

Recycle: A method to save our Earth

Climate change and global warming have been one of the most prominent issues in today's society. The overall carbon consumption of all people increased significantly ever since the 1900s. Combustion of fossil fuels, industrial processes, and deforestation only contributed to an increase in the carbon emissions in the atmosphere. Net Zero 2050 is the last straw drawn by the human population. Net Zero 2050 is a concord to prevent the worst outcome due to climate change and global warming that is out of hand. Net Zero is the state in which the greenhouse gas that enters the atmosphere is equal to those that exit the atmosphere, resulting in no accumulation of greenhouse gases, hindering further development of climate change. This essay would address the methodology that would address fundamental principle steps to achieve Net Zero by 2050, and the following method is to Recycle.

Everyone would be familiar with the term "climate change", "global warming", and "greenhouse gases". We already heard those following terms in our everyday lives. We all know that climate change is urgent new in today's society and that it is a major problem that we must cooperate to find an adequate solution to. Climate change is a struggle that we struggled with for decades. While the problem of climate change only got more severe, we never were able to find a solution to it. Climate change itself may be crucial. However, what affects people the most is the side effects of climate change. Change in temperature, change in sea levels, extinction of keystone species due to change in habitat, and numerous natural disasters are those that affect us to a larger degree. It is stated that an increase in global temperature is directly correlated to the increased occurrence of droughts and storms. Droughts are caused as higher temperatures dry up the ground, and storms take place more commonly since higher sea levels contribute to creating stronger storms than ever before. Strong storms impose a threat to so many people. Typhoon Goni, a storm that swept the Philippines, Vietnam, Cambodia, and Laos in 2020, is recorded to be the strongest storm. Typhoon Goni killed at least 10 people and displaced about 517,000 people as Goni destroyed 80% of total shelters in the Philippines. The following damage is exclusively in Phillipines.

It will take hours, days, and even weeks to address all of the problems that are directly and indirectly caused by a big event of climate change. For this reason, we all know about "climate change," and we all know that we need to find a solution to it. Net-zero 2050 is not a solution that would entirely solve the problem of "Global Warming." However, doing something is better than doing nothing. Through net-zero 2050, we are taking initiative to allow more people to follow our footsteps until so many people contribute to the Net Zero 2050 movement, eventually solving the issue of Climate Change. This simply defines the importance of Net Zero 2050. It is merely a first step for human beings to make long-lasting changes.

Why do so many countries want but cannot stop climate change? After years of pondering, the UN decided to show establish Paris Climate Agreement, in which numerous countries agreed to decrease carbon emissions. So many countries around the road already agreed to decrease the overall emissions of greenhouse gases around the world. To be more specific, all countries had to reduce their carbon emissions so that there is no more than 2 degrees increase in the overall global temperatures. Nevertheless, these guidelines are far too short to make live changes to our society. Frankly, the governments around teh world are simply not that enthusiastic enough to regard the issue of climate change in a serious manner. No particular government was so eager to find a solution to the grand issue of climate change. Also, most of the pollutants and greenhouse gases are because for economic purposes. Why would a country take risks by not using their ordinary methods of the industry?

The primary reason for no particular country to show exceptional progress in the following movement is that climate change is an open-ended problem. There are so many answers to this problem. We can save energy, go to Mars, or start using alternative energy forces. Most of the solutions that I have mentioned are a bit hard to achieve for each individual. Nevertheless, the conventional notion of "Recycle" is a solution that everyone can show progress on. There are so many ways to practice the following solution. The availability of numerous solutions sometimes makes it

harder to make a decision. Recently, more companies and the countries themselves are put under more pressure to make more changes. However, I believe that the contribution of companies and countries is not the most fundamental aspect of this movement. Just like how there are more human individuals compared to several countries and several firms in the world, I believe that the contribution of the efforts of individual human beings outweighs those of companies and government bodies.

Individuals like me, who has no authority over anything, still can make positive changes regarding the issue of global warming. Increasing the number of alternative energy sources or inventing a new source of energy via the usage of thrown-away garbage are not tasks that ordinary people can do by themselves. However, there are still simple but crucial steps that end up making big changes. One can turn the lights off when it is not being used. Turning the lights off when not needed would reduce the energy that is being used, allowing it to be used later on. One can help by recycling thrown-away garbages to ensure that no more trashes are flowing into the rivers and the oceans. Lack of resources is a concern that arose in recent society most the people. Through recycling, we can conserve resources. Used resources are being recycled and are turned into different products that can be used for other purposes. Without recycling, new products are solely made of raw materials from Earth. However, there are limited sources to our Earth. One of the main causes of climate change is burning fossil fuels, and fossil fuels are one of the most common raw sources that we use. Before the 1920s, the U.S. ran programs to recycle used materials, and throughout World War II, the U.S. was able to reuse about 25% of total waste. The conceptuality of recycling rose recently again, and the composting and recycling rate in the U.S. started from 7.7% in 1960 to 30% in current society. Recycling can show benefits to the economy as well. Recycling allows each individual to use resources efficiently. Thus, we are conserving raw resources. Since recycled materials are already processed once, the cost of manufacturing them again is much cheaper both in the scope of the environmental aspect and economical aspect. For instance, creating something with used aluminum cans use 95% less energy than creating the same object using aluminum with bauxite.

Recycling starts with the most crucial step of classifying thrown-away garbages, and this is the task that all people can do. Many countries invest in recycling infrastructures. California showed that there are substantial benefits of investments in recycling industries. It is said that there is a gross annual revenue of \$14.2 billion, an annual payroll of \$2.25 billion, and employment of over 84000 people. Recycling not only solves environmental problems, but it solves unemployment problems as well. It is told that recycling creates more jobs than disposal. Recycling and reuse provide 9 times more jobs than landfills and as many as 30 times more jobs. It is said that if the recycling rate in the United States increases to 75% by 2030, then there would be 1.1 million new jobs. Around the world, the UN estimates that recycling and reuse would provide 60 million new jobs. Recycling would create following new jobs. Some people should collect, process, and prepare materials; some people would make new products from recycled materials; there should be people who reuse and fix some of the discarded items.

Recycling showed lots of environmental benefits as it helps save energy, save natural resources, prevent the accumulation of greenhouse gases, and discard pollution. Stanford Univerisity showed numerous efforts in recycling and showed lots of progress. Stanford reduced 62% of its waste and reduced the landfill by 35%. Standford recycled about 70,481 million BTUs of energy through recycling paper, glass, metals, plastic, and other organic materials. The following amounts of energy are equivalent to powering 613 homes. Stanford University reduced greenhouse gas emissions by 2447 metric tons of carbon equivalent, which is the same as removing 1889 cars off the road each year. Stanford further saved 32,115 trees and reduced 414 tons of iron ore, coal, and limestone by reusing 288 tons of ferrous scrap metal.

Different sources save energy to a different degree. Recycling aluminum cans helps save 95% of the energy required to make the same amount using raw aluminum sources. One ton of recycled aluminum saves 14,000-kilowatt-hours of energy and 40 barrels of oil. Recycling newsprints can save 601-kilowatt hours of energy and 1.7 barrels of oil. Recycling office paper saves 4,100-kilowatt-hours of energy and 9 barrels of oil. Recycling plastic saves 5,774-kilowatt-hours of energy and 16.3 barrels

of oil. Recycling steel saves 642-kilowatt hours of energy and 1.8 barrels of oil. Recycling glass saves 42-kilowatt hours of energy and 0.12 barrels of oil. 5 gallons is equivalent to 0.12 barrels of oil. Therefore, there are lots of waste being produced in the absence of recycling. Only by recycling aluminum cans and newspapers, we can save the equivalent energy of regulating 15 power plants. Processing raw materials are the portion that uses lots of energy. 3% of total energy consumption in the U.S. is used to produce packaging. Recycling paper decreases the energy required to produce paper from scratch in half. Recycling a pound of steel saves enough energy to light a 60-watt bulb for a whole day.

Recycling different products give different benefits. Recycling paper products saves trees. A Sunday New York Times is equivalent to 75,000 trees. 500,000 trees are being used to create each week's Sunday newspapers. If all of the newspapers are recycled, then more than 250,000,000 trees are going to be saved. Recycling plastics helps reduce the amount of oil drilled up from the ocean floor. Conventional plastics are made from fossil fuels, a product of the oil and gas industry. It is told that plastic production from fossil fuels is only beneficial when plastics are byproducts of the industry and the main production is energy. Thus, it is heavily encouraged to prevent the usage of single-usage plastics. Recycling aluminum saves the raw sources of aluminum. This is crucial since as said before, recycling aluminum saves around 95% of the energy needed to make new metals from raw sources. Most landfills are located in poor neighborhoods. People living there spend their daily lives next to the landfills. Recycling is important since landfills may be in someone's home.

The United States of America is also one of many countries struggling in regards to throwing away garbage. Styrofoam, used papers, empty bottles, and cans are commonly thrown away that can be found in landfills. 300 million people are living in the United States. However, on average, each produces about 3.5 pounds of trash every day. This means that there is a total of 18,433,779,281 cubic feet of trash. If the U.S. were to put all of its trash in one giant landfill, it will cover 1000 acres of land with a height of 400 feet. If this trend were to continue for a century, the landfill will cover 160,000 acres with a height of 400 feet. This landfill full of thrown-away garbages is 32 times larger than the Great Pyramid. Landfills emit anthropogenic methane. However, methane is a very powerful greenhouse gas as it has a global warming potential that is 28-34 times that of carbon dioxide. However, we have hope. It is told that landfills are the third-largest source of methane in the U.S. Recycling thrown away garbages would decrease the amount of trash in the landfills. Thus, the overall methane emission would show a decline. More amount of trash out of the landfills is equivalent to saving so ecosystems and hindering the further effects of global warming.

We, as individuals without any authority, only provide the materials that large industries can use to make changes. Thus, without us, none of the following benefits would be accomplished. We have to start recycling thrown-away garbage and help classify those garbage through types to help later industries to recycle the following materials to make new goods. It is time to make a remarkable first step to make our world a better place. Make Net Zero 2050 not a dream but a future.

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