

In their comments, many people have noted how this material is depressing. Really depressing. Before jumping in here, let's consider how this course is structured.

A frequent objection to Al Gore's milestone 2006 film *An Inconvenient Truth* was that it principally explained the problem rather than offered solutions to the climate crisis. As it provided little direction on how to solve this extraordinary problem, more than a few people found the film depressing. Some even felt hopeless after viewing it, which was certainly understandable.

After all, on what were we to pin our hopes? What could avert, or at least mitigate, the crisis? Gore offered us very little to go on – and, thus, very little hope.

In fairness, given that the film ran for just under two hours, Gore was able to do quite a bit in a short time. He certainly energized a generation of activists, like filmmaker Kip Anderson (as he explains in the opening of *Cowspiracy*). Nonetheless, *An Inconvenient Truth* is something of a cautionary tale for anyone wishing to communicate the extraordinary challenge that the climate crisis presents for humanity.

Climate Crisis 101 humbly both takes up this formidable challenge of 1) communicating the climate crisis, as well as 2) exploring the challenges we face in mitigating this crisis.

As *An Inconvenient Truth* made clear, both challenges are indeed formidable and interconnected. Why didn't Gore communicate more solutions? In part, he arguably didn't because they were still being worked out in detail across the globe in 2006, even though at the time we had known for over 40 years that we needed to make changes like switching to renewable energy, such as photovoltaic and wind power. Moreover, we largely had the necessary technology in the 1970s.

However, as far as our day-to-day lives are concerned, a climate friendly lifestyle seemed, to be honest, like something of an oddity. Again, this is not to say that people haven't been developing and advocating for such a lifestyle for 50 years, as environmental vegetarianism (i.e. eating a large plant-based diet for environmental reasons), for example, is certainly that old.

Part of the problem was that we were still in something of a state of denial. This is not to say that Gore's audience was denying that the crisis was real. While it was unfortunately the case that many Americans were denying the crisis in 2006, the people that filled theaters to watch *An Inconvenient Truth* likely acknowledged that there was a problem. At least by the end of the film they certainly did.

But this is a different sort of denial. Denial that our lives would have to change in order to avert the crisis.

Many people were (and are) still hoping that a new kind of car, perhaps a hybrid or fully electric one, or buying organic food would solve the problem (Michael Pollan's *The Omnivore's Dilemma* also came out in 2006).

But they weren't at all prepared for the fact that we would have to forgo owning cars altogether and radically rethink the way that we eat. Pastured beef may arguably be somewhat better for the planet than feedlots, but a far bigger problem is that we eat beef at all.

It is not that Gore and his original audience were denying the validity of the climate crisis, they just were arguably in a state of denial when it came to personally addressing the problem. Gore himself certainly repeatedly came under fire for his personal failure to do so. It is, in fact, difficult to understand how a Nobel laureate for his work on the climate crisis would be ok with crisscrossing the globe in a private jet.

Climate Crisis 101 takes the position that we both need to stop denying that personal changes will be necessary, as well as stop delaying implementing them.

Once we open ourselves up to the fact that we need to make changes to our way of life, we are suddenly presented with scores of things that we can do to help mitigate the climate crisis.

Big and little things that together that can reduce our size-ten climate footprints down to size-one. I don't mean this just figuratively. As we shall see, it is literally possible for Americans to reduce our individual climate footprints by a factor of ten and still live meaningful and happy lives. Arguably more meaningful and happier lives.

The needed changes are both individual and collective. Hence, there are things that we can do by ourselves, such as switching to a largely plant-based diet, and things that we can only do collectively through activism and political action, like enacting a Green New Deal.

These changes form the basis for Climate Crisis 101. In other words, in some ways, Climate Crisis 101 is less about climate change than it is about human change – how we human beings, both individually and collectively, need to change.

Consequently, and in contrast to *An Inconvenient Truth*, which focused on the problem, Climate Crisis 101 focuses primarily on solutions. This is not to say that we gloss over the problem, but rather that we only devote about a third of the course to it.

Here is how Climate Crisis 101 proceeds, which should help further explain its underlying rationale.

Climate Crisis 101 is divided into ten sections, which correspond to the ten weeks that Climate Crisis 101 is taught at UCSB. Note that these sections are different than the chapters.

The first three of ten sections are devoted to the problem.

