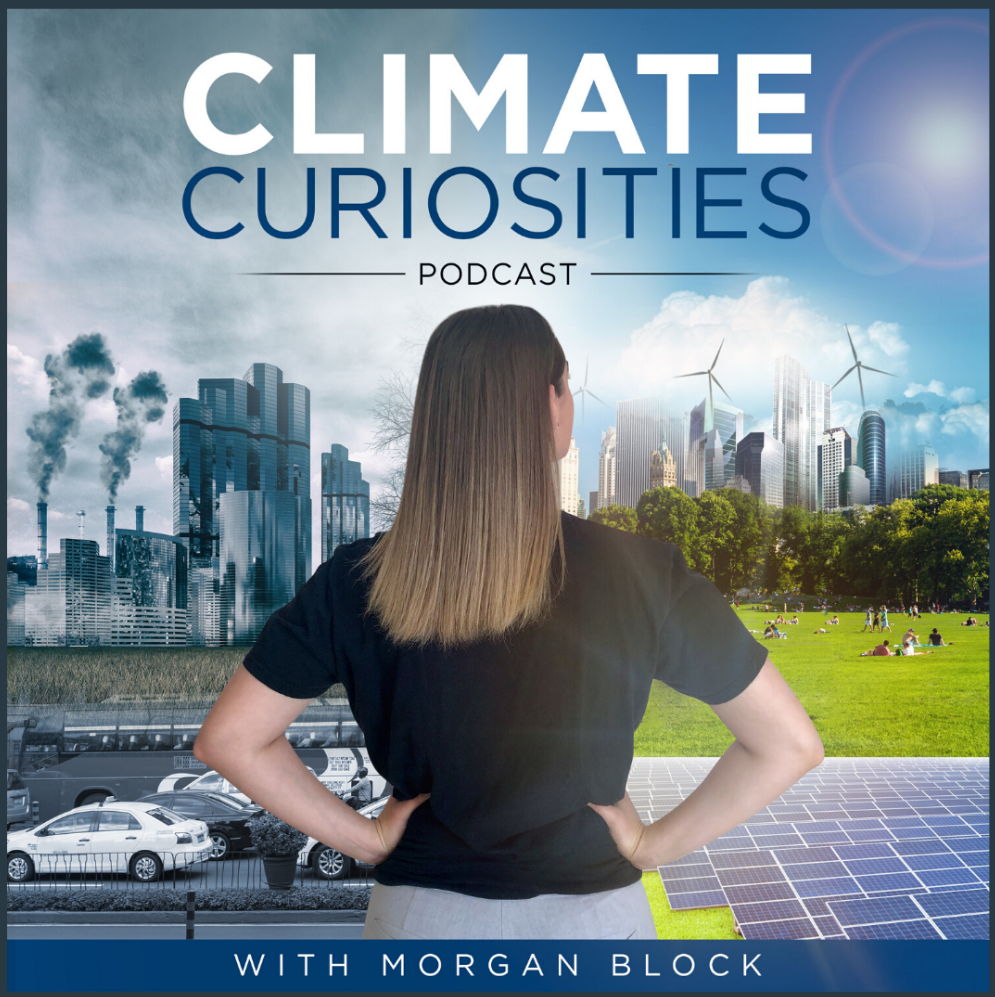
Climate Curiosities

A Podcast Championing Climate Science Communications



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MAS Climate Science and Policy
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Social Media

Podcast link: https://climatecuriosities.buzzsprout.com/
Instagram: @climate.curiosities
Twitter: @curiosities_pod

Capstone Advisory Committee

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Part 1: My Motivation

Ring. Ring. Ring. I pick up the phone. It is my grandad. He asks me to pick up the little globe stress ball he gave me for my birthday the previous year. I knew immediately this would be another uncomfortable conversation about one of the most divisive topics in America and in my household: climate change.

I think that climate change manifests from all the problems with people: greed, selfishness, fear, and at first, ignorance. Unfortunately, people do not like to be told that their statements are factually incorrect, especially if science contradicts their beliefs, livelihood, or culture. Climate change has evolved into this partisan issue where the majority of democrats typically support climate policy, while republicans seemingly do not (AEI Political Report. 2019). Society has lumped climate science in with many other humanitarian and political disagreements such as abortion or universal healthcare, but why? It's a science with data and results which show a scary reality, yet it appears as though for many Americans, science has lost its ring.

Ring. Ring. It's my grandad. For a couple of months now, he has been calling me each week with a new question or curious explanation for climate change. As I am holding my little globe stress ball in one hand and balancing my phone between my shoulder and my ear, he begins to explain that the sun is a powerful influence on Earth's climate. He continues, "the solar irradiance strength increases and decreases over time, and what we are experiencing right now is just a stronger solar period…" I knew this skeptical argument, and I knew it was wrong, at least partly.

Science does show that solar variations have caused temperature increases (interglacial cycle) or decreases (glacial period) in the past, corresponding to the Milankovitch cycles. The Milankovitch cycle refers to the cyclical movement of the Earth related to the sun, which includes three major players: eccentricity, axial tilt, and precession. Eccentricity refers to the elliptical shape of Earth's orbit that shifts closer and further away from the sun on cycles of around 100,000 to 400,000 years. Axial tilt

describes how the Earth's tilt changes every 41,000 years. Lastly, precession explains how the Earth actually wobbles like a top rotating on cycles of between 19,000 and 24,000 years. When these cycles line up the Earth is actually closer to the sun causing more solar radiation to enter into the climate system (Jouzel et al. 2007; Lüthi et al. 2008). This increase in solar radiation causes an initial spike in temperature on the planet, specifically at the poles. In temperature records, the Antarctic temperatures actually proceed global temperatures establishing evidence for the positive feedback loop that is triggered from the increase in solar radiation (Shakun et al. 2012). The increase of solar radiation warms the poles and causes them to warm and melt. “The influx of fresh water disrupts the Atlantic meridional overturning circulation (AMOC), in turn causing a seesawing of heat between the hemispheres” (Shakun et al. 2012). The warming of the global oceans causes CO_2 to be released into the atmosphere, which in turn causes the entire planet to warm via the increased greenhouse effect. Therefore, yes. My grandad’s statement does have a scientific basis, but solar radiation changes cannot be used to explain the Earth’s current climate change situation. Unfortunately, I did not know how to tell him all of this science in a clear, concise, and easy to digest way.

My grandad is a really smart and well-educated person. I have always admired his strong drive and desire to succeed. Of course, he inspired me to always work hard and constantly want to learn more. Growing up in rural Mississippi, he did not have access to the same education and opportunities that I had early on, but in spite of that he pushed himself to always do better. College was an admiral pursuit for him, and he did not even stop there. After he earned an undergraduate degree in Mathematics with a minor in Chemistry, he continued on to complete his Master’s degree in Physics from Mississippi State University. Naturally, with this educational background, he knows a bit about planetary science. Unfortunately, even with his strong science and mathematical background, climate change was not properly communicated to him, and so he remained skeptical.

This kind of conversation began to be the new normal for us. He would bring up a seemingly scientific argument as to how humans could not be responsible for the changes in climate, and I would attempt to respond. But my quick, general answers never seemed to be effective, and it was not just him. My grandmother also had questions and concerns about the reality of climate change, but she did not have the same mathematical background as my grandad. In fact, she has a business background and specialized in executive business accounting. And so, although she is quite the businesswoman, she did not know much about climate science at all. If I asked her any question about climate change, she usually did not have an answer for me. These interactions with my grandparents made me think: If they never learned about climate change, then how could I possibly expect them to know what to think about it? I quickly realized that climate change education and science communication is a huge problem, and this issue is where my skills and passions really converge.

Part 2: The Communication Problem

As I started my Master's degree in Climate Science and Policy at Scripps Institution of Oceanography, UC San Diego, this question of how to effectively communicate climate change to others remained a top research priority of mine. One of my first attempts at exploring climate communication was through my summer project called, "Approaching and Negotiating Climate Skepticism: An Analysis of Climate Skeptic Science in the NIPCC." My research into climate skepticism helped me to better understand the root cause of our climate change communication problem.

I found that the lack of effective communication strategies can be linked to many people remaining skeptical or doubtful about climate change even when the science is evident (IPCC). Understanding that there is an inconsistency in Earth's energy budget which can cause major changes in its ecosystems, habitable locations, and accessible resources is quite challenging. In addition, throughout Earth's 4.6 billion years of existence its climate has naturally changed drastically many times with severe consequences for living organisms each shift. Consequently, the term climate change is mostly used interchangeably with the human-caused term: anthropogenic climate change. Since the climate can change due to natural variability or as a result of human activity (or both simultaneously), the terminologies often are blurred together and communicated incorrectly.

Unfortunately, the complexity of the Earth's climate system, as well as the scientific rhetoric associated with it, has caused enormous confusion in society today. This confusion has allowed for some organizations to actively spread misinformation that appears to be backed by science yet contradicts climate change's human origin. One such organization that I found during my summer research on climate change communication is the Nongovernmental International Panel on Climate Change (NIPCC). The NIPCC is an important group to consider because their publications defend many of the most commonly used arguments against anthropogenic climate change. Politicians and voters in the general public are often addressed directly in their

reports in an attempt to convince them to reject the science that shows humans are responsible for current climate change. This organization released a report titled: *Climate Change Reconsidered: 2009; Report Climate Change Reconsidered II: Physical Science; Nature, Not Human Activity, Rules the Climate; and Climate Change Reconsidered II: Fossil Fuels.* In this report, the exact same solar intensity skeptic argument that my grandad called me is inaccurately explained and defended. This intentional misinformation relies on seemingly reasonable science and logic to convince people that climate policy and action are unnecessary or part of some overarching political manipulation scheme.

After learning so much about the communication problem from my summer project, I decided that I wanted to dedicate my capstone project to finding a climate communication solution. I spent the first few months in my master's program learning more about climate science and speaking with climate science experts. Over and over again, my cohort would ask the climate science experts the same question: *What are you doing to get the message out to the policymakers and the public?* Unfortunately, we received the same answer over and over again: "I am just a scientist. I publish scientific reports and let someone else deal with communicating the solutions." Honestly, I was astounded at this huge informational disconnect. If the scientists themselves are not connected with the policymakers and the public, then how would people know the information they are hearing is credible or not? With this observation in mind, I began to brainstorm capstone project ideas that could directly connect people to climate change experts in an informal and welcoming manner.

