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Ecosystem in South America

The belief in global warming and whether or not it is real can either be a political or economical tactic. Politicians use it to attract or push away political parties, and companies use it as a threat against consumers to make the consumer feel bad about the companies' disregard for the environment. No matter what, global warming is real, and it can be defined as the rising of the Earth's atmospheric temperature. The consequences of global warming are seen everywhere: Rising sea levels, increasing temperatures, more consistent and rigorous weather events are just a few of the many negative consequences that challenge the world. Often forgotten is the importance of the Southern Hemisphere in reducing global warming. Because of the alternating seasons, the Southern Hemisphere plays a major role in the progression of reducing the extreme climate crisis that people all over the world are faced with. Countries and people all around should expedite the measures that countries - Specifically in South America - can take to improve the climate, preserve the rainforests in South America, and reduce the amount of food waste the world produces.

To begin, global warming is a real threat that our world faces however there are steps that can be taken to reduce the amount of global warming. Individual changes might not be enough to cause a drastic change to the amount of carbon dioxide being released into the atmosphere, but when countries come together to pass laws and to establish changes then the world can see a much more widespread change in the rate of carbon dioxide being released. Specifically, in

South America, there is a vast opportunity for growth and change in regards to the climate crisis. For example, South America is known for its beautiful tropics but those tropical plants can actually help to draw out some of the extra carbon dioxides in the air. Countries are starting to take heed to examples like this of where improving and protecting the ecosystem leads to positive changes in the climate crisis. One major country that is making significant changes in Costa Rica. Costa Rica is working to become carbon neutral by 2021. This means that the country will work to reduce the amount of greenhouse gas emissions to zero (“Solutions of Global Warming in South America”). Greenhouse gases are gases that absorb and emit energy in the atmosphere. Examples are water vapor, carbon dioxide, and methane. (“Greenhouse Gas”). The emitting of energy is what causes the Earth to have a “greenhouse effect”. Like a plant greenhouse, too many of these gases being released into the air causes the Earth’s temperature to rise, which, as expected, can lead to several problems that the world is facing today. Costa Rica chooses to reduce the amount of greenhouse gas emissions to zero which helps to reduce the rising temperature of the Earth. It must be noted that Costa Rica is a small country. Many would be led to believe that the changes that are being made will have little effect on the environment. However, they are very wrong. Costa Rica may be small but is reducing the most amount of carbon dioxide that they can release. This will reduce the amount of global warming, and it will better the ecosystem that is in the country of Costa Rica. The plants that they grow will be able to grow faster and healthier due to the better climate that the country is working towards. Excess carbon can be released from burning gas which also causes pollution. Choosing to cut down on the gas that is being burned will lead to cleaner air for the people, the plants, and the animals. Most importantly, they are leading an example to other countries. Costa Rica is proving to the world that reducing the amount of greenhouse gas emissions is possible. If a third-world country

can choose to better the environment, then countries like America can do the same. They are already a green leader with 96% of its electricity coming from a renewable source. They have also increased their forested area by 10 percent in the last decade. The increasing of the forest will help to draw out the excess carbon dioxide and with the country not emitting carbon dioxide into the atmosphere they are not only helping the problem, but they are helping to fix some of the problems that other countries are creating.

Another major country making changes is Brazil. This country has contributed to the cause as the people and the government has demonstrated enormous potential by reducing emissions from deforestation and from forest degradation. Brazil has also demonstrated enormous amounts of potential by reducing emissions from vehicles - as one may know, produces a large number of emissions. According to research, "Detailed analyses of publicly available satellite photos show that Brazil has reduced deforestation in the Amazon enough over the past five years to lower heat-trapping emissions more than any other country on Earth" ("Solutions to Global Warming in Latin America"). Brazil's efforts to reduce the amount of deforestation is a wonderful step in the right direction. Reducing the amount of climate change is critical in maintaining a balanced ecosystem all over the world. The animals and the plants that are in South America can affect animals and plants that are on the other side of the world. In order to maintain a balance in the environment, countries need to follow in Brazil's footsteps to stop deforestation and forest degradation before the climate crisis gets worse.

