him), Higher Ed, calling from northern VT
- aly f: 🙋 Frisco, TX - Environmental Sustainability and Water Resources Educator
- Sandra Gibbons: Hi everyone! I'm watching from Olympia, WA and enjoying a short burst of sunshine. :)
- Rachel Weaver: Rachel Weaver, Education & Volunteer Coordinator with Native Prairies Association of Texas
- Richard Ogle: Richard Ogle, Port Gamble S'Klallam Tribe Natural Resources, Environmental Education Outreach Coordinator, Washington
- Jimena Cuenca: Hi all! I'm Jimena from NAAEE, zooming in from Alaska.
- Heather Kraus: Heather K from Beaufort SC. I'm an education coordinator for a wildlife nonprofit
- Natalie Ratzke: Hi Everyone, my name is Natalie and I am the Environmental Education Coordinator for the Orlando Science Center in Florida!
- Sam Hoffman: Sam Hoffman, Outreach Naturalist, Indy Parks in Indianapolis, Indiana

- Ashley Knoch: Ashley in Pittsburgh, PA, non-formal environmental education
- Martha Monroe: Martha Monroe, Gainesville FL, climate education
- Wanda Bryant: Wanda Bryant, retired middle school science teacher from Michigan
- Kimberly Welty: Kym Welty from UMass Dartmouth - grant support specialist at the Kaput Center
- Catherine Rider: im Cat in AL..
- Roberta Hunter: Roberta Hunter, with NJ Audubon. I run the Eco-Schools U.S. program and do professional development across the state
- Michelle Robertson: Michelle from Santa Barbara, CA
- Elizabeth (Sheflin) Sieglinger: Beth, Education Coordinator with Jug Bay Wetlands Sanctuary in Lothian, Maryland
- Gabriella Giordano: Gabriella Giordano, Chesapeake Research Consortium in Edgewater, MD working on the new Chesapeake Bay Internship Program!
- Shaghig Chaparian: Shaghig Chaparian, Environmental Education Doctoral Student, NYC
- Tara Chudoba: Tara Chudoba, WCS Bronx Zoo in New York
- Julie Ellefson: Julie E from Chicago, IL higher ed
- Millie Cortés: Millie from Puerto Rico. :)
- Pallas Kern: Pallas (they/them), learning facilitator at Shedd Aquarium in Chicago
- Kim Lowther: Reston, VA. Naturalist for Walker Nature Center
- Steve Schmidt: Hello from LEAF: WI K12 Forestry Education Program in the WI Center for EE at UW Stevens Point
- Midori Coyle: Hi! My name is Midori Coyle and I am the Environmental Education Coordinator for the Sand Creek Regional Greenway Partnership in Denver, Colorado.
- Candice McKinnon: Hi, Candice, from Spain
- Amanda Dutkiewicz: Amanda, Volunteer Coordinator at Edelman Fossil Park & Museum in NJ
- Abby Benson: Hello! Abby in Saratoga NY.
- Ximena Bogarín | WWF-PY: Hi! Ximena from WWF-Paraguay :)
- Betty Olivolo: Betty O from the Natural Start Alliance zooming in from Culpeper, VA
- Carolyn McFarlane: Hi I am Carolyn in the UK. Outdoor and Nature Based Learning educator.
- Laura Blood: Laura-Pennsylvania Resources Council-Pittsburgh and Philly
- Bethany Vosburg-Bluem: Otterbein University, Westerville/Columbus Ohio
- Liz McKoy: Liz McKoy, NY Sun Works
- Connie Lilley: hi, I'm Connie Lilley, We ReUse, Territory Director/Green Schools Coordinator Michigan!
- Susan Baron: Susan, Missouri Botanical Garden in St. Louis
- Courtney Sullivan: Courtney in Seattle WA. E3WA and National Wildlife Federation
- Tara Chudoba: Hi, Susan Baron!
- Elena Martelli: Hi from Italy!
- Susan Baron: Hi Tara!
- Rowena Capuno: Rowena, Children's Environmental Literacy Foundation(CELf), tri-state area NY-NJ-CT
- Carolyn Morris: Hi Carolyn, Bucks County PA
- Neysa Gabriel: Neysa Gabriel, Atlanta, GA

