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International Environmental Agreements on Climate Change

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1. Introduction

Climate change is a serious issue that has an impact on every individual in the world, and it comes with many consequences. Some issues stemming from climate change include rising sea levels, weather patterns becoming more extreme and the rise in global temperature (United Nations Goal 13, 2018). Greenhouse gas emissions are currently at their highest levels ever, and they are the main reason why climate change is such a prominent issue. According to the United States Environmental Protection Agency (2017), the global greenhouse gas emissions stemming from human activity increased by 35% between 1990 and 2010. These greenhouse gases include carbon dioxide, methane, and nitrous oxide. These emissions primarily originate from the burning of fossil fuels, and the production and transportation of oil, natural gas, and coal. The increase in greenhouse gas emissions can cause a rise in the global temperature which comes with devastating results. If there is a global temperature rise of 2 degrees Celsius, then 99% of the world's coral reefs will die, and Central America's rainforests will decrease by 30% (Markham, 2018). The coral reefs are home to thousands of species that play an important role in the world's food chains. These are only a few of the many catastrophic results the world would see with the temperature rise. If no action is taken against climate change, the average surface temperature of the world will rise to at least 3 degrees centigrade (United Nations Goal 13, 2018). A temperature rise that significant would be tragic for the entire world. We could possibly see the sea levels rise so much that islands and homes would be destroyed forever. Copious amounts of animals and ecosystems would die off as well.

Action against climate change needs to be initiated for the world to sustain development by limiting environmental degradation. As mentioned before, climate change can impact the environment negatively in a tremendous way and put many lives in jeopardy. The urgency of this subject is commonly understated, because individuals do not understand the severity of issues climate change can cause. In order for society to thrive and survive, we must continue to develop. Development, specifically sustainable development, is not possible with the threat of climate change hanging over the world's head. Sustainable development is the ability for a country to meet its current needs to develop without jeopardizing the future generations' ability to meet their own needs (Kates, 2018). To promote sustainable development, the United Nations created 17 sustainable development goals. The purpose of these goals is to make sustainable development easier to grasp and to limit the devastating impact of climate change on the world.

The UN hopes to reach each and every goal by 2030 (United Nations, 2018). There are three main pillars of sustainable development which include environmental protection, economic development, and social development (Barbier, 1987). Today, environmental protection is the primary pillar because there is an urgent need to protect and sustain the environment. All 17 of the sustainable development goals fit under one or more of the three pillars. Goal 13 of the sustainable development goals focuses on climate action. The purpose of this goal is to combat and limit the impact climate change has on the environment. This goal continues to grow in importance as climate change becomes a more prominent threat. One way to promote goal 13 and sustainable development is through the use of international environmental agreements.

Countries have been using international environmental agreements as a way to address concerns related to climate change for a while now. International environmental agreements, also known as IEAs, are used to protect the world's natural resources and promote climate action. There are many elements needed to create an IEA. Some of these elements include levels of investment in green technology and specifications on greenhouse gas emissions reduction. Some of the popular international environmental agreements that have recently been used in the world include the Kyoto Protocol, the Copenhagen Accord, and the Paris Agreement. The Kyoto Protocol was adopted in 1997 but was not fully initiated until 2008. One agreement was never officially adopted, which is the Copenhagen Accord, but it was negotiated in 2009. The Paris Agreement was implemented in 2016. These types of agreements are a great way to encourage climate action because they include countries all over the world.

The rest of the paper is structured as follows: Section 2 reviews the literature that provides a theoretical foundation to the IEAs and highlights the issues that affect the IEAs. Section 3 examines the existing IEAs (such as the Kyoto Protocol, the Copenhagen Accord, and the Paris Agreement) and the effectiveness of these IEAs to sustain the environment. Section 4 provides the concluding comments.

2. International Environmental Agreements

International environmental agreements are instruments used to address climate change and help protect the world's natural resources. IEAs include numerous countries around the world and urge them to take action to conserve our environment and stop temperatures from

rising. These IEAs can be made to protect countless issues, but the agreements focused on in this paper concentrate on the climate, and emissions levels. The objective of these IEAs is to combat climate change to protect the environment, the people on this earth, and to encourage sustainable development.

2.1 Features of IEAs

There are many features of IEAs. First, all international environmental agreements are voluntary (Battaglini and Harstad, 2016). There is the opportunity to opt-in to join these agreements by negotiations. It is possible that all the countries in the world could opt-in to participate, although this has not been the case always. The Kyoto Protocol had 38 developed countries in the second commitment period, and the Paris Agreement had 195 signatories overall. Next, IEAs on climate change specify emission levels and/or investment levels on green technology, and the participants negotiate those levels (Battaglini and Harstad, 2016). Emission levels specify how much a country will cut down its greenhouse gas emissions based on an existing level of greenhouse gas emissions. There are two ways technology can be used to cut down emissions; a country can lower its energy consumption or see improvement through investment. Investment refers to how much money a country will invest in new green technology.

There are four main features of IEAs: greenhouse gas emissions levels, investments on green technology, duration of agreements, and participation. These are all interconnected, and each feature plays an important role in IEAs. If the length of the agreement is short, then the investment in green technology will be smaller. If the number of countries participating is small, the duration of the agreement will also be shorter. This is due to the expectation that more countries will join the next negotiation round. There are two major issues that come along with these agreements. The first issue is the free rider problem, which is when countries choose not to participate in an IEA but still reap the benefits of the agreement (Battaglini and Harstad, 2016). These benefits include the reduction of greenhouse gas emissions and the protection of the environment. The second problem is the holdup problem. Countries will not invest in green technology as much in shorter agreements, because they will be expected to reduce their emissions more in the next bargaining round (Battaglini and Harstad, 2016). This would be expected because they would have a larger stock in green technology.

2.2 Types of Agreements

There are three main types of agreements. The first type of contract is a complete contract. In complete contracts, countries negotiate both the emissions levels and investment in green technology they aim to achieve (Harstad, 2016). Countries will agree to first-best levels, or known as the most desirable levels achievable with the situation at hand, because both emissions and investments are contractible (Harstad, 2016). If there is a large pollution shock when a complete contract is in place, then the steady state will be returned to after the transitory phase is over. Harstad's (2016) model predicts that in the event of such a shock, the steady-state will return in two periods. This is because investments are included in the agreement. When the shock happens the greenhouse gases stock will increase. Investments in the next period will increase to offset the greenhouse gases stock which will then decrease the emissions level. The greenhouse gases stock will go back to its original level due to the increase in investments. In the next period, technology levels will still be high, so countries will not invest until the investments go back to normal levels and countries will be return to their steady-state (Harstad, 2016). The holdup problem is not an issue with complete contracts, because investment levels are negotiated. The free rider issue does arise in complete contracts because both emissions and investments are negotiated which makes the benefits of free riding larger. Non-participating countries will free ride during complete contracts because the benefits are larger. The benefits of free riding a contract with a lot of participants is also larger, because more participants mean a larger reduction in pollutants is required. A larger reduction in pollutants creates greater benefits for the non-participating countries who are free riding.

The next type of contract is an incomplete contract. In such a contract, countries only negotiate the emissions level they would like to reach, and the investment level is not negotiated (Battaglini and Harstad, 2016). Countries still have the option to invest, but it is not specified in the contract. Countries are more likely to underinvest in such a contract, because then they don't have to spend more money on developing new technology as the investments in green technology is not negotiated explicitly (Battaglini and Harstad, 2016). As a result, the holdup problem arises in these contracts. Investments are not specified so countries will put off investing in case the next contract is a complete contract. The underinvestment and holdup problem result in a small amount of investment in green technology, and that makes signing a short-term contract costlier. Signing the contract is costlier because smaller investment means less technology, and the lack of technology makes reducing emissions more expensive. Countries

must decide if they want to sign a costly short-term agreement. They will wait to sign a long-term contract if the benefit of waiting outweighs the cost of signing a short-term contract (Battaglini and Harstad, 2016). If the number of countries entering into the agreement is small, the benefits outweigh the costs and they should wait to sign a long-term agreement in the future. The holdup problem in incomplete contracts limits the benefits of free riding (Battaglini and Harstad, 2016). Investments are decreased, meaning the benefits of free riding are also decreased.

The last type of contract is no contract at all. Neither emissions nor investments are negotiated. Countries can do whatever they please, and this is known as business as usual (Harstad, 2016). A country will pollute a smaller amount if their pollution levels are high and if they have good technology. If a second country has better technology than the first country, then the first country will pollute more (Harstad, 2016). This implies countries with strong technology are expected to pollute less, while the other countries will pollute more. This drives a country's willingness to pay for new technology down, meaning investments are low when there are no contracts.

2.3 Length of the Contract

IEAs can be short-term or long-term. In short-term agreements, countries do not commit to the distant future. In such agreements, it is difficult for countries to invest and develop new technology as the agreement does not last very long. If a country pollutes less than the business as usual level and has good technology, then they will have a poor bargaining position in short-term contracts (Harstad, 2016). This is because when the next contract is negotiated, other countries will expect them to commit to a lower emissions quota, while the other countries will commit to higher emissions quotas. This leads to the holdup problem in short-term agreements. Countries anticipate this, so they do not invest in new technology during the agreement. The holdup problem makes free riding less appealing. This is the same concept as the incomplete contracts. Investments are not increasing due to the holdup issue, so the benefits of free riding are also not increasing. The holdup problem also leads to emissions being higher than first-best levels, because countries are discouraged to invest (Harstad, 2016). The underinvestment issue won't be as large of a problem if the cost of technology is high (Harstad, 2016). Countries will be more willing to sign a short-term contract if the cost of technology is high, because that makes investing costlier. If a country's technology is not very strong, then reducing emissions will be

costlier to them. In this case, short-term agreements are not ideal (Harstad, 2016). This is because there is not enough time to develop new technology, which will lead to the underinvestment issue becoming more severe. If there are not very many countries willing to participate, then a short-term agreement will be signed. Participants decide to sign a short-term contract because it is assumed that more countries will participate in the next bargaining round (Battaglini and Harstad, 2016). Overall, if investment is considered valuable then a short-term agreement is worse than business as usual (Harstad, 2016). This implies short-term agreements can potentially be worse than no agreement at all.

Long-term contracts give countries time to develop new green technology and decrease emissions. A long-term contract helps to diminish the holdup problem. The problem will only arise in the last period of the contract. Countries will stop investing in the last period, because it is cheaper for a country to reduce emissions if they have strong technology (Harstad, 2016). Other countries will then expect a greater reduction from the countries with good technology in the next bargaining round, so the countries with strong technology will avoid investing in the last period of the agreement. If a country has good technology, they will have to agree to a lower emissions quota which will be harder to achieve. This will then encourage more technology development (Harstad, 2016). Long-term agreements are ideal when investment levels are low, because they encourage growth in green technology. Investment levels are lowest when technology is weak and long-lasting, and when the number of participants is high (Harstad, 2016). Long-term agreements do come with some issues. The biggest issue being free riders. The longer the agreement, the longer other countries get to free ride and reap the benefits (Battaglini and Harstad, 2016).

The optimal length of a contract depends on multiple factors. One factor is the expectations of the next agreement (Harstad, 2016). If the next agreement is expected to be bad, for example business as usual, then a longer contract now is favored. If the shocks were known and could be accounted for in the contract, the optimal length would be infinite (Harstad, 2016). This is not possible, so all contracts will have a finite timeline. The holdup problem is decreased if consuming the correct amount of energy is more important to a country than their future bargaining position (Harstad, 2016). When this happens, the optimal length of the contract will decrease, because participants don't need to worry as much about the holdup problem. The optimal length of the contract will be longer if technology is weak and long lasting (Harstad,

2016). Longer contracts give participants time to develop new green technology. The same reasoning is used for the underinvestment problem. When the underinvestment problem is severe, then a longer lasting contract is preferred.

3. Previous Agreements

There are three previous IEAs that will be explored. As mentioned before, the IEAs being investigated in this paper are the Kyoto Protocol, the Copenhagen Accord, and the Paris Agreement. These three IEAs were all made to sustain the environment and promote climate action, but they all still have their own unique features.

3.1 Kyoto Protocol

The first IEA is the Kyoto Protocol. The Kyoto Protocol was adopted in 1997, and it has two commitment periods. The first commitment period went from 2008 to 2012. Most countries committed to reducing their emissions by 8% compared to base year levels in the first commitment period (Almer and Winkler, 2017). The second commitment is covered by the Doha amendment, which goes from 2013 to 2020. The countries participating in the second period committed to reducing emissions levels to at least 18% below 1990's levels (European Council, 2018). This protocol specifies emissions levels in developed countries which are legally binding; it does not include developing countries (European Council, 2018). In the second commitment period, there was 38 countries participating which includes the European Union and its 28 member states (European Council, 2018). There are three mechanisms participants can use to reduce emissions. The first mechanism is emissions trading. This mechanism lets countries trade their emission units back and forth. It redistributes the amount a country must reduce their emissions by (UNFCCC, 2008). The second mechanism is joint implementation, and it lets participants invest in projects in other countries that count towards the investing country's emissions reduction (UNFCCC, 2008). The third mechanism is the clean development mechanism. This mechanism mostly focuses on reforestation projects (UNFCCC, 2008).

This protocol is considered an incomplete contract. The mechanisms included in the agreement add the investment aspect, but they do not add enough for the contract to be considered complete. Investment in green technology is promoted due to the emissions trading and joint implementation initiatives. The incentive to invest helps to reduce the holdup problem.

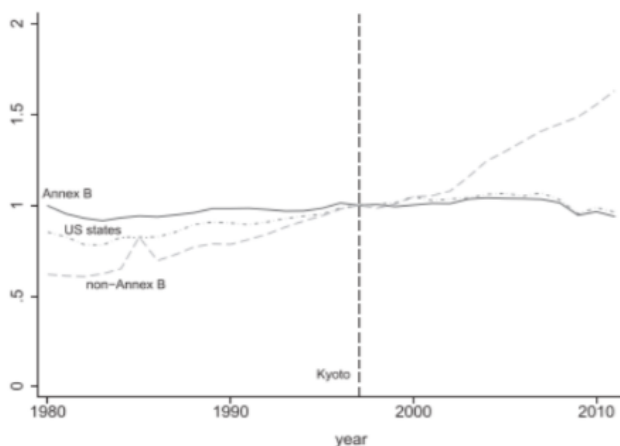
The holdup problem will not be as prominent if utilizing the mechanisms is appealing to participants because as stated before, the mechanisms promote investment.

There are many issues associated with the Kyoto Protocol. The first issue is that it only requires developed countries to act. Developing countries are not included in the contract. The second issue is that many countries never signed up, pulled out, or refused to recommit. The United States never signed the contract for the first commitment period (European Council, 2018). Canada pulled out during the first commitment period, and Russia, Japan, and New Zealand did not recommit for the second period (European Council, 2018). Another issue is that the protocol is only reaching a small share of the world's total emissions; it only applies to 14% of the world's greenhouse gas emissions (European Council, 2018). It is a good attempt at fighting climate change, but it does not reach the majority of the world's emissions. The base year levels for emissions reduction targets do not include sinks, but sinks are included in the reduction efforts to meet the targets (IGBP Terrestrial Carbon Working Group, 1998). Sinks refer to the systems in nature that have the ability to remove carbon dioxide from the atmosphere, for example forests and oceans are natural sinks. Sinks make it so countries don't have to put in as much effort because the sinks are doing part of the work in reducing emissions levels. It may look like countries are investing in more work than they actually are, but in reality, the sinks are doing part of the work.

Overall, the Kyoto Protocol was not very effective. There was no enforcement mechanism written into the agreement. Countries were not held accountable if they did not reach their targets. Participants could have potentially avoided reducing their domestic emissions because the joint implementation mechanism let them invest in projects elsewhere, and count that as their own emissions reduction. The nonparticipation of large pollutant contributors was also a reason the protocol was not as effective as it could have been. As mentioned before, a lot of the large pollutant contributors either never committed, pulled out of the contract, or decided not to recommit to the second commitment period. Almer and Winkler (2017) studied the effectiveness of the protocol focusing on 15 of the 38 participants in the first commitment period. They used two different control groups, countries that did not participate including the United States, known as non-Annex B, and strictly the United States, known as US States, to estimate counterfactual emissions for the 15 participating countries, known as Annex B (Almer and Winkler, 2017). The participants and the US States control group had almost the same emissions

reduction after the protocol went into effect as illustrated in figure 1. In the end, they found the participating countries would have had the same reduction of emissions even if they did not have emissions targets in place (Almer and Winkler, 2017). This shows the binding emissions targets had no significant effect on how much the countries polluted, which implies the Kyoto Protocol did not have a large impact on the amount a country reduced their emissions. Overall, the Kyoto Protocol was not as effective as it could have been.

Figure 1



Source: Almer and Winkler, 2017

3.2 Copenhagen Accord

The next attempt at an IEA is the Copenhagen Accord. It was negