



We hope you're all doing as well as you can in this difficult and pressurized pandemic times. Our heart goes out to everyone, especially those directly impacted: the global COVID-19 pandemic has changed all of our lives. This current COVID-19 crisis has shown how fragile we are - as individuals, communities, countries and global systems - to major shocks. Over the past months we have been learning many painful and important lessons.

While we necessarily partake in urgent behavior changes needed to minimize the spread of the novel coronavirus, we're solemnly aware that climate change too remains pressing and urgent. While it may feel difficult to confront the climate crisis as we face this current COVID-19 crisis, there are critical reasons to continue to confront both. Among them, we see:

- the intertwined benefits of early action
- connected and renewed respect as well as humility for humans' role in a changing environment
- interrelated and renewed value for evidence
- an appreciation for what communities and governments in coordination can accomplish
- a heightened awareness of the how coronavirus and climate change have differentially heavier impacts on vulnerable and disadvantages communities

Frankly, this has been an extended period of accelerated learning and intense behavior change. We have all experienced a lot since our last newsletter update in December.

While those who are not essential workers adhere to stay at home order, we note that the International Energy Agency (IEA) announced recently that the latest decreases in emissions related to COVID-19 reverberation have been the largest in the past decade. The IEA also projected that emissions were forecasted to drop by 8% in 2020, a drop six times greater than the drop in 2009 associated with the Great Recession. That said, in the [words of IEA executive director Fatih Birol](#), "this historic decline in emissions is happening for all the wrong reasons. People are dying and countries are suffering enormous economic trauma right now. The only way to sustainably reduce emissions is not through painful lockdowns, but by putting the right energy and climate policies in place".

So we at Inside the Greenhouse (ITG) resolutely carry on with our work to meet people where they are and 're-tell climate change stories' from a range of perspectives in order to help make sense of 21st century climate challenges and to inspire great climate engagement and action.

Despite current conditions, below you'll find updates regarding our ongoing research, teaching and engagement over these first months of the year. Visit our website <http://www.insidethegreenhouse.org> for further details as well.

We continue to carry out these projects through important collaborations and partnerships linking campus and community as well as the local with the global.

Up with hope,
Max Boykoff, Beth Osnes, Phaedra Pezzullo and Rebecca Safran
(Inside the Greenhouse co-directors)

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To support our work with your donation go to:

<https://giving.cu.edu/fund/cires-inside-greenhouse-gift-fund>

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Subscribers to ITG will be notified by email when a new edition is available, and may access it either in pdf or html format. The newsletter is also available online at:

<http://www.insidethegreenhouse.org/about/newsletters>

RESEARCH SPOTLIGHT

Barn Swallow Research and Swallowed Whole!

While Professor Becca Safran (Ecology and Evolutionary Biology) and her field team is unable to travel to China for planned research in the Gansu Province this summer, they are happy to be able to work on barn swallows close to home. Indeed, because barn swallows are so common in most parts of the northern hemisphere during the summer, Safran's team can easily keep busy even when grounded from international travel. This summer the Safran team continues to work closely with a group of wonderful landowners whose barns and other structures are the summer homes for a very vibrant population of barn swallows.

On top of the usual data they collect on reproductive biology and genomics, they are partnering with ITG co-founder Professor Beth Osnes (CU Theatre and Dance) to work conduct a science-art collaboration along with her women's vocal empowerment group. For this project, the team has established a large colony of breeding barn swallows near east campus where the young women will receive basic training (from an appropriate and safe social distance) to collect basic biological data.

This project has evolved into connected artistic endeavors that focus on various aspects of barn swallows far and wide which will be highlighted in two upcoming public performances and exhibits. The overarching idea is to inspire artistic projects associated with one of the most common species of bird on planet earth: the barn swallow.

This work is culminating in numerous local community-based performances and will be integrated into a book project for which Becca Safran has arranged a contract with *Princeton University Press*. This project is beginning with an intergenerational participatory action art/science project with Young Women's Voices for Climate.