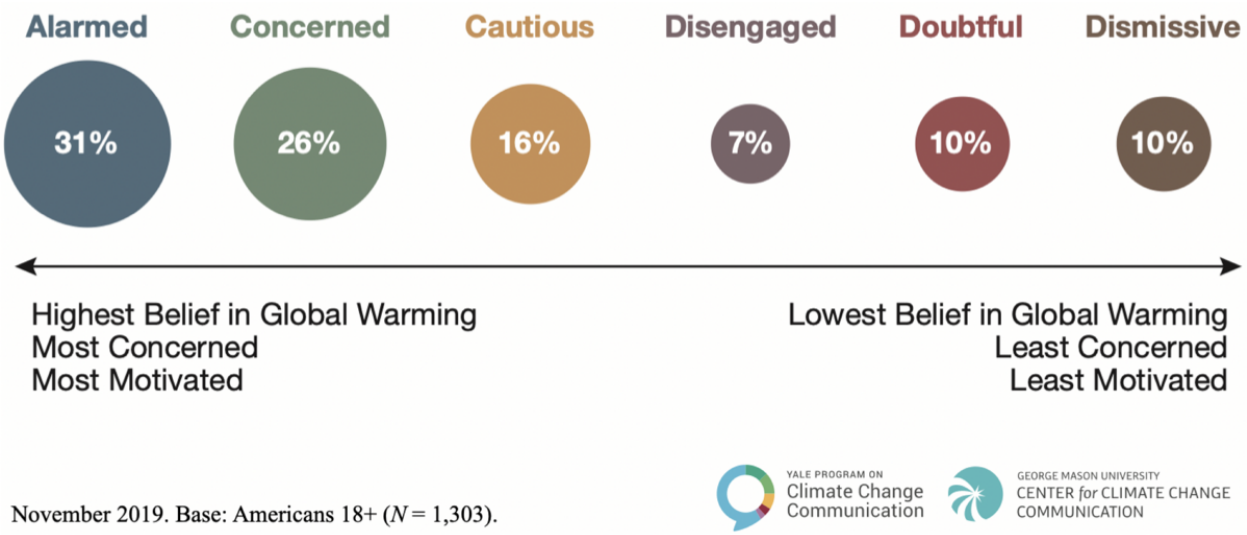
It was around the first week of December 2019, when I sat down in my program coordinator's office to throw around some capstone project ideas with her. I had been considering an in-person event or some kind of educational workshop with community members, but all of these ideas felt too narrow. In-person events attract people who are already interested in the event topic and are less approachable to individuals who may not know much about it. In addition, workshops and events inadvertently limit the number of potential participants due to scheduling conflicts, location capacity and

timing. That's when my program coordinator instead suggested an online format to connect people. She described to me how a student in the previous cohort created a video showcasing her capstone research, and how the video can be circulated and watched by anyone, anywhere, anytime. The accessibility and convenience of an online project was perfect, but I did not think a video was the right approach for me. I knew I wanted to include lots of scientists all with different climate change research focuses into one capstone while maintaining unity within my project. By the end of our meeting, my podcast capstone idea was born.

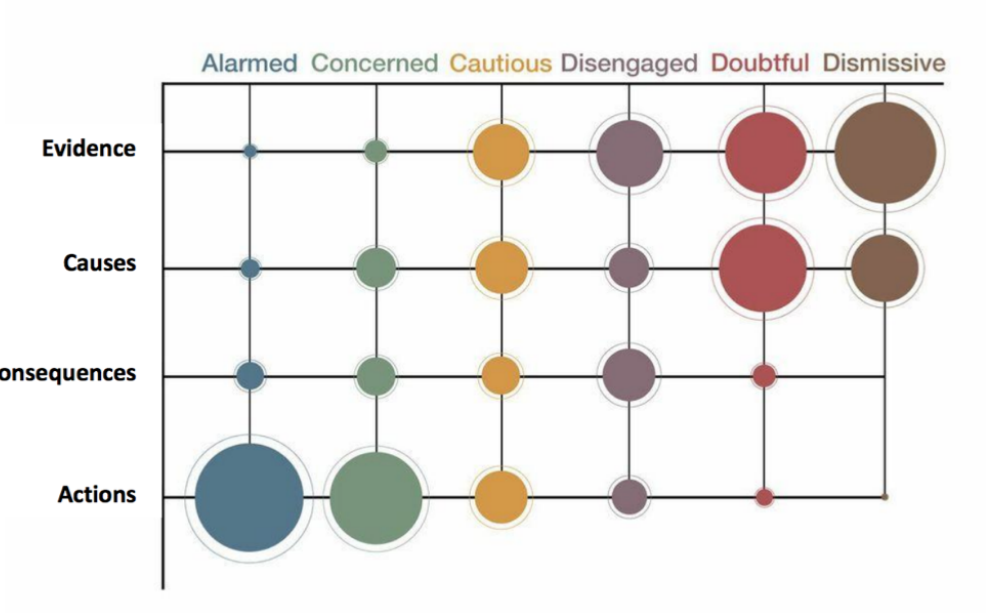
Part 3: Climate Change Communication Research

With a firm handle on my capstone project approach, I was able to start researching climate change communication once again. One of the most detailed sources that I found extremely helpful for my project is the Yale Program on Climate Change Communication. This program “conducts scientific research on public climate change knowledge, attitudes, policy preferences, and behavior at the global, national, and local scales” (Yale Climate Change Communication). A lot of the Yale resources and publications are in direct collaboration with the George Mason University Center for Climate Change Communication. Their mission, similarly to the Yale program, is defined as: “We develop and apply social science insights to help society make informed decisions that will stabilize the earth’s life-sustaining climate, and prevent further harm from climate change” (George Mason University Center for Climate Change Communication). These programs were the exact resources I needed to strengthen my podcast’s approach with data and scientific insight on effective climate communication strategies.

According to several published Yale and George Mason studies, Americans can be divided into approximately six categories representing their combined “climate change beliefs, attitudes, risk perceptions, motivations, values, policy preferences, behaviors, and underlying barriers to action” (Leiserowitz et al. 2015; Global Warming’s Six Americas, 2009). The six categories are: alarmed, concerned, cautious, disengaged, doubtful, and dismissive (Global Warming’s Six Americas, 2009). As of November 2019, about 31% of Americans were categorized as Alarmed, 26% as Concerned, 16% as Cautious, 7% as Disengaged, 10% as Doubtful and 10% as Dismissive (Climate Change in the American Mind, 2019). Each group represents how much that part of the population understands, accepts, and wants to take individual, consumer, and/or political action to address climate change. For the first time, the survey shows that the largest group is the alarmed, which is definitely an important consideration for my podcast’s potential audience.