- Neysa Gabriel: Hello All!
- Masoom Jethwa: Hello all, I am Masoom, working at Vikram A Sarabhai Community Science Center from India .
- Masoom Jethwa: good morning all.
- Tony Murphy: Hello everyone, Tony Murphy, CO
- Yun-Hsuan Chiu: Hi, I am EE teacher in Taiwan.
- Brian Akom Ekuri: Hello all, I am Ekuri, an environmental educator from Buea, Cameroon.
- Neysa Gabriel: Neysa Gabriel, Atlanta, GA, College Educator, Marine and Environmental Sciences and Ecology
- Christine Kustra: Hi all, Christine here! I am an Environmental Educator from Northeastern Illinois.
- Heather Hutmacher: Good afternoon! I am a School Engagement Coordinator for the City of Denton, TX. and collaborate with the local ISD.
- Emily Calder (She/her): Hi! I'm an outdoor and environmental educator (mostly for kids) with Audubon in Vermont
- Judy Braus, NAAEE: <https://naaee.org/programs/guidelines-excellence>
- Scott Shepherd: Hi All, I'm an outdoor/environmental educator, parent, and program director on the California Coast in the Monterey Bay Area. Looking forward to learning more!
- Olivia Poulos: Environmental Justice & Access!
- Midori Coyle: water quality
- Steve Schmidt: Climate change
- Susanna Bruneau: invasive species,
- Hannah Newell: conversations about climate change
- Bethany Vosburg-Bluem: Pollinators
- Betty Olivolo: climate change
- Yvonne Schramm: water scarcity
- Christine Kustra: habitat fragmentation
- Rachel Weaver: prairie ecosystems
- Susanna Bruneau: biodiversity loss
- Heather Kraus: microplastics in the environment
- Martha Monroe: civic engagement for climate change
- Carolyn Morris: road ecology
- Laura Blood: zero waste
- Amy Burt: Stormwater management
- Roberta Hunter: climate change
- Kim Lowther: biodiversity, citizen science
- Julie Ellefson: Climate change
- Sam Hoffman: Pollution
- Ashley Knoch: Increasing composting in the community
- Janice Milanovich: water quality
- Julie Ellefson: Biodiversity loss
- Wanda Bryant: Lead in water
- Natalie Ratzke: Phone recycling !
- Judy Braus, NAAEE: equity and justice

- Richard Ogle: Recruiting interest in Natural Resources influencing Tribal Youth through a Tribal Youth Corps
- Hannah Newell: joy in climate action
- Julie Ellefson: Water quality
- Victoria Loiacono: Civic Science, climate ed and sustainability through various pathways
- Sam Hoffman: Nature deficit disorder
- Ximena Bogarín | WWF-PY: Grassland conservation (protection, restoration, management)
- Rowena Capuno: Food waste and food insecurity
- Yun-Hsuan Chiu: Biodiversity loss
- Neysa Gabriel: Equity
- Connie Lilley: reducing single use plastic, Styrofoam foodware
- Scott Shepherd: Inequitable access to the outdoors
- Jennifer Verschoor: The AI in environment
- Candice McKinnon: Civic engagement / solutionary action
- Susanna Bruneau: invasive species
- Marcela Villan: Hi! All of them
- Elena Martelli: Phone life balance
- Masoom Jethwa: I am working on extreme weather events, Layers of atmosphere and impact of climate change , and recycling and plastics, and finally carbon credit.
- Özgül Keleş: Nature education
- Julie Ellefson: Environmental justice
- Marcela Villan: So good to be here
- Natalie Ratzke: sustainable fishing
- Yun-Hsuan Chiu: Invasive species
- Elena Martelli: Water footprint of food
- Özgül Keleş: Ecological footprint
- Masoom Jethwa: Also integrating AI with GEE in Env Ed.
- Leanna Rodriguez: fear
- Bethany Vosburg-Bluem: ugh
- aly f: pollution
- Carolyn Morris: NO!!!
- Midori Coyle: sad
- Michelle Robertson: Pollution
- Pallas Kern: worry
- Victoria Loiacono: Long term effects
- Preethi Mony: horror
- Amy Burt: sadness :(
- Kimberly Welty: sadness
- Ashley Knoch: despair
- Betty Olivolo: sadness
- Sam Hoffman: Sadness
- Kim Lowther: sad
- Yvonne Schramm: conflict
- Olivia Poulos: ick

- Candice McKinnon: Sadness
- Natalie Ratzke: despair
- Catherine Rider: :(
- Emily Calder (She/her): unsurprising
- Nande Gilbert: no consideration
- Yun-Hsuan Chiu: Danger
- Steve Schmidt: yuck
- Susanna Bruneau: frustration
- Jan Ward: Yikes!
- Laura Blood: preventable
- Marcela Villan: Empathy
- Elizabeth (Sheflin) Sieglinger: preventible
- Megan Adcock: sadly familiar
- Carolyn McFarlane: sad
- Elena Martelli: angry
- Neysa Gabriel: Plastic pollution, unacceptable
- Masoom Jethwa: Danger
- Shamili Ajgaonkar: Preventable plastic pollution
- Özgül Keleş: Water pollution
- Richard Ogle: Peoples influence on the planet
- Marcela Villan: Want to solve this
- Masoom Jethwa: Environmental issues are not accidents but systemic outcomes of larger habit.
- Steve Schmidt: Will these slides be available to share some slides with colleagues in order to report back to some who could not make it?
- Anne Umali, NAAEE: Yes! We'll share the slides and recording this week
- Scott Shepherd: Colonialism
- Candice McKinnon: Poverty
- Judy Braus, NAAEE: Racism
- Richard Ogle: Traditional Ecological Knowledge and Western Science aka Two Eyed Seeing
- Martha Monroe: increase in consumption
- Leanna Rodriguez: how forests provide eco service to cities
- Elizabeth (Sheflin) Sieglinger: access
- Rowena Capuno: Colonialism and Capitalism
- Megan Adcock: capitalism
- Aidyn Intykbekov: Food webs
- Candice McKinnon: Corruption
- Bethany Vosburg-Bluem: capitalism
- Marcela Villan: Plastic pollution. The relation with oil
- Christine Kustra: access
- Catherine Rider: inequity
- Wanda Bryant: Flooding
- Midori Coyle: Water Quality changes due to urban environment and local industry
- aly f: consumption
- Rachel Weaver: energy development

- Kim Lowther: deforestation
- Judy Braus, NAAEE: economic disparities
- Ximena Bogarín | WWF-PY: Intersectionality in general
- Monica Alba-Murillo: Our responsibility as consumers!!
- Candice McKinnon: Individualism
- Rowena Capuno: disconnection from the natural world
- Masoom Jethwa: Learners rarely see the Systemic Structure. They focus on the 'event' (the littering) because it's visible, but they miss the invisible web of industrial standards, policies, and social norms that actually drive that behavior.
- Neysa Gabriel: Sustainable practices - environment, economy, social
- Yun-Hsuan Chiu: Enterprises' duty
- Elena Martelli: Human choices matter
- Laura Blood: They think most of the plastic in the ocean is from littering and not from mismanaged piles on the countries where wealthy countries sends them
- Ellen Jamieson: silo mentality
- Carolyn Morris: how man made structures negatively impact migratory species
- Christine Kustra: .
- Judy Braus, NAAEE: Please add any questions you have along the way, and we'll try to answer as many as we can during the webinar. :-)
- Richard Ogle: Reminds me of the medicine wheel and the four directions..
- Elena Martelli: Wow! This is incredibly powerful!
- Judy Braus, NAAEE: Go, David!
- Rachel Weaver: We are all ecological!
- Victoria Loiacono: Its all connected!
- Masoom Jethwa: How do we balance such Compass that has unequal 'pull' in different directions ?
- Yun-Hsuan Chiu: Labor
- Rachel Weaver: Economy - all the holidays that focus on buying chocolate as gifts
- Bethany Vosburg-Bluem: Nature - harder to grow due to climate change
- Susanna Bruneau: Why does chocolate cost so much?
- Roberta Hunter: Economy - child labor
- Victoria Loiacono: Makes me happy - wellness
- Pallas Kern: Child labor- economy (price) and wellbeing (wellbeing of the child laborers)
- Emily Calder (She/her): Chocolate trees grow in tropical places
- Masoom Jethwa: This element relates most directly to Economy and Society on the Compass.
- Wanda Bryant: Nature-source
- Elizabeth (Sheflin) Sieglinger: Can't have without pollinators
- Özgül Keleş: Nature- Walter footprint
- Sam Hoffman: Economy - the rising process of chocolate due to struggles with growing
- Ashley Knoch: Nature - made with palm oil, also requires pollinators!
- Steve Schmidt: Society - we gather around chocolate in the office and elsewhere!
- Catherine Rider: society- what we accept from companies re: human rights
- Sam Hoffman: *prices

- Neysa Gabriel: Society, disparities of those who cannot afford chocolate
- Özgül Keleş: Wellbeing- happiness
- Masoom Jethwa: It addresses social stability, human rights, and the governance of labor standards within the chocolate industry.
- Elena Martelli: Nature: deforestation
- Sigrid Falla: Society - Taking care of communities growing cacao in South America
- Christine Kustra: Nature - coco seeds and fermentation
- Jennifer Verschoor: Wellbeing can't live without chocolate :-)
- Megan Adcock: Nature -impact on ecosystems and orangutans!
- Özgül Keleş: Nature: more parkina so waste
- Rachel Weaver: Great on them know its cacao!
- Carolyn Morris: Wellbeing - chocolate packed with antioxidants and polyphenols
- Rowena Capuno: Social - connects me to my culture we get pure cocoa - Tablea - from the Philippines when we visit -
- Bethany Vosburg-Bluem: Society - not everyone has access to outdoors
- Scott Shepherd: Society - being outdoors improves wellness
- Steve Schmidt: Nature - discrepant observations/events
- Emily Calder (She/her): Outdoor ed can be expensive (E)
- Elena Martelli: Wellbeing: mental health benefits.
- Heather Kraus: wellbeing-being outside calms our nervous system
- Christine Kustra: Well being: building relationships in outdoors and to group
- Midori Coyle: being in nature has been shown to improve mental health
- Catherine Rider: nature- connected to all other subjects
- Wanda Bryant: Well being-accessibility to all
- Olivia Poulos: Well-being & society: finding community in being in nature together
- Candice McKinnon: Wellbeing - mental health
- Rachel Weaver: Society - sharing nature joy with multigenerational communities
- Sigrid Falla: Wellbeing - Connecting with nature is good for health
- Carolyn McFarlane: Wellbeing - physical activity
- Megan Adcock: society - not everyone feels like they belong in the outdoors
- Yvonne Schramm: society - how we integrate into schools
- Leanna Rodriguez: access to time
- Nande Gilbert: society - getting kids more acclimated with the natural world around them
- Martha Monroe: inequitable; every school doesn't have school sites or field trips
- Masoom Jethwa: It is connect with all.
- Özgül Keleş: Nature: seeing nature beauty
- Rowena Capuno: well being - mental health and community
- Carolyn Morris: Society and wellbeing Mental health
- Amy Burt: Society - place-based learning
- Emily Calder (She/her): connection to community (W + S)
- Roberta Hunter: society - which landscapes we value determine which gets traffic of people
- Neysa Gabriel: Nature- who has access to know where to go or what it can provide
- Elena Martelli: Nature: connection to ecosystems.
- Candice McKinnon: Nature

- Masoom Jethwa: We can learn about 'green cover' available on a school campus and how it impacts the local 'Urban Heat Island' effect.
- Gustavo Requena Santos: anyone got what are the PATH steps?
- Nande Gilbert: Pick focus
- Emily Calder (She/her): Pick a focus, Add ideas, Think, Hubs
- Roberta Hunter: I got Pick your focus, Add ideas, THink analytically
- Roberta Hunter: missed h
- Judy Braus, NAAEE: find hubs
- Elizabeth (Sheflin) Sieglinger: Find Hubs- consider actions, where do you have agency
- Roberta Hunter: Thanks!
- Gustavo Requena Santos: Thanks
- Bethany Vosburg-Bluem: creating integrated curriculum for students
- Yvonne Schramm: as a pre and post activity to assess change in thinking for a 9 month program
- Bethany Vosburg-Bluem: Inquiry for student research
- Roberta Hunter: Moving teachers beyond the "big" climate impacts in NJ and connecting to equity
- Janice Milanovich: I feel like it would be very help for the issue identification step in NOAA's Meaningful Watershed Educational Experiences (MWEE)
- Marcela Villan: Highly recommendable
- Judy Braus, NAAEE: Another example of a skills framework:
<https://www.climateliteracy.earth/>
- Masoom Jethwa: Incredible resources hub.
- Leanna Rodriguez: I came late my apologies can someone confirm if these slides will be shared?
- Anne Umali, NAAEE: Yes, we'll share all the slides and the recording this week!
- Raelene Child: consumerism
- Richard Ogle: All of them but water quality
- Sam Hoffman: plastic litter or demand for single-use plastic
- Xia Lowery: People eating seafood.
- Rachel Weaver: food chains
- Olivia Poulos: anxiety
- Kim Lowther: Water Quality
- Susanna Bruneau: Consumer demand
- Hannah Newell: plastic litter
- Emily Calder (She/her): waste management
- Midori Coyle: consumerism and water quality
- Candice McKinnon: Consumer demand
- Catherine Rider: convenience culture
- Rachel Weaver: plastic litter
- Julie Ellefson: Waste management
- Yvonne Schramm: plastic litter
- Betty Olivolo: people eating seafood
- Neysa Gabriel: Water quality
- Masoom Jethwa: Plastics
- Brian Akom Ekuri: Health

- Carolyn Morris: consumer demand
- Steve Schmidt: One thing I wonder about this model is that it appears that many learning arcs go to an adjacent compass point, but not across the middle. I did see some in the video that hopped across. Is this a pattern you have noticed? If so, how do you address it?
- Richard Ogle: Call to action
- Marcela Villan: Sorry! Must leave 🙏 compass is highly recommended
- Marcela Villan: I Love It
- Rachel Weaver: Service Learning
- Amy Burt: I feel like this would help with eco anxiety. 💚
- Richard Ogle: Relate it to the tribal youths future and future generations to come,
- Scott Shepherd: Community engaged research
- Neysa Gabriel: Community-engaged research
- Masoom Jethwa: Call to Action : Volunteering and advocacy
- Richard Ogle: Volunteerism and advocacy
- Bethany Vosburg-Bluem: Have them reduce their own demand for them
- Betty Olivolo: Political involvement
- Carolyn Morris: service learning
- Ayça Alan: volunteerism and advocacy
- Özgül Keleş: What kind of tool can we use to evaluate the responses provided in the Compass Education from an assessment perspective? Thank you
- Candice McKinnon: Fantastic presentación. Thanks so much!
- Bethany Vosburg-Bluem: Thank you!!
- Kimberly Welty: Thank you!
- Denise Galiano: Add last minute items before the meeting ends:
https://otter.ai/u/NAAihsw_fr5coje5NLdkLm9BXEg?utm_source=va_chat_link_3
- Denise Galiano: Takeaways from the meeting 🗣️
- Yun-Hsuan Chiu: Thank you
- Heather Hutmacher: Thank you!
- Elena Martelli: During my lessons on sustainability, I've noticed that students often focus only on negative impacts, so when using the Sustainability Compass, should we guide them to also identify positive ones in each area? Thank you
- Steve Schmidt: One thing I wonder about this model is that it appears that many learning arcs go to an adjacent compass point, but not across the middle. I did see some in the video that hopped across. Is this a pattern you have noticed? If so, how do you address it?
- Carolyn McFarlane: Thank you.
- Rowena Capuno: Thank you!!
- Julie Ellefson: Thank you!!
- Ashley Knoch: This is really great, thank you for this
- Richard Ogle: THANK YOU my hands go up to the presenters
- Masoom Jethwa: That helps Thank you Nicole! 😊
- Jennifer Verschoor: Amazing webinar. Thanks for sharing and for more systems thinking in the world.
- Masoom Jethwa: Insightful meeting. Thanks all for helping us with systems thinking with real world tools.

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- Özgül Keleş: Many thanks
- Ashley Knoch: Did you say we would get an email with a recording including the chat?
- Sigrid Falla: Many thanks!
- Wanda Bryant: Thank you
- Yvonne Schramm: Thank you!
- Janice Milanovich: Thank you!
- Carolyn Morris: Thank you!!
- Elena Martelli: Thank you!!
- Nicole Swedlow: Thank you all for joining us!
- Nicole Swedlow: Please reach out anytime. Nicole@coompasseducation.org
- Shaghig Chaparian: I appreciate your ideas and discussion! Thank you!
- Anne Umali, NAAEE: NAAEE links:
 - eePRO <https://eepro.naaee.org/>
 - NAAEE 2026 CFP (due April 10) <https://conference.naaee.org/>
 - NatStart26 registration <https://conference.naturalstart.org/register-attend>
 - eeWEBINAR (April 23) <https://eepro.naaee.org/learning/when-values-collide-deliberating-environmental-issues-youth-and-adults>
 - EE 30 Under 30 (due March 31) <https://naaee.org/programs/ee-30-under-30>
- Judy Braus, NAAEE: Thanks to all of you for joining! And thanks again, Gitanjali, Nicole, and Anne!