SUSTAINABLE CONTRA COSTA

ACTION OF THE MONTH: AUGUST
Staying cool while saving energy

ACTION OF THE MONTH: SEPTEMBER
Eating lower down the carbon chain

CLIMATE CAREERS CHAT
Our upcoming virtual panel and interactive Q&A with Kimberly Lam and Darren Daffner

FARM TO TABLE
The benefits of localized eating

STRIVING FOR SUSTAINABILITY
The power one teenager can wield

BACK TO SCHOOL SHOPPING
Green tips when school shopping

ENVIRONMENTAL VOTING GUIDE
Insights on candidate from local to presidential

CAFO’S
The insidious impacts of animal agriculture

FAST FASHION
Insignificant trends or hazardous businessnes?
ACTION OF THE MONTH
(AUGUST)

STAYING COOL
By: June Nguyen
Art by Kyle Suen

August is over which also means the hot summer months are mostly behind us. This year is probably really different and strange for all of us -- being trapped inside our house under the heat of the California summer. For me, it wasn’t hot during June or July, but when August came, I could really feel the difference. Luckily, the Sustainable Leaders in Action (SLIA) decided to emphasize Stay Cool as our August Action of the Month through the Cleaner Contra Costa Challenge. Thanks to the helpful resources provided, I was able to keep my house cool and practice sustainability at the same time!

Using your air conditioner (AC) is often the first solution that comes to mind amidst the summer heat. What many don’t realize is the negative environmental impact AC units can cause.

Four negative impacts of AC are:

1. Cooling agents (CFCs/HFCs) increase the holes in the ozone layer

2. Huge amounts of electricity results in release carbon dioxide

3. Accumulated dust and bacteria in AC ducts can affect health when released

4. Plastic, made from fossil fuels, is used to make AC units
A single AC unit cannot do much damage to our beloved Earth, but every household using AC does. For example, the average watts of electricity used every hour to keep an AC running is 3,000 - 5,000, and Contra Costa County (CCC) has 948,816 households. Imagine if every household in CCC uses AC for an hour, the total amount of consumed electricity would be 2.8 billion - 4.7 billion watts. Compare this to a ceiling fan that only consumes around 100 watts per hour. It’s true that AC is convenient and fast, but is it worth the risk to our environment?

In my opinion, the answer is no, and there are many effective and cheaper solutions. I have been using a 12-inch table fan in my room and encouraging my family to use a big stand fan in our living room. I close the windows and doors during the day to keep the sun out of my house, then slightly open my windows at night to let the cool air in.

My uncle also installed awnings to further block the sun’s heat from coming in. These adaptations have been great options for our family. Sometimes, they can not be as effective as AC, and I was tempted to turn the AC on. However, I considered how AC can contribute to climate change by accounting for 20-40% of the world’s remaining “carbon budget”. This horrific and detrimental fact shuts me down immediately. If it is getting too heated, I suggest you eat some delicious popsicles!

I highly encourage you to participate in the Cleaner Contra Costa Challenge this fall. The Fall Challenge will go from October 1-December 31st. You not only help the environment but also save money, killing two birds with one stone. Check out this amazing Youtube video, our Instagram account, and the Challenge to learn tips and tricks on how to stay cool sustainably!
Admittedly, I am a meat eater -- I love myself a tender steak and a crispy piece of fried chicken. This being said, this month is a time for all carnivores, much like myself, to begin making amends with the environment. As brought up in detail by Alexi’s Concentrated Animal Feeding Operation article (page 17), consistently eating animal products (especially red meat and dairy) creates detrimental effects to our planet. To put a meat eater’s impact into perspective, after adjustment for sex and age, an average 2,000 kcal high meat diet has 2.5 times as many greenhouse gas emissions than an average 2,000 kcal vegan diet (as described in an article headed by Peter Scarborough of Oxford University).

Common fears of leaving a meat-filled diet include sacrificing protein and taste. However, plant based products can easily fulfill your FDA recommended Daily Value of 50 grams of protein. My personal favorite protein-packed meat-substitutes are tofu and tempeh. Not only are these delicious, but 3 ounces of firm tofu equates to 7 grams of protein and 3 ounces of tempeh equates to 15 grams of protein! Additionally, soy products are complete proteins (for all those wanting to build muscle). Legumes such as peanuts and grains like oatmeal also provide substantial amounts of protein. Likewise, as most plant-based protein sources are incomplete, know how to mix and match to ensure you consume all nine amino acids.
Perhaps the best sustainable, vegan option for those attached to the texture and taste of meat is the most mind bending trend to hit the food industry: impossible meat. This “meat” carries more protein, less saturated fat, and does not involve CAFOs when compared to beef.