Section 1 focuses on the problem by considering how the climate crisis is a global phenomenon already impacting the entire planet. Moreover, as we explore in this section, this is just the beginning, as the worst is yet to come. How bad will it be? It all depends on how quickly and decisively we act.

Section 2 brings things close to home, as we look at how the crisis is already having a real impact on us locally. Since this course is taught in California, the focus is on how the crisis is unfolding here, including Santa Barbara in particular. This is an important section, as it underscores that this worldwide crisis will be experienced very differently across the globe.

Section 3 takes up the question of climate change denial and delay, which is greatly exacerbating the problem – and, in fact, making the problem far worse. If we resolve to take the required actions, we can avert the worst of what is to come. Unfortunately, the fossil fuel industry and other interests are devoted to thwarting those actions.

Three weeks are not a lot to devote to the problem. We could easily spend the whole course on this. Indeed, multiple courses. But this brings us back to Gore's challenge with *An Inconvenient Truth*: a course devoted to the problem would offer little hope for the future.

In fact, when this course was taught for the first time, during the first three weeks many students were already becoming depressed and indeed despairing. After reading their weekly comments, I found myself repeatedly reassuring them that there was hope and that we would get to it soon.

And there is hope, lots of it. The final seven sections are devoted to it.

Section 4 introduces, by way of Henry David Thoreau and the modern movement of minimalism, how lifestyle choices and personal actions can have a profound impact on our individual climate footprints.

Section 5 not only takes a look at the environmental impact of the past 60 years of consumer culture, but also the social justice issues that it created.

Section 6 looks at the top 25 sources of greenhouse gas (GHG) emissions and considers how important personal action is to many of these. For example, we look at how limiting food waste and switching to largely plant-based diets are together more important than either wind or solar energy in reducing GHG emissions.

Note that sections 4-6 focus on personal action. I agree with climate activist Naomi Klein that “focusing on individual consumer behaviour, whether it's changing lightbulbs or going vegan, is just not going to get us there.”

However, as we shall see, it is not a question of choosing either personal action or climate activism or becoming politically active. In many, many cases, all three are integrally connected – and desperately needed.

Personal action has a special position, as it can help keep our focus on the prize on a daily basis. Every day that we hop on a bike or forgo a burger, we remind ourselves that much needs to be done – and that we are, even if in a small way, doing something.

Doing such little things also sends a message to the rest of the world, as we lead by example.

However, Naomi Klein is right that this is not enough, which is why the next two sections of Climate Crisis 101 are devoted to climate activism, political action, and the challenge of communicating climate change.

Section 7 underscores the importance of climate activism and political action. In particular, the focus will be on the Green New Deal, as it promised sweeping political, economic, and cultural changes in response to the climate crisis. Although it is presently not being enacted, it represents the most reasonable response to the climate crisis that has yet to be put forth by politicians in the US.

Section 8 focuses on the importance of communication. In addition to personal action, activism, and being politically active, it is important for each of us to communicate to others the urgency of the climate crisis and what can be done about it. This is often far easier said than done.

Section 9 takes up what may seem to be an odd question: Can the climate crisis make us happy? In no way do I mean to be insensitive here, as I realize that millions of people are already suffering because of the climate crisis – and that this is just the beginning, as billions (with a B) will ultimately suffer.

In response to this suffering, this course takes a long hard look at the current, consumerist iteration of the “American Dream” and how it is not just an environmental and social justice nightmare, but has also taken its toll on the American psyche.

The problem is that this consumerist dream promising happiness has not at all delivered on the promise.

In fact, in recent decades, Americans have become less and less happy. While this would be a sad irony in itself, the great tragedy is that in pursuing happiness in this way we are destroying our planet. During the same period that Americans have been becoming less happy, we have been pumping more and more greenhouse gases into our planet’s atmosphere.

Not only could profoundly reevaluating and reducing consumerism make us happier, it could reduce suffering in wealthy countries now, as well as the rest of the world, as billions of people move out of poverty.

Section 10 concludes the course by considering how we can make a difference in the world in light of what we have learned.

By ending on an optimistic (indeed “happy”) note, my goal is to make clear that not only is there hope for the future, but that it can be a far better, happier future than the present – or, for that matter, any point in human history.

How do we bring such a future about? The majority of this course is devoted to what each of us can do about realizing it.

### Reading 2, 2°C- Beyond the Limit, Fires, floods and free parking

If you asked most people a decade or so ago what they thought that the consequences of global warming would be for California, they would likely have mentioned sea-level rise – perhaps only sea-level rise. After all, with over 800 miles of coastline and roughly two thirds of its 40 million people living in coastal counties, it seemed as if flooding was the only danger to the state from the climate crisis.

As it turns out, it's not.

[As \*The Washington Post's\* article on California's changing climate makes clear,](#)

“Since 1895, the average temperature in Santa Barbara County has warmed by 2.3 degrees Celsius, according to *The Post's* analysis. Neighboring Ventura County has heated up even more rapidly. With an average temperature increase of 2.6 degrees Celsius since preindustrial times, Ventura ranks as the fastest-warming county in the Lower 48 states.”

The problem, having to do with temperature rise and corresponding wildly unpredictable weather and environmental conditions, has really hit home for Santa Barbara and the surrounding area.

“Warming here already has exceeded the threshold set in the 2015 Paris climate accords...The agreement concluded that average warming worldwide should be held ‘well below’ 2 degrees Celsius to avoid potentially catastrophic consequences — but it already has warmed by more than 1 degree Celsius.”

With such extraordinary temperature increase, all sorts of impacts follow. For example, fires are now a reality of life due to dry conditions and lack of rain. The 2017 Thomas Fire at Santa Barbara, at 281,000 acres, was the largest wildfire to date in California in modern history, though it was surpassed in size by the Ranch Fire less than a year later.

As *The Washington Post*'s article noted, this is not an isolated problem, as “[a] quarter of California’s 40 million residents now live in high-risk fire zones.”

It is not just fires, as the article reveals, what California locals call “global weirding” has resulted in strange midday temperatures soaring to 115 degrees Fahrenheit or more, followed by sudden cooling, which resulted in deaths of livestock animals and scorched orchards.

Regarding this, please allow me to relate a little story, as something startling happened while I was writing the first draft of this short lecture a few years ago.

I penned the above paragraphs, which explained that California would likely experience far more than just sea level rise as a result of climate change, on Christmas morning, 2019. My plan was to come back the next day and finish this lecture.

But that night my phone flashed with an alert that a rotating storm cell was off the coast of Santa Barbara and that the city needed to immediately brace for a tornado. Everyone was advised to take shelter in their homes and “move to an interior room on the lowest floor of a sturdy building and avoid windows.” While a tornado did not hit Santa Barbara that night, the National Weather Service confirmed that one touched down in the nearby Ventura harbor that was generated by a different storm cell.

Now, if you are in another state or part of the world, this may not seem like a big deal. But the central coast of California is one of just a few true Mediterranean climates on the planet. The Ancient Romans had a name for this sort of welcoming climate, they called it *locus amoenus* a “pleasant place.” For over two thousand years, people across the world have wistfully pined for such a perfect pastoral climate, with none of the temperature variations and various storms that most of the planet experiences.

While a handful of small tornadoes have been recorded over the past hundred years in the Santa Barbara area, they are extraordinarily rare and generally insignificant. That two rotating storm cells capable of generating dangerous tornadoes formed during one storm is exceptionally unusual and perhaps unprecedented.

I mentionable this because it underscores that climate change will likely produce a range of consequences that, like these tornadoes, may well be altogether unexpected. This is not to fault the predicative computer models produced by climate scientists, but rather to underscore that in addition to the sort of things that we can model and expect, like protracted drought conditions that set the stage for wildfires, there may be a range of others that we just don’t see coming.

And this is not just limited to the physical consequences of climate change (like droughts, fires, and tornadoes), but even more so when the human implications are taken into account. California produces almost half of fruits, nuts and vegetables grown in the U.S. If there is significant change to the climate of this region, it could have profound consequences for the food supply and security of the country.

The climate crisis is not only here. The climate crisis has now come home to California.

Class discussion of “2°C- Beyond the Limit, Fires, floods and free parking”

(Note that the following observations, which are in italics, have not been paraphrased or altered, though I do correct the occasional typo and, because of space concerns, often just part of the comment is reproduced here along with my reply. In working through these, I will first quote an observation by a student, followed by my thoughts.)

Note that the following two comments were from the first time that Climate Crisis 101 was taught, in January of 2020.