In addition, these projects survey and document what each group is the most interested in learning about within climate change education. They break up the topics-of-interest into categories like evidence, causes, consequences and actions. According to their nation wide survey, the alarmed and concerned groups are both most interested in learning about the actions and solutions Americans can take to address climate change. The cautious and disengaged groups are fairly evenly distributed amongst all the learning topics. The doubtful and dismissive Americans are the most unsure about the scientific evidence and causes for climate change, and are skeptical that humans have caused or influenced climate change. This information was highly valuable to my podcast because it revealed the massive scope of curious climate change topics people want to learn about.



Roser-Renouf, C., Stenhouse, N., Rolfe-Redding, J., Maibach, E., & Leiserowitz, A. (2015) Engaging diverse audiences with climate change: Message strategies for Global Warming's Six Americas. In Cox, R. & Anders, H. (eds.) Handbook of Environment and Communication.

The report, *Engaging Diverse Audiences with Climate Change: Message Strategies for Global Warming's Six Americas,* reveals how much each of the Six Americas groups either actively or passively interacts with climate change news, policies, politics and science (Roser-Renouf et al. 2015). The level of engagement with each group follows an almost linear pattern, with the most likely to interact being the alarmed Americans and the least likely, the dismissive Americans. There is a slight reversal between the disengaged and doubtful groups probably related to the groups' ability to understand the material presented to them, which is studied in more detail in the *Low Involvement Communication Strategies* section (Roser-Renouf et al. 2015). According to this section, 77% of the Americans classified as disengaged, 44% of cautious, and 39% of concerned admit to having difficulty understanding climate change news and science reports (Figure 10: Ability and Motivation Barriers).

Figure 10: Ability and Motivation Barriers

	Alarmed	Concerned	Cautious	Disengaged	Doubtful	Dismissive
"I have difficulty understanding news reports about global warming."	23%	39%	44%	77%	35%	19%
"In general, I don't like to read or hear anything about global warming."	10%	28%	37%	59%	57%	72%

Note: Cells show the proportions that agree with each statement; source: Yale/George Mason, June 2011; n=1,043

Reading about these groups and remembering how my grandparents also struggled with these same climate change communication issues, helped me realize that I needed to make my podcast as accessible as possible. My goal being to publish a podcast that can engage any person from any of the Six America groups. I needed to learn how to balance my topics of interest and make sure the information is explained in terminologies that allow people without a scientific background to understand.

Although the likelihood of capturing a full spectrum audience is low, I wanted to design my material so that the "two-step flow model" could easily be applied. This communication strategy suggests: "rather than trying to communicate with all citizens directly, climate communicators might instead promote opinion leadership among the Alarmed, encouraging them to discuss the issue with friends and family more frequently (Nisbet & Kotcher, 2007)." In order to properly prepare the listeners to have difficult climate conversations with family and friends, I began modeling some of the script material after questions on the website: "how to talk to a skeptic." This website lists many common climate change questions and denier arguments along with a sample response based on science. I thought this approach would help boost the "two-step flow" communication from my podcast and thus, hopefully reach more individuals from different categories of the "Global Warming Six Americas." Using some common opposing arguments and frequently confused concepts, I would ask the guest expert to talk through an example conversation that they might have with a cautious or

disengaged friend or family member. The ultimate goal is to give the listeners the scientific knowledge and tools to go out and advocate for the climate themselves.

From my research, I learned that each group's attention level to climate change media and science will probably have a direct correlation on whether or not they will engage with my climate science and policy focused podcast. With each level of engagement in mind, I predicted that the audience of my podcast will probably be mostly made up of alarmed and concerned Americans. According to the *Engaging Diverse Audiences with Climate Change* report, these groups are extremely interested in learning about what actions and climate solutions we can take as individuals, consumers or even just as active political participants. In order to meet these interests and align my podcast material with the likely audience, I decided to incorporate questions and discussion material in my podcast that of course, addressed the scientific evidence, causes, and consequences of climate change, but focused mostly on climate change mitigation and adaptation actions.

Part 4: The Podcast Production Process

After all of my climate change communication research, I needed to finalize my capstone committee members. This committee would help me produce the best capstone project possible by providing me with their mentorship and expertise. Being a climate change communication capstone project, I needed a communication expert. A person to help me with all the communication aspects of my project including social media promotional content, marketing ideas and aesthetic formatting for my podcast episodes and materials. My program coordinator, Risa Farrell, suggested that I contact the Scripps Communications Office. Through the Scripps Communications Office, I met Brittany Hook, the Scripps Communications Specialist. She is the key “contact for public information, writer for Scripps news and publications, and for education communications” (Scripps Communications Office Website). Instantly, I knew Brittany would be a perfect member for my capstone committee and she was quick to provide advice and assistance.

Next, I reached out to my program director, Dr. Corey Gabriel. He has the experience and science background to be a great science advisor as well as a general mentor for the capstone processes. As we discussed my capstone project further, we noticed the clear need for a climate change educator to be on my committee. Corey connected me with Dr. Jane Teranes, who had come to speak to my program earlier in the year on climate change education at UC San Diego. She specializes in paleolimnology, paleoenvironmental studies, and interdisciplinary education in earth, environmental and marine sciences. My initial meeting with Jane was so productive and thought provoking that I asked her to be my capstone committee chair. With a strong team of capstone advisors assembled, it was time to dive straight into the podcast implementation and planning process.

