



Cornell Climate Online Fellows

Stories of Climate Engagement

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2019

**Edited by Marianne E. Krasny
with chapters by 13 Fellows from 11 countries**

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Preface

Marianne E Krasny

Ithaca, New York, USA

Maybe it's too late. Last year scientists said we have 12 years to avert the worse. But still I want to do *something*. Then again, it feels as if any actions I take—as a lone individual—shrivel up like the witch in the Wizard of Oz as California fires engulf the landscape. Or become drowned in blooms of harmful algae as waves of climate disruption engulf our lives. But doing nothing is going to make me unhappy, and then I am no good to the people I care about the most—my family and yes, my students.

These are the thoughts that were swirling around my brain after the IPCC Special Report—*Global Warming of 1.5°C*—hit the media in fall 2018. Most of all I wanted to do something. But I am a professor and supposed to write papers and books. As a professor at a public, land-grant university in the US, I also teach online classes for environmental educators globally. But writing academic papers or conveying knowledge are not means of mobilizing action. And the small actions that I can do—stop eating meat, turn down the heat, reduce air travel—wilt in the face of heat waves in Montreal or get inundated alongside homes, cars, pets—and people—in the flood waters of the Philippine archipelago and the Florida coast.

I pondered these thoughts during October, then November, then December. I read about individual behaviors vs collective action. Might there be a way I could foment collective action—something bigger than what I can do alone?

This is when I hit on the idea that each of us has a social network. And possibly, if each of us takes an action, we could persuade our social network to take action. So if I decide to go with “Meatless Mondays” and invite my Facebook followers to also reduce their meat intake, and to post photos of tempting plant-rich meals to seduce others into trying vegan, my impact would be greater than me acting alone. Or maybe I can convince my department colleagues to join a climate offsets program, or stop pressing the Print button that empowers our office photocopier to spew out hundreds of sheets of unneeded paper.

Amy Westervelt is the investigative reporter for “Drilled,” a podcast that traces the history of how Exxon and its buddies in the oil industry created a massive—and effective—social influence campaign to convince us that climate change was not happening. This was happening at the same time that Exxon's own scientists were doing the research that showed otherwise. The history of Exxon's disinformation campaign is the basis for multiple climate suits being brought against the oil industry, claiming that Exxon and its oil buddies knew their product had negative outcomes, yet they lied.

So, I could wait and not do anything, because as Westervelt proclaims, the oil industry has wrongly convinced the public that we—individual citizens—are to blame. If only people would not demand cars, the Exxon narrative goes, then the car industry would not make cars. And why not recycle in the meantime? So by going vegan or reducing paper use—even if I can leverage my action through my social network—I am buying into the false narrative that individuals—not industry—are to blame.

But, if I wait and do nothing I feel worse than if I do something. It's sort of like my “plalking” habit—every day on my way to work I “pick up trash while walking.” This morning I

picked up the usual Dunkin Donuts and Solo plastic cups, a brown paper bag that had carried someone's take out and would come in handy for carrying the litter I subsequently encountered, scraps of aluminum foil that had been picked over by squirrels, cigarette butts, and my stomach churns to think about it—what looked like a used condom (I had gloves and for the condom I used a leaf to shield my gloves—still I washed my hands five times when I got to the office). My thought as I lean over to snatch someone else's disgusting refuse is that each piece of trash I pick up means one fewer piece of trash washed down the street, into the road grates, and making its way to Fall Creek where it is eventually snatched up by some fish. I realize how ridiculous my plinking is given that much of the US Midwest and Mozambique are now under water and that that water will carry tons of trash and debris into a river and ocean. But picking up each cigarette butt or Starbucks discarded cup is like a ray of hope—maybe my action will somehow make a difference and my beloved Fall Creek will retain its pristine beauty.

Getting back to climate change. I know what actions individuals and their social networks can take to help mitigate greenhouse gases while we are waiting for the legal process against Exxon to unfold. Or while we are waiting for some version of the Green New Deal to pass Congress. Or for nations to seriously come together and address the climate crisis. I know this because of the resources provided by Project [Drawdown](#), an initiative started by environmentalist and entrepreneur Paul Hawken. Drawdown has worked with scientists to compile a list of one hundred climate solutions, which are listed in order of effectiveness in drawing down greenhouse gases in the atmosphere. Top of the list is managing refrigerants, which is not really conducive to individual action on a regular basis. But a number actions I could take are in the top ten—like reducing food waste and reducing meat, or alternatively, being creative with leftovers and eating a healthy, plant-rich diet. Others in the top ten relate to solar energy, educating girls, and family planning. Here I might try to persuade my social network to write letters to government officials supporting clean energy policy, or to contribute to an NGO that works on women's education and family planning.

So ignoring Westervelt's claim that I am buying into blaming the individual rather than the true oil conglomerate culprits, I like the idea of scaling up the actions of individuals through social networks. Fortunately for me, my Civic Ecology Lab at Cornell University already has a following of several thousand environmental and education professionals and students in countries around the world (many of whom have taken our online courses). I figure that I can convince some of these environment-related folks to also choose a Drawdown action, identify a social network, and mount a campaign to try to convince their network to take action alongside them.

In January 2019, my colleagues and I put out a call for applications for the “Cornell Climate Online Fellowship,” or what is now referred to as CCOF. We had well over 600 applicants from 80 countries. My PhD student Annie Armstrong and I spent a long weekend narrowing down the list to 35 fellows—who come from 26 countries. They include a water and sanitation engineer from Zambia and a university lecturer on disasters and the media from Jamaica. A high school student from British Columbia whose environmental activism was spurred by the teachings of his Sikh gurus. A government climate advisor in Lahore Pakistan, a city sustainability educator in Sarasota Florida, and a human rights worker in Sana'a Yemen. And two veterinarians—one from Colorado and the other from Uganda—as well as an African-American Vietnam veteran turned climate and social justice activist in Kansas City, Kansas.

Over the next year, I plan to write the story of our collective “experiment.” What did I learn about climate actions and social influence through networks? What did the fellows learn

and what did they share with me? Did our actions make any difference in the race to draw down greenhouse gases? And what else emerged from our work together—from connections we formed as we not only tried to implement our actions, but also heard firsthand what it meant to live through Tropical Cyclone Idai in Zimbabwe, or to try to implement climate action while dodging violent uprisings in war-torn Yemen.

But one thing I definitely learned is that after working remotely for 12 weeks, our fellows felt part of a community, and they were reluctant to let that community go when the fellowship ended. We had developed a closeness, in large part due to our weekly Zoom calls and WhatsApp group, where we shared details of our climate experiences, our climate actions, and our lives. So, sensing that our fellows did not want to let go, I invited them to write their own stories of climate activism and the fellowship experience. Thirteen fellows took me up on my offer. This book is their stories.

One fellow I felt particularly close to was Gail Woon, a long-time environmental activist from the Bahamas. On September 1, 2019, Hurricane Dorian slammed into Grand Bahama Island, where Gail lives. Our fellows used WhatsApp to follow anxiously as Gail reported from the church where she was sheltered. People were mopping the floors as water began to come in through the door. They were trying to sleep on the floor of the second story, but the wind was too loud. Then the roof blew off and they moved down to the sanctuary. For another day and a half, they huddled as rain pounded on the floor above their head, and miraculously, others made it through the rising waters and wind to their shelter. With no power, what news they got from the outside was terrifying. Our climate fellows were offering Gail their prayers and encouragement throughout the three day nightmare. After 36 hours of silence, Gail texted that she and her daughter had survived Dorian. She expressed thanks to our CCOF community for supporting her through her terrifying ordeal. Gail continues to soldier on, as she deals with the enormity of the changes facing the Bahamas and the Bahamian community—and many other communities to come.

I dedicate this collection of Cornell Climate Online Fellow stories to Gail Woon and her loved ones.

Climate Action: Story from African Classrooms

Michael Adetunji Nunayon Above

Lagos, Nigeria

First Breath: Small Strides

I was born and raised a playful city boy, who always loved fresh air breezing into my home a kilometer from the Atlantic Ocean on Lagos Island in Lagos, Nigeria. This affection for fresh air may have started with my first breath at the General Hospital, fondly called baby factory and located 500 meters from the ocean. Then Lagos had a small population. The city was quiet and aesthetically appealing, devoid of noise or air pollution, secure, and with a high tourist value. It was a cool city. My elementary school friends and I were environmentally conscious and enjoyed this city of gardens, race courses, parks, and cricket grounds. Unfortunately, environmental consciousness in Nigeria nosedived in the early 1980s, induced by the consequences of the oil boom. As the population began to increase exponentially and construction frenzy took over, the city's beauty began to fade away gradually like the stars when the day dawns. Some of us began to migrate to "cooler" locations.

Dressed in my favorite short-sleeve plain green shirt with a rainbow color tie, I hurried to join the next 16-seater commercial bus heading towards the campus. I was excited, being at the onset of my career in January 1997, to accompany the Deputy President of my University, Professor Peter Okebukola, in making a presentation somewhere on Victoria Island, Lagos. Arriving on campus at 7:20am, I moved to the office building, located the Peugeot 504 2000 model series, and sat beside the driver waiting for the boss. Within five minutes the Deputy President joined, dressed in a dark blue, well-fitted American tailored suit. Soon after, we took off in the Peugeot. Driving through Broad Street, Professor Peter sighted and paid for a copy of Time Magazine titled "What on Earth Are We Doing to the Oceans?" Soon a conversation broke out from my boss on the title, as we drove through the street. At the end of the day, it was a rich academic and pragmatic discussion. We concluded that it was a contemporary issue worthy for national consideration. Days passed, I had a moment of reflection, and came to the realization that the ocean is a giant regulator of carbon dioxide. However, anthropogenic activities have negatively influenced that process, thus less CO₂ is being sequestered by the ocean. I never imagined that our discussion in the car that morning would cascade into organizing a national workshop led by Professor Peter on global warming and ozone layer depletion for teachers in May 1997. My renaissance journey on the environment and more specifically climate change thus began. I was a charter member of that project and made contributions for over a decade.

My inspiration to work in the area of environmental and climate change education is built on a tripod. First is that gut feeling since 1997 that there is danger ahead; today, the danger has become an existential challenge for humanity. Only our collective action can stop it. Second, I have witnessed the climate crisis in many communities first-hand as well as in the media, and seen how people who have overcome the challenges inspire hope for action. Finally, research indicates that poverty and low levels of education and political will are the basic challenges of developing countries. I strongly believe that Nigerians' efforts to educate youths and climate vulnerable communities will go a long way in reducing the climate crisis, rather than solely relying on outside aid only given to developing nations. This is hinged on my understanding that an educated community with 21st century skills will likely handle the climate crisis as well as value and channel financial aid more profitably. In view of having over a century of educational

interface with the western world, Nigerians will be better positioned to handle the formal and informal educational systems at all levels, to provide the cultural and contextual approach that embraces technology education. The use of technology will aid climate education and communication in communities before, during and after a climate crisis

CCOF Experience

Reading through the online newsletter of the North American Association for Environmental Education, I stumbled on the advert for Cornell University online course: *Climate Change Science, Communication and Action*. Then I said, “this is one of the experiences I have desired.” The course facilitator, amiable Anne Armstrong, made the webinar fascinating and facilitated interaction among our diverse community of students. The discussions and data on the politics of climate change in the US were quite interesting as individuals and groups were mostly polarized along party line, unlike the situation in Nigeria. I found the webinar and discussion on climate change communication skills to be very rich and rewarding, notwithstanding my past climate change knowledge, skills, and experience.

It was this rewarding experience that gave me the interest and a measure of confidence to apply for the maiden edition of the Cornell Climate Online Fellowship, CCOF 2019. I applied for the fellowship and also shared the link with some friends and higher degree students. Although not too sure I would be given admission, I tried not to think about the outcome. Wednesday evening, February 6th 2019, I checked my mobile phone expecting a mail concerning the African Center of Excellence for Innovative and Transformative STEM, one of my responsibilities, which just took off in my University. Lo and behold a mail had dropped at 18.13pm West Africa Time (12.13pm, New York time) from the Civic Ecology Lab of Cornell University in Ithaca, New York, with a personal congratulatory message from Professor Marianne E. Krasny. My skin glowed; I was extremely happy and discussed my “new found love” with my wife. She was very happy and supportive throughout the duration of the fellowship.

In selecting my climate action, the articles posted for reading on the CCOF platform about social media and social mobilization were very instructive. They provided information on how to bring my social network to come to terms with the “product” I have and their willingness to pay a price. I had two social networks outlined for implementation: graduate students of the Lagos State University and professional colleagues in the Nigeria Environmental Society (NES). My goal was to give everyone in my social network an opportunity to decide on a drawdown solution. I therefore organized an International Seminar on Climate Change and Social Media. Professor Marianne Krasny made her presentation online using Zoom in the presence of 167 motivated participants; hearing an international scholar talk to them on climate change and drawdown solutions was one of the most important motivations for the students as they related their experiences with me after the seminar. Professor Emmanuel Oladipo, the “Apostle” of climate change education in Nigeria, also made his presentations, flavoring the seminar with interesting local content.

After the seminar, graduate students responded favorably to our discussions on the 100 Drawdown Solutions and chose a Drawdown solution to implement in their social network. But no response came from my professional association except planting of trees. In essence I was replicating what Cornell University was doing with graduate students within my own university.

Climate Actions for Impact

Now I will describe the climate actions I took and those taken by the graduate students.

Turning off Air Conditioner. Since mid-March, turning off my office air conditioner is habitual during cooler morning office hours, usually about three hours. My office location provides fresh air, filtered by several trees, breezing through my twin 4-foot sliding glass windows. This reminds me of the breezes blowing through the windows of my family's house on Lagos Island when I was a child. This action has resulted in saving 4.5KiloWatt per hour daily of electricity. As of June 25th 2019, I have conserved 330kwh of electricity, which is equivalent to 0.17 Mt CO₂ at electricity factor of 0.5kg CO₂e/Kwh (see carbonfootprint.com). I am still enjoying this experience.

Tree Planting. This drawdown action was implemented immediately after our graduate seminar at about 3pm (West African Time) April 4th (see Fig. 1). Over 29 graduate students, five Nigerian Environmental Society members, a faculty colleague, and two excited non-academic staff members joined in planting 45 tree seedlings. We had two groups; I led one and a faculty colleague led the other. Alongside a PhD student, I planted two seedlings 30 meters away from my office frontage (see Fig.2) and 10 others dotted around five locations in the university. My professional colleagues and ten other doctoral students in my group also planted some trees. The second group led by a faculty colleague had 19 postgraduate students and planted trees in four different locations in the university. Days ahead of the tree planting, I and three doctoral students surveyed and marked appropriate locations for tree planting based on the university criteria. The head of our university parks and garden unit verified and approved these locations, and provided four staff members who dug the planting holes about 15 inches deep and three times as wide as the root ball of each tree seedling, and placed the seedlings beside each hole. This unit later focused on maintenance of the trees. These trees are expected to offset 45 tonnes of CO₂ in their life time.

LED Bulbs. Mitigation with Light Emitting Diode (LED) bulbs appears to have been an unfortunate experiment. I had a face-to-face discussion with my graduate students whose action plan was LED bulbs, discussing the benefits and we agreed to convert. Unfortunately, the students misconstrued CFBs, Compact Florescent Bulbs, for LEDs. When I saw the implementation pictures sent by students, I realized I had not communicated properly. Four students had this issue with close to 35 bulbs changed from Tungsten bulb to CFB. I had to post a comparative picture of LED and CFB bulbs on our WhatsApp group chat, where the issue was sorted out and they agree to gradually convert to LED when the bulb expires. However, the advantage of this change is that CFB bulbs consume less current than Tungsten bulbs. I have always used CFB before my CCOF experience; now I have converted to 4 LED bulbs and will continue as each CFB expires. LED bulbs are cheaper especially in terms of energy consumption without emitting heat. My 10 year-old son loves it as we observed that the LED 9 Watt bulb was brighter than 15 Watt CFB placed in the seating room.



Figure 1. With experts, NES members and our graduate students at April 4th Seminar. Credit: CCOF Lagos State University.

Figure 2. Dr. Michael A. Arove planting a tree seedling along with a female doctoral student as others watch. Credit: CCOF Lagos State University.

Plant-rich Diet. I was a bit surprised to find two students opt for this drawdown action, partly because it could be more expensive and requires discipline at the onset. During the class discussion, a lady asked if one of the volunteers would be disciplined enough to go on this diet for two weeks. A bold “Yes” was his response and he did it successfully, eating as a vegetarian. The second individual volunteered to be on a fruit diet for two weeks. He was consistent and sent photos each day to our WhatsApp group. I joined as a flexitarian, on Fridays fruit was my diet. It was healthy and spiritually rewarding.

Ride Sharing. We had five students, who reside a few kilometres away from each other, engage in the ride sharing family. Their action plan was for two Saturdays to rideshare to attend my normal Masters class. I witnessed their arrival each week and they also posted exciting pictures. The total carbon that was conserved was 0.02MtCO_{2e} from three medium petrol cars with a total distance of 47.4 km.