Additionally, preserving the rainforests in South America will take the pressure off of the Northern Hemisphere during the winter months- reducing global warming. The Southern and Northern hemisphere has alternating seasons. When it is wintertime in the Northern hemisphere, it is summer in the Southern Hemisphere. Winter means that the trees are dormant, so the job of

taking all of the CO₂ out of the hemisphere falls onto the southern hemisphere. However, the Southern hemisphere has much less land than the Northern hemisphere meaning that it has a much harder job taking all the CO₂ out of the hemisphere. This job has become hard/harder due to the cutting down of trees. Restoration of the rainforest could take out more Carbon dioxide from the atmosphere, reducing the amount of global warming. Tropical plants take in carbon dioxide like all plants and release oxygen into the atmosphere. According to the Union of Concerned Scientists, “When trees are cut down and burned or allowed to rot, their stored carbon is released into the air as carbon dioxide. And this is how deforestation and forest degradation contribute to global warming. According to the best current estimate, deforestation is responsible for about 10 percent of all global warming emissions.” If deforestation is such a major contributor to global warming emissions, then preserving the rainforests can make a major difference. The rainforests are filled with so many different plant species. Biodiversity assists in the efforts to reduce negative consequences because some plants might breathe in more carbon dioxide than other plants. Additionally, biodiversity creates a more balanced and functional ecosystem which allows for the plants to live longer.

Lastly, the actions of the people have an effect on global warming. Luckily, many participate in reducing the amount of waste globally which can help improve the number of gases and energy being absorbed and released in the atmosphere. When food is wasted, all the energy that not only man put in, but also all of the energy nature put forward is being wasted. When the food goes to the landfill and rots, it produces methane - which has been proven to be more dangerous than carbon dioxide. Methane is a greenhouse gas that is more potent to the environment as well. Large quantities of methane being released into the atmosphere cause an extreme increase in the amount of energy being released. Energy-related to heat, so more energy

being released leads to the temperature of the Earth increasing. Reducing food waste is an easy fix to a very critical and dangerous problem. People that participate in saving the Earth through their lack of food waste may take various steps that are very easy to follow. By planning ahead and buying controlled, needed proportions, one saves energy not only for themselves but saves energy for an environment much bigger than themselves. Additionally, freezers can be plenty useful as food can be just as nutritious and have longevity. By buying frozen foods or preserving fresh foods by freezing them, one can avoid throwing away good food. Being more frugal and creative is a solution as well. Many may think it to be cheap, but with recipes and resources around the world, people can make more of what is there rather than wasting money. Preventing food waste is the most effective way to shrink its impact on the planet. When avoiding the excessive purchases of food, one can save the land, water, and energy that would have been used to make it. And awareness is a good first step; according to ReFED, educating consumers about food waste could prevent 2.3 million tons of greenhouse gas emissions. (“Fight climate change by preventing food waste”). By choosing to eliminate a needless habit, one can help the condition and health of the entire planet. Food waste leads to many problems. It emits a greenhouse gas that is extremely harmful to the environment. Many people all over the world waste food due to overconsumption. Companies love to sell extremely large proportions of food by advertising it as a better way of eating. However, these practices are causing dangerous consequences. By choosing to follow a couple of easy steps, entire countries can reduce the amount of food that they are wasting, therefore reducing their energy waste.

To conclude, the life of a person can end, but the effects of one person’s ambitions can leave a longer impression than one can imagine. Climate change affects more than one person. Entire populations are impacted- animals and plants included. There are ways to help better the

climate crisis that the world is in and there are countries that are already working to reduce the negative effects that certain actions are having on the environment. For example, Costa Rica and Brazil are two South American countries that value the health of the Earth. They are working to implement plans and laws that will decrease greenhouse gas emissions, deforestation, and forest degradation. All of these activities cause excess greenhouse gases to be released into the atmosphere. Greenhouse gases absorb and release energy. Energy relates to heat so when they release this energy, the temperature of the Earth increases. So, reducing the participation of people and countries in these activities will actively reduce the amount of energy being released into the atmosphere. Additionally, preserving the rainforests will help reduce the amount of global warming as well. Tropical trees and plants that are found in the rainforest breathe in the extra carbon dioxide that is in the air reducing another presence of major greenhouse gas in the atmosphere. And lastly, reducing the amount of food waste will help to improve the climate crisis. When food is left to rot and spoil in landfills, then it releases methane into the atmosphere. Methane is an extremely potent greenhouse gas that dramatically increases the rate of global warming. By following a couple of lifestyle changes, the amount of food that communities waste can be reduced. Global warming is a real problem that so many around the world are dealing with. There are a plethora of negative consequences from global warming that are even being seen today. There are countries that are working to reduce their effect on a bigger issue but it is up to the people of this world to care about an issue greater than themselves.

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