Writing a proposal for my capstone project and sending it to my capstone committee was the first major task. My proposal discussed all of my communication research and its influence on my podcast content and schedule. In my proposal, I discussed how

climate change has become a top priority for many scientists and politicians around the world, but most of the general public cannot understand their science and political jargon. Without the proper knowledge or exposure to climate science and policy, the general public is left uninformed and confused on what to do individually or how to vote on systematic climate policy. I proposed an approachable and easily accessible podcast designed to introduce the general public to climate science and policy from subject experts. I would develop and host my podcast with the purpose of connecting people with climate scientists and policymakers and help breakdown three major questions: 1. What scientific evidence do we have to backup climate change observations and projections? 2. What are the causes and consequences of climate change? 3. What are the needed actions and solutions to address climate change?

Once my capstone committee all had a chance to review and accept my project, the full production process started. One of my first priorities was to contact potential climate science and policy experts to interview on my show. My climate communication research made it clear to me the importance of covering a diverse set of climate change topics because each group of the “Global Warming’s Six Americas” wanted to learn about something slightly different. Since my goal was to make my podcast as inclusive and accessible as possible, I decided to discuss all of the topics instead of focusing on only the science or the actions. This wide target audience meant that I would need to find experts on climate change evidence, causes, consequences, and potential actions.

Building my invite list required substantial research as well. Of course, most of my climate scientists are from my connections at Scripps Institution of Oceanography, UC San Diego, but I also reached out to The City of San Diego to connect with their sustainability department. After weeks of emails back and forth with many experts, I secured seven guest climate science and policy experts to interview. My final capstone project guest experts are: Dr. Corey Gabriel, the Executive Director of the Climate Science and Policy Master’s program at Scripps Institution of Oceanography; Dr. Jane Teranes, a Teaching Professor at Scripps Institution of Oceanography, UC San Diego; Cody Hooven, the Director of the Sustainability Department and the first Chief

Sustainability Officer for the City of San Diego; Dr. Yassir Eddebbar, a postdoctoral scholar at the Center for Climate Change Impacts and Adaptation at Scripps Institution of Oceanography; Dr. Veerabhadran (Ram) Ramanathan, Distinguished Professor of Atmospheric and Climate Sciences at Scripps Institution of Oceanography, UC San Diego; Dr. Kate Ricke, Climate Scientist and Assistant Professor at Scripps Institution of Oceanography and at the School of Global Policy and Strategy at UC San Diego; and finally, Margaret Lindeman, a fourth-year PhD candidate in the Fiamma Straneo lab at Scripps Institution of Oceanography.

In addition to securing my podcast guest experts, I also spent time researching their profiles and specialties in order to prepare my episode scripts. My podcast should sound like a conversation. After listening to countless podcasts, including *Science VS* and the *Climate One Podcast,* I decided a conversation style podcast felt the most engaging and inviting for an audience listener. In order to ensure the conversation was still powerful and hit on the most important climate change questions, I prepared episode scripts with relevant and curious questions for my guest experts. My scripts targeted many climate change skeptic arguments as well as some of the most common questions regarding climate change science and policy. On my personal social media accounts, I also sent out an informal, anonymous survey asking my family and friends what they knew and what they wanted to learn about climate change. This mini survey was inspired by the Yale and George Mason publication, but I wanted to do it on a more personal scale. My friends and family would most likely be the initial audience of my podcast, so I wanted to make sure I would answer many of their own questions and concerns. I spent hours crafting questions that would be both scientifically simulating and easily understood by any of my potential audience listeners.

Finally, a title for my podcast seemed more evident than ever. Everyone is curious about climate in one way or another, maybe the science evidence or maybe the solutions. Regardless, we all have climate curiosities, which is now the title of my podcast and capstone project: Climate Curiosities. Each of my episodes cover a

different curious topic and start with fun curiosities about myself and my guest expert. The curiosity theme tied the entire project together.

With a title, my curious questions, and a new professional podcasting microphone, I started recording my episodes over Zoom. The virtual interviews were fairly easy to complete because Zoom has a helpful recording feature. It allows the user to put a consent message onto the screen for any guest speaker and informs them that they will be recorded if they choose to continue with the call. After the zoom call ends, the audio recording is automatically downloaded onto a computer folder. It is extremely easy and convenient for both parties.

Of course, Zoom did not edit the recordings for me, so my next task was to decide what editing software I could use. Even though I did have some audio and video editing experience, time is precious during a one year master's program. If I had to manually edit each episode, my attention to other capstone details would have probably been limited due to time. Thankfully, I found a podcasting online app called "Alitu" that simplified the editing process dramatically. Alitu describes itself as "The Podcast Maker." It is designed to "help anyone create a podcast in the easiest way possible" (Alitu). All I had to do was upload my raw recordings from Zoom, then Alitu used AI computer software to clean up the audio automatically. It saved me a lot of time by leveling out my recording volume, reducing background noise and equalizing the podcast's loudness standards. Once Alitu cleaned up the audio, I cut out any mistakes from the recordings and added music and an introduction right on their program. Lastly, Alitu connects directly with most podcast hosting sites so that once an episode is finished with edits, it can be uploaded instantly.

