NO PLANET B

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Sea levels are **rising.** Coral reefs are dying**.** Forests are being **depleted.** Deserts are expanding**.** Weather is becoming **unpredictable.** The world as we have known is changing. It doesn't seem to matter whether the shift is triggered by **human activities** or is entirely natural – now 97 percent of climate experts agree that **climate change is real** and that climate change is happening.

After being inundated with Facebook posts, tweets and angry protesters on the street, living through the stickiness of wet socks from trudging through puddles and being lectured about meat consumption, hybrid cars, organic food and clean energy, have we become desensitized to the problem at hand? We can plan for college, prepare for our future jobs, start saving for retirement, but we have failed to invest in the most important thing on which all this depends: our planet.

SINKING CITIES

Climate change is demonstrated most dominantly by sea level rise. According to the Intergovernmental Panel on Climate Change's (IPCC) fifth report in 2013, the last three decades have been successively warmer at the earth's surface. Much of the globe's warming can be connected to greenhouse gas emissions. In IPCC's report, levels of carbon emissions were the highest in recorded history from 2000 to 2010. The extra greenhouse gases in the atmosphere interact with radiation from the sun, causing the solar radiation to be absorbed by the atmosphere and produce heat. Instead of fostering a safe, livable climate, the additional human-induced gases produce more heat from the sun. This heat leads to the continual warming of the atmosphere, oceans and surface of the earth.

According to Dr. Harold Wanless, chair of geological sciences at the University of Miami and a leading sea-level rise expert, climate change is warming, expanding and acidifying the ocean. Wanless describes the melting of ice as an accelerated process, not a linear one. Models detailing sea level rise state that by the end of the century, the ocean water will have risen four to six feet. Wanless predicts it will be bigger than that.

"What we have in the atmosphere today could lead to 70 to 90 feet of sea level rise. The last time CO2 levels were this level, sea level was 90 feet higher than it is now and that is where we are headed," he said.

Moreover, many of the models describing climate change do not factor in desertification, where sand dulls the white of the ice and melts the ice sheets due to a lack of heat reflection back into the atmosphere.

HUMAN ROOTS

However, sea level rise is only one component of climate change. Beyond it, the IPCC notes that drought, torrential rainfall and heat waves will become more commonplace, oceans will become more acidic – killing coral and influencing sea life – and storms will only intensify.

"There are profound changes happening to the world system that will alter the way the world looks and the way the land appears," Dr. Gina Maranto, a professor and director of ecosystem science and policy at the University of Miami, said. "Land mass will be covered by water, animals and plants will move."

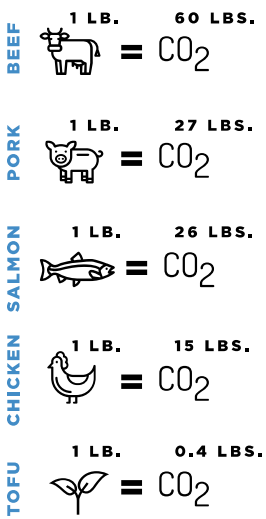
Maranto claims sea ice will be melted within 30 years, leading to a great northward shift of the boreal forests, the thawing of methane induced permafrost and the expansion of desert areas.

CHANGE WILL DIFFER

Just because climate change is caused by average global warming levels doesn't mean that the whole world will become warmer. Each region of the world will face different issues and adaptations. According to the International Panel on Climate Change, Central and South America will have regional shifts in precipitation, creating a loss in crop production, and will no longer have glaciers. Australia and New Zealand will face drought in their desert areas and increased rainfall and flooding in their tropical areas. For Africa, drought will drastically devastate food production. North America will experience more hurricanes and heat waves as well as harsher winters and more rainfall in the northern regions. In Europe, heat waves will become more prevalent. Finally, Asia will experience fewer cold spells, increased heat waves, decreased crop production and, in some southern areas, intense precipitation.

GETTING TO THE MEAT OF THE MATTER

One way to reduce your carbon footprint is to lower your consumption of meat. The choice to become a vegetarian or vegan is a personal one, but if you can't resist giving up that double cheeseburger, consider taking into account how much carbon is in your daily meals.



There is evidence that supports the idea that change in climate is an anthropogenic change, meaning we are the problem. If we know this, then why aren't we doing everything in our power to stop it?

In a survey done by the Pew Research Center prior to the United Nations Climate Change Summit in Paris of 2015, the countries with the highest levels of carbon dioxide emissions per capita, namely the United States and China, expressed less anxiety about climate change than those in nations with lower emissions per-capita. Only 18 percent of Chinese and 45 percent of Americans, compared to the global average of 54 percent, identified climate change as a very serious and important problem.

Everytime we turn on a light, use our phone or type on our laptop, we are contributing to carbon emissions. Every time we drive a car, take a flight, cook, tweet, connect to wifi, we are contributing to carbon emissions. We add to the climate change process every time we choose beef, buy new items, throw away trash. We always want more, we need more. We are fueling our current consumption culture at the risk of our future world.

Culture, politics and money intertwine as roadblocks to progression with climate change mitigation and adaptation policies. One issue is the human inability to prepare for the distant future. "We are not very good at thinking of the future as human beings. We evolved from small bands and we had limited horizons," Maranto said.

Furthermore, culture influences people's personal ideological positions. We can only think about so many things. People in well-developed societies will have a different perspective of imminent needs than people in under-developed communities. "If you are poor, you are concerned about rent and food. Your worries are going to be very different than a person who lives in a gated community," Maranto said.

Personal upbringing can additionally contribute to cultural perspectives of climate change. People who have contact with wildlife growing up form a better bond with the environment, according to Maranto. Adults who grew up in an inner-city environment have a different relationship with nature than adults who grew up in wealthier households and had opportunities to explore the environment, whether it be their own backyard or on vacation.

Politically speaking, governments subsidize oil companies and oil companies pour money into the public sphere to stop the public from believing in climate change. A dominant aggressor, Koch Industries – a multinational corporation with subsidiaries involved in manufacturing, trading and investments – donates millions of dollars to political action committees, think tanks and politicians to keep oil as the world's main energy source. Cheap, efficient energy is money, and people who have power and money will do everything they can to keep it that way.

The issue is also related to political parties, according to Wanless. Both men and women of all political parties have often failed to represent the public in issues regarding climate change. "We have politicians that are no longer representing the people they represent. They have purely sold themselves to somebody with money," Wanless said.

Furthermore, many politicians, much like basic human nature, are concerned with their elected term only. The public and governmental institutions are not well-suited to make decisions about what will happen in 50 years from now, and often a politician's mindset can revolve around when the next election is, according to Maranto.

ADAPTATION

Despite the daunting news and reluctant waves of change, change is happening. Obama introduced the Clean Power Plan, California has started a carbon cap and trade agreement and for the first time in history, nations across the globe set attainable goals to curb carbon dioxide emissions in the Paris Agreement of 2015. There is hope for the future, but lifestyle changes are still necessary. Especially with President-elect Trump's plans to dismantle the Clean Power Plan and disavow the Paris Agreement, we need to see our roles.

Climate change mitigation, or reduction, and climate change adaptation are both necessary to preserve the planet. We need to admit there is a problem at hand and prepare for the future. "The best thing we need to do is realize it [climate change]," Wanless said. "It will start to hit home when you tell them their house cannot be sold, then people will realize the mess we are in."

Miami specifically needs to adapt mitigation and adaptation policies. The current mayor of Miami beach, Philip Levine, has invested in infrastructure to combat rising water levels, such as saltwater pumps; however, according to Wanless, there will be a point where projects will cost too much. Wanless suggests that politicians begin to look at relocation plans to adapt to climate change. With the projected sea level models, Wanless believes Miami should be planning for inundation.

> **"WE ALWAYS WANT MORE, WE NEED MORE. WE ARE FUELING OUR CONSUMPTION CULTURE AT THE RISK OF OUR FUTURE WORLD."**

Globally, many countries still see the carbon consumption culture as the only means of advancement. When the priority of a country is development and bringing people out of poverty, often coal is placed as the solution and climate change is shoved to the wayside. However, the most vulnerable people on the globe will be impacted the most by climate change. In a study by The World Bank, researchers found that increased droughts, storms and heat waves will influence crops and create widespread famine in poor agricultural communities. Food safety is matched with water scarcity. Furthermore, small island communities could be wiped out entirely. Presently and even more so in the future, climate refugees will increase and people will fight over resources. The impact of climate change has the ability to destabilize nations and lead to war, according to Wanless who identifies this trend with the current political situations in Yemen and Syria. "Global stability should be a priority," Wanless said.

The future may look grim, but policies are coming into action and will continue to come into action. Yet, it is important to realize that policies alone will not save the earth. A lifestyle change, a cultural and psychological change, is necessary to adapt to climate change. The luxurious American lifestyle is feed by carbon emissions. Our whole life we have been able to eat whatever we want, buy whatever we want, use whatever we want without any question. This cannot continue in full.

"We are asking to fundamentally change the very way people are living," Maranto said. As a society, a new collective conscious needs to be adapted. In small steps, such as reducing red meat consumption, employing reusable resources, voting for representatives that value the environment and purchasing energy efficient products, we can reduce our carbon emission. "Small actions can add up," Maranto said. By realizing climate change is a problem, we can begin to prepare for the future.

"For any student, look at climate change as a mega opportunity to do something and have a huge impact on the world. It doesn't matter if you are law or architecture, the seriousness of what is happening has made it the center of attention," Wanless said. "There are unbelievable opportunities to do incredible things, from how to get carbon dioxide out of the atmosphere to redefining property rights."