Together Becca and Beth have begun their exploration through active scientific field observation with the swallows in Boulder County and art making on location. This pandemic-proof design for embarking on this project allows participants to travel to our research site alone or just with their families to do their observations and art/science field notes that will be collected online. Beth and Becca have earned funding from CU's Center for Humanities and the Arts to begin the creation of some of the barn swallow costumes they will use for the Art Hikes they will be leading for Open Space Mountain Parks this fall or spring (depending on what is allowed given the state of the pandemic).



Bird costume being painted. Painting and photo by Juliana Forbes.



Top photo and bottom photo: Rebecca Safran.

COURSE SPOTLIGHT

Environmental Communication & The Public Sphere

It was a unique semester for teaching at CU Boulder, since we went into remote teaching starting in March due to COVID-19. Our seniors were particularly sad to have an abrupt end of classes (well, probably not all of them—ha ha). And many students were dealing with family financial and health struggles.

Professor Phaedra Pezzullo's class this spring ended with video final presentations instead of presentations in class. The presentations embodied the entire pandemic emotional cycle, from denial to acceptance, frustration to silliness/creativity. Some of the more creative ones included: a student who did every slide in a different accent, a parodic CEO training on how to greenwash, and a gorgeous rendition of Jason Mraz's "I'm Yours" to lyrics making an argument about the metaphor of the world as a melting ice cream cone.

Also, Phaedra is co-authoring the 6th edition of the class textbook this summer and will be submitting it to the press right after the 2020 elections results are released. The sixth edition will include remapping the field of environmental communication to reflect our growing community of scholars and practitioners, as well as engaging new research on topics such as: disability rights advocacy, indigenous knowledge, advertising, brand identity, PSAs, sustainable organizing, risk desensitization, energy coloniality, disinformation campaigns, projection mapping, climate communication, and green futurity/imagination. This edition also explores recent events that have occurred since the last edition, including: fast fashion, global youth climate strikes, anti-science backlash, outdoor retailer advocacy of public lands, declarations of climate emergencies, single use plastic ban controversies, divestment/reinvestment campaigns, and more.



While many final emails from students were moving, this one from Lauren Eckl (pictured, with permission) was inspiring: "I promise to never stop caring about the environment! I recently secured a job in Washington D.C. working for Sen. Lisa Murkowski and I hope this experience can give me the skills and connections to spread even more environmental consciousness and allow me to use the skills you taught us."

Creative Climate Communication

The initial plans for this Spring 2020 Creative Climate Communication course were similarly disrupted by the pandemic and the shift to remote learning, but together the class adjusted and ended up making a substantial contribution to climate communication while reaching their learning objectives.

One of the first assignments was to translate Project Drawdown climate solutions for 5th-grade level access for use in the elementary classroom to guide students in understanding climate solutions. The 40 CU students in the class worked with University Hill Elementary 5th graders to receive expert peer review from elementary students.

In their second assignment, the class contributed photos for an iteration of an ongoing ITG participatory photography initiative, Green Suits CU. For this assignment, student groups were paired with CU sustainability initiatives, such as Green Labs and the Recycling Center, to "green" light their great work.

In their third assignment, 'Striking the Match' challenged students to create a shareable mediatized composition that explored a disruption of our usual non-renewable energy consumption behavior. Solar powered lights were purchased for students to check out as well as highly efficient clean-burning cook stoves. Furthermore, they were challenged to reach and receive feedback from at least ten people within their circle of community. This is based on research that reveals that people are more likely to receive climate information from trusted sources within their own close circles. The richness, inventiveness, and variety of student work was amazing, and cumulatively reached over 1751 people through a wide variety of social media platforms.



Left photo: Solar panel photos with green suits. Photo: Rosie Stewart and Kelly Bates. Right photo: Green Suits CU highlights Recycling Center. Photo: Caleb Mueller and Anna Lynton.

EVENT HIGHLIGHT

#MakeClimateAClass: Just Transition = CO Climate Solutions session

In early April, ITG co-directors Phaedra Pezzullo and Max Boykoff – along with Engineering Undergraduate student Andrew Benham – co-organized a discussion of climate change, energy and just transitions. This Colorado event was part of a national-level effort led by Eban Goodstein from Bard College in New York, w/ support from David Blockstein from the Association of Environmental Studies & Sciences called 'Solve Climate by 2030'. The Boulder event took place simultaneously in 45 US states and also in Puerto Rico as well as in Washington D.C. and a number of international locations.



The Colorado event – co-sponsored by Inside the Greenhouse along with the Colorado Energy Office, the Center for Science and Technology Policy Research (CSTPR), the Boulder Faculty Climate Science & Education Committee (BFCSEC) and the Media and Climate Change Observatory (MeCCO) – was opened with comments from Colorado Governor Jared Polis. Following his comments, the event then featured a panel discussion involving former Colorado Governor William Ritter, Jorge Figueroa, Director of El Laboratorio, and ITG co-director Phaedra Pezzullo, moderated by ITG co-director Max Boykoff. Give the context and the time, the session focused centrally on what COVID-19 and climate change have in common, as well as solutions for a just transition in the state of Colorado.

Co-organizer Andrew Benham identified these five takeaways:

1. We could have imagined this future together

Eban Goodstein, director of the Center for Environmental Policy at Bard College in New York and organizer of this national webinar series, stated: “We need to listen to and trust scientists, and act on their knowledge sooner rather than later.”

2. Environmental health is directly tied to human health

“Clean air action should be integral to our COVID-19 Colorado and climate change response,” Pezzullo said.

3. The importance of a ‘just transition’

Figueroa stated: “Climate change isn’t being taken seriously by those not at the front lines.” Gov. Polis noted Colorado is the first state with a Just Transition Office “to think about communities that have been left behind.”

4. We are capable of radical change

“COVID-19 has proven the world is capable of radical behavioral change in a relatively short period of time

if we are convinced lives depend on it,” said Pezzullo. Ritter agreed: “This is a dual challenge that can be solved together.”

5. Local-level changes will make the difference

Goldstein said: “The most powerful thing you can do to solve climate by 2030 is to join the campaign of a candidate that shares your vision of climate solutions for the future.”

You still can watch a video of the event, available at the ITG website: <https://insidethegreenhouse.org/node/4695>.

ITG Earth Day 2020 ‘Stand up for Climate!’ Comedy show

On the 50th anniversary of Earth Day, ITG co-directors Beth Osnes and Max Boykoff co-created and co-hosted the annual climate comedy performance, Stand Up for Climate, celebrating the role of good-natured comedy for drawing serious attention to climate action. ‘Live to tape’ from Boulder at the University of Colorado, the show featured a great lineup of sketch comedy, fun and funny interludes and particularly great contributions from the featured celebrity comedian Chuck Nice. Among these skits – some from years past (as far back as Spring 2012 student contributions) and some new for the 2020 show – there were celebrity appearances from scientists, journalists, actors, artists and activists such as Katharine Hayhoe, Andrew Revkin, Ed Begley Jr., James Balog, Bill McKibben, Seth Shostak and Ben Gleib.

If you missed the show you can view the archived event here: <https://insidethegreenhouse.org/node/4701>.



Top photo: ‘Stand up for Climate’ Comedy show co-hosts Beth Osnes and Max Boykoff. Bottom photo: Featured guest, celebrity comedian Chuck Nice.

EVENTS HIGHLIGHT



Vegetables and fruits singing the praises of a plant-rich diet. Photo: Beth Osnes.

Youth Women's Voices for Climate

How did a group of young women respond to having their art opening canceled due to a global pandemic? They took it online. *Recipes for Change*, which was originally designed to be displayed at the Boulder Public Library Canyon Gallery in May 2020, now moved to an online platform due to the library closure because of the pandemic. You can visit it at <https://speak.world/recipes-for-change>. Don't forget to check out the music video of them as rapping fruits and vegetables at the end! This exhibit is by Young Women's Voices for Climate is a group of Boulder middle and high school girls who use arts-based methods for climate action and vocal empowerment through SPEAK (<https://speak.world/home>) in partnership with ITG.

Chelsea Hackett, Executive Director of SPEAK did some curating magic to design this online offering to highlight the youth writings and designs. This exhibit shares arts-based approaches focused on food to help reverse global warming. By partnering with *Project Drawdown*, we are focusing on top climate solutions. According to Drawdown's 2020 revised list of the top solutions for reversing global warming, Reduced Food Waste and Plant-Rich Diet both feature near the top of this list (*The Drawdown Review* page 86, available for free download at <https://drawdown.org>). By adding the total CO2 and equivalent greenhouse gases reduced and/or sequestered by these two solutions, it becomes evident that focusing on food is surprisingly the number one solution for reversing global warming. Also included in the exhibit are actual plant-rich recipes contributed by Young Women's Voices for Climate.



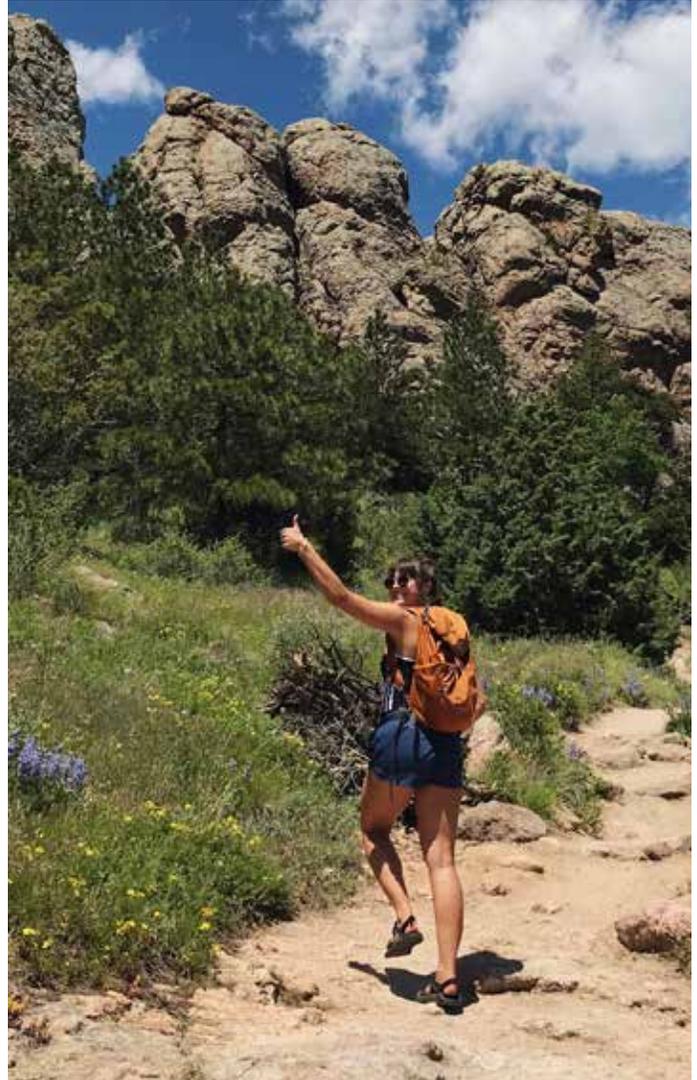
Performing Vegetables in Recipes for Change. Photo of Lerato Osnes and Uli Miller by Patrick Campbell.

STUDENT SPOTLIGHT

Izzy Sofio

Izzy Sofio is a recent graduate from CU Boulder and a new intern for ITG's project focusing on translating Project Drawdown solutions to a 5th-grade reading level for environmental curriculum content. She has received a B.A. in Environmental Studies, a minor in Creative Writing, and a certificate from the Eco-social Justice Leadership Program while attending CU. Izzy is passionate about the environment and empowering people to take climate action. Her passion for the environment and love of writing has led her to an interest in climate and environmental communication. She has just completed her senior Honors Thesis "How Does Climate Change Content on Social Media Influence Individual Pro-environmental Behaviors?" She worked with Assistant Professor Cassandra Brooks (Environmental Studies) as well as ITG co-directors Max Boykoff and Phaedra Pezzullo.

Upon graduation, Izzy will be staying in Boulder for the summer where she will help ITG with the *Project Drawdown* project. Her interest in this project came from classwork that took her into the 5th-grade classroom to focus on these Drawdown solutions. The fear and confusion around climate change she saw in elementary-aged kids inspired her to want to help children learn about what they can do to help alleviate climate change and believe in their futures. She is super excited about this project and working with ITG team!



Izzy Sofio.



Inside the Greenhouse Graduate Fellow, Patrick Chandler posing with youth climate performers. Photo: Beth Osnes.

Patrick Chandler Inaugural Inside the Greenhouse Graduate Fellow

Inside the Greenhouse is thrilled to announce our inaugural Inside the Greenhouse Graduate Fellow, Patrick Chandler. Patrick was first profiled in our ITG newsletter #10 (<https://insidethegreenhouse.org/about/newsletters/issue-10>). In the intervening years, ITG acknowledges Patrick incredible contribution to representing the mission of Inside the Greenhouse at countless conferences, his contributions to publications on creative climate communication, his partnership in the artistic, academic, and lived conversation of creative climate communication, his contributions to education (both at the k-12 level and university), and his outreach and engagement accomplishments. ITG is grateful for his friendship and partnership in this continued work.

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'The ITGs': 2020 Creative Climate Communicator and Citizen Awards

We are delighted to announce the winners of the 2020 ITG award! The spirit of this award is to celebrate creative climate communicators who so artfully communicate with broad audiences the pressing concerns associated with the climate crisis.

This year's 'Creative Climate Communicator' award goes to comedian Chuck Nice in celebration of his good humored yet very straightforward messaging on the importance of climate change awareness and action. Chuck is the co-host of *Star Talk* with Dr. Neil deGrasse Tyson. He is a regular contributor to the *Today Show*, has guest hosted *The View*, and he is a frequent guest on *MSNBC*, *CNN* and *HLN*.



Our 'Citizen Award' goes to a dynamic duo, ecosystems scientist Dr. Jane Zelikova and ecologist Dr. Kelly Ramirez, co-founders of 500 Women Scientists (<https://500womenscientists.org>), and their entire worldwide community for their dedication to making science 'open, inclusive and accessible' to all. You can read more about our awardees (current and past) here: <https://insidethegreenhouse.org/awards/itgs>.



500 Women Scientists.

Fifth Annual International Comedy & Climate Change Video Competition

This Spring we put out our fifth annual call for comedy and climate change video entries and we received submissions from North America, Europe and Africa. This ongoing competition is motivated by the notion that humor is a tool underutilized in creative climate communications, yet comedy has power to effectively connect with people on climate change issues. Therefore, we've held this competition to encourage folks to harness the powers of climate comedy through compelling, resonant and meaningful videos.

An esteemed panel of judges including scholars, practitioners, staff and students at CU Boulder determined the winners.

From this selection process, winning submissions rose to the top. Here are the 2020 winners:

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First Place

'Climate Change in South Africa: How Bad Could It Be?' written and produced by Stephen Horn from 'Politically Awesh' in South Africa



Second Place

'Do people know more about the actual universe or the Marvel Universe?' by Rollie Williams in the USA



Third Place (tie)

'Be A Climate Voter' from written, directed and edited by Celia Gurney in the USA



Third Place (tie)

'Too Late to Stop Climate Change?' by writer, presenter and editor Adam Levy in the United Kingdom



ITG sponsored co-ed indoor soccer team

This winter ITG sponsored a high school co-ed indoor soccer team at Boulder Indoor Soccer by providing matching ITG tee-shirts as jerseys. It was reportedly a great season for everyone involved.



Jack O'Connell, Elijah Boykoff, and Calvin Boykoff.



Co-ed players warming up and preparing for match action.

Ongoing information-sharing, talks and workshops

This spring, ITG co-directors have led information-sharing and participatory workshops as well as giving talks involving creative climate communications, while shifting to online environments beginning in mid-March. Yet for all of us, spring 2020 plans has been dramatically different than was planned.

For instance, instead of traveling to give talks around the country, ITG co-director Becca Safran has instead been planning for projects near and far from home. Along

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with two teenage boys, an academic spouse and two dogs, the Safran-Flaxman household is pulling a lot of bandwidth associated with online schooling, teaching and meeting. With fieldwork and other travel plans on hold, Becca is working on many different data related projects with current and previous students and other collaborators from around the world as well as new creative collaborations focused on the relationship between climate, humans, and barn swallows.