I decided to host my podcast on Buzzsprout. This host site, most importantly, is compatible with Alitu, so my episodes can be uploaded quickly and easily. In addition, Buzzsprout is rated as one of the most user-friendly podcast host sites. I could not accept any potential technical issues, especially so close to the end of my capstone timeline. Overall, Buzzsprout is not expensive, it provides helpful statistics, and it has

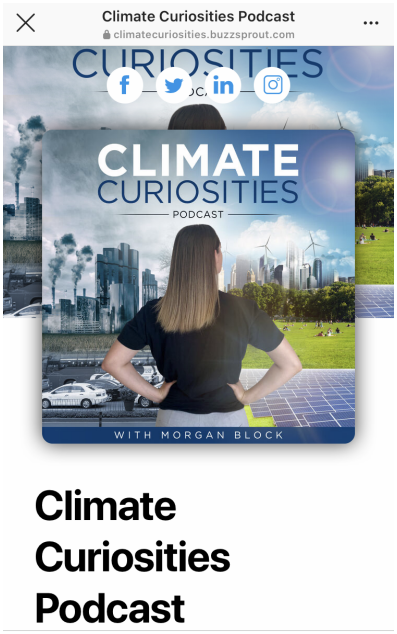
many sharing features for promoting the episodes through social media. The site also allowed me to change the IP address to a customized link with my podcast's title in it. Buzzsprout met all of my requirements for a podcasting host site, and so far, it has worked perfectly for my capstone podcast project.

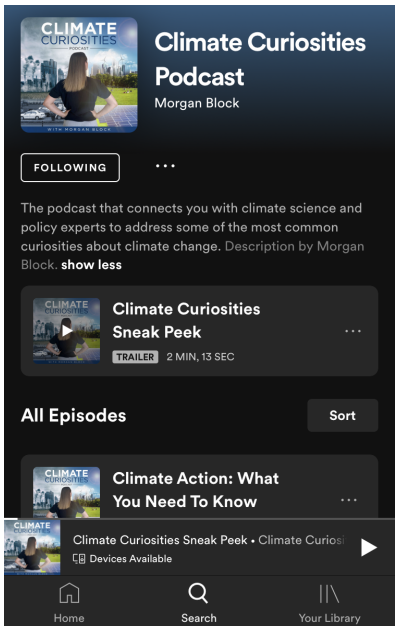
One major component to my podcast that needed to be completed before any uploading or publishing to Buzzsprout could occur, was finalizing an album cover design. The website 99Designs is highly recommended on many podcasting blogs, so I decided to give it a try. 99Designs has a custom Podcast Cover Design package, where you can enter any ideas and visions for a podcast cover. Then, graphic designers from all over the world start submitting draft designs based on the submitted briefing description.

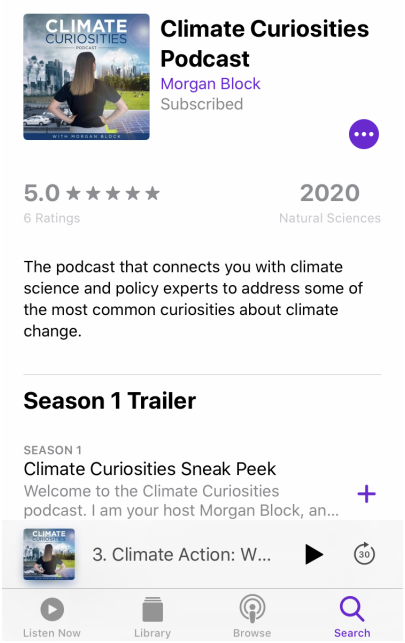
My podcast album cover brief on 99Designs stated: "I want anyone who looks at this album to instantly be curious about climate change. I want it to portray climate change from a variety of societal perspectives and I want it to show a human perspective. How does Earth look currently... pollution and fossil fuel energies versus how could it look in a sustainable, green, resilient society. Also, I want the podcast's name: *Climate Curiosities* on the album cover, and I don't want it to look 'doom and gloomy.' This podcast is trying to help people understand the climate change problem and to be introduced to real potential solutions! I want to inspire people to be curious, ask questions and take action."

Thankfully, a talented graphic designer entered the contest and truly transformed my vision and description into a compelling and inviting album cover. Through a lot of drafts and back and forths with my designer, my Climate Curiosities Podcast album cover became a reality.

With all aspects of my podcast finally coming together, it was time to get back with Brittany Hook, my communications committee advisor. Unfortunately, recording, editing, and publishing my podcast is only part of the battle. The other: marketing! Of course, my podcast's main purpose is to communicate with people, so it needed listeners. The first step to promoting a podcast is to share it on all of the major streaming platforms such as Spotify and Apple Podcasts. Buzzsprout allowed me to submit my podcast directly from their site to several different directories, so that people can listen to it in the podcast player of their choosing. Within hours of submitting my podcast, it was approved for Spotify, and only about two days later, it was live on Apple Podcasts.

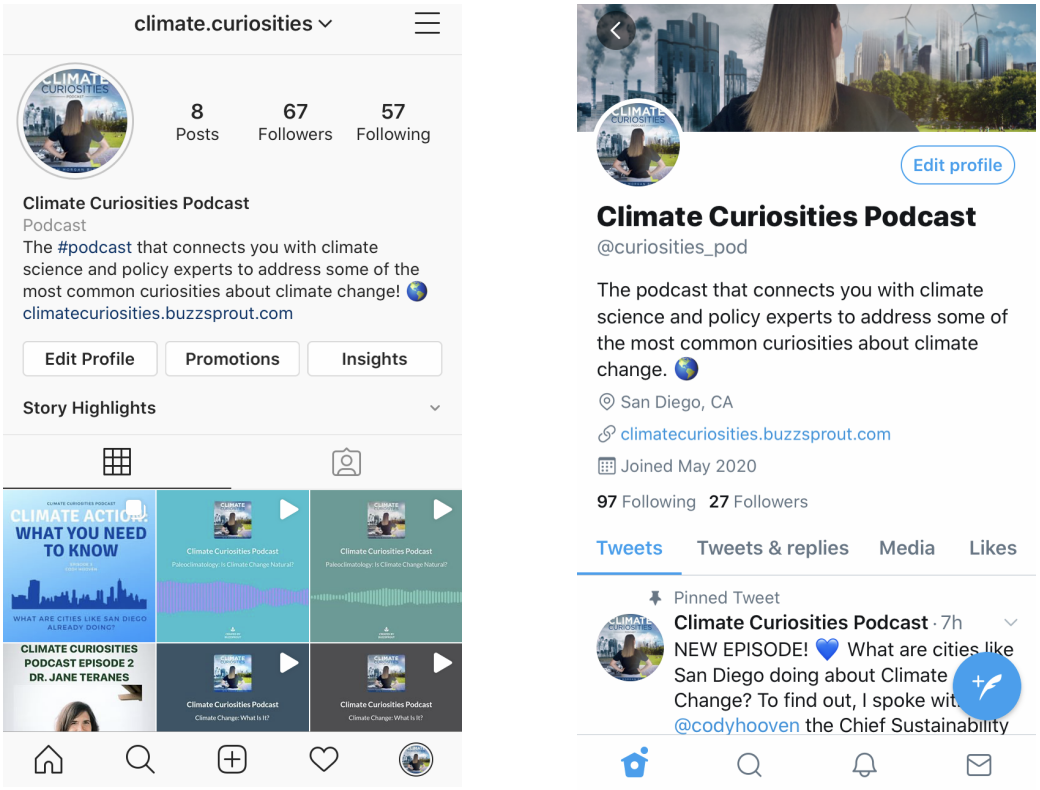






Climate Curiosities Podcast on my host site: Buzzsprout; Spotify; and Apple Podcasts.

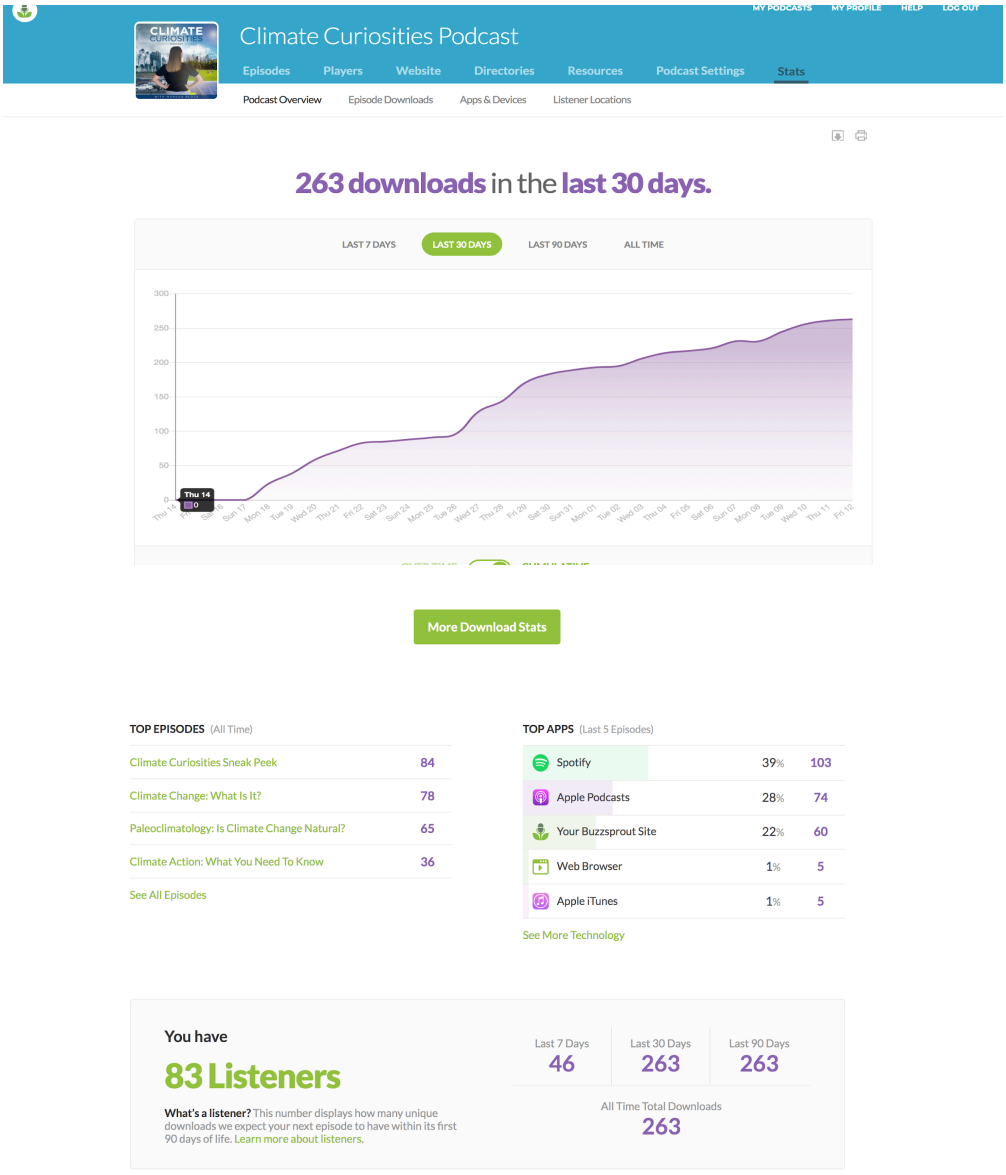
My communication capstone advisor, Brittany Hook, also suggested that I create a branded “Climate Curiosities” Twitter account and Instagram account to help share the podcast with my contacts. Sharing it on my personal channels for other platforms like Facebook and LinkedIn would also help to spread its potential listener base. In addition, Brittany recommended for me to reach out to family, friends, peers, and my guest experts to ask if they would share it on their networks and platforms. Continually creating engaging content to post on social media has been my latest contributions to promoting my podcast. Although promoting and marketing the podcast is difficult, my Buzzsprout host site has revealed promising results.