*Never have I experienced something like the fire in the Santa Barbara hills that took place in November. Although it was not close enough to directly affect myself and my friends, seeing the fire with my own eyes and not through a television was genuinely frightening. Driving to my hometown while the fire was happening another fire was happening in LA county that I also saw on the side of the freeway. Two visible fires in just one day that were unconfined for long periods of time.*

This is a reference to Santa Barbara's 2018 Cave Fire, as is this one:

*[T]he recent wildfire that happened in Santa Barbara is definitely a warning from nature. This was the first time that I felt that the climate crisis was more than a topic in a textbook.*

The Cave Fire, was visible from the UCSB campus, as well as Isla Vista, as it was on the nearby mountains. At night, you could actually see the orange and red flames. During the day, the smoke was everywhere.

Because of events like the Cave Fire, "the climate crisis," as the second comment aptly notes, is now "more than a topic in a textbook" for people across the planet, including those of us in California.

As I noted above, just a year before this, in 2017, what had been the largest wildfire in California history), the Thomas Fire, threatened to destroy Santa Barbara. Incidentally, since the Thomas Fire in 2017, [there have been seven larger fires](#), including the August Complex Fire in 2020, which was nearly four times larger than the Thomas Fire.

There have also been more recent wildfires in the Santa Barbara area, including the 2021 Alisal Fire, which was north of Isla Vista.

In addition to wildfires, Santa Barbara has experienced unprecedented temperature rise in the past few years. The following comment, which is from a student who took Climate Crisis 101 in 2018, notes this temperature increase:



*The article talked about the crazy temperature surge on July 6, 2018. Coincidentally, that day was my Freshman orientation. Everyone was sweating, dying of thirst, and it did not even cool down a bit at night. I panicked and thought maybe this kind of heat would continue.*

The hottest temperature ever reliably recorded in Santa Barbara was 115° F, which was in 2017, the same year that the largest wildfire in recorded history, the Thomas Fire, swept through the area. In 2020, just 30 miles over the mountains in Solvang California, the temperature hit 122°F.

In July of 2021, [The Washington Post produced another article](#), this time a fascinating piece on why temperatures this high are simply impossible for the human body to endure.

For decades, when we thought that the consequences of global warming would principally be sea level rise, we largely failed to think about the direct consequences of a hotter globe, such as spikes in temperature too hot for the human body to survive. Or months of prolonged heat and that would set the stage for wildfires.

In the back of our minds, we also imagined that the consequence, sea level rise, was a long way off, both in the sense that it was decades away and would likely impact people far from us.

We now know that this is simply wrong. The climate crisis is here, in Santa Barbara, California, now.

*Compared to the pre-industrial time, the average temperature in Santa Barbara county has raised 2.3 degree Celsius, which exceeded the 2 degree Celsius which is the threshold temperature set by the Paris Agreement. In the article, what impressed me was that the government of Santa Barbara has done nothing to change the current condition. The county has pledged to decrease the emission of greenhouse gases by 15 percent compared with 2007, yet it actually rose up by 14 percent. Many of whom are aware about the consequences of climate crisis, but the mainstream seems to intentionally ignore that.*

We often read pledges - local, national, and global - to reduce greenhouse gas emissions (GHG). The city of Santa Barbara made such a pledge in 2017. However, as *The Washington Post* article and this comment notes, GHG emissions did not go down, but rather quickly increased by a 14%.

Another example would be the Paris Agreement signed with much fanfare at COP 21 in 2015, where nearly 200 nations pledge to reduce greenhouse gas emissions. At the time, [atmospheric CO2 levels were at about 399 ppm](#). Now, we are at 420 ppm and rising, [which is higher than it has been at any point in the last 3 million years on earth](#).

Back in 2015, at COP 21, the nations of Earth pledged to stop global temperature rise at 1.5°C. For this to happen, we would need to leave most of the fossil fuels on earth unextracted. Scientist worked out the maximum number gigatons of CO2 that we could add to the atmosphere and still keep global temperature rise at 1.5°C.

In other words, over the upcoming decades, this was to be our maximum global carbon allotment. In the immediate six years after COP 21, we burned through half of it.

Pledges and promises are great. They certainly draw attention to the severity of the problem, as they often make the news. But without follow-through, they are meaningless. Neither Santa Barbara nor the earth's countries have followed through with their promises to mitigate the climate crisis.