Educating Girls. I had gone through a very tedious procedure that lasted for about four weeks before obtaining approval and a day for interaction with the female students. I led a team of four PhDs and one MSc student on Wednesday 8th May, to Army Cantonment Senior Girls Secondary School, a public high school located in the biggest Army Barracks in Lagos State. I gave a slide presentation followed by an interactive Q & A session with 152 grade 11 girls (see Fig. 3). The presentation, “Girls and Climate Change: Educated for a Better Life,” highlighted the reality of climate change--why girls and education are important using information from the book on 100 drawdown solutions. I also mentioned the influence of Greta Thunberg to motivate them as girls to be resolute for adequate education at the highest possible level and not to leave schooling to make babies. That is the key to a better life. They all agreed to have fewer children than they earlier imagined. We took pictures with the students, two designated teachers, and the school’s principal (see Fig. 4).



Figure 3. Dr. Michael A. Aho in an interactive session at the Educating Girls Action Plan.



Figure 4. With Army Girls Senior Secondary School's Principal and the school counsellors at both ends.

Family Planning. A female student embraced this idea and within two weeks had an implant, with documentary evidence, to control child birth. Although she had thought about this procedure earlier, the drive wasn't there. Our discussion on the drawdown solutions and implications of population increase on climate change awakened her understanding and her willingness to act was the icing on the cake.

My CCOF Experience

I have learnt that Africans, if well informed by authority on the implication of the nexus between the consequences of climate change and drawdown actions, are willing to pay the price with the hope of a better planet. I have interacted with people who are having financial issues, yet they are willing to pay the price for taking climate action. My CCOF experience with my social network showed that students valued the freedom to choose any drawdown solution. They demonstrated commitment and financial support. Social marketing using social media to influence others is the key. In the application of this key, three of the six principles from *Harnessing the Science of Persuasion*, by Robert Cialdini in the Harvard Business Review, October 2001, were deployed. The principles I applied are: *consistency and commitment*, *social validation or social proof*, and *authority*. In applying these principles I began a conversation in all my postgraduate classes (diploma, masters and PhD) on the relevance of setting up a WhatsApp group discussion, and this was agreeable to all. The goal was to move from the theory of class discussions to showcasing our actions on social media. It was at this point I introduced the idea of climate action and my ongoing CCOF. The provoking question I asked these students was: "Should we be recognised as environmental managers by word of mouth only (knowledge) or actions that impacted people and the environment?" I injected "*Na for mouth?*," a thought provoking question and colloquial expression, used when someone pays lip service without performance on vital issues where society expects visible results. The entire group of students agreed not to fall into this category. Thus, the principle of *social validation* or social proof subtly came into play. This principle expresses the "desire to conform to what others recognize us for" and thus suggests that environmentalists be known for their impacts on human and the environment. The next principle was *authority*, which expresses "doing what expert says we should do." As an expert, I requested that students through negotiations in class and on

WhatsApp select a drawdown solution. The campus seminar on April 3rd was an additional forum of interaction with drawdown experts. The professor as an authority is usually respected in African society. Interactions with these experts created very strong motivation for action and gave rise to the last principle, *Consistency and Commitment*: aligning what we do with what we have said we will do. My social network was truly committed in view of the outcomes from their action plan, which is not a requirement for the course I teach. In CCOF, we also learnt to work as a team and help each other as the need arises.

I also experienced several challenges. First was the misconception between LED and CFB. Second, seeking approval for the Army Girls School over four weeks of trying was tiring. Some of the graduate students dropped out from educating girls because of other engagements and some switched to ride sharing. I had to form three groups pairing a male and female graduate student for educating girls because I was concerned that working in the school might require counselling the school students. Each pair of graduate students was expected to serve as surrogate parents, and to advise girls if they experienced difficulty with paying for books and transportation. Luckily, we had no reported incidence of girls not coming to school because their families lacked money for transport or books. My final challenge was that my colleagues did not end up taking Drawdown actions even though they were the ones who started the discussion of Drawdown solutions via WhatsApp before I introduced the solutions to the graduate students. Perhaps they thought taking action is just a “student thing.” Had I been in a higher position of authority relative to the faculty (as I was to the graduate students), or developed some way for faculty to understand “what’s in it for me?”, perhaps my colleagues would have followed through on climate actions.

Crystal Ball for CCOF 2019 Spring

I expect our group of fellows to continue to work together based on interests and action plans. Research and publications in different countries on our actions plans would be a great idea. Importantly, I hope to see this group influencing people step-by-step around the world to take actions to drawdown greenhouse gases and to help additional people learn to influence others to do the same.

I see a tomorrow where many youths are enlightened about climate change and are in the vanguard of educating communities to take drawdown action. I see men, women, children, and the old enthusiastically taking steps to drawdown greenhouse gases. I see Drawdown action becoming a fad in many communities in Africa once known for low level of literacy, poverty, and high climate vulnerability. I see a world united on drawdown solutions with CCOF as major crusaders.

From Crisis to Career Interest: My path to environmental and climate change issues

Oluwakayode Ashamu
Lagos, Nigeria

I was about five years of age when I was diagnosed with asthma, which began disrupting my academic progress at an early stage. My asthma was triggered by poor air quality amongst other environmental factors in Ibadan, an ancient city and capital of Oyo State, Nigeria. I was given several medical do's and don't's, which included staying away from petroleum products, sources of CO emission (e.g., bush burnings, campfires), dusty environments, smoky/stuffy/choky places, unclean environments, fatty/ fried foods, among others.

In support, my parents totally banned the use of kerosene stoves, lanterns, candles, and rugs (which accumulate a lot of dust) from the house. We started using a domestic gas cooker, battery charged lamps (which had been used only during power outages before generators became popular), and floor tiles. These changes informed my consciousness and alertness to my environment, which in turn developed into environmental attitudes and behaviors. My conscious environmental behavior coupled with medications and prayers (which I cannot rule out) helped me to overcome asthma by the time I turned 18.

Fast forward, I was accepted to Ladoke Akintola University of Technology to study Urban and Regional Planning. There I developed an intense interest in environmental management as a result of my past medical experiences and academic exposure in relevant courses. I actively started by looking into "Landscaping as a mitigating measure and buffers to combating climate change" for my undergraduate research seminar topic, and thereafter led a team working on a landscape project (from design to implementation) in my school. This led to writing my undergraduate dissertation on "Knowledge, Attitude and Perception of Climate Change," which used the case of the Akinyele local government in Ibadan where I lived. This further exposed me to how people live and what they face on a daily basis as a result of poor environmental conditions.

Since then, I have decided to further (professionally and academically) my interest in helping to solve environmental issues (particularly caused by businesses), which result in many environmentally induced health problems like those I experienced. I have taken this as my way of contributing to a better environment for everyone to live in, including one conducive to sound health, which is the aim of Urban and Regional Planning.¹

My Climate Action and Practical Experiences

Upon joining the Cornell Climate Online Fellowship on the 6th of February 2019, I decided to scale down my research interest in the social and environmental impact of oil industrial activities to focus more specifically on reducing the effect of the use of petroleum products. My CCOF interests reflect the fact that the whole lifecycle of petroleum activity is harmful to the environment.

¹ Lewis Keeble (1969) defines Urban and Regional Planning as 'the art and science of ordering the use of land and siting of buildings, communication routes and space so as to secure maximum practicable degree of economy, convenience and beauty.'

Vehicular emission from combusting hydrocarbon fueled-vehicles is one of the major causes of climate change and of respiratory health issues such as I once faced. This made me select for my CCOF climate action: “Walking and cycling as an alternative to using the campus taxis and personal cars for short distance travels on campus,” an idea that was refined by Professor Taibat Lawanson.² I discussed this idea with my CCOF small group members who further assisted me in developing a scalable action plan around it. This led me to working alongside two colleagues at the center³ where I worked (Mofe and Daniel), who assisted me in creating digital contents to foster awareness and an online platform to help with registration, tracking, and analysis of data gathered.

Aim

This action plan was aimed at reducing carbon footprint on campus as part of my passion to contribute to the enhancement of a better environment for everyone, thereby helping shape people’s behavior to be environmentally conscious.

Methodology

I got people to sign up and participate by printing a banner (as shown in the Plate 1) and placing it at the entrance of the Faculty of Environmental Sciences. I chose students in this building to use for my sample frame. Also through the use of Twitter and Whatsapp broadcast. The broadcast was to create awareness for the Students within the Faculty and to also carry students of other faculties along. Myself and a cycling partner printed and distributed copies of the flyer round the hostels on campus.



Figure 1. Banner of my CCOF Action Plan.
Photo Credit: OluwaKayode Ashamu

² My Supervisor, a Professor of Urban and Regional Planning, and a believer in Ubuntu and the African Renaissance.

³ Center for Housing and Sustainable Development, University of Lagos, Nigeria.



Plate 2. Myself and my bicycle.
Credit: Olanrewaju Olasunkanmi

Participants were supposed to download a tracker called PEDOMETER (as shown in Plate 3), screen grab it after the day's activity, and post on twitter (the preferred social media platform of the students). We analyzed participants' contributions to reducing greenhouse gases and content analyzed their Twitter captions, over the three-week challenge.



Plate 3. Part of my personal activity post online.
Credit: OluwaKayode Ashamu

Results

After physically talking to more than 200 students and broadcasting to more than 350 students, 22 people signed up to take part, while eight people completed the task. Cumulatively we were able to take a total of 1,207,600 steps and covered 603.8 miles.⁴ I estimated this was equivalent to 243,936.2g⁵ of carbon that would have been generated if we had used the campus taxis/personal cars to move around.

Limitations

Several limitations may have contributed to the low turnout of people in participating:

- Unsafe environment at night
- Insufficient greenery or trees to encourage walking under the scorching sun
- Hot weather
- Behavior/ Attitude towards change.

Way Forward

Based on these challenges, I intend to write a report that will be shared with the school authority to address these issues, with the goal to enhance behavioral and attitudinal change towards walking/cycling for short distance travel on campus. I am also working on a proposal for a campus shareable bicycle program as a Corporate Social Responsibility initiative that a financial institution might jump on. This way reliance on campus taxis would reduce drastically and we can have a more conducive environment to work, live, and learn in.

Reflections

Behavioral change is hard to come by as people would prefer to partake in an initiative that has monetary reward embedded. There is a need to repackage the discourse about climate change and related environmental issues in such a way that people would easily accept and understand the issues rather than scaring/ terrifying them. As my CCOF team mate Mechthild Adameit would say “the discourse of climate change is not sexy.” In fact, it is overwhelming based on my observations during this action plan exercise.

CCOF 2019: An Experiential Moment of Learning

Multiple cultures and a diverse spectrum of knowledge/nationality were the characteristics of my small group. These made engagement and relationships during and after this fellowship worthy of continuity.

Experiences at the Micro Scale. I was in group 5 alongside Emmanuel Kaija from Uganda who I silently call “my brother’s keeper.” Emma noticed that I had dosed off in one of the webinars (after a long night previously) and had to call me to get my attention on board. His CCOF action plan was looking at the impact of mining activities on environment and social life.

Mechthild Adameit, a German who lives in Uruguay, is a sister so concerned about our wellbeing alongside willing to help solve any problem we might be facing. She was fond of

⁴ 1 mile = 2,000 steps. 1 km = 1,250 steps using <http://www.kylesconverter.com>

⁵ The average passenger vehicle emits about 404 grams of CO₂/mile <https://www.bettermeetsreality.com>.

saying “Kay, I hope you are ok?!, if there is anything I can help you with just tell me. We can fix a meeting for it.” She moderated all our weekly small group meetings prior to the required Zoominar. Her CCOF action plan focused on plant-based diet to combat climate change.

Yueyang Yue from China but based in the USA, is a very smart lady who was always willing to assist us with any tech-related issue. She is one of the greatest listeners I have ever met. I am forever grateful for learning a lot from her (she doesn’t even know about this as I never told her). Her CCOF action plan was also looking into plant-based diet amongst the Chinese.

Rahmat Rafee from Afghanistan, a man I call a genius—very analytical in everything. We mostly missed him due to time zone and network issues at our weekly smaller group discussions prior the Thursday Zoominar. His CCOF climate action was on LED bulbs.

Experiences at the Macro Scale. Engaging with other fellows gave me a full blown climate awareness and understanding of real life issues and scenarios, which I wouldn’t have had access to by talking only with my colleagues here in one city in Nigeria. CCOF was filled with passionate experienced experts who were willingly to make an impact. Information was shared and assistance was collective without any form of discrimination, as if we had known one another prior.

Talking about the energy on different platforms of interaction would be another writeup entirely. From my CCOF small group, I got introduced to a Sustainable Finance online course which I have completed, and further did another online course on Biodiversity Finance. I am hoping this will help me with job interviews waiting on me. For this, I will be forever grateful.

In sum, the CCOF experience was filled with so many memorable moments spanning from the Zoominars, to interactions on social media, to contributions on the edX Edge discussion board, the readings (though voluminous were helpful), to learning from colleagues/guest presentations. With this, I learnt a lot about climate change global initiatives, which has helped me better engage myself in the local discourse around climate.

Professor Marianne Krasny and her team were so patient to carry everybody along. She would send me emails to remind me of upcoming webinars; this made me feel a “sense of consciousness and responsibility” throughout the fellowship. She would also request to get in touch if we had issues with implementing our Action Plans, which I did on three occasions, and she networked me with some of her contacts for further assistance.

CCOF 2019 generally engaged me at my best, as I am currently getting myself actively involved in several environmental discourses here in Lagos, a coastal city of 1274 km² with population of more than 24 million people⁶.

⁶ Source: Lagos State Ministry of Science and Technology

Can Instagram Motivate People to Save the Planet? I'm a Social Media Professional, and Thought I Knew

Diana Crandall

Denver, Colorado, USA

It was supposed to be beautiful, and in a sense it was. At 19, I stood on the deck of a Royal Caribbean cruise ship, watching Alaska's Hubbard Glacier come apart in pieces and fall into the ocean in front of me. I learned that day what calving was—the splitting apart or shedding of ice from a glacier—and I can vividly remember how loud it was. Like thunderclaps and massive waves marrying for a few moments, showcasing Mother Nature's raw, rumbling power in a way I couldn't conceptualize from my small apartment in central Ohio.

Today I know that Hubbard Glacier is one of the few glaciers thickening, despite the warming climate ebbing away at its brethren. This knowledge takes the bite out of the memory. But witnessing Hubbard Glacier calve not only changed the way I see fragile, frozen worlds. It expanded for me what a climate looks like, smells like, tastes like. Most importantly, it laid out for me in blue and white terms what we stand to lose if we don't listen to scientists warning us about a changing climate and rising seas. Witnessing a glimpse of the world outside my community set the groundwork for connecting with and learning from people passionate about the environment around the world. But that comes later.

Who I Am

My name is Diana Crandall, and it's been seven years since I visited Alaska. My love of nature and the outdoors started early, but that trip came at a pivotal time in my development. I was a student at Capital University in Columbus, Ohio, working at my school newspaper, going on biology field trips, and scheduling nature-centric vacations whenever possible. When it came time to plan life after college, I couldn't think of anything I loved more than storytelling. So I enrolled in the University of Southern California's M.S. journalism program to hone my skillset and to be in a city with beaches, mountains and desert nearby. My master's thesis was on water quality in the Santa Monica Bay, and after graduation, I pitched environmental stories whenever possible: in South Africa, on great white shark cage diving and finning, and in Costa Rica, on recycling in indigenous communities.

I was on a boat in Florida when I checked my email in early 2019 and saw I'd been accepted as an online fellow with Cornell University's Civic Ecology Lab. That morning I'd been snorkeling with manatees in Crystal River, and I was ecstatic I'd been chosen amongst so many applicants to work with other people who love science and the environment as much as I do. We all quickly got to work, and for me, choosing a climate action and a social network proved difficult. When I lived in New York, it was simple. Los Angeles and Columbus, too. But I'd just recently moved into a vintage recreational vehicle (RV) to travel and work full-time with my fiancé. What did the RV community look like? Could I use my skills as a journalist and as a social media manager to reach them?

Figure 1. My RV and a family friend's dog, Sully, Oakhurst, California, Spring 2019. Photo credit: Diana Crandall

The CCOF Experience

I had an experience that overlaps with what I learned in CCOF. When I was working in New York, I heard from a mentor that a movement had sprung up overnight on a Reddit thread to try and get people around the world to take to the streets to demand the world's politicians pay attention to science and prioritize it in their policies. The March for Science needed someone to help with their social media team, and I had worked for a couple years managing large social media accounts online, so I raised my hand and got to work. I co-wrote the social media strategy for the March and corresponded with scientists all over the globe, including Greenland and Antarctica. It was my first taste of coordinating with passionate people around the world from behind my computer screen, so I felt confident about the ask coming from Cornell: Communicate with and learn from your peers. Identify an environmental problem and come up with a solution. Engage your network. How hard could it be?

Really difficult, as it turned out. I chose to focus on a trifecta of issues I noticed in my own life: I ate too much meat, I had no concept of responsible refrigeration, and worst of all, I threw out way too many leftovers and too much spoiled food. If you're reading this book, you're likely familiar with Project Drawdown, and these three action items—plant-rich diet, food waste, and refrigerant management—are all on their top ten solutions to reverse global warming.

To get people involved, I first focused on small online groups for people my age who live full-time in vans or RVs. I explained what I needed from them—post a picture of a vegetarian meal on Instagram, show how you reduce food waste, and answer a question about refrigeration management in your caption. I also offered an incentive, which initially was a \$50 gift card to Kampgrounds of America. This would give van or RV campers a place to sleep with electricity, water, and a shower for the night. But no one was interested in participating. While they “liked” my post, some people were a little rude (“I don’t have an Instagram. Oh well.”) and a few men belittled my proposal and instead asked me if I was single, or insulted the way I look.

I also sent out several pitches to magazines and online outlets about the work I was doing. An acquaintance who operates a non-profit was initially interested in working together, but then didn't respond to the informational email I sent to her that would explain what I needed. There was a timeliness factor to my pitch because Drawdown got press from CNN and other mainstream outlets, so I figured they'd be interested: Here's what it actually looks like to implement these action items. But I got zero bites from anyone. It was time to rethink things.



Figure 1. Diana lived in this van during the fellowship. Photo: Diana Crandall

Tweaking My Action Plan

OK, next draft. Widen the pool and increase the incentive. If I couldn't get mainstream outlets and people in my community to participate, my next area of focus was people I know. On Earth Day, I posted instructions on Instagram. This time, it didn't matter if people lived in RVs or vans full-time; it was a free-for-all. Anyone who was willing to post a picture of a veggie meal, show how they reduce food waste, and answer a question about refrigerant management was eligible to enter and win \$100 Visa gift card. I created a new hashtag—#EveryDayEarthLover—so I could keep track of the submissions.

What I got was...radio silence.

We were running out of time to implement our action plans, and I had to reflect on what had happened. How was it possible that I spent years working in social media and storytelling and I wasn't able to convince at least one person to make small strides? Even people I knew who loved the environment?

I simplified the ask—just post a picture of a veggie meal, and you'll be entered to win a \$50 Visa gift card—but specified I needed the participation of at least 15 people. Basically, I wanted more than one or two people to participate, and I wanted the word to be spread across people's accounts. I ended up getting only three people to post before time was up.

The Takeaways

I learned a few very valuable lessons from this experience, and I've boiled them down as follows:

- A clear, specific audience needs to be identified and connected with before I launch an action plan. Next go around, I'll make more time to partner with a non-profit or religious organization, sustainable business, or other institution that already has a receptive audience. I knew going in this would be important, but didn't anticipate the level of hostility and inaction I found in trying to reach out to pre-existing Facebook groups and my own network.
- Make the ask simple. Despite the \$100 gift card I offered my network, I think it was too much of an ask—it was confusing, a lot of work, and not worth the \$100.
- Clearly communicate the benefit to planet and person. It might have been worth the work and the \$100 if I also made it more clear, in a tangible way, how people were helping the planet. Our team also learned over the course of the fellowship that the \$100 incentive might create a sense of mistrust: "Who's willing to give away this money? Is it a scam?"
- If you choose to try incentives, follow through. I could have chosen to give out the \$50 Visa gift card even though I didn't get 15 participants, because it could have set me up to have a more successful fourth launch. But I didn't have the resources to keep doing so, and that was a problem for me.
- Finally, listen to people. I asked people through Instagram polling why they didn't want to participate, and I heard a LOT of people saying they didn't feel comfortable sharing their vegetarian meal through a public forum. Others said they simply eat meat with basically every meal—it's on me to show them how sacrificing meat for just *one* meal can make a difference.

Ultimately, I found this experience so valuable because it taught me vital lessons about how to communicate about the climate crisis—and how to motivate people to do something about it. As a new resident of Denver, it's time for me to sit back and listen to the geographically-specific climate issues we're facing here—and start planning the photography, reporting, and outreach needed to tell the story of climate change—and stimulate climate action—in Colorado.

East Less Meat, One Day a Week: Plant-rich diet in Jamaica

Chandra Degia

Jamaica

Live Healthy. Eat Plants. Save the World: Influencing Climate Actions on Digital Social Networks

Lisa Digidigan
Philippines

We were forewarned. The Philippines was about to be hit by a Category 5 hurricane, and the path included Northern Cebu with Cebu City under its rain band. It came in the afternoon of November 8, 2013. The sky darkened, rain fell in torrents, and the wind was howling. Black out. Phone lines disconnected. Although Cebu City was not hard hit by Typhoon Haiyan, compared to the north and other places in the country, the aftermath sent shivers down my spine. Earlier that week I rushed to the grocery to stock up on food. People were shuffling back and forth to almost empty shelves. I was fortunate to buy a week's supply. Then came the water problem. No electricity meant no water replenishing in the tank. I didn't have enough water bins to last us a week. I thought of buying gallons of mineral water to augment what we had stored only to find out that the water station had sold the last gallon, and the rest were for the store owner's personal consumption. My last resort—check in at the nearest bed and breakfast for our hygiene needs. The food and water crisis sent red flags to my brain, but I dismissed it. It can't be that bad. It wasn't. In fact, it was the beginning of worse to come.

From Dread to Hope



Figure 1. The aftermath of Typhoon Haiyan in Tabugon, Northern Cebu. Photo: Lisa Digidigan

My friends and I organized a relief mission to one of the municipalities in the North. While we were nearing our destination, people were lining up along the road begging for help—food, water, housing materials. And the sight that followed afterwards struck me—landslides, uprooted mango orchards, flattened sugar cane fields, destroyed houses, struck down schools, and desperate people in tears. It was chaotic. In spite of the warning, it was clear that people were not ready for the magnitude of deadly destruction brought about by Haiyan, and it was at that moment that I understood the root source of the food and water crisis. The environment—soil, freshwater streams, watersheds—our sources of food and water—were already in a degraded state but made even worse by Haiyan. Since 1994, I had been working for environmental conservation, but the scope

and depth of this severe storm made me realize that the conservation work I did for decades demands a radical shift, this time with a new lens—climate change.

Recently, the Philippines' Weather Bureau officially announced two new typhoon categories – Cat 4 and Cat 5. The new norm. Something has to be done. We Filipinos are most affected by climate change, yet we are the ones who do not know the crux of why all of these storms are happening. It's time to act and save ourselves from the worst.

From Aversion to Action

I tended to veer away from climate change topics every time it was being discussed at work and around my network. I told myself I'd better stick to what I'm good at—ecotourism, marine conservation, cetaceans and dugongs. But come to think of it, they are all impacted by climate change. At the back of my mind I knew I had to learn the matter. "*Remember Haiyan*," I told myself repeatedly. Climate change is something we cannot escape, and according to the 2017 World Risk Index, the Philippines is the third most vulnerable country affected by it. How can I protect my family and adapt to something I don't even understand? And how can I tell people about it when I myself cannot articulate the matter in a manner they can relate to? The CCOF opportunity came at the right time, and I was literally shouting for joy upon receiving the acceptance letter from Dr. Krasny. In our weekly sessions that followed, she introduced climate solutions from Drawdown.org, shared principles of social marketing and behavior, and provided guidance in implementing our climate action.

Choosing a solution from Drawdown wasn't that simple. How can I make a difference in a short 23 days? Will I see results? What issues most affect the people in my network that can possibly draw them to action? Browsing over my friends' Facebook pages, I noticed one common issue circulating—health and wellness. A light bulb switched on. Drawdown 4 – Plant-rich Diet. Filipinos are meat eaters, and the table isn't complete without cardiac delights. To capture my target audience, millennials and Gen X friends over Facebook, I started using infographics with the hashtags Climate Impacts Week and Climate Solutions Week. The first week, infographics centered on the effects of climate change on the environment, food and water, and health; the second set of infographics captured solutions addressing the effects mentioned. I followed with a poll asking who wants to switch to a plant-rich diet, who is aware of climate change but has little



Figure 2. An example of an infographic I posted on my Facebook page to capture my target audience. Infographic from the World Health Organization.

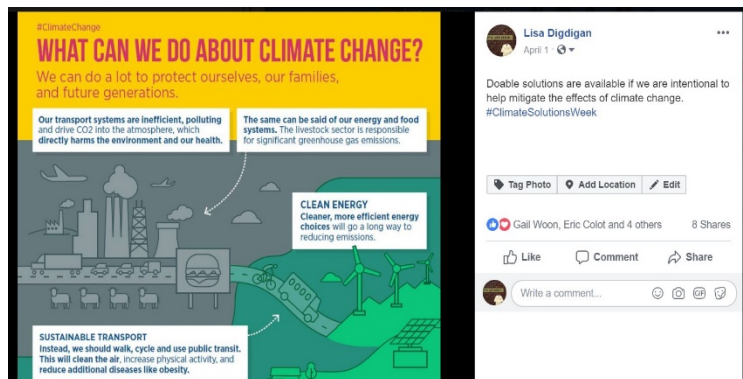


Figure 3. Infographic as part of #ClimateSolutionsWeek on my Facebook page. Image from of the World Health Organization. <https://www.who.int/globalchange/climate/infographics/en/>

understanding, and who would want to contribute in curbing the effects of climate change on a personal and doable level. From there, I launched Project Drawdown-Philippines on Facebook, with a group of eight people consisting of friends and colleagues in environmental conservation. These people shared our page on their own Facebook accounts and eventually, Project Drawdown-Philippines grew to fifty-three members. Basically, members are required to post at least one plant-rich diet meal thrice weekly. Their posts are then recorded separately and placed in a folder labelled Week 1, 2, and so on. To boost engagement, members who regularly post their meals are acknowledged.



Figure 4. To boost engagement, members who regularly post their plant-rich meals are acknowledge on the Project Drawdown-PH (Philippines) page

From Challenges to Collaborations

Maintaining a social network page and educating members on plant-rich diets and climate change seemed simple and easy but it is not. It is an everyday task of growing, engaging and mobilizing. My goal was to *grow* the group so that our collective action will make a significant contribution to the reduction of greenhouse gas emissions; *engage* with members so that they would post photos of their plant-rich diet meals and influence their own social network to switch to a plant-rich diet as well; and, *mobilize* by finding a way to spur people to discuss the climate crisis. While it is easy to get a “like” or a supporter, the challenge is to keep the members active and interested.

Although half of the members were regularly posting photos of their plant-rich meals, the frame of mind for most is the food and recipes—not climate. Thus, I had to redirect the group back to the goal by posting interactive articles on food systems, carbon emissions, and carbon calculators. Several members shared these posts to their Facebook pages as well. And while I was able to influence behaviors on mindful food consumption, conversations on the climate crisis were challenging. Only a handful were giving their comments, while the rest were silent or merely reading through the posts. Measuring how much greenhouse gases were saved is difficult given the absence of a carbon calculator in the context of Filipino food consumption patterns, food sources, and food miles. To give us an indicative figure nevertheless, we settled for the Quick Meat app.



Figure 5. The author giving a talk on Biodiversity and Climate Change during a National Youth Summit on the *Laudato si*. Credit: Ellen Villar

I intend for Project Drawdown-Philippines to continue and in the process, tackle other Drawdown solutions related to plant-rich diets, invite experts from Cornell University and my co-fellows through Zoominars to talk on climate change education, and come up with interesting activities, one of which is #ClimateEye – documenting climate issues and solutions through photographs in the areas where members are working or residing. Currently, Project Drawdown-PH is active in face-to-face networking with local organizations working on the climate crisis and has conducted dialogues with civil society organizations on Sustainable Development Goal 13 –

Climate Action. The group also intends to develop an environmental education module, in collaboration with The Dream Big Project, focusing on climate change to be used by teachers and students in the far flung mountains of Northern Cebu—the area hardest hit by Typhoon Haiyan.

From Connections to Community

We fellows were not only engaged in our own network of climate actions, we were also building a virtual community among ourselves. We became allies in confronting the climate crisis and developed friendships outside the “four walls of Zoom.” Listening to one another’s advocacies prodded us to continue working for the planet and people, and the seriousness of our discussions almost always ended on a light and fun note.

Reading through each of the fellows’ weekly reflections on the EdX discussion board helped me gain insights into factors influencing the implementation of my own climate action, made me re-think my strategy on how to reach out to my network, and prompted me to offer encouragement and support, particularly among my small group members. Discussions with other fellows aside from my small group on their country’s own climate agenda kept me researching what my government has done in relation to the climate crisis, and if we are at par with other developing countries where my co-fellows come from.

My CCOF experience is like a puzzle where each Fellow represents a piece, and as we connect with one another, a community is formed with a shared goal of putting the world back into balance, while taking and influencing manageable actions in this imbalanced world. Our goal seems lofty, but the stakes are high. We need to achieve actions knowing that our children will go through future “new normal” apocalyptic events such as Typhoon Haiyan.

My Journey on the Climate Movement Train

Daniel Gbujie

New Jersey, USA, and Nigeria

My interest in nature and environmental advocacy was triggered by the death of a distant friend in northern Nigeria. He was murdered by herdsmen while trying to defend his farm from thousands of cows encroaching on his land. They shot him in the chest and, lacking nearby access to healthcare he died, leaving behind five children and a young widow. I decided to find out why he was killed and, soon, the underlying reason was revealed to be climate change.

It happens that herdsmen from northern Nigeria have been leaving their region for some years in search of green pasture for their cattle. Desertification—linked in part to climate change—has plagued the area for years. The vegetation that used to feed cattle has completely disappeared forcing herdsmen to migrate south, in search of grazing grounds. This has led to constant conflict with farmers who are surprised by large number of both humans and cattle, and have been known to kill the encroaching livestock. In turn, herdsmen have attacked the sedentary farmers. With little or no government regulation of cattle rearing and poor security, the conflict has escalated, spurred on by climate change.

After my selection in 2016 as a delegate to the United Nations Framework Convention on Climate Change (COP 22) by the World Medical Association, I realized that I must begin the process of educating everyone within the country and across the continent about how Africa's agricultural sector, especially livestock, are greatly affected by climate change. In particular, climate change has led to altered rainfall patterns and rising temperatures, which has impacted the habitability of some regions. This in turn has led to migration within and across nations. Thus, climate change constitutes a serious threat to African nations, because of our high dependence on the agricultural sector for livelihoods and food security.

This is the reason why I jumped on board the climate movement train as an advocate who promotes taking action on climate change through behaviour change and seeking multilateral solutions at the local, national, and global level. These actions must be designed to ensure a peaceful, all-inclusive sustainable way to manage land, water, and other earth resources.

In 2017, I decided to establish an US-based nonprofit organization called Team 54 Project International (www.team54project.org), referring to the 54 African countries. Team 54 Project International identifies innovative ways to advocate for climate solutions and take climate action, especially towards building community resilience, with a focus on existing sectors: environment, agriculture, education, economy, health, and security. Over the last two years, our membership has grown to include climate activists in 167 nations, and we have been able to inspire and reinforce a new approach to climate action. This new approach reflects our 'All-Inclusive' principle, that is that programs and activities harness talents, skills and passion to achieve a sustainable environmental future.

My COOF Climate Action Journey

After discussion with and guidance from CCOF Director Prof. Marianne Krasny, I settled for a land-based mitigation strategy, which involves the planting of trees, shrubs and home gardens by people in my social network. I started my climate Drawdown action with a campaign slogan "Driving Climate Awareness into Climate Action," which was also adopted as the slogan of Team 54 Project International (www.team54project.org). Our goal is to address the challenge of

the climate crisis holistically by transforming ordinary citizens into responsible ecological advocates who go on to inspire others.

In February 2019, we created a promotional video on our plans to plant trees mainly in Africa and Asia. In March 2019, we were using social media to live stream presentations about the benefits of tree planting, aided by CCOF staff and fellows. I knew that this informal way of education was going to be the key to the success of my project. Through the online presentations, I managed to gather Team 54 members around tree planting and to inspire them to take action. Some of our partner organizations expressed interest to join the project, which my team and I gladly accepted.

Then, on 16 March, 2019, I launched the tree planting activity that resulted in over 180 saplings being planted by Team 54 Project members in the Philippines, Samara province and at MacArthur Island, and in Kenya and Nigeria. By May 2019, when our CCOF final reports were due, we had planted over 400 trees. Social media played a great role in getting this result even though I fell short of my 1000 tree expectation. Social media got the message out and helped participants understand my CCOF project. My go-to social media platforms were Facebook, Instagram and Twitter. CCOF also helped me additional gain strategies to influence and mobilize action.

The challenges centered on how to care for the trees and how to source for the tree saplings we hoped to plant. At some point, I had a challenge regarding how to get volunteers to plant the trees. Based on suggestions from CCOF fellows, I decided to use incentives and partnered with youth-based groups, while building my network of Team 54 country coordinators. Another challenge was government policies on tree planting in participating countries. I and participants managed to overcome these challenges and we are still planting trees in countries around the world.

My CCOF Experience

The 2019 CCOF was a well-structured fellowship with wonderful climate content and all the staff were supportive. The weekly lectures and breakout sessions via webinar and WhatsApp, and interactive CCOF Facebook and WhatsApp groups, enabled the 30 fellows to stay in contact between our weekly discussions. A mini online community was born. I was always inspired by the efforts and stories of other fellows in the CCOF. We were all committed to ensuring a better green world.

I was assigned to the Group 4. Its members Ms. McCurdy Elon (Guyana), Dr. Chandra Degia (Jamaica) and Ms. Gail Woon (Bahamas), I now regard as close friends. My relationships with fellows, with Ms. Gail in particular, had a direct positive impact on me and my journey as an environmental advocate. Ms. Gail was a big inspiration and was supporting me during the entire CCOF. She and other fellows reminded me again why teamwork is important and how much we can achieve together. Except for myself—I am a Nigerian now living in the US—Group 4 members were all from the Caribbean, and it was indeed a bubbly time hearing them speak in their respective accents. Clearly, our collective resolve was to make the earth green again and we shared notes and discussed the likely ways to achieve this mandate. They all were there for me when I felt overwhelmed.

I can't forget the Project Drawdown manual we used as a guide. It is a wonderful book that highlights actions to mitigate the impact of the climate crisis. I was particularly inspired by the land-based mitigation approach, which I used for my CCOF climate action. My joy was full when I was speaking at the UN headquarters and I introduced myself as a fellow from Cornell

University. People were amazed and clapped loudly. After my speech, I was told Cornell was one of the most prestigious universities in the world.

To say that my life has not changed since joining CCOF would make light of the impact of the fellowship! The program uplifted my status among other young advocates and exposed me to new innovative and creative ways to deliver the message of hope and respect for nature.

I now understand better the challenges of addressing the climate crisis, and clearly, I learned that there was no single best approach to draw down greenhouse gases. Rather there are multiple innovative approaches each of which can fit certain situations. Regardless of which solution you choose, everyone must be carried along as we find solutions to the lingering climate crisis.

I proudly wear my badge as a Cornell University CCOF fellow. Special thanks to Cornell University and Cornell CCOF staff Ms. Anne Armstrong (climate communication, technology), and to Ms. Kim Snyder and Mr. Brian Hutchison, both of whom helped with technology. And a special appreciation to Prof. Marianne Krasny for being a great teacher and a mentor.

Conscious Water Saving In Zimbabwe

Maxwell Kanotunga

Harare, Zimbabwe

“For that which is common to the greatest number has the least care bestowed upon it.” Although these words were said long ago by Aristotle, they have relevance to what we are experiencing today. They suggest a worldview—people engage in deforestation, climate pollution and overfishing the commons, thinking nature will always be there and continuously providing regular services. Alas, it was not to be, as humanity has taken the wrong turn towards the total destruction of the fabric that has been sustaining us for millennia, impacting the survival of all.

For me, a change came in 2005 after reading an article by environmental journalist George Monbiot in the Guardian newspaper. I made a total commitment to learn and fully understand the climate phenomenon. I quickly sent Monbiot an e-mail. Guess what! He replied! “Send me your home address,” Shortly thereafter, I received a surprise package in the mail—a book entitled *The Heat Is On*. I read it over three times in a space of two months. True activism had blossomed within me from this tiny e-bud. I felt it internally. My whole story had evolved to another state—did more research on climate change and more research. It became my daily bread as a new recruit who had entered a new territory. My zeal was out of this world.

It took another three years to really hit the road running. In 2008, whilst surfing on the internet I unexpectedly opened a pop up advert by Campaign Against Climate Change in the United Kingdom, inviting global citizens to join the Global Climate Campaign. I quickly registered and became part a worldwide movement of like-minded people fighting for a safer and livable planet, It meant massive mobilization worldwide and having an impact. Then in February 2010, came the real test of action. I got invited to the United Methodist Church Highfield Circuit- Environmental Education Week, a dream come true. It was exciting and nerve wracking as it was my first time in front of a congregation of more than 300. I whispered “you can do it!” These events marked the birth of this fun filled journey. As the founder of Living Green Campaign Zimbabwe, I have been giving back to my community, working specifically with the youth and at times adults providing awareness using books and posters on climate change. It’s fulfilling knowing fully I am truly paying rent for a living planet.



Figure 1. Maxwell Kanotunga at the Climate Change Awareness – Steward Bank Entrepreneurs Expo, Harare, Zimbabwe. Photo credit: Chaibva Moreblessing

CCOF Climate Action

The whole process into CCOF was like a crazy joke happening in a circus. I was opening my e-mail as part of a daily routine on the 20th of January 2019, expecting just the regular e-mails. As I scrolled down, right in the middle there was this mind blowing message from Professor Marianne Krasny from Cornell University Civic Ecology Lab, inviting applications for the CCOF fellowship. Without hesitation I quickly opened the link with the urgency it deserved. In a space of fifteen minutes I had completed the application. I said to myself, “this is the right time or never.” The 12th of February 2019, was a day to remember. My application was successful. I quickly went into a joyous mood as my wish had finally come to positive fruition as a professional activist. Being selected amongst over 600 applicants, considering only a small group of 35 would make it globally, this was a memorable souvenir.


Everything began as a normal learning session through the Edx-Edge platform where our weekly assignments were posted regularly by Professor Krasny. To my surprise, she asked all of us to select one Drawdown climate solution from a possible list of 100 actions with a plan to implement it in a social network during the fellowship period. It took me four days to select the right choice. I realized clean water was becoming scarcer in most parts of the world especially in urban settings due to droughts, climate change and pollution. Poor water quality as well as increased incidences of cholera and typhoid are affecting health delivery and resulting in loss of lives. I opted for Drawdown solution number 46—water saving. My idea was to inculcate the notion of water saving at home among friends and colleagues in my environment circles using the social media platform Facebook.




Figure 2. Water Saving Infographic. Credit: Devine Technology

The process began in earnest with the designing of the infographic on water saving tips at home. The campaign ran under the theme “Think- Act –Save Water.” On the 8th of May 2019, I launched the campaign by posting on colleagues’, friends’, and Living Green Campaign Zimbabwe’s Facebook pages. It was electric and fun to implement after a long planning process. The first week had over 135 likes and comments. It was more than motivating. It spiraled to other groups like veld fire. What made it so unique was the simplicity, practicality, and positivity amounting to win-win action in terms of reduced water bills and biospheric values. We focused on environmental, protection and reduced carbon footprint with no regrets or loses in taking

action on water saving at home in the bathroom, kitchen, laundry and toilet. I personally got involved in reducing water use (and consequently carbon dioxide emissions), managing to save 100 litres on average per week. Taking action induced the feeling of huge achievement. The whole CCOF concept was tailor made to influence friends and colleagues, putting into action the ideas learnt during CCOF like social mobilization, social marketing and social influence. I felt as if I was widening the climate change campaign horizon in terms of revitalizing the movement today and into the future from planning right to finish. Implementing my Drawdown action in my network was truly satisfying.



SAVE WATER CAMPAIGN- WATER USE LOG IN TABLE: 2019



Activity Area	Time of Day	Day 1	Water in Ltrs	Day 2	Water in Ltrs	Day 3	Water in Ltrs	Day 4	Water in Ltrs	Day 5	Water in Ltrs	Day 6	Water in Ltrs	Day 7	Water in Ltrs	Weekly Total Water in Ltrs	Total Carbon Emitted kgs
Bathroom & laundry	Morning		50		35		35		40		45		35		50	290	
	Afternoon		55		40		40		35		30		55		55	310	
	Evening		45		45		55		60		40		50		60	355	
	Tub bath																
	Laundry																
Bathroom & laundry	Brushing teeth																
	TOTAL USED		80		120		130		135		115		140		165	955	
	END DAY																
Kitchen	Morning		40		50		65		65		60		60		60	400	
	Afternoon		55		25		55		55		70		70		75	405	
	Evening		60		50		60		35		65		75		75	420	
	Food preparation																
	Drinking water																
Toilet	Cleaning																
	TOTAL USED		155		125		180		155		195		205		210	1225	
	END DAY																
Toilet	Flushing																
	Morning		70		65		70		80		75		65		70	495	
	Afternoon		50		70		65		55		70		55		65	430	
	Evening		80		85		75		85		85		75		90	575	
	TOTAL USED		200		220		210		220		230		195		225	3680	
	END DAY																

Think, Act, Save Water
You can do it – its fun!

Figure 3. Jeremy Stevens' water log.

As the campaign rolled into motion, it was reflection time. Unforeseen circumstances emerged like people avoiding entering their behaviours into the water log table right from onset which required swift reaction, so as to keep everything on track. Also, time limit was a major hindrance to successful implementation as the planned four weeks was not sufficient. The water saving log table beyond doubt was the biggest failure, followed by the lack of interest to post pictures of saving water action at home-zero posts. I shifted quickly to Facebook messenger to motivate my colleagues and friends to like, share and tag friends. The campaign numbers of likes and comments began to rise, from posting once a day to three times a week at different times. The idea was to influence more friends and colleagues. I extended the campaign to the end of July 2019. I plan to continue on Twitter sharing the water saving infographic, and engaging my

local community in practical water saving behaviours at all the climate change presentations I give in schools, churches, and tertiary education institutions during the rest of the year.

CCOF Experience

To be quite frank, CCOF was in its own league and truly transformational as it enabled all fellows from different regions to share and compare, and above all learn new concepts. What a refreshing experience especially learning in a small group. Even the bigger group had lots of knowledge exchange on climate change covering all aspects pertaining to climate mitigation, as fellows chose a variety of Drawdown actions. Group 8—Richard, Michael and Omer—you were all a total package in terms of contributions to climate change discussions and sharing of positive solutions being implemented globally. Despite the challenges in Yemen, Omer was always ready and available to share the climate change knowledge. Richard, the one American in Group 8, was always motivating to the group. And Michael was awesome sharing the real Nigerian climate mitigation efforts regularly. I enjoyed most of the encounters both in terms of constructive comments and criticism with humor, appreciating lots of learning and sharing of opportunities with other fellows. On a more personal note, Professor Marianne was always there for guidance—what a role model!

To sum it all, I will close as I opened with Aristotle. The philosopher Will Durant synthesized Aristotle's words as follow: "We are what we repeatedly do. Excellence, then is not an act, but a habit." Let the climate habit continue to spread to all global citizens through CCOF fellows. It is possible!

Justice and Climate Action in Kansas City, Kansas

Richard Mabion

Kansas, USA

Whenever I try to pinpoint what it was that caused me to see the environmental movement as the new frontier for being Black and continuing the fight for my freedom in America, I can't help but to think that if Barack Obama hadn't already used the title, I might have called my story "The Audacity of Hope." Here I am, a guy who lives in a neglected corridor of a struggling city in the poorest county in the state of Kansas. A guy who got inspired about economic and environmental activism by author David Korten. But when I found so few people of color speaking at national conferences, I was compelled to detour into the prickly territory of how progressive organizations were not reaching out to minority communities. For years, as I continued to advocate for locally driven economic development in Kansas City, Kansas, I hit nothing but bureaucratic walls and deaf ears.

This is why when I read the environmental book written by David Korten, *The Great Turning*, I knew that the difficulties we as ancestors of former slaves had just trying to be heard, was now going to become an experience and major lifestyle change for the majority population in America, too. I take inspiration from the following passage in Korten's book, "Leadership to create a world that works for all is more likely to come from those who live in the real world and consequently are intimately acquainted with the injustice, violence, and the environmental failure that the Empire has wrought." After reading these words, I immediately knew that someone from the portion of the population I served needed to take the time to enter into the environmental industry, to learn it from the inside out, and be able to return to this portion of the population to train the needed trainers. When it came time for that caliber of person to take the leadership role that David was talking about, it was highly possible that caliber of person from the population I serve could very easily not exist.

So, during a Business Alliance for a Local Living Economy conference in Berkeley, California in June of 2007, I decided to embed myself into the environmental industry. There, I could experience firsthand what was being taught and to determine if, with my 1970's community activism facilitating skills, I—from a low-income professional perspective—could actually figure out a way to successfully teach the various aspects of overcoming what David Korten called an "Empire to Earth Community."

When I am asked how and why this consciousness aspect became the theme of my climate change action plan, I tell the story about 1950, when, as the 4-year-old son of one of the contributors to the *Brown vs Topeka Board of Education* desegregation lawsuit, I was sitting in the back row of 8th Street Baptist Church in Kansas City, Kansas. I was the youngest of four siblings during a time when childcare was not the preferred method of caring for one's children, and it was not uncommon to see non-school age children attending functions during the day with their mothers—especially one like mine, who was heavily engaged in community affairs. Back in those days, when a child was told (by mom) to busy himself, the children would usually do so by listening to the tempered conversation going on (in this case) in the front of the church. So, here was my mother—the last President of the Negro School System's Parent Teacher Association for the state of Kansas—in the front talking. Her tone was the kind that children learned early in life was serious adult business discussion—the worst thing a child could do was make noise. I was concentrating more on not being heard than on what was being discussed. In

fact, I did not fully understand the extent of that history-making moment until some years later. But since then, I have come to realize it is that same DNA that made my mother involved as a contributor to the integration of the public school system that has led me to my marching orders. I have spent my entire life involved as a contributor to justice and common sense in our society and for our world.

My pathway as an integrator began in elementary school in 1956, two years after the *Brown vs Topeka* desegregation lawsuit. Because my mother was a prominent civil rights leader, I was picked on by any of the White school personnel who did not favor school integration or who had a friend who had suffered consequences from the integration process. As an example, the principal of the elementary school I attended was a very close friend of the principal of that section of town's public high school, and he was heard to say he "would never be caught dead overseeing a school that admitted n*****s". Because of their friendship and because my elementary principal wanted to have a way to affect my mother, she daily found reasons to harass or constantly criticize me—expecting to see either me or my mom react. But since both White and Black forward-thinking school administrators had done an excellent job to prepare students for this racial transformation of public schools, daily we weathered the storm.

There was, however, a transformational racial incident that happened to me in sixth grade. My teacher was a very good friend of the elementary school principal, and so my teacher decided to mistreat me, which I saw as her way of seeking approval from her friend the principal (even at 11 years old, I had been taught to evaluate human behaviors). This is what happened.

My teacher was calling on each of the students to give her our test scores so she could record the scores in her grade book. When I heard my name called, I said, "5" (like – jive short i), and this was the dialog that followed:

The teacher said, "that is no way to say 5 (like my - long i). Now, say 5 (long i) again."

I said, "5 (like-jive short i)", the same way.

She yelled, "No, no! That is not how I want you to say it. Now say 5 this way (like my-long i)."

I once again said, "5 (like-jive short i)".

She exploded! "I told you to say 5 (long i)."

I said 5 (like-jive short i).

She told me to say it again like I (long i).

By now I could see what she was doing, and the other students were finding humor in our exchange. I became determined not to submit.

So, I said, "5 (like – jive short i)" again.

She had turned three shades of red and was breathing out of her nose. She said, say "my."

I said "my".

She said "Say "my" again."

And I said "my" again.

Then she said, "Now, say 5 (like my-long i)."

And I said "5 (like-jive short i).

She was livid, totally out of control.

She repeated the say "my" routine at least two or three more times and I would keep saying "my." And when she asked me to say "5 (like my -long i)," I again would say "5 (like-jive short i)." By now the other students were in stitches doing everything they could to keep from bursting out laughing. They too had turned a variety of shades of red. It was definitely a moment to remember.

Guess what? She made me sit on a dunce stool in the front of the classroom with one of those dunce hats on until we went to recess. Humiliating, you bet, and if not for the warnings from my mother and the Superintendent of the Negro School System, who knows how angry I could have become.

This may seem hard to believe but this is exactly what happened between my white sixth grade teacher and me. It was fragile for we black students—children—to be representing the adults in America when we integrated formerly all-white schools. You would have thought that no outwardly racist teachers would be allowed to teach in such a situation, but as my example clearly demonstrates, they were not only allowed to teach, they were also free to demean black students at will. When I share this story, I can't help but think about the way my "speak up and be heard" attitude was quashed, and I became a protected introvert. I wouldn't say what was really on my mind for fear of saying it wrong or improper and didn't want to be humiliated in front of my classmates again. I won't try to analyze her motivation to treat another human being in such a manner, especially an 11-year-old boy. The way I look at it, her behavior speaks for itself. However, I will take a moment to say that it was incidents like this one that made me proud to be who I am.

When you think about it, regardless of how things may look or be presented, well-meaning, God-fearing black people in this country have had an up-hill battle pretty much all our lives. It makes me think of a song I have learned to sing when doubt has become a factor in my life: "Through it all, I have learned to trust in Jesus, I have learned to trust in God. Through it all! Through it all, I have learned to depend upon Jesus's words." And here I sit, some sixty years after my struggle with my sixth-grade teacher, still doing my part to make our nation's integration process a reality that actually works.

When I challenged the classroom teacher's authority and humiliation, I made myself an instant pop-cultural hero to the rest of the class. I had taken her abuse and instead of getting angry, I mentally fought back without fear of the possible consequence. Even though I ended up sitting on the dunce stool wearing a dunce hat, it was seen by my classmates as an incident where I fought the good fight, which made me their hero.

When time came for us to line up for recess, I was allowed to return to my place in line. Everyone kept saying how much they supported my behavior, especially the white males. I truly believe it is possible that a single incident may have completed my racial transformation. I was no longer their minority classmate; I was now considered their peer. I had faced the oppressor and showed I had "balls," which to the white males in America makes you the caliber of male that mainstream history claims has been responsible for the civilization of America.

Prior to this incident, it was not uncommon for me to be by myself while walking to and from school, but when I got ready to walk home that day, I had a group of white males who wanted to walk with me. It was like I had arrived! You need to keep in mind this incident was still during the early stages of integration and shows that what the people who supported integration wanted—black and white children to learn to be friends—was actually happening, without fanfare or additional adult involvement.

A second incident is a perfect example of the bonds that occurred between this same group of white males and me—and of the persistent racism pervading multiple aspects of American society. After my classroom humiliation incident, about three of the white boys and I started walking to and from school together. One morning one of them suggested that they invite me to join their Boy Scout troop, and the others agreed. When they asked me if I would, of

course I said I had to ask my parents for permission. I remember telling them the next day that my parents had given me permission.

The day of the meeting we went directly from school to the big white steepled church on the corner just three blocks from my house. When we arrived, we began to play in the basement of the church like normal 11-year-old boys would do. I saw this white male adult enter the basement of the church. When he saw me, he immediately called out one of the boys in our group. After they had talked, the boy returned to our group and told me that the Boy Scout master wanted to talk to me, so I ran over to introduce myself. But instead of wanting to meet me, he wanted to let me know that this particular church had a policy that required all non-members to be approved by their Board of Trustees before they could join any church activities. He said he would let me stay for the rest of this meeting, but before I could return, my parents and I needed to meet with the Board to get their permission. So, I stayed for their scout meeting and had a great time, and at the next Board meeting I sat on the front pew in the church with my parents.

The scoutmaster introduced himself to my parents and told them he was going to take our request before the Board. He left us and entered a room off the vestibule.

As we waited, I could not help but compare how this church differed from my own. I began to hear some loud voices coming from the room the scoutmaster had entered. I saw my parents look at each other but neither of them said a word. In fact, my mother started talking to me about how different this church looked on the inside from what you would have expected from passing by on the outside.

We sat there chatting when the scoutmaster finally returned from the meeting. He said, "Mr. and Mrs. Mabion, Richard, I need you to understand that I was personally really excited about Richard joining our troop." I guess both my parents and I knew what he was about to say, especially after hearing all of the loud voices—we were in our own personal "expect the worse mode"—each of us knew there was a "but" coming. The scoutmaster continued, "But the Board of Trustees has determined that the church is just not ready for a Negro boy gaining membership in any of our church activities."

Boy, I felt that this just wasn't going to be my year. First the harassment from the principal, which resulted in the teacher's humiliating experience in front of my classmates, and now the big rejection by, of all places, the church. I couldn't help but wonder, as my parents and I walked those three blocks back to our house, what's next?

After this, the boys who had asked me to join their Boy Scout troop and I were walking to school. That I had been denied membership was of course the topic of our discussion. I will never forget their reactions; they were livid, and I do mean livid. They could not believe that I had been treated that way; remember, this was a church that had rejected me because of my skin color (an 11-year-old black boy). A church that stood as the symbol of all that America was supposed to be, the standard of morality.

I believe the boys were hurt more from the rejection than I was. I won't repeat all that was said. I would just say that after experiencing my rejection, every one of them decided to quit that Boy Scout troop in protest, simply because of how I had been treated because of the color of my skin. They ended up saying, if Richard is not good enough to be a member, then none of us are good enough either. End of story!

Of course, it would have been nice if that classroom situation had been my only incident with the members of this group of white males. If you notice, I keep saying "white males." My reason for doing this is because I still see them as the backbone of this country's mental attitude.

As goes the white male, so goes the nation and/or the world. This is why I feel we (those white males and I) had made our racial transformation prior to entering junior high school. Because the junior high school district was fed by five or six elementary schools, I was no longer the black dude integrating white schools. I was now the black dude from Stanley, the name of our elementary feeder school.

This pretty much became the point of my integration experiences for the rest of my academic and professional career, which included junior high school, senior high school, my Coffeyville Junior College experiences, my military experience during the Vietnam conflict, and my 1968-71 Easy Rider hippy days in college after my return from the Vietnam conflict. When I say returned from the Vietnam Conflict, it was not returning from an overseas experience; I never made it that far. I was hand-picked to be an instant NCO (non-commission officer) acting E-5 Drill Sergeant type. It seems the Army needed people like me who could master a certain leadership program, to work with draftees in basic training, and free up real fighting E-5 soldiers for Vietnam. Which like every other phase of my career and academic development in this country, this one also seemed to involve me as a contributor to some racial inclusion.

I promise I am not going to write one of those, “look at what white people did to me” stories, because as Americans, I feel we all have had enough of those kinds of books and media events. I don’t want to write one of those “my father was a janitor” stories either. While we do have many of those kinds of success stories in America, not all of us who have become productive citizens came from neglected or downtrodden backgrounds. So, I will try to keep my sharing on my mental processes more than the negative treatment I received. I admit those kinds of books and stories, just like the Holocaust, will always be a factor in our lives and the lives of future generations, simply because we have a need to learn from the mistakes of the past as well as from our many successes. However, it is my intention to add a new perspective to the equation. That would be my personal “Black Like Me” experience of turning or putting a positive spin on a negative circumstance, and therefore making the negative experience not only a benefit for me, but in many cases a benefit for the other people involved too.

That is why I have shared these two incidents and the new relationships that were the unexpected benefit. As you saw, when the white public school teacher took pleasure demeaning a helpless Negro boy in front of his mostly all white classmates, with no concern for the young boy's feelings, the end result was the creation of a lifelong interracial relationship between that Negro male and a group of white males. And for the life of me, and I can't help repeating, how I felt then and still believe that is what integration was supposed to accomplish.

Of all the incidents (and there were many) that occurred during those early years of public school integration, I selected these two to share because of the learning that I discovered from the behaviors people showed.

Today, many social economic development efforts for inner cities are designed by mostly white—but occasionally black—researchers who have determined the best strategies for our low-income communities to overcome and achieve. Other activities are designed by “race conscious” groups that have their own thoughts or agendas of what is needed. Yet, other than the support of some workplace mandated diversity program, these same white boys who stood shoulder-to-shoulder with me on their own, 60 + years ago, have been driven from today’s efforts to truly complete the integration of America. What had been a breaking down of racial barriers between individuals in the beginning has now turned to a series of manipulative moves, designed to give a particular people, place, or group some advantage. Not based on merit, or respect, but simply because of their racial background or political party. This is the opposite of what so many of us

freedom fighters like my mother tried to accomplish—and what we achieved as six grade white and black young boys (students).

In the mid-2000s, I was recouping from the loss of the civil rights service industry business I had established in 1983. The need to recoup was due in part to the 9/11 tragedy that devastated small businesses in America. Then, while I was recouping, the 2005 Katrina tragedy occurred in New Orleans, and I found myself in the low-income community of Kansas City, Kansas, watching the experience at the New Orleans Superdome on television. I said to myself that there was no way we could have such devastation here and not find a way to care for ourselves. I began researching the Katrina disaster and learned the environment may have been the main reason for such destruction. This is when the environmental world entered my life.

While searching for ways to empower low-income leaders to prevent what had happened in New Orleans from happening again, I discovered a 2006 book by David Korten, titled *The Great Turning: From Empire to Earth Community*. After becoming completely mesmerized by what I read, I discovered that Korten was hosting his first Navigation Summit in Columbus, Ohio. Along with two other environmentally minded souls from Kansas City, we made our way to Columbus in April of 2007. It didn't take long to see how few people of color were in attendance—we were 5 out of 200 people, with only two black males. I felt invisible to the other summit participants. Other than several activities when we had to talk to our tablemates, I was pretty much ignored. Korten saw this, and while I sat and observed how little people even looked my way, he came up behind me, touched me on the shoulder, and introduced himself. An introduction that not only got me invited to eat lunch with him but ended up getting me a personal invitation to attend what he referred to as the economic development arm of the environmental movement, the Business Alliance for Local Living Economies (BALLE) conference in Berkeley, California.

Long story short, by the end of the BALLE conference (which had a total of 700 people in attendance) in June of 2007, I had become somewhat a nationally known environmentally minded person of color. So much so that by November of 2007, I was hosting my own environmental conference with David Korten as my keynote speaker.

I can't help but feel it was my DNA that led me into what has become my need to create a climate change consciousness. I will never forget receiving the following statement from David Korten, when I asked him to explain why we needed a person-of-color-led environmental conference called Breaking The Silence in Kansas City, Kansas. David wrote:

Richard, you asked me to describe my intention regarding my visit to Kansas City. In the larger sense, it is no different from my intention wherever I visit to speak about the Great Turning from Empire to Earth Community. It is to spread awareness of the essential need at this distinctive time in the human experience to turn from dominator to partnership relations as the organizing model for human societies and to deepen understanding of what this requires.

Since discovering Korten's thinking in late 2006, I have been profoundly influenced by my association with him. He is an American author, former professor at the Harvard Business School, political activist, prominent critic of corporate globalization, and "by training and inclination a student of psychology and behavioral systems." His best-known publication is *When Corporations Rule the World* (1995, 2001). In 2011, he was named an *Utne Reader* visionary. In *The Great Turning*, Korten argues that the development of empires about 5,000

years ago initiated unequal distribution of power and social benefits and that corporations are modern versions of empire, since both are social organizations based on hierarchies, chauvinism, and domination through violence. These empires together with the rise of powerful, advanced technology are becoming increasingly destructive to communities and the environment, leading the world to the precipice of a perfect storm of converging crises, including climate change, post-peak oil production decline, and a financial crisis caused by an unbalanced global economy. Korten believes that these crises will present an opportunity for changes that replace the paradigm of "Empire" with that of an "Earth Community," based on sustainable, just, and caring communities that incorporate the values of mutual responsibility and accountability.

I have learned from Korten that we cannot look to institutions of imperial domination for leadership in this transformation. Such leadership must come from broadly based popular movements that lead from the bottom. Empire maintains its power in part by controlling the prosperity, security, and meaningful stories that frame the dominant culture, and in part by keeping us fragmented by race, gender, age, and class to keep popular social movements fragmented and thereby impotent. Korten has written, and I agree, that division by race in our nation remains intractable. We are an apartheid nation. This apartheid plays out in our progressive social movements and ultimately incapacitates them. I believe it is not a consequence of the intent of anyone in our social movements; I believe there are too few initiatives specifically devoted to multiracial dialogue on progressive issues and agendas. Korten told me he was so energized by the Kansas City initiative because the leadership is coming from communities of color and its defining purpose is to build a multiracial dialogue. This is hugely important, and since encountering Korten, I have been committed to supporting such a dialogue in whatever way possible.

CCOF Experience

For a person who has spent his time hitting nothing but bureaucratic and academic walls or barriers, trying to be heard or to get help for low-income residents has meant finding a group to work with like CCOF has been heavenly indeed. The fresh minds of the international fellows and an up-to-date highly recruited academic world gave me examples of what was being done and or could be done to create a climate change consciousness in the low-income communities where no climate change consciousness existed. Hearing individual stories and efforts from my classmates and professor from a perspective not known to most, I was able to use the results of their findings to design the kind of climate change action plan that before now has not existed in my neighborhoods.

My small group with Michael in Nigeria, Maxwell in Zimbabwe, and Omer in Yemen was truly a God sent learning experience. I was so taken by the parallels between Omer's Yemen circumstances and my circumstances in Kansas City, Kansas. It is often said that the reason for the lack of a climate change consciousness in the low-income communities has more to do with priorities as far as needs are concerned than because of a lack of interest or education. The distractions in Kansas are similar to those experienced by people in Yemen—where mine may have been violence, crime, and the lack of employment opportunities, the main problem in Yemen was an out-of-control ongoing war. It's hard to develop economically when you don't know where you may be living from day to day. Both damaging circumstances caused the kind of distractions that can set one's progress back to square one.

While the distractions in Kansas may have been violence, crime, and a lack of employment opportunities, and the distraction in Yemen the ongoing and tragic war, the people's mental reactions in both locations to these distractions were very similar. A degree of fear, with a divine spiritual determination to succeed.

Finally—My CCOF Climate Change Action Plan

My first step to create a climate change inner-city consciousness was the formation of an environmental minded parent organization that had the responsibility to facilitate an ongoing community-based engagement program. The following was that organization:

Building A Sustainable Earth Community



MISSION STATEMENT

Our mission is to engage our multi-cultural society in a positive manner, which empowers individuals to collaborate and promote ideas and activities that focus on building an accessible sustainable earth community that honors and preserves people and the environment

The next step was to facilitate the partnership between three local social service agencies or institutions that have a direct relationship with low-income residents.



Donnelly College

Founded by the Benedictine Sisters of Mount St. Scholastica



Economic Opportunity Foundation (EOF),

The design of such a proposal, will include that recently formed Metro KC Climate Change Action Coalition, and 3 KCK social service agencies.



Figure 1. To give this joint partnership the kind of leadership that it will need in the Metropolitan region, it will be necessary to also develop a relationship with a Climate Change policy-oriented coalition: (www.mkccac.org). Photo: Anonymous

Then the next step will involve the creation of a relationship between the Climate Change Coalition members with the community based social service agencies to design a workable climate changed consciousness solution.

- What We Now Have is Members of the Low-Income Community, Engaged in Conversation about Climate Change with Members from the Environmental World, lead by a Multicultural Group of Environmental Consciousness Providers or Facilitators



Photo: Fus'Kari

Our final step during this beginning phase of development will be the creation of a workable greenhouse gas reduction calculator program. The program will be designed to create an incentive for the middle class environmental minded individuals to contribute to a plan that is designed to provide marginal populations weatherization funding.

Once such a program is implemented, it is our desire to use it as a way to introduce climate change values to the portion of the population that is void of such knowledge, to begin the creation of the climate change consciousness process...

The Greenhouse Gas Reduction Solution

Construct a Carbon Offset Program in Kansas to benefit the low-income marginal community in not only KCK (Kansas City, Kansas), but the entire state of Kansas (our rural communities too).



CARBON CALCULATOR

Carbon Footprint Calculator For Individuals And Households



This carbon calculator is provided free to use

Show you care for the environment and communities across the World by Carbon Offsetting.

You can support Carbon Offsetting Projects that both tackle climate change and support impoverished communities across the world.

Just click the 'Offset' button after you have finished your calculation. It takes only a few easy clicks and costs only a few Pounds/Dollars/Euros per tonne CO₂.

You also get a personalised **Certificate recognizing your offsetting - makes an ideal gift too!**

This is my Kansas Divine Spiritual Determination
to succeed!

Composting in Guyana

Elon A. McCurdy

Georgetown, Guyana

I was raised in Chelsea Park, a rural farming community located on the low-lying coast of Guyana. As I got older I realised that the weather was changing, the creeks were drying up, and my neighbour had to build up a dam surrounding his rice field due to saltwater intrusion. During this time, climate change was not being discussed at the local nor national level. In 2007, while at the University of Guyana, I was encouraged to join a volunteer group in an effort to build numbers. This group was the Caribbean Youth Environment Network (CYEN-Guyana).

In 2009, Bevon Currie (deceased), the former National Coordinator of CYEN-Guyana, recommended that I participate in a climate change advocacy and media training funded by 350.org in the Dominican Republic. Founded by Bill McKibben, 350.org is an international environmental organization addressing climate change with the goal of reducing atmospheric carbon dioxide to 350ppm while raising awareness about human-driven climate change. During this period, I along with other Caribbean youths were instrumental in drafting the Santo Domingo Climate Change Youth Declaration, which outlined the demands of the youths in the Caribbean region. The youth declaration fashioned the Caribbean Community Liliendaal Declaration on Climate Change and Development, which asserts the objectives of the United Nations Framework Convention on Climate Change (UNFCCC) and the Kyoto protocol. It places the onus of mitigation efforts on the developed nations while underscoring the vulnerability of low-lying, small island developing states such as those found in the Caribbean. As well, it points to the Caribbean Community's (CARICOM's) own efforts at education, outreach, and adaptation in response to climate change. The training was an opportunity to prepare youth delegates in how to communicate climate change in their respective communities. Equipped with the requisite tools and knowledge, I returned to Guyana. In 2009, my participation as a youth delegate at UNFCCC COP 15 in Copenhagen, Denmark, served as my introduction to climate change negotiation and diplomacy. There I was able to observe the Association of Small Island States delegates meet and discuss their collective interests ranging from climate finance to migration.

CCOF Action

In Georgetown, the Capital City of Guyana, 50% of the waste collected is vegetable/organic. Due to the absence of a waste separation system at the source, the vegetable/organic waste is dumped at the Hagg Bosch Landfill Site. Over time the build-up of methane and other gases has led to several fires. The impact of improper disposal of solid waste has become a critical environmental problem in Georgetown, creating unpleasant esthetic conditions and threatening the health of the urban population. The negative impact of improper waste disposal was heavily felt during the January 2005 flood, where waste-filled canals did not drain as rapidly as expected and contributed to several deaths and diseases. Thus, in an effort to highlight the need for behaviour change and awareness, I chose composting organic waste to mitigate climate change.

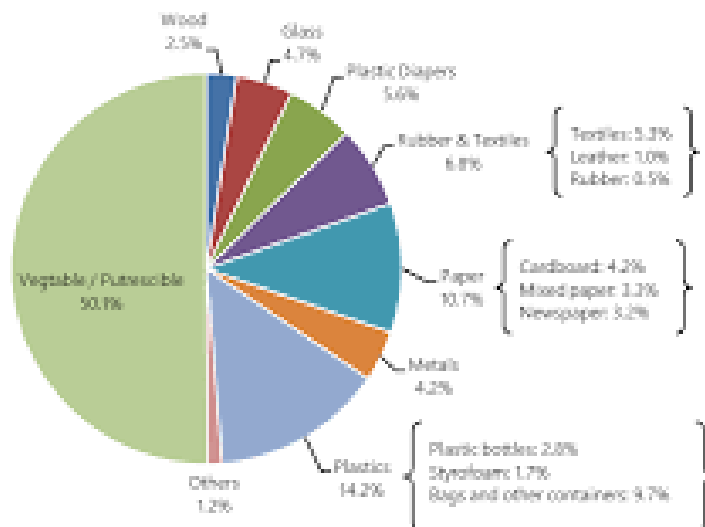


Figure 1. Household Waste Composition for Georgetown, Guyana. Credit: Hydroplan, CEMCO Inc, 2010

Given the state of Guyana's solid waste management, the idea was to engage and network with others in the same field so as to discuss, design and implement a composting project. I had hoped that we would be able to influence and encourage school children to compost their vegetable and other organic waste. My plan was to influence individuals between the ages of 20-45 years old who work with children by utilising my social media accounts. As someone who depends on social media for news, updates, and to stay connected with family and friends, I decided to use Facebook, Twitter, and Instagram Stories to implement my project. Facebook was mostly used to encourage persons to share photos of food waste/scrap. Twitter, in contrast, was used to conduct a poll. In addition, I posted all photographs taken from my own personal climate action on Instagram Stories.

During the project implementation, I encountered a number of challenges and barriers that hindered the success of the project. One such challenge was the non-cooperation from the Solid Waste Management Unit. There was no change related to cooperation and collaboration from the identified stakeholders at the Solid Waste Management Unit. After realising that my initial approach wasn't working, I tried to obtain a composting bin from an NGO that teaches children how to compost in schools. However, my efforts were in vain since no feedback was received and thus the proposed school outreach never came into fruition. Additionally, time was a major constraint due to work and other prior commitments. However, a few activities were shifted around in an effort to ensure sufficient time was allocated to streamline what I hoped would be a successful campaign.

In addition, I conducted my Twitter poll for one week and only two persons participated. In the future, I will evaluate using Facebook's poll/survey functions to see if I might get a better response.

My intention was to present my findings via an article outlining the impact of food waste, the importance of composting, and the way forward for Guyana with prospective co-writers Mr. Walter Narine, Director, Solid Waste Management Unit at the Mayor and City Council, and Ms. Aretha Forde, Environmental Officer at the Environmental Protection Agency. The article, should it go forward in the future, will incorporate elements of the findings of the action. Given

the magnitude of organic waste and the need to find and implement a suitable strategy for waste separation, and to promote more sustainable waste management practices, I continue to compost food waste/scraps at home but even this isn't without its challenges. After reviewing the action plan and what transpired, the provision of some form of incentive could have motivated more participation. Also, if I were able to better connect with school officials, this could serve to bring awareness and encourage children to separate their waste and use the compost to fertilise the school garden.

It is my goal to continue my climate action after the fellowship. Thus, I'm considering creating a separate page on Facebook to document my action and other developments as relates to a composting movement in Guyana. I also plan to support other fellows by joining their individual actions. This includes supporting Daniel's tree planting and Dr. Chan's Plant-rich Diet actions.

CCOF Experience

As someone who isn't a confident public speaker, CCOF was an opportunity to face my fears and build my interpersonal communication skills, as well as share experiences and connect/network with other fellows. Weekly webinars and small group breakout sessions provided a platform for me to grow and build more confidence. The breakout group sessions provided an opportunity to be more candid and served as a support mechanism/platform for fellows who needed guidance on their individual projects. Even though we have never met in person, CCOF provided a platform for persons to build lifelong friendships.

Community-based Advocacy: Actions at the frontline

Respect Musiyiwa

Chiweshe Rural Area, Zimbabwe

Born and bred in Chiweshe rural area of Zimbabwe, I had my own share of misfortunes whilst growing up. I was born of a 15 year-old mother and I lost my father to HIV/AIDS when I was only 10 years old. My uneducated peasant mother struggled to pay my school fees and provide for me. I managed to come out with flying colors in all my studies. Sadly, I lost my mother to HIV/AIDS when I was still a second year student at the University of Zimbabwe. The death of my mother marked the end of my education and I had to return to Chiweshe to face life by myself. Social evils related to being an illegitimate child and stigma also brought its package of drawbacks for me. Nonetheless, being an orphan and a university dropout did not make me quit; I kept my dream alive. The negativity in my peasant farming community stimulated me to rise above what is often labelled as “charity cases.” I was inspired by the diversity, potential and capacity of marginalized communities such as my own, and envisioned a world where there is zero hunger and poverty through community-based participatory climate smart initiatives.

I did not waste time chasing after the wind and job hunting like most other young people do. Instead, I opted for social innovation and social entrepreneurship. I decided to create something sustainable and beneficial to my community and many other youths who were also like me. I formed a community youth group, Youth Network Club, in 2010. Sadly it was caught up in the political chaos and was destroyed. This setback was nothing to me for my determination was strong. I re-strategized and formed the Youth Initiative Against Marginalisation in 2011; this too succumbed to political instability. Eventually, my breakthrough came when I founded the Centre for Agro-entrepreneurship and Sustainable Livelihoods Trust (CASL) in 2012. There is less political interference with CASL Trust as we decided to focus on climate change, environment management, and sustainable agriculture. CASL Trust is comprised of a board of five trustees, two of which form the secretariat. It also has two part-time volunteers as well as several operational partners.

CASL’s success speaks for itself; it has changed my life and transformed my community. From a poor peasant rural young man, I have risen to become a successful and multi-award winning social entrepreneur and climate change advocate. Through CASL Trust, we have implemented several projects aimed at building our community’s resilience to climate change. These include a community climate-smart agriculture demonstration centre, community woodlots, tree nursery, post-harvest facilities, and advocacy and lobbying.

Today I thrive as an Agricultural Science student and MasterCard Scholar at EARTH University where I am acquiring more skills and knowledge pertaining to sustainable agriculture and natural resources management. I also want to thank Cornell University Civic Ecology Lab, which has solidified my climate change activism and social work, by offering great training, resources, and networks. By just mentioning that I am a Cornell Climate Online Fellow everyone now takes me for a high profile activist.



Figure 1. Working with other young people at our community climate-smart agriculture demonstration project that was funded by Global Environment Facility Small Grants Programme–UNDP in Mvurwi Community of north-west of Zimbabwe. Photo Credit: CASL Trust

Why Focus on Climate Action?

I am passionate about Sustainable Development Goal 13 because climate change is real and we have been badly witnessing its effect in my non-resilient rural community. Only this year hundreds of people in Zimbabwe, Malawi, and Mozambique died as a result of flooding and toppled trees and buildings brought about by Cyclone Idai. Hundreds are still missing and thousands were left homeless. This happened in communities that are clueless about how to handle the effects of the worst drought in decades and with high political polarization.

Young people just like me, as well as women, are hardest hit by these climate change induced problems. Besides my struggle story, there are other stories of young people trying to change the status quo of our community. One such story is that of Florance Machingura, an enterprising young single mother. Florance is a smallholder farmer in the community. Due to financial hardships she did not manage to advance with her studies. However, she is business minded and hardworking. She runs a vegetable garden from which she earns a living and supports her child since she is divorced. Despite this hardwork, she is still struggling to make ends meet. She depends on climate sensitive and rain fed agriculture; she cannot obtain a loan from financial institutions; she does not know about climate change mitigation and adaptation; she does not have access to good paying markets; and most of her produce goes bad due to lack of proper post-harvest facilities and techniques. She is one of the thousands of young farmers failing to make it due to so many barriers.

I am very positive and strongly believe that despite all these challenges, Florance and other members of my community have the potential and capacity to be active participants in the planning, designing, implementation, monitoring and evaluation of programmes to develop and transform our communities. I strongly believe in working with frontline communities as they are the hardest hit by climate change and at the same time they contribute to climate change through unsustainable agriculture and unsustainable utilization of natural resources. I have been working on climate-smart agriculture training, tree planting, reduction of food loss and waste, and utilization of renewable energy.

I see the power of working with stakeholders and partners to come up with participatory and inclusive solutions towards building resilience of these rural communities to climate change, and to sustain our agriculture. I believe in the potential of social enterprises, social innovation, and entrepreneurship as a sustainable option to build this resilience. I started one such social

enterprise, ECO-CONNECT Natural Foods, which produces and sells high quality and nutritious dehydrated food. It uses local human and natural resources, applying sustainable, food value addition and processing techniques. We turn food considered to be waste into quality and edible food. Our product portfolio consists of: natural food powders produced from dried fruits, vegetables and trees; dried natural fruits and vegetables; and natural and herbal teas.



Figure 2. Explaining a site plan to young people of our Global Environment Facility Small Grants Programme – UNDP funded community climate-smart agriculture demonstration project in Mvurwi Community of north-west of Zimbabwe. Photo Credit: CASL Trust

Cornell Climate Online Fellowship and the Amplification of my Rural Transformation Journey

When I received my acceptance email for the Cornell Climate Online Fellowship, it was one of those great “whaaal” moments of my life. Coming from a rural background and though positive about changing my life story, I could not image having Cornell University on my resume. That was a great boost to my community-based advocacy, which has been so evident by receiving rare opportunities like making presentations of my work on fighting rural food loss and waste in Zimbabwe at Michigan State University, UN Headquarters in New York City, and Shenzhen China for the UNLEASH Innovation Lab 2019 Summit under SDG 13, Climate Action cohort.



Figure 3. Presenting our solar drying post-harvest project as one of seven finalists for the Global Youth Advancement Summit 2019, Michigan State University. Photo Credit: Michigan State University

CCOF Action Plan: Fighting rural post-harvest food loss and waste

During the fellowship I was working on promoting community-based and sustainable post-harvest systems. Together with my team at ECO-CONNECT Natural Foods, we have been working on a project to harness solar energy for rural food processing and household energy using a low cost solar dryer—the Smart Villages Solar Dryer Kiosk. We are working with over 150 smallholder farmers and two farmers group, and have processed over 9000 kg of fruits and vegetables, which could have rotted. We produced over 1800 kg of dried fruits and vegetables.

Smart Villages Solar Drying Kiosk is a low-cost solar dryer for vegetables, tea and fruits. It also charges batteries allowing for clean energy for domestic use. It is made up of UV treated greenhouse plastic paper, a solar powered fan for blowing air, and wooden drying trays. The dryer is based on similar technology at EARTH University. We innovated and designed our model on our own using resources within our community in Zimbabwe.

I am working on reducing food loss and waste because this can give permanent solutions to some of the poverty and food insecurity problems I experienced. I aim to contribute in building the resilience of our community. The struggles I faced and many other stories like that of Florence stimulated me to be a social leader and innovate solutions for our challenges. The people in my area are marginalized and poor and have little time and resources to face crises, hurricanes, and droughts. In order to be resilient and at the same time to help solve the root of the problem (climate change), reducing food waste is important. Thus, we developed the solar dryer. We are working with various groups of smallholder farmers, youths, women, and people living with HIV/AIDS. We are setting up the solar dryers in rural villages. We buy agricultural produce from smallholder farmers and community groups, solar dry it, and then package and sell.

CCOF Action: Social media implementation

I was using social media platforms that are common among the Zimbabwean population—Facebook and WhatsApp. I raised awareness and educated on the potential of solar energy, which is widely abundant in Zimbabwe and can be a game changer in reducing food loss and wastage. I was sending videos and messages explaining how our idea can help to reduce food loss and wastage through agro-processing, value addition, and food preservation. During my CCOF action plan implementation, I managed to convince two community groups to replicate my team's solar drying project. My social media campaign messages reached many farmers and

community WhatsApp groups and thousands of my Facebook friends and followers. People were giving feedback and sending queries about our project and my connection to the Cornell Climate Online Fellowship. Generally a lot of people showed lack of adequate knowledge on how to harness solar energy to reduce food wastage and loss, and in turn, to help to mitigate climate change.

CCOF Experience

My Cornell Climate Online Fellowship has been one of those great transformational moments of my life. The fellowship is such a great networking platform where I work, closely, interact, and share with some of the greatest climate activists globally. I now understand climate change from global perspectives, from different life backgrounds, and from various career outlooks. I am now part of a global family consisting of climate researchers, university professors, advocates, farmers and others. This has enriched my community-based climate project planning, implementation, monitoring and evaluation. I received good training, reading materials, and tools that we can use in our organisation and community, not only to plan our activities but also to have a base for our advocacy and arguments for sustainable and climate-smart living. The Fellowship has also opened doors for collaboration and networking with a great cohort of like-minded people. I am now a global climate activist who acts locally.

Cornell Campus Visit and Seminar

After the fellowship ended, I had a rare opportunity to visit the Cornell University Civic Ecology Lab where I managed to conduct a seminar about CASL Trust's work. The seminar was a breathtaking moment as I shared my life story and community-based climate activism and social leadership. I was also given an orientation to life at Cornell University and other opportunities to further develop my profession and work. I am highly convinced that I will go back to Cornell University in the near future for graduate studies after finishing my undergraduate studies at EARTH University.



Figure 4. Conducting a seminar on our climate change work in Zimbabwe at Cornell University as a visiting Cornell Climate Online Fellow 2019. Photo Credit: Cornell University

Homo-Sustinens

César Alfredo Nanni De Valle
Monterrey, Mexico

Homo-Sustinens: a new way of decision making

I remember that when I was a child, we used to visit my grandmother for the summer holidays. She lived in a tiny village far away from the city, so we had to travel by car. As a child you pay attention to what you see through the windows and it is always a brand new experience. To my amazement, every summer the city grew bigger and bigger so instead of seeing trees I was looking at more houses, concrete and stores. At that moment I did not know anything about the impact we humans can cause to the environment. I only knew trees and animals were being displaced and losing their homes. Today that city I am talking about is around 4.6 million people and keeps growing. It has changed in many aspects.

It was around 2007. I was an undergrad and a friend of mine invited me to a conference about economics and resources. I did not have anything better to do so I went, also because they were giving away free food—that always works. To my amusement this guy was talking about how we wish for unlimited economic growth with limited resources. At that very moment, I had a flash from my childhood summers—the city growing, the trees disappearing. I needed to do something, and upon graduation, I decide what I wanted to do—to get my master’s degree in environmental sciences and change things. And so I did. After that, I started working at the Sustainability Center at the Universidad de Monterrey, where I have the opportunity to address sustainability from many points of view and with many different people. So far I can tell you, it's been worth it. But at some points it is tiring, because we are facing complex problems and not everyone can give complex solutions. We are so used to the status quo that it is hard to change to the magnitude needed.

CCOF Action

One of my personal goals is to make people aware of the environmental impacts of our choices and how good decisions matter. I have noticed social media is a great tool to communicate so I wanted to take advantage of that. I created a Facebook fan page called “*homo-sustinens*” (sustainable man), appealing to the idea that we humans are a species that cares for the environment and for other humans, and that we need to stop making decisions based on money. I am aware that making complex and good decisions is difficult, but it is a must.

My action was to give people accurate information on how they can impact the world positively through good decisions, and my goal was 100 separate sustainable acts. From the 100 Drawdown solutions, I selected ones that have greater impact with lower investment. The solutions I chose to communicate are: Reduce food waste, Plant-rich diet, Afforestation, LED lighting, and Water Saving. Every week, I would post to social media one Drawdown action and related information.



Action 1. Plant-rich diet. *Homo-sustinens* infographics shared with students. Credit: Stephanie Cavazos

I asked followers to share a photo of them taking that action and inviting more people to take action. At the end of the timeline, I only achieved 40 sustainable actions out of my goal of 100. Some of the ideas of why I didn't get more participation are that there was no incentive, and people do not like sharing what they do, eat, or make.



Action 2. Plant-rich diet. Facebook fan sharing her plant-based meals. Credit: María Alicia Treviño



Action 2. LED Lighting. Facebook fan sharing his new LED lightbulbs. Credit: Adrian Martinez (left photo), Stephanie Cavazos (right photo)

I will keep communicating and inviting people to take action through the Facebook fan page. Another idea I have is to assign my students to select sustainable actions and through the *homo-sustinens* Facebook fan page, to try to mobilize others to take mitigation and adaptation actions to fight climate change. Being a *homo-sustinens* is not about one action or a 9-5 job. It is a lifestyle.



Action 4. Energy saving flyer. Credit: Stephanie Cavazos (left). Evidence from a Facebook fan. Credit: Julia Cedillo (right)



Action 5. Saving water flyers. Credit: Stephanie Cavazos

CCOF Experience

For me, being part of the CCOF was a great experience because I get to hear what people are doing in different parts of the world. Sometimes we can feel as if we are the only ones fighting and it's tiring, but listening and seeing my small group members in China (Xiuli), Nigeria (Kayode), Afghanistan (Rahmatullah), and many others gives you hope. Many different actions and paths can be taken to create an equitable and sustainable world.

I can say that these 12 weeks were totally worth it, even when the call was very early in the morning. Listening to Marianne and my fellows from group 6 was empowering. I am sure there is so much more I can do to improve my implementation of a sustainability campaign. I can affirm I learned a lot from the reading, the guests, Marianne, and all the fellows.

Spreading LED Bulbs Across The Bahamas

Gail Woon

The Bahamas

My mom said I was an environmentalist ever since I was a little girl. She tells tales of me feeding caterpillars until they made a cocoon and releasing them when they metamorphosed into butterflies. I also collected tadpoles as a toddler and fed them until they became four-legged frogs ready for life in the wild of our backyard.



Figure 1. Little Gail Woon loved all creatures great and small. Photo by Phyllis Woon

I grew up as an only child. I spent a lot of time with my uncles who were commercial fishermen. I was driving a 10-foot aluminum skiff boat with a 6-horsepower outboard engine at the tender age of ten. I took free divers spearing fish with Hawaiian slings to the shallow reefs of the south shore of Eastern Grand Bahama Island, Pelican Point. I remember one of those hot summer days. After a day of spearing the boys were cleaning their catch. I was cleaning off the groupers that were half my height in the seawater and carrying them up to the cooler holding them by the eyeball sockets, one in each hand. Suddenly I felt something whiz past my head barely missing my face. It was a turtle head. These were the days when sea turtles were still allowed to be harvested. Now The Bahamas is a National Sanctuary for all marine sea turtles and all species of sharks.

The first time I drove the boat my uncle forgot to teach me how to start the small 6-horsepower outboard engine with a hand crank. The engine stalled and I was drifting away from my divers. I yelled and screamed and finally got their attention. My uncle swam over and saved me. He taught me then and there how to start the engine so that I was never stranded again!!

I first became aware of the concept of “Global Warming” in the early ‘70s during my high school days, when I read a report by John Sawyer entitled “Man-made Carbon Dioxide and the ‘Greenhouse’ Effect”. After reading this report I was very concerned about what would be termed global warming and later climate change and now the climate crisis. I went on to become

a marine biologist and environmental scientist, earning a Bachelor of Science in Environmental Technology/Aquaculture Option and an Associate of Science in Oceanographic Technology from Florida Institute of Technology. We spoke about the greenhouse effect in my oceanography class. My first job out of college was Aquaculture Analyst with the Wallace Groves Aquaculture Foundation. Mr. Wallace Groves founded the City of Freeport in the 1950s. My father surveyed and set out the subdivisions, for what would become Freeport. He also designed the Grand Lucayan Waterway, and redesigned the Airport for L1011 jets. My grandfather, a graduate of Kew Gardens, the Royal Society of Horticulture, landscaped the city of Freeport for Mr. Groves. Mr. Groves made his fortune with a lumber company on the islands of Abaco. In his later years, he felt guilty for the environmental destruction and wanted to give back to the country through funding aquaculture technology for Queen Conchs, shrimp, oysters and various other marine species. That is how he formed the Wallace Groves Aquaculture Foundation.

Soon after I graduated in 1980, I did my first ever television and radio news interview on ZNS, the Broadcasting Corporation of The Bahamas, on the topic “Global Warming and its Effects on The Bahamas”. Ironically, I was a member of a panel talking about industrial pollution and the reporter asked to interview me, and instead of asking me about the pollution issue she asked me my views on “Global Warming”!!



Figure 2. Since my first radio/T.V. news interview on Global Warming, I have become a regular on environmental shows. Photo by: Diane Phillips

CCOF Fellowship

I was so happy to be chosen as a CCOF Fellow with Cornell University's Civic Ecology Lab. I had already taken two classes with Cornell University--*Global Environmental Education* and *Civic Ecology*. During both classes, I volunteered to be a small group Community Leader, which entailed managing a Facebook Group and communicating with group members. I still interact with one of my colleagues in Nigeria due to a relationship formed during the classes and was looking forward to meeting more people from different countries through the new fellowship. Interacting with colleagues from all over the globe is very inspirational and gives me a broader outlook on the wicked problems we are facing.

I wanted to choose either Wetlands or LED Lighting for my CCOF Drawdown climate action. After discussing with my Professor, Dr. Marianne Krasny, we decided to narrow it down to LED Lighting, to concentrate on one Drawdown action. During the Fellowship, my first opportunity to talk about LED Lighting was on March 21st, 2019, at the Eco Summit where I had been invited to speak at the Lucaya International School.



Figure 3. At the Lucaya International School Eco-Summit, I am issuing the LED Lighting Drawdown Action Challenge to the audience. Photo credit: Tyrie Moss

You see, I had founded an environmental Education NGO—EARTHCARE—in 1988. EARTHCARE volunteers go into the schools and work with teachers and students on current environmental issues in The Bahamas and globally. EARTHCARE had a table at the Eco-Summit with a display and surveys for the students and parents to fill out in order to enter the LED Lighting Challenge. EARTHCARE had a good response from the Lucaya International School students who filled out the surveys and took the LED Challenge. Most had already converted all of their lighting to LED bulbs. At this school we found that we were, in many cases, “preaching to the converted,” which was a good thing.

EARTHCARE Fun Film Night

April 13th 7 p.m.



Join us for fun and short films. Get pumped for Earth Day. Fun, Trivia and Challenges. See if you can win the **L.E.D. Challenge!!!** Do you have a student who wants to be an EARTHCARE Eco Kid? Come out and learn how to join! Everyone is welcome! This event is **FREE!!!**

Kevin G. Tomlinson Music Academy, Sunrise Highway

Figure 4. Poster announcing EARTHCARE event to promote LED Lighting Challenge. Credit: EARTHCARE

EARTHCARE also held a Fun Film Night in honour of Earth Day/Month on April 13th, where I introduced the LED Lighting Challenge to our community.

On April 27th, National Parks Day, we had an information/demonstration table at the Rand Nature Centre where EARTHCARE Eco Kid volunteers gave out information on LED Lighting and, also approached attendees asking them to answer the survey and to take part in the LED Challenge. Throughout this period, we had a social media presence on Facebook as well as Instagram, Twitter and YouTube.



Figure 5. EARTHCARE Eco Kids and EARTHCARE Volunteers on National Parks Day where the EARTHCARE Eco Kids had people fill out the LED Lighting Surveys. Photo credit: EARTHCARE

CCOF Experience

I became very close to my CCOF Group 4 members, Elon McCurdy from Guyana (my father's home country), Dr. Chandra Degia from Jamaica, and Dr. Gbujie Daniel Chidubem from Nigeria and the US. We had a great sense of camaraderie. Dr. Chan and I connected, due to the fact that we were both products of the Caribbean and also had our media presence in common. I found out that Elon worked in the same field as my father did--Land & Surveys! Elon was able to look up my father's name in the Guyana files! Our Daniel is a real spitfire. He always kept us rolling in laughter. He has more energy that I have ever seen and a passion for drawing down climate gasses. He has created a huge global network called Team 54 Project and is making big waves at the United Nations. Did I mention that he is a dental surgeon in his off time? We all shared the same passion of trying to get the world to realize that each of us needs to change our habits in

order to draw down climate gasses and we need to do it now. I was glad to have my Group 4 compatriots to encourage me in my Drawdown action when I was feeling discouraged.

We had weekly webinars on Zoom and also on WhatsApp for those who could not access Zoom. An interesting thing happened. When you have a group on a Zoom webinar you can “chat” (using text) while others are presenting. I discovered that persons could chat with others privately during the presentations. From time to time, I found myself in engaging conversations with other CCOF Fellows. This made life more interesting. If it was Methchild from Uruguay asking me what I was drinking in my reusable cup with a metal straw, or Lisa Didigigan from the Philippines asking me about my Plant-rich Diet, I really enjoyed our weekly webinars. I also privately chatted with Dr. Chan about what fashion accessories I was wearing for work that particular morning. Dr. Chan also asked me and Daniel to appear on her radio show after the Fellowship was done. Daniel asked me in the private chat to join his Team 54 Project.

We also had a WhatsApp CCOF Group. Early on, our colleagues in Africa experienced a very strong, “climate changed” hurricane. I was offering my heartfelt advice to Maxwell whose country, Zimbabwe, was hard hit by the storm. Methchild private messaged me and suggested that I private message Maxwell. I had not thought of doing this! So, I did speak to Maxwell, every day during the aftermath of the storm. You see, living in The Bahamas, I, myself, had been made homeless (“displaced”) three times. My house was inundated by climate changed super strong hurricanes that produced saltwater storm surge of 5 feet, 3 feet, and 1 foot high inside my house. We had to live six weeks without power and water. We used to burn the ruined furniture at my uncle’s house in order to cook dinner when we had no power. So, I knew how devastating a storm can be. I used this experience to give Maxwell encouragement during his trials.

At one point during the Fellowship, I do believe I sort of lost my head. I mentioned to my ex-co-worker

at the Broadcasting Corporation of The Bahamas that I was working on this LED Lighting Drawdown Challenge and had been accepted to the Cornell University Climate Change Online Fellowship. She was elated. So, I asked her if I could be interviewed so that we could do a news story on it! We organized it and I was interviewed at my favourite store, Dolly Madison, in front of their LED Lighting Display. (You can find the link to my interview here: https://youtu.be/G_Uuu-Ld3o.)

The story aired nationally. Once it aired, I realized I might have made a mistake. I was supposed to be able to keep track of the people that I tried to influence and, also to be able to go back to them and find out if they were able to convert their lighting to LED. In the news story, in my excessive zeal to share, I challenged our *entire country* to the LED Lighting Challenge and told them why Drawdown actions are so important for our very low-lying country, The Bahamas! I knew that I would not be able to gage how many people heard (it was on the local radio, which can be heard in Florida), or saw my story (our Television Newscast is on YouTube and so can be accessed globally!). I also had no way to find out how many persons had actually taken the action of changing their bulbs after hearing or seeing the story. Oops!! All in all, my CCOF experience was amazing. I would certainly do it again. I plan to stay in touch with my CCOF colleagues.

Bioplastics

Xiuli Zhang

Beijing China

I remember that in 2017, the first time that I participated in the United Nations Climate Change Conference, I was stunned that there were so many people focusing on this area. After discussing with so many participants, including those from international organizations and the private sector, my interest in climate change was triggered. During that time, I was studying international and public affairs at the University of Hong Kong. But I decided to join in the School of Environment at Tsinghua University after I graduated. I was struggling since this is new area for me, but I still wanted to explore more and figure out why so many people and even the whole world are discussing this topic. As one of the heated topics in the world, climate change drew my attention.

CCOF Climate Action

My climate action was writing a research paper about bioplastics and plastic waste. My goal was to influence five environment experts to consider the potential of bioplastics. These people mainly focus on climate change, solid waste, and waste management. But some of them may not be familiar with bioplastics. It took me lots of time to convince them to engage in this topic and incorporate it into their research. Social media was a platform for me to connect and discuss with colleagues and we also talked about the research face to face. During the research project, many colleagues gave me suggestions and were keen to talk about the possibility of implementing bioplastics as a way to address plastic wastes. Even though I experienced lots of frustrations in writing the research paper, I am now going to finish it. My colleagues commented on my research paper and some of them accepted my idea of waste management. Although I was not able to convince everyone, I was still happy that I drew some people's attention to this area.

In the future, I hope to conduct climate change workshops at different universities in China. Through cooperating with international organizations, NGOs, and universities, I want to share climate knowledge, mainly related to garbage classifications, and call for climate actions. Every month or two months, a workshop can be held at one university, starting from Beijing and spreading to Shanghai, Guangdong, and other cities. That is my plan of the workshop program. I will utilize social media such as Wechat to advertise my program. Perhaps I can also plan a climate change forum every year.

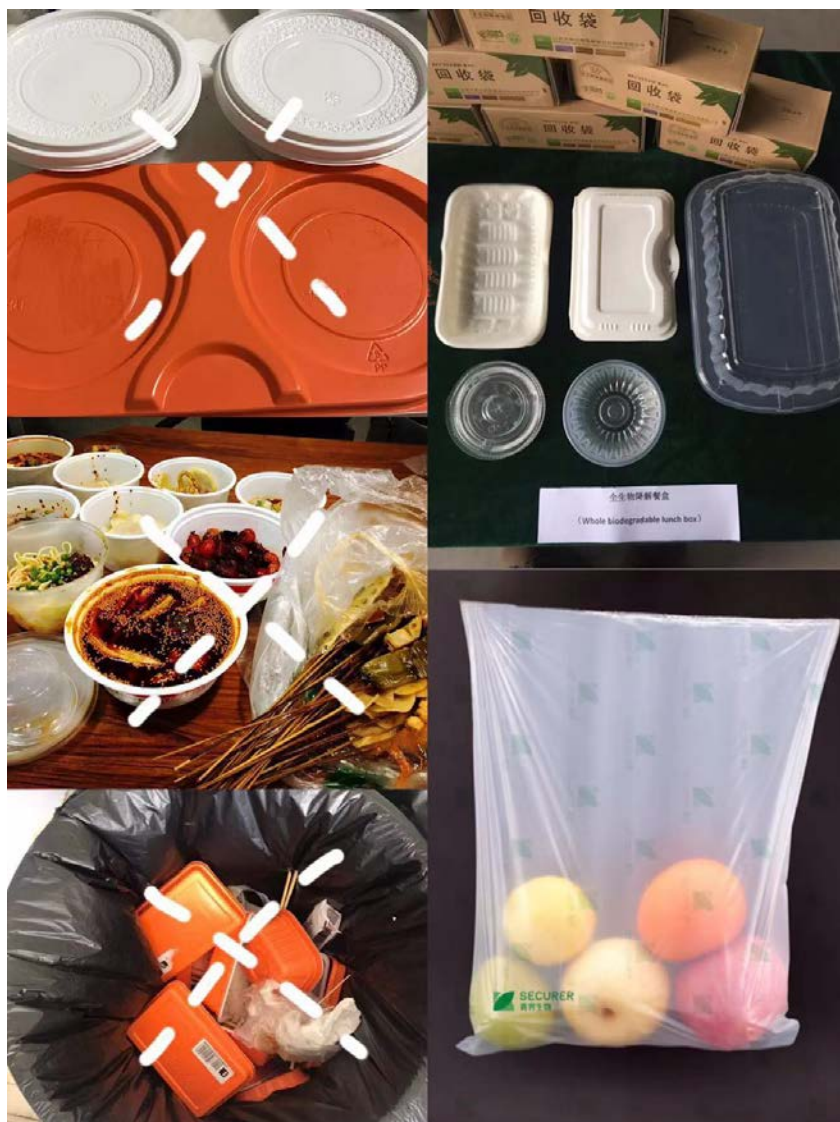


Figure 1. From plastic to bioplastic. The items on the left are petroleum-based plastics and those on the right are bioplastics made by a Chinese company. Photo credits: Xiuli Zhang, Jack Gou, SECURER

My CCOF Experience

I was extremely excited and I was very honored to join the CCOF project. I remember that day, when I was reading my WeChat messages, a CCOF recruitment post showed up and it triggered my interest. I applied and was luckily accepted by our Professor Marianne. This was an amazing team of fellows from different areas with rich climate change knowledge and experiences. I will never forget one of my small group members, Cesar, making efforts to call for people to join in his action. Some of the fellows are already successful in climate change area and even got recognition from the United Nations. But most importantly, it is the inspiration I got from the fellowship. I determine to take future climate action and shoulder responsibility with other fellows.

Treelogy

Daniel Chidubem Gbujie

New Jersey, USA and Nigeria

The concept of a tree represents different things to different people, from a fresh start in life, to vitality, to perfect wellbeing and a green future. But trees have much more important roles than that. They connect and generate all types of resources, and they provide habitat for other living organisms. Knowing this, it is no surprise that trees are often portrayed as the symbol of strength and growth as they stand tall and strong across the globe.

This is one of the reasons I decided that my Cornell Climate Online Fellowship (CCOF) action would focus on trees, planting, and forests. By choosing planting trees as my climate action, I aim to humanize trees and to highlight the role trees play in our communities, starting from the seed through new saplings to mature trees that are lush and green. The reason for “tree humanization” is to show people why trees are important for our planet and our future, and to raise awareness of the need to protect trees and appreciate them.

An online dictionary describes “treeology” as a nonce word, or a word invented for a particular occasion or situation. I decided to use the term treeology to connect the history behind a tree’s sacredness with my feelings about CCOF. In so doing, I was inspired by the symbolism of the tree of life and sacred trees. This piece is also rooted in the understanding that we all have moral obligations, first as individuals to care for our surroundings, and second as the human race to preserve our shared natural resources and fellow creatures.

Our journey, as CCOF fellows started with over 600 applicants, which I call seeds. Only 30 of them sprouted and grew into saplings.

Trees can’t grow without soil; therefore, soil is the foundation upon which trees are rooted. I see the soil in CCOF represented by the Cornell University Civic Ecology Lab, which is the home for CCOF. With proper care and watering, saplings started growing into young trees with their trunks widening and branching. The soil was our supportive staff including Professor Marianne Krasny and her Civic Ecology Lab team.

As the weekly care and watering process in the form of webinars, readings, and discussions continued, more nutritious substrate was added to the soil. One of the main nutrients was the *Project Drawdown* book by an experienced “planter,” Paul Hawken.

The CCOF trees began to grow into a forest with branches shooting out. The forest continues to grow, not minding the scary calamities poking up on regular basis, called extreme Mother Nature—drought, flooding, rising temperature, bush fire, and melting polar ice.

CCOF fellow Gail Woon has planted trees on her island for over thirty years. Yet shortly after the fellowship ended, Gail’s Grand Bahama Island became nearly devoid of trees, which were struck down by Hurricane Dorian. I believe in my heart that Gail will start planting again and that through her efforts, seedlings will once again start poking through the rubble. Others managed to evade environmental disaster during and immediately after the fellowship—such as our fellow Rahmatullah Rafee who is helping to build a climate resilient future in Afghanistan.

Don’t be deceived by the gentle West African breeze, which called upon fellows Oluwakayode Ashamu and Michael Arove to wave the flag of leaves to the beat of popular afro-juju melodies. Another CCOF fellow, Chandra Degia, uses Jamaican reggae rhythms to call attention to the planetary struggle—with jingles like “One day a week, eat less meat” she urges fellow citizens to adopt plant-rich diets.

Watching African trees grow in the Cornell soil is incredible, but it is in keeping with the strength of a tree. The resilience displayed by east and southern African CCOF fellows, Maurice Clement, Chewa Chishala, Kaija Emmanuel, Herbert Kasiita, Nangula Heita, and Maxwell Kanotunga, is worth commending. We should not forget the respectful Zimbabwean tree, Respect Musiyiwa, which has grown to spread its climate action seeds way beyond his rural village, only to remind the world that by using the sun to preserve vegetables, we can help farmers and nature.

Every day, we are able to see and to feel the consequences of the climate crisis unfold. This helps us to understand better why fellow Bianca Gichangi directs carbon offset agreements so that they benefit her native Kenya, and why Daniel Chidubem Gbujie looks for innovative ways to survive through global scale tree planting.

Asia also has its own tree of life symbolism, perhaps reflected in our Chinese fellow Zhu Laqiqige and Filipina fellow Lisa Digdigan. We can think of them as trees whose leaves are indeed edible—they spread plant-rich diets. Others include Humera Qasim, Santosh Khanal, Mishra Sanjiv Kumar, Novera Tamanna, and Muhammad Lukman Baihaaqi, from Pakistan, Nepal, India, Bangladesh, and Indonesia respectively. And from Yemen, we had Omer Al-Shareqi, who reminded us of the connections between climate and conflict, and inspired us by his actions to save lives.

One can remember the ancient stories told by Americans Diana Crandall and Briana Prado, and Tajdeep Sandhu, whose youth made me think of him as Luke Skywalker of the northern Canadian sky. Neighborhoods received daily care from Floridian Jeffrey Vredenburg, and from our fellows ranging from China's Yueyang Yu to Colorado's Colleen Duncan.

Although many countries have shifted their priorities from nurturing trees to building walls, we are reminded by Latin American gardeners, Luz Maria Castro, Cesar Nanni, and Elon McCurdy, that collaboration and building bridges can help to connect and transport the needed nutrients to the entire tree network, what is required at this moment.

And as our CCOF trees have started reaching maturity, it is customary for tree loving elders like Vietnam veteran Richard Mabion to pray for a peaceful time.

For the trees that survived the weekly care and watering during the Cornell University season and began sprouting, and then became full-grown trees with trunks and branches and little green twigs, the journey of tree doesn't always have a happy ending. Witness the suffering caused by deforestation in South America and Africa.

My takeaway from this treeology journey is simply an observation: That trees may look the same, especially when they first begin their life. But as they grow and thrive, they begin to experience effects from the environment and from humans. Trees are teaching us that in this illusory sameness, we must find compassion and understanding toward each other.

Trees that finally survive are the strongest ones and have fully built resilience. That makes them unique.

It is in our differences and various roles that CCOF fellows can be envisioned as trees that together created a forest. Clearly this highlights that we are citizens of this planet contractually bonded to Mother Nature, with the right to live and allow other living things to thrive. This ecological responsibility means we surely are bonded to protect and to preserve on behalf of other humans and other creatures that call this planet home, as we journey toward the forests of the future.

Aftermath

I think about Gail Woon daily as she deals with the aftermath of Hurricane Dorian—standing in line to get food, watching as the mechanic tries to start her water-logged car, re-connecting with friends whose loved ones were swept away in the flood. One thing I learned from CCOF is how common such events are in places around the world. During our 12-week fellowship, we received updates from Maxwell Kanotunga and Respect Musiyiwa as the waters of Cyclone Idai surrounded their communities in Zimbabwe, and from Richard Mabion who shared a photo of the safe room and supplies his partner had prepared as they awaited anxiously a Kansas tornado that was building in the sky over their home. We also had celebrations—the wedding of a fellow from Uruguay, the birth of the baby for our Nepali Fellow—these same fellows talked about their experiences with drought in Uruguay and the melting of the Himalayan glaciers. One thing I learned was that the fellowship provided and continues to provide a kind of “support group” for those already experiencing and those fearing climate-related disasters. Regardless of how one feels about Facebook, or its offshoot WhatsApp (we used both but WhatsApp was more popular), they enabled us to share resources as well as our trials and tribulations as we tried to convince our networks to take climate action. They also allowed us to share our daily lives.

Another thing I learned was how hard my original fellowship idea was to implement. I decided to take my own action—purchase offsets for air travel—and to try to convince my work colleagues to do the same. We have a local offsets program—[Finger Lakes Climate Fund](#)—which uses the money people contribute to offset travel or energy use to help local low-income families weatherize their homes. I work in the Cornell Department of Natural Resources, where our faculty have devoted our careers to improving the environment. Yet, convincing my colleagues to purchase offsets was not easy. I learned it required multiple messages, multiple messengers, and making buying offsets fun. Although initially I hadn’t involved the graduate students because they have lower incomes than do faculty, it turns out that the graduate students were some of our most ardent climate fund supporters. After a lot of one-on-one convincing, and some creative strategies like donating offsets for our annual graduate student auction, I ended up with 31 members of our “Fernow and Friends” climate offsets team (our building is called Fernow Hall). Still, like many of the fellows, I was disappointed in my inability to convince most of my colleagues to take this climate action. Also like many of the fellows, I will continue my work on carbon offsets—and continue exploring the role for individuals and their networks in addressing the climate crisis.

One other lesson that I myself and the fellows learned: CCOF was a place to make contacts, get new ideas, and learn about global climate policies as well as about current research on behavior change. Our fellow from Kenya opened up my eyes to the world of developed/developing country climate agreements, and she ended up recording lectures about her work with the UN for our climate change online course. Given my work with climate offsets, I was asked by a new Cornell student group to serve as their advisor. The students’ [GreenClub](#) has their own model for convincing people to buy climate offsets—you pay \$10/month to offset your carbon use, and in turn, get discounts at sustainability-minded businesses.

In September of this year, we launched our second CCOF cohort with 37 fellows from 31 countries. I am enjoying reading their Facebook and WhatsApp posts and answers to our weekly discussion question prompts. I am also enjoying learning about these teachers, NGO leaders,

Corporate Social Responsibility consultants, emergency managers, and university professors and students from places as far away as Sudan and as close by as Washington DC. I believe our CCOF community will continue to grow. We will become wiser about convincing people to take climate actions, we will expand our connections, and we will support each other in sharing life's celebrations and life-threatening climate challenges.

Marianne Krasny, Ithaca, NY, October 2019

Cornell Climate Online Fellows: Bios

Michael Adetunji Nunayon Aabove

Michael Adetunji Nunayon Aabove holds a PhD in Environmental Education with a concentration in climate change. He teaches graduate courses and conducts research on environment and climate change at the Center for Environmental Studies and Sustainable Development, Lagos State University, Nigeria. He often gives invited presentations for government and environmental NGOs on the environment and climate change, and publishes in the areas of cognitive and socio-psychological aspects of climate change among youths, and community-based climate change mitigation and adaptation. Aabove is a member of the National Association for Research in Science Teaching in the US and of the Nigerian Environmental Society.

Oluwakayode Ashamu

Oluwakayode Ashamu is an environmental and social sustainability researcher with special interests in sustainable business. “Kay” holds a Bachelors of Technology in Urban and Regional Planning from Ladoke Akintola University and a Masters degree and soon to be PhD in the same field from the University of Lagos, Nigeria. He is a Fellow of the Institute of French Research in Africa, a member of the Nigerian Institute of Town Planners, and a member of the Young Planning Professionals, International Society of City and Regional Planners. His research focuses on the effects of oil resource exploration on the environment. He draws inspiration from his belief that negative impacts of Nigeria’s oil industry can be controlled and that substitutes for oil can be developed.

Diana Crandall

Diana Crandall is an award-winning writer and photographer with an M.S. in journalism from the University of Southern California. Her work has appeared domestically and internationally in outlets ranging from Reuters and The Atlantic to exhibits in Columbus, Ohio, and Arles, France. Today she lives in Denver, Colorado, USA.

Lisa G. Digdigan

Lisa G. Digdigan is a biologist from the University of the Philippines, and has more than two decades experience doing environmental conservation work in Palawan, Southern Luzon, Central Visayas and Northern Mindanao. She is the Founding Director of Green Steps Philippines, an online education platform on responsible tourism. Lisa is also a documentary photographer and has written children’s books on wildlife conservation. She currently works with the Foundation for the Philippine Environment in Cebu City, where she reviews and assesses proposals for funding.

Daniel Gbujie

Daniel Gbujie Chidubem hails from southeastern Nigeria and currently lives in New Brunswick, New Jersey, USA. He leads the NGO Team 54 Project International, which advocates for climate solutions in vulnerable communities in Africa’s 54 countries and beyond. Daniel received the

Global Youth Parliament “Global Youth Leadership” award in April 2019, was selected by the UN Secretary-General Antonio Gutierrez to attend the first youth climate summit in September 2019, received climate training from the UN institute of training and research in New York, and was recently appointed as a member of the Youth Representative Steering Committee of United Nations, Department of Global Communications. He is currently working with his team on developing the "RepClime / SpaceClime" app.

Maxwell Kanotunga

Maxwell Kanotunga resides in Harare, Zimbabwe, where he is a climate activist and environmentalist. He works with Living Green Campaign Zimbabwe, a local membership-based organisation with an emphasis on spreading the word on climate change and sustainability issues and providing information on adaptation to local communities. He is a certified campaigner with Campaign Against Climate Change since 2012, was recognized by Greenpeace International as compass ambassador in 2013, and has regularly organized climate change demonstrations in Zimbabwe to coincide with United Nations COP- talks. To top it up, Maxwell became a Cornell Climate Online Fellow in 2019. Maxwell’s passion and persistence have motivated him over the last decade in his work educating and raising awareness on climate change.

Marianne Krasny

Cornell University Professor Marianne Krasny conducts research and outreach in civic ecology, social-ecological systems resilience, environmental education, and online learning. Her books include the upcoming textbook *Advancing Environmental Education Practice* (Cornell University Press, 2020); *Grassroots to Global: Broader Impacts of Civic Ecology* (2018); *Communicating Climate Change: A Guide for Educators* (with A Armstrong and J Schultdt, 2017); *Urban Environmental Education Review* (with A Russ, 2017); and *Resilience in Social-Ecological Systems: the Role of Learning and Education* (with C Lundholm and R Plummer, 2011). Dr Krasny is a Foreign Fellow of the Royal Swedish Academy of Agriculture and Forestry, directs Cornell’s Civic Ecology Lab, and launched the Cornell Climate Online Fellowship in January 2019.

Richard Mabion

Richard Mabion is a Vietnam veteran, retired business owner, and social and climate activist from Kansas City, Kansas—the Sunflower State—USA. His work with Building A Sustainable Earth Community aims to empower low-income residents through environmental literacy activities. The activities are designed to give the individual a personal view and experience of climate change concepts alongside doable actions from an individual responsibility perspective. As the sole African-American community leader of the Metro Kansas City [Climate Change Action Coalition](#), the president of the Kansas City, Kansas National Association for the Advancement of Colored People (NAACP), and the first black board member of the Kansas Sierra Club, Richard strives to find common interests among city officials, climate change activists, and low-income residents. Guided by his Christian faith, Richard also seeks to use climate change mitigation actions as a Pathway Out of Poverty for local Kansans.

Elon A. McCurdy

Elon A. McCurdy is from Georgetown, Guyana, where she works at the Guyana Lands and Surveys Commission as a Senior Land Administration Officer within the Land Administration Division. She is a UNEP Fellow and the former National Coordinator of the Caribbean Youth Environment Network –Guyana, a youth-led organisation that focuses on youth empowerment, sustainable development, climate change, and solid waste management.

Respect Musiyiwa

Respect Rungano Musiyiwa is a MasterCard Foundation Scholar at EARTH University and an award winning social innovator, environmental entrepreneur, climate change activist, and young leader passionate about sustainable smallholder agriculture and rural development. He is Founder and Coordinator of Centre for Agro-entrepreneurship Sustainable Livelihoods Trust (CASL), a youth community-based organization that focuses on sustainable, smallholder climate-smart agriculture and natural resources management in Mvurwi, northwest Zimbabwe. Respect is also Founder and Director of ECO-CONNECT Natural Foods, a social food processing company dedicated to fighting post-harvest food loss and waste through community based dehydration and cold storage systems. His goal is to contribute to the total eradication of poverty and hunger through participatory community initiatives towards climate-smart agriculture and sustainable utilisation of natural resources.

Cesar Nanni

Cesar Nanni is the Sustainability Coordinator and a faculty member at Universidad de Monterrey in México. His job is to incorporate sustainability into every aspect at the university including academic courses, maintenance and operations, engagement, and administrative processes. Under Cesar's leadership, Universidad de Monterrey became the first university outside the US and Canada to achieve the AASHE (Association for the Advancement of Sustainability in Higher Education) STARS (Sustainability Tracking and Assessment Rating System) Silver level, and since 2017 he has been part of the AASHE Advisory Council. Over the last five years, Cesar has been collaborating with *Fomento de la Cultura Ecológica* (FOMCEC), an NGO that promotes environmental education to elementary school teachers. Cesar also has been part of former US Vice President Al Gore's Climate Reality Project Leadership Corps, including serving as a mentor for 20 participants and involving 25 students from his university in training in Mexico City.

Gail Woon

Gail Woon hails from Grand Bahama Island. She holds a Bachelor of Science in Environmental Technology/Aquaculture, an Associate of Science in Oceanographic Technology, and a Diploma in International Environmental Law from the United Nations Institute for Training. She has trained in Sustainable Tourism Development, Green Management Strategic Planning, Humpback Whale Research, Hazard Assessments of Marine Contaminants, Island Waste Management, Shrimp Culture, and Tropical Marine Phycology. Her career includes positions with Disney's Pirates of the Caribbean II & III, The Broadcasting Corporation of The Bahamas, Shrimp Farm Management, Underwater IMAX film production, working with marine mammals for open ocean release, Harbor Branch Oceanographic Institution, Aqualife Research Corporation in

Walker's Cay, among others. In her off time Gail founded an environmental NGO dedicated to environmental education called EARTHCARE in 1988.

Xiuli Zhang

Xiuli Zhang is a research assistant in the School of the Environment at Tsinghua University. She focuses on sustainable consumption and climate change, which are included in Sustainable Development Goals. She is trying to solve the plastic waste problem in China, especially plastic waste produced to package takeout foods, considering that takeout is very popular in China coincident with the development of internet economy. Xiuli is also a regional focal point (health care) for United Nations Major Group for Children and Youth. She participated in the 23th United Nations Climate Change Conference in 2017, and other UN conferences during her studies at the University of Hong Kong. In 2018, she was nominated as a action partner at United Nations SDGs Campaign. Her story was included in a Chinese bestseller—*Beyond the Vision, Into the World*. In the future, Xiuli hopes to integrate research on climate change and international relations. She also wants to trigger more and more Chinese young people's interest in climate change and encourage them to take actions.