“Climate Curiosities” Instagram and Twitter accounts

Part 5: Results and Concluding Remarks

According to my Buzzsprout's stats, my podcast is gaining a following. To date, I have released the Climate Curiosities teaser episode and three full length episodes. There is a feature that allows me to see how many times it has been downloaded, and between May 20 and June 12, 2020, my podcast has been downloaded 263 times. In addition, Buzzsprout publishes the stats for each episode individually, the apps that are being used to stream it, and how many "listeners" I currently maintain.



Because the main goal for this project was to communicate climate change to people from all different education levels and backgrounds, each episode strategically covered different climate change educational topics. I wanted to give listeners the opportunity to learn what they want to know in a fun and easy way. Each episode can be categorized into the different Six Americas' learning interests, either evidence, causes, consequences, or actions of climate change (Roser-Renouf et al. 2015).

Episode 1 titled: "Climate Change: What Is It?" interviews Dr. Corey Gabriel. Throughout this episode we discuss the **Causes** and the **Evidence** for climate change. This episode was designed to help anyone listening feel confident defining climate change. It focuses on introducing the science of climate change. Episode 2 titled: "Paleoclimatology: Is Climate Change Natural?" interviews Dr. Jane Teranes. We spend the first half of the episode on the paleo record **Evidence** for climate change and the human **Causes** of it. The second half of our episode discusses climate change **Consequences** and why it is bad for humans in particular. Lastly, Jane and I discuss **Actions** that individuals can take to address climate change on a personal as well as a systematic level. Episode 3 titled: "Climate Action: What You Need To Know" interviews Cody Hooven, the Sustainability Director from The City of San Diego. This episode concentrates only on **Actions,** and specifically, actions that cities can take to combat climate change. Episode 4 titled: "Our Changing Oceans & Oxygen Minimum Zones" interviews Dr. Yassir Eddebbar. We spend most of the episode on the ocean related **Consequences** of climate change, but we also touch on the data and **Evidence** for it. At the end of the episode, we mention **Actions** that scientists like him can take to make their work more visible and publicly accessible. Episode 5 titled: "Climate Politics, Human Health, & Morals" interviews Distinguished Professor, Dr. Ram Ramanathan. This episode focuses on political and individual **Actions.** He also discusses some of the public health and human **Consequences** of inaction**.** Episode 6 titled: "Geoengineering: Can It Save Us?" interviews with Dr. Kate Ricke. It addresses some of the **Causes** of climate change, but spends the bulk of the time discussing Geoengineering, which is a climate change **Action.** Episode 7 titled: "ICE To Meet You" interviews Scripps

Institution of Oceanography, PhD candidate Margaret Lindeman. She touches on several topics including glacial **Evidence** for climate change, glacial melt **Consequences** like sea level rise, as well as possible **Actions** we can take to help mitigate and adapt to climate change. With this large range of topics and interests, I hope to appeal to all of my listeners regardless of what "Global Warming Six Americas" they identify with.

In the future, I would like to study how effective my podcast actually is at communicating climate change to various groups of people. Conducting a survey to people before and after listening to my podcast and measuring if their beliefs or opinions changed at all would be helpful data for measuring my impact. Although my capstone project has come to an end, I would like to briefly revisit why it started in the first place: my grandparents. Luckily, they are a small subset of my listeners that I do actually know what their opinion was before listening to my podcast, and how it has changed.

Ring. Ring. I pick up the phone. It is my grandad. For a couple of weeks now, he has been calling me with a new exciting statement or curious question regarding my latest podcast episode. As I am holding my little globe stress ball in one hand, smiling ear to ear, and balancing my phone between my shoulder and my ear, he begins to explain: "I have never been a climate change denier, only a questioner of the primary causes and whether the argument about anthropogenic contributions is settled science. Frankly, I don't hear much on this topic in my day to day activities in the oil and gas industry in Texas. Your series of podcasts provided a fact based convincing argument that we humans have definitely altered the normal climate patterns of our planet. Your focused interviews with some of the world's leading climate scientists has moved me from a climate change 'questioner' to 'an acceptor.' I'm now on board with advocating policy changes and funding of mitigation measures" (John Wells 2020).

This kind of conversation began to be the new normal for us, but it is not just him. My grandmother also has been calling me with questions and motivating statements about climate change since listening to my Climate Curiosities podcast. She begins, "I've

always been a recycler and an energy conserver, but your podcasts certainly reinforced the imminent need for what I've been doing, and that a worldwide commitment to do even more. I came away from your podcasts feeling that 'communicating' this problem to the masses is critical. I certainly was not aware of most of the collected data and the various techniques that have been proposed to combat greenhouse gas emissions … I am 73 years old and have been enjoying listening to your podcast and learning about climate change. We really are never too old to learn" (Chappell Wells 2020).

Overall, this capstone project has taught me a lot about climate change communication as well as podcast management. I learned the importance of public opinion in regards to climate change and some of the most effective methods for communicating to people with different opinions. Whether I am talking to someone about climate science or promoting my podcast on social media, I come back to the same conclusion every time: communication is key! Everything in our world is so interconnected, and we have the opportunity to communicate vitally important information to huge audiences instantly through digital media, which is promising. As the Yale and George Mason University surveys show, people are becoming increasingly alarmed about climate change, so communicating the solutions and actions will be the next task. The first step towards change is awareness, and I think my capstone podcast is directly helping people become more aware of climate science and policy.

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Scientists and Professors at Scripps Institution of Oceanography, UC San Diego Quotes from John and Chappell Wells, 2020.