Going full fledged vegan is the most optimal means of reducing greenhouse gas emissions from your diet, however eating lower down the carbon chain does not mean full omission of animal products. Avoiding red meat is crucial, as beef and lamb top all food products in amounts of greenhouse gasses produced (see this chart for more detail). This being said fish, pork, and poultry’s amounts of emissions are significantly less, as a result of low methane emissions.

Just by omitting beef from one meal (4 ounces) a week already gets rid of above 6 potential pounds of carbon emissions. Having four weeks in September, this simple routine can eliminate more than twenty-four potential pounds of CO2!

This challenge will indeed be a challenge for me, but that will be the fun of it. Learning new recipes and diversifying my palate provides personal incentives. From an environmental standpoint I am helping to reduce greenhouse gas emissions and fighting against animal cruelty, by committing to eating lower down the food chain. Whether it be one day a week of no red meat or a complete change in diet, join me and many others by eating lower down the carbon chain to help save the earth!

By: Alexi Lindeman
September Action of the Month

Eat

Lower Down the CARBON CHAIN

Even food has an impact on the climate! Animals like cattle, sheep, and goats create methane gas, a greenhouse gas that is 30 times more harmful than carbon dioxide. And raising cattle requires a lot of resources and energy. Eating lower down the “carbon” chain helps the environment, and can also lead to better health!

Beef and lamb are the most carbon-intensive. Beef is almost 7 lbs of CO₂ emissions for a 4 oz serving!

Cheese, butter, pork, and shellfish are just under 50% of the impact that beef and lamb has on climate emissions.

Poultry, fish, and eggs are just under 20% of the impact of beef and lamb.

Milk, yogurt, nuts, grains, fruits, and vegetables all have a very low impact - about 5% of the impact of beef and lamb!

SUSTAINABLE LEADERS IN ACTION

LEARN ABOUT NEW MEATLESS RECIPES: MEATLESS MONDAY RECIPES

TAKE ACTION NOW! EAT LOWER DOWN THE CARBON CHAIN -- CLEANER CONTRA COSTA CHALLENGE

INTERESTING STUDY ABOUT THE BENEFITS OF PLANT-BASED DIETS: THE CHINA STUDY
Climate Careers Chat

Kimberly Lam
UC Berkeley Graduate, now a Municipal Manager for Republic Services

Darren Daffner
Worked in Congress for 4 years as an environmental advocate, now a principal employee at PG&E

The Sustainable Leaders in Action are thrilled to announce that we will be hosting a Climate Careers Chat on Tuesday September 8th from 7:00-8:30pm! Join our team and 2 wonderful panelists who are professionals in their respective industries and SCOCO Board Members! The free event will provide an insightful and informative Q&A session as they discuss their college experiences, the path to their successful careers in sustainability, their lessons learned, and specific career information.

We hope everyone can join us on Zoom to hear from and learn from these amazing and dedicated panelists!
Typically, Americans buy their groceries from large chain supermarkets. These supermarkets get their produce from mass suppliers all over the country and sometimes all over the world.

If you are wondering why our food travels so much the answer is simple: densely populated cities don’t have enough agricultural land to feed their populations. As a result, most of our food travels much longer distances to get the supermarket than we do.

These goods are transported across the country or across national borders by trucks, planes, or trains. Transportation methods such as these burn fossil fuels, leading to the release of immense amounts of greenhouse gases which directly contribute to global warming and climate change.

With all of this in mind the term “farm to table” was coined. The goal of the farm to table movement is to encourage consumers to purchase locally sourced foods for their homes, restaurants, and schools. Restaurants in Contra Costa such as Main Street Kitchen, Frog Hollow Farm-To-Table Cafe, and Danville Harvest, take these messages to heart and provide customers with local and seasonal delicacies all year round.
Additionally local farmers’ markets, such as the Walnut Creek Farmers' Market and Diablo Valley Farmers' Market, provide fresh produce, dairy, and seafood directly to the members of our communities.