Also, in March Becca was honored with 'honorable mention' for an Outstanding Faculty Mentor Award: <https://www.colorado.edu/urop/2020/03/26/urop-celebrates-2020-outstanding-faculty-mentors>.



Meanwhile ITG co-director Beth Osnes recently published two pieces for more popular publications. The first was entitled "It Starts with Us: Young Women's Reflections on Performance Intersecting with Climate" (<https://howlround.com/it-starts-us>) for *Howl Round Theatre Commons*, a vibrant platform for sharing progressive and disruptive ideas on performance. This is a piece for a *Howl Round* series edited by Chantal Bilodeau entitled *Theatre in the Art of Climate Change*. The second was a piece entitled "Steal This Joke: Uplifting Climate Comedy Celebrates Earth Day" for *Medium*: <https://medium.com/@osnesb/steal-this-joke-uplifting-climate-comedy-celebrates-earth-day-2020-f1697887d5e6>.

ITG co-director Phaedra Pezzullo participated in the 50th Anniversary of the CU Boulder Environmental Center while others participated in and organized other virtual Earth Day events (see the 'Stand Up for Climate! Comedy show info above). It was not ideal, but every event had hundreds of participants.

In particular, Phaedra spoke at a Virtual Campus Earth Day Town Hall hosted by the campus Environmental Center to celebrate its 50th anniversary, as well as the day. Among the participants' comments:

"Students, your voice has made a difference," said CU Regent Lesley Smith, announcing her addition of two student representatives to the CU System Sustainability and Deferred Maintenance Committee.

"The solutions to all of these problems really require all of us as a species to grow," noted Interim Dean of Arts and Sciences Jim White.



Andrew Revkin, Max Boykoff, Beth Osnes, and Sean Endres collaborating for 'Stand up for Climate' comedy show.

Meanwhile, Phaedra emphasized the historical context, including Republican President Nixon establishing the EPA and key legislation in 1970, as well as labor organizer Tony Mazzochi coining the term "just transition" in 2000 in Denver, Colorado. Although few wore medical masks in protest of poor air quality in 1970, today, people are wearing them out of necessity in a pandemic. With inclusive policies, projects, and public participation in how to revive our economy as well as ecology, Phaedra reminded the audience that "sustainability" was coined to include not just ecology, but also economics and equity—with those three values in mind, we may find hope for our future.

You still can watch a video of the event, available at the Environmental Center website: <https://www.colorado.edu/center/css>.

Lastly, ITG co-director Max Boykoff contributed to the ITG Earth Day 2020 'Stand up for Climate!' Comedy show and the Just Transition = CO Climate Solutions session this Spring, while he also coordinated the international comedy video competition. In addition, he spoke about Inside the Greenhouse during a January invited talk at the Wild Bear Nature Center, Nederland, Colorado, a March Creative Climate Leadership workshop at Biosphere2, hosted by the University of Arizona, an early April panel session called 'Clearing the Air: What the media gets right - and wrong - when covering climate change' hosted by the University of Minnesota, and a Colorado School of Mines presentation in mid-April.

Going forward, you can also follow us via Twitter (@ITG_Boulder),
Instagram ('everydayclimate') and Facebook:
<https://www.facebook.com/Inside-the-Greenhouse-at-CU-Boulder-1267256946701231>

More information can be found on our website:
<http://www.insidethegreenhouse.org>

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ABOUT US

Creative framing and storytelling of issues surrounding climate change through video, theatre, dance, and writing can connect a wider audience to the deep and pressing need to address climate change. Project leaders Max Boykoff (Associate Professor, Environmental Studies; CIRES Fellow), Rebecca Safran (Associate Professor, Ecology and Evolutionary Biology), Beth Osnes (Associate Professor, Department of Theater and Dance) and Phaedra Pezzullo (Associate Professor, Department of Communication) have

been producing events and classes over the past six years under the banner of the 'Inside the Greenhouse'. Support for this work catalyzes creative climate communication and builds capacity among CU Boulder undergraduate and graduate students in particular. Our efforts to engage our students, those working at the science-policy interface, and the public alike seek to help concerned make climate change meaningful in the lives of everyday people. Students are involved directly and collaboratively connecting work in the classroom to applied contexts.



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