So, instead of asking about promises and pledges, it is better to ask what is actually being done. Or at least, in very specific terms, what will be done.

*I felt like this article was a car crash that I couldn't look away from; it morbidly sucked me in! Wow, as a junior at university I really thought I knew a lot more about climate change in my local and surrounding counties but this article really informed me on a lot of details of how we're really being affected (I live in Ventura/Ojai). I was shocked to find out that "warming in Ventura has already exceeded the threshold set in the 2015 Paris Climate Agreement" and feel like this has never been voiced within my community.*

When we focus on global warming, especially when we talk about goals, like holding global temperature rise to 1.5°C or 2°C, there is a tendency to see this in global terms. However, the earth is not uniformly heating. Some areas are heating more than others (like Ventura and Santa Barbara counties) and [others, like Germany, are actually experiencing harsher winter weather](#).

Global warming is so far along at this point that some areas in fact have more than 2°C of temperature rise, which was the outside limit at which COP 21 hoped to hold global temperature rise. Unfortunately, as [The Washington Post article](#) argues, Santa Barbara County has already warmed by 2.3°C and Ventura county by 2.6°C. Incidentally, 2.3°C is over 4°F and 2.6°C is over 4.5°F.

Hence, one of the reasons that California is already experiencing severe consequences of the climate crisis in the form of droughts, heatwaves, wildfires, and so forth, is that we are already experiencing the temperature rise that is considerably beyond the limit that scientists tell us we should not pass.

What is even more worrisome is that if California continues to have a disproportionate temperature rise, then we will be firmly in the 2°C to 4°C range that David Wallace-Wells explored in such frightening detail.

As this person notes in their comment, it is altogether shocking that this information is not being better disseminated by the communities that are being hit the hardest, such as the little town of Ojai in Ventura County, which, being further inland than some places in the county, gets especially hot. In September of 2020, Ojai experienced its hottest temperature ever: 118°F.

*It amazes me how much firsthand experience that Santa Barbara is getting with environmental disasters, such as oil spills, wildfires, and global weirding, and is the birthplace of the modern environmental movement, but still cannot serve as an environmental-model for others to admire and be inspired by. As Wilson states: "If a place with Santa Barbara's predominantly green electorate and political class is unwilling or unable to change, who will?" And this is exactly right. Santa Barbara is a place that has been significantly affected by the climate crisis and has finally recognized the climate crisis at the political level, but is still not putting effective policies in place to help prevent these environmental tragedies from happening over and over again. It is truly up to my generation to take action and encourage radical changes in order to try and reverse the huge effects of the climate crisis.*

When it comes to the source of inaction on the climate crisis, we often focus on climate change deniers, people who refuse to act on the situation because they deny its reality.

However, acknowledging the reality of anthropogenic climate change is no guarantee that action will be taken to mitigate it. While there are a host of reasons that can keep knowledge from turning into action, it often boils down to economics. People are simply unwilling to make the necessary changes if they fear that it will harm the economy.

Although we might think that this only occurs in conservative and economically stressed areas in order to protect industries like coal mining, it happens in a wealthy and progressive areas as well.

Because Santa Barbara's chief industry is tourism, the city has, as *The Washington Post* article noted, been reluctant to significantly do anything that could curb car use, as most tourists drive to the region rather than arriving in other ways, such as by flying.

The difficulty is that this is a very shortsighted attitude. While Santa Barbara's economy may benefit in the short term, and the city will become less desirable as a tourist destination if the temperatures rise and dangers to the region, such as wildfires, increase.

*In the article they use the term 'environmental posers' to describe the gap between Santa Barbara's talk on the environment and its actions, and I think this term describes the majority of people, not just people from Santa Barbara. Yeah, we all are aware of climate change, we're not denying that, but what have we really done as a generation that is so profoundly different from what previous generations were doing? It seems that we just accept that climate change is a huge issue, but we aren't really doing anything that is going to make as big of a difference as we need.*

This is an excellent point. While we might think that *The Washington Post* article is just about Santa Barbara, as this person aptly notes, it really "describes the majority of people" in wealthy countries like the United States. "Yeah, we all are aware of climate change, we're not denying that, but what have we really done as a generation that is so profoundly different from what previous generations were doing?"

This really gets to the heart of the issue - and brings it home.

In wealthy countries like the US, many people associate happiness with wealth and its trappings. Hence, we are largely unwilling to change what and how we are consuming.

Unfortunately, consumption of the planet's resources is often directly related to greenhouse gas emissions. As a consequence, although many people often talk a good talk when it comes to the climate crisis, few walk the talk.

This need not simply involve personal action. For example, we could elect politicians that put a focus on mass transportation. As a consequence, Santa Barbara could still remain a tourist destination for people coming from the Los Angeles area and elsewhere. If mass transportation was attractive and efficient, it could become an even more appealing destination, as the freeways from Los Angeles to Santa Barbara are often congested.

*This is perhaps the reading I have enjoyed the most, both from English 22 and the little bit of reading we have done in this class, English 23. I enjoyed all of the personal stories told in this article and the pictures and captions that went along with it.*

Although I have said it before, and will no doubt say it again, communication is of central importance in mitigating the climate crisis. A well written (and illustrated) story that engages readers can be highly effective.

Engaging readers by way of personal stories can be effective because it puts people like us (sometimes rather than the issue at hand, in this case the climate crisis) at the center of the story. In this case, people exactly like us, or as the story focused on how the climate crisis is now impacting people in the Santa Barbara area.

*For students like those of us at UCSB that may consider themselves environmentally conscious, this article became an eye opener due to the fact that there are climate change issues occurring where we live ourselves. It was pressing to see the massive impact that cars have on the environment and how simple aspects of everyday life such as transportation become an issue to the climate...I am sure that many believe Santa Barbara to be a more progressive city considering its young population and awareness of social and political issues, but even cities such as ours are not doing enough to combat climate change.*

One of the things that helped make *The Washington Post* piece an effective article was that it simultaneously focused on local cause and local effect. In other words, the article both looked at how Santa Barbara is being impacted by the climate crisis, as well as what it is doing that is contributing to the crisis.

The author of the piece, Scott Wilson, was not required to take this approach. Instead, he could have focused on how actions across the country, such as in eastern states that burn coal to generate electricity or car use across the planet in another country are bringing about climate crisis.

In many parts of the world, this would have been the only way to tell the story, as many regions are contributing little to the climate crisis. As I have repeatedly noted, the poorest three billion people on the planet have only contributed 5% of greenhouse gas emissions. Hence, if we were to tell their local story, it would be entirely about effect (how the crisis was impacting their community), rather than anything that the region was doing to significantly bring about the crisis.

However, in Santa Barbara, we are – in a profound irony - significantly contributing to the crisis that is wreaking havoc with region, our home. What is worse, we are refusing to significantly curtail are these disastrous actions.

*After reading the article, "2°C: Beyond The Limit," I was left again feeling shocked. I feel like this is a pretty common theme for the first half of this class, so I'm not really surprised that I was left feeling this way. Having grown up in Southern California (San Diego) for all of my life, I'm completely embarrassed that I was THIS oblivious to the fires ravaging our state. Reading that La Paloma Ranch manager John Kleinwachter was forced to change what crops he could harvest effectively due to climate change. It's scary reading that crops that have been growing in California for over centuries now physically cannot grow.*

Another excellent point.

While we are often aware of the direct consequences that the climate crisis will bring to human beings, we often forget about the indirect consequences.

[California's agricultural production is not only greater than any other state in the US, is nearly twice that of the second most productive state \(Iowa\).](#) What's more, over 99% of the following US crops are grown in California: almonds, figs, olives, peaches, artichokes, dates, pomegranate, raisins, sweet rice, plums, walnuts, and more.

During particularly dry years, such as 2014 to 2015, [California's gross value of agricultural production declined by 8.6 percent.](#)

Climate change in California will likely significantly affect its agricultural production. This will not only impact California and the US, but the entire world, as about "[one-quarter of what California produces is exported around the world.](#)"

In general, climate change will impact agricultural production across the planet. As I have noted elsewhere in Climate Crisis 101, this is already happening in certain Central American countries, as well as portions of the Middle East. Unfortunately, this is just the beginning, as it will very likely result in reduced agricultural production and food shortages – in some cases famines - across the planet in the upcoming decades.

*The article did a great job of showing what climate is capable of to UCSB students. Showing pictures of the blatantly eroded cliffside had to spark some type of emotion into all of us; Talking*

about the future state of the DP the article said, “erosion could claim up to 78 percent of the city’s bluffside beaches by 2060.”