Not only does this switch reduce greenhouse emissions, it prevents food from being wasted as 1/3 of food worldwide is wasted due to its inability to be transported effectively.

Imagine how many families or even communities could be fed with all that food! Currently in Contra Costa County, Urban Tilth is working with County Supervisor John Gioia’s office to develop North Richmond Farm, an initiative to “provide healthy, and locally produced food, create a program that embraces sustainability, and incorporate educational programs that enrich the community.”
STRIVING FOR SUSTAINABILITY
THE POWER ONE TEENAGER CAN WIELD
By: Alexi Lindeman

My story begins in 8th grade. My class spent a quarter learning about plastic pollution and as horrified as I was, I couldn’t stop learning more. Every detail only made me angrier, sadder, and more determined to do something about it. Initially, I started with my family. Every time I saw them about to grab a plastic Ziploc bag, fork, straw, or Saran wrap I would spout off a couple of facts and offer an alternative. It was a little difficult at first, but over the course of two years, my family has largely eliminated those items. Now Tupperware, glassware, and silicone stretch lids store our food and reusable/biodegradable cutlery is taken to go.

During my sophomore year, a group of students and I started Project Climate, a club dedicated to educate students and empower them to fight climate change. In just one year, our club had organized four Walk to School Wednesdays (walkers and bikers were rewarded with hot chocolate), and we have grown over 200 valley oak saplings in our Carton to Garden Project. For the Carton to Garden Project, we upcycled all of our materials. We collected milk cartons around our community to use as pots. Then we used scrap wood from my grandmother’s house remodel to make a cart and planter box. Lastly, we contacted local organizations and discovered that the University of East Bay could include them in their carbon sequestration project this fall.
Last year my family replaced our lawn with numerous plants including drought-tolerant ones and California natives! We also use a drip system and mulch to conserve water. Annie's Annuals and Perennials in Richmond has an amazing selection of these!

I am a vegetarian and have influenced my family to eat mostly plant-based meals. We also make our own bread, yogurt, and most of our meals. If this seems like a lot of work, look into buying a bread machine and an instapot!

For my birthday, I asked for a composter and now all of our paper products and produce scraps are being turned into soil! If you can't compost you can always reduce your food waste by avoiding overbuying and keeping an eye on expiration dates!

I have a pile of paper only used on one side and use this for unimportant work. When both sides are filled I either compost it or use it for origami.

Most self-care products come in plastic bottles, so I use bar shampoo and body wash, refillable lotion and conditioner and charcoal floss. These products also lower transportation emissions (a bar of soap is lighter and more compact than a bottle).
• All of our showers have a bucket in them to collect water before any soap is used. And about half of my family takes navy showers (turns off the water while lathering). We also have a bucket in the sink for when we wash produce. This water is used in our garden!

• I make face masks out of old clothes.

• I dismantled an old wooden fence and turned it into a trellis for the passion vine on the side of the house.

• When my kitchen was remodeled a couple of years ago, my family used our old island outside. About two years later the protective stain was chipping away and parts of the wood were rooted. My mom wanted to toss it, but I was able to remodel the island using free plywood siding from craigslist.

• After months of spouting off information about CAFOs (concentrated animal feeding operations) and showing my family clips of a documentary, I was allowed to build a coop so we could adopt chickens from a chicken rescue (egg-laying hens are killed and dumped when their productivity declines). I used the old fence, the free plywood siding and other second hand materials to build it this summer.
BACK TO SCHOOL SHOPPING
GREEN TIPS WHEN SCHOOL SHOPPING
By: Max Tcheng

REPURPOSE SOME EXTRA TUPPERWARE OR TRAVEL BAGS AS HANDY STORAGE FOR STATIONARY.

Let's admit it - that pile of office supplies on your desk isn't going to organize itself. If you can find the motivation to clean, you should also make it last by using some old tupperware or travel/makeup bags to keep everything in its place.

GRAB A COFFEE MUG FROM THE CUPBOARD TO KEEP YOUR DESK ORGANIZED.

For the items that you need quick access to, commandeer a coffee mug (tea or hot cocoa mugs work too). Perfect for converting your workspace at home to have a more classroom vibe. Bonus points if it has an awesome design.

SAVE UP ON SCRAP PAPER - A SHEET ONLY NEEDS TO HAVE ONE BLANK SIDE!

Instead of finally getting rid of that ever growing stack of papers from the previous year, turn them over and you've got a pile of ready to use scratch paper!

TEAR OUT USED PAGES FROM AN OLD NOTEBOOK AND IT BECOMES A BRAND NEW ONE.

If there's still some blank pages left in a notebook then there's no reason to throw it out. Tip: Use a pair of scissors to cut off any paper bits left on the binding after you remove the used pages.

Since it’s getting close to the new school year, and for some it has already started, students are starting to make their back-to-school shopping plans. However, it’s important to keep sustainability in mind when picking out items for the new year. Students can reduce their carbon footprint from back to school shopping by reusing items they already have - even the most sustainable brands still create waste from shipping and packaging. Above are a few ideas to get students started with their eco-friendly back to school preparations.
Elections are a chance to fix the problems we perceive in our country. It is a chance to elect people who can represent our voices in government. Some of the world’s biggest problems now are environmental degradation and climate change. This is why every vote is a vote for the future of the environment. Voting at every level matters and being informed on the policies of elected officials matters even more. Regardless of political party, climate change and environmental protection should be a top priority as we will all have to live with the consequences of global climate change and environmental degradation. With that in mind, here is a guide of our elected officials and their running mates in regards to their promises and actions to protect the environment and mitigate climate change.

President Trump’s contributions to environmental protection include replacing Obama’s Clean Power Plan with the Affordable Clean Energy Rule after he abolished it in 2019 and signing the Save Our Seas Act into law after it was passed in the Senate in 2018. Trump has also withdrawn the US from the Paris Climate Agreement, approved plans for multiple gas drilling projects and pipelines, and rolled back many environmental protections. He has been quoted stating that climate change is a hoax and often butts heads with famous environmental activists. Throughout his presidency, Trump’s platform in the environmental sphere has largely promoted the oil and gas industry instead of environmental protection. He has received more than 1.3 million dollars in campaign funding from oil and gas corporations and even more from individuals who work in those fields.

Democratic Presidential candidate Joe Biden’s contributions to the environment include being Vice President under Obama during which many environmental protection laws were passed. This includes the Clean Power Plan and joining the Paris Climate Agreement. A big part of his current presidential campaign platform revolves around his plans to mitigate climate change and turn the US into a sustainable country. His plans are summarized in his recently released environmental “Build Back Better” plan. Biden proposes a 2 trillion dollar investment which aims to create jobs and put the US on track to be carbon neutral by 2050. Part of this plan includes creating jobs to rebuild infrastructure, produce clean energy, build sustainable homes, and improve the auto industry. It does not cover the details of how he will manage to meet these goals or ensure that the pollution from production and construction is kept to a minimum. Biden has raised a little over $320,000 of his campaign funding from oil and gas corporations.
Senator Kamala Harris’ contribution to environmental protection is co-sponsoring Senator Ocasio-Cortez’s **Green New Deal**, a plan to combat climate change in an equitable way while also creating jobs and helping the economy. Harris has largely focused on environmental justice and combating environmental **racism**. When she was Attorney General, she sued oil companies for “pollution activities, helping win $50 million in **settlements**.” Harris plans to continue to hold fossil fuel companies **accountable**. She is not up for re-election until 2022 and is the Vice President-elect under Biden.

Senator Dianne Feinstein is up for re-election in 2024. Her contributions to environmental legislation focus on protecting and restoring habitats and funding projects that concern issues with California’s bodies of **water**. Her environmental conservation goes back to early in her career. In 1994 she authored and passed the California Desert Protection and Recreation **Act**, which created the Death Valley National Park, Joshua Tree National Park, and the Mojave National Preserve. Feinstein continued to improve upon her bill with legislation that increased the amount of protected desert land and succeeded with similar projects for other **habitats**. Beyond protecting the environments, she has also secured billions of dollars for projects concerning draughts, floods, desalination, and sewage **spills**. Over the span of her Senatorial career, she has received the most campaign funding from **PG&E**.
Representative Mark DeSaulnier is up for reelection this year. His environmental platform is to champion “policies that protect the environment and address climate change.” His environmental contributions include sponsoring and co-sponsoring many different environmental protection legislation that combat issues like fracking, plastic pollution, and environmental justice.

Nisha Sharma is running against DeSaulnier with her main campaign platforms being helping the homeless and fixing infrastructure issues. Climate change and environmental protection are not among her main platforms. Sharma does not seem to have been given any major funding from any fossil fuel companies. She is currently a realtor in the East Bay.

Elections are just one way we can influence major change in U.S. legislation by electing officials who are also focused on fighting climate change and bringing environmental issues to the forefront. Once they are elected, we still have the power to influence their decisions by voicing our opinions through petitions, votes on legislation, and protests. It is important that we not only elect people who will fight for the environment, but also keep the pressure on them to live up to their promises.

If you are not eligible to vote there are still things you can do. Youth are more and more becoming leaders in fighting for change. Some actions available to you include starting a petition, raising money, joining an environmental organization, and calling your representative to share your views. You can also start a conversation with your parents and those around you who are of voting age to discuss the importance voting has in shaping how the U.S. interacts with the environment. Everything counts.
CONCENTRATED ANIMAL FEEDING OPERATIONS

THE INSIDIOUS IMPACTS OF ANIMAL AGRICULTRE

By: Alexi Lindeman   Illustration by: Luca Mathias

As the world’s population and demand for animal products rise, markets increasingly rely on concentrated animal feeding operations (CAFO). CAFOs confine as many animals as possible into a small area of land while encouraging unnaturally fast growth and production. Billions of sentient beings endure unsanitary and brutal treatment as their bodies are exploited to maximize efficiency. In the US alone, 11 billion animals face this fate annually. Besides the inhumane treatment of animals, CAFOs largely contribute to leading environmental problems including climate change, water pollution, land degradation, and biodiversity loss.

Raising an animal for food requires more land, water, and energy than growing plants for food. Take dairy cows for example. A productive dairy cow requires 110-120 pounds of wet feed per day and produces around 8 gallons of milk per day. The 110-120 pounds of food fed to the cow could feed more people than the 8 gallons of milk they produce. In Mark Gold’s, The Global Benefits of Eating Less Meat, he states that the food fed to the world's cattle could support the caloric needs of 8.7 billion people.
Animal agriculture is so energy inefficient that it uses 77% of the world’s arable land, while only providing 18% of global calories! (more crops are needed to raise animals, than eating crops directly). Unfortunately CAFOs are expanding into fragile ecosystems as the demand for animal products rises. For instance, 70% of the Amazon Rainforest can no longer support life due to cattle ranching, and rainforests have lost half of all their species because of this habit destruction. In addition to extinguishing biodiversity, this destroys a carbon sink vital to combating climate change. Carbon sinks hold a large amount of carbon for a long period of time. The Amazon Rainforest is a carbon sink; thus, the carbon previously trapped in the dense greenery is released into the atmosphere when the rainforest is replaced with pastures and soy plantations. The cattle raised in these regions are mainly sold to American fast-food chains, so you can directly help save the rainforests by avoiding eating beef products!

Furthermore, CAFOs are linked to water pollution. Due to the high concentration of animals in CAFOs, extensive amounts of water are required to clean their waste production. For ONE dairy cow, 150 gallons of water is used to remove their daily feces. In the US, 116,000 pounds of animal waste is excreted EVERY SECOND! For California, 80% of water is used for agriculture, and of that 56% goes to animal husbandry. You might be wondering, where does all of this wastewater go? Most of it ends up in a manure lagoon, or less eloquently, a pool of poo. Additionally, a report by the CDC (Centers for Disease Control and Prevention) explicitly states, “Though sewage treatment plants are required for human waste, no such treatment facility exists for livestock waste.” Yuck!

Some of this manure is used as fertilizer, but oftentimes too much is applied, leading to nutrient runoff into nearby water supplies. One consequence of this is algae blooms. The excess nutrients in the water allow for a spike in algae. When the algae dies, decomposers use up all of the oxygen breaking it down. Subsequently this phenomenon, also known as eutrophication, forms a dead zone. These spots are deprived of aquatic life as organisms suffocate from the lack of oxygen. Currently, there are 500 dead zones worldwide.
Essentially, CAFOs have negative environmental consequences that affect everyone. They replace nature with acres of mono-crops and cages and pollute limited water and land reserves. In a world with a predicted population of 10 billion, it's impossible to continue our current trend without destroying the habitats and species we have left.

One of the easiest solutions is to reduce global meat consumption. You can significantly help just by avoiding red meat! For instance, it takes 2,640 gallons of water to produce one pound of beef while a dozen eggs require 477 gallons, and a pound of tofu requires 469 gallons!

You can also lower your carbon footprint every time you eat. Check out this chart to see different foods’ carbon emissions! There are so many great meatless alternatives to kitchen staples. Beyond Burger is a plant-based subsite that looks and tastes just like the real thing! There are also delicious plant-based recipes like pesto pasta! And while reduction is the best method, you could buy products from small organic farms instead of CAFOs!

---

**SLIA’S ACTION OF THE MONTH**

**EAT LOWER DOWN THE CARBON CHAIN.**

For more information on how you can take the necessary actions to change your eating habits, visit the Cleaner Contra Costa Challenge. Reduce your environmental impact and take on the action of the month [here](#)!
In a world of trends and social media, fast fashion has risen to dominate the fashion industry. Fast fashion is inexpensive clothing produced at breakneck speed by mass-market retailers in response to the latest fads. You might recognize many of these companies such as Zara, H&M, Forever 21, Fashion Nova, Romwe, Shein, and Zaful. Though these products are everything that modern-day consumers look for -- affordable, trendy, and “Instagram worthy” -- they have disastrous consequences on the environment and are an evil that seems unavoidable.

The production of fast fashion is often based out of coal-powered factories, consequently making the industry responsible for approximately 10% of worldwide carbon emissions. The Institute of Sustainable Communication also suggests that the fashion industry is the second biggest polluter of water -- a result of pouring toxic chemicals into clean water supplies during the production process.

Furthermore, these companies mostly employ workers overseas in countries such as China, Bangladesh, India, Sri Lanka, Myanmar, and Indonesia. They pay their workers the minimum wage, about a half to a fifth of the average living wage in that country, in order to then sell their clothes in the US for the maximum profit. Minimum wage is the legal bare minimum a company can pay their employees, while a living wage is the amount needed to earn in order to live comfortably in that area. For example, the living wage in Sri Lanka is $230.59/month, but the minimum wage is $70.75/month. As if barely paying them was not enough, these companies consistently neglect workers’ rights, subjecting them to dangerous factories, unhealthy environments, and long hours.

The harmful effects do not stop at production. Fast fashion companies produce 150 billion articles of clothing a year. Whereas stores used to have a single collection for each season, fast fashion has ushered in a new era of constantly updated collections. Zara introduces about 20 different collections a year, and Fashion Nova introduces 600-900 new styles every week. The clothes made by these brands are meant to reflect the fleeting trends of that week, or even day. They are not meant to withstand a long period of time, and people often get sick of the piece after only wearing it a few times.
The average American throws away about 80 lbs of clothing a year. More than 60% of fabric fibers are now synthetics, which uses 342 million barrels of oil a year to make, and consequently, do not decay easily. According to the Ellen Macarthur Foundation, 87% of fabric used for clothing ends up incinerated or in a landfill. Even if you donate your clothes, they often end up in the same place. As Micheal Solomon, a consumer behavior expert, said “It's not just about clothing, it's about a disposable society.”

So what can you do to stop the lasting and harmful effects that fast fashion has on our environment? Buying second hand, wearing your clothes for longer, taking your clothes to a textile recycling plant, and supporting ethical brands, such as ThredUp, Pact, Patagonia, American Apparel, and Reformation, are just a few simple ways to do your part. If we fail to act now, the fast fashion industry will continue to expand and take advantage of society, workers, and the environment.

FOR MORE INFORMATION CHECK OUT...

THIS VIDEO ON WHY FAST FASHION IS SO CHEAP

TRUE COST DOCUMENTARY
Writing Team
Alexi Lindeman
Abigail Stofer
Ani Jamgotchian
Ellie Porciuncula
June Nguyen
Max Tcheng
Noah Zakaria

Photography Team
Alexi Lindeman

Editorial Team
Alexi Lindeman
Courtney Jane Sanchez
Gautham Sathisan
Karen Rosenberg
Max Tcheng
Noah Zakaria

Artwork
Kyle Suen
Luca Mathias