When we think of sea level rise, we often think of gradual increases that can be measured in millimeters or centimeters. Doing so encourages us to think that this is a relatively minor issue. However, when coupled with high tides and storm surges from the extreme weather that comes with climate crisis, this could result in major (and deadly) floods and serious erosion.

While this will be filled in coastal regions across the planet, here in Santa Barbara it will directly impact on our beaches and bluffs. As the Washington Post article (and this comment) notes, “erosion could claim up to 78 percent of the city’s bluffside beaches by 2060.”

As with the issue of temperature rise and agricultural production (mentioned above), this will have far-reaching implications. [In 2016-17, tourism brought \\$1.9 billion to the Santa Barbara area.](#) If Santa Barbara's iconic beaches, one of the biggest draws that the area offers, are significantly deteriorated, it could have a real impact on tourism in the area.

This is just one of many for reaching implications of the climate crisis that we often ignore. Yes, efforts to mitigate climate crisis will sometimes be expensive. However, the long-term impact of the climate crisis will absolutely be more expensive. When we get to Project Drawdown, this will become especially apparent.

*Being the epicenter for the grassroots environmental movement, I had liked to think that Santa Barbara had been doing its fair share to mitigate the climate crisis, but as I read through the article I found I was sorely mistaken. The severe lack of environmental regulation really opened my eyes to one of the main reasons why the climate crisis is so threatening to us now: because there are still people in positions of power that do not wish to see us change for the greater good at some relatively small sacrifice, instead pushing the county and its residents to remain within the status quo, perpetuating the problem that they claim to be seeking a solution for. My only hope is that the people who are taking or have taken this class as well, the people in my generation who recognize the problem we are facing and realize that something must be done about it, that we are the ones that will pick up where others have left off to guide us in the right direction towards a lasting future for our species on this Earth.*

As I, and other people in the class have noted, it is more than a little demoralizing that a wealthy city like Santa Barbara is doing little to mitigate climate crisis. Unfortunately, the same can be said of the United States, which is obviously a wealthy country.

However, like the person who made this comment, I have great hope that the people taking this class, and their generation in general will, to quote this person, "recognize the problem we are facing and realize that something must be done about it, that we are the

ones that will pick up where others have left off to guide us in the right direction towards a lasting future for our species on this Earth."

That is wonderfully said.

Let's be clear, it is absolutely unfair that this crisis has fallen on the shoulders of your generation. My generation and the ones before and the one after it did precious little to address this issue. Unfortunately, as I have noted elsewhere, since my generation is still largely in power, this is particularly frustrating.

It would not be at all surprising if people in the future vilified my generation for both doing more to bring about the climate crisis than any other generation, as well as for doing little to significantly mitigate the crisis.

My students and their generation are at a fascinating crossroad. If you do nothing, you are arguably even more blameworthy than my generation, as the consequences of the climate crisis have now arrived. When I was 20, all of the things that we are talking about (temperature rise, wildfires, flooding, heat deaths, and so forth) had not yet significantly manifested themselves. However, those impacts of the climate crisis are undeniably evident at this point.

So, you can either risk being vilified by the future even more than my generation or you can be remembered as the first generation that stepped up and began to turn all this around.

It's really up to you.

To again quote the person who made this comment, you can be the "the ones that will pick up where others have left off to guide us in the right direction towards a lasting future for our species on this Earth."

I think the solution of not using vehicles in this city is a bit of a complex take. Plenty of students rely on vehicles to get to and from classes and to get around the city with their regular days, and without it, public transportation would be overflowing and it would pose a great issue. I believe there could be other methods of lowering pollution and emissions that would not interfere as much with the everyday lives of the citizens here.

[Someone replied to this comment with the following:]

Regarding the complex issue of vehicle usage and its contribution to emissions, you have a valid point. It's true that many students and residents rely on personal vehicles for daily transportation. Completely eliminating vehicle use might not be feasible or practical, especially considering the limitations of public transportation. However, there are alternative solutions that can be explored to reduce emissions without significantly disrupting daily life. For instance, promoting carpooling, increasing the efficiency and coverage of public transport, and encouraging the use

of electric vehicles could be effective strategies. Additionally, the development of bike-friendly infrastructure and promoting cycling for shorter distances could also help, which UCSB already does a good job of considering that most people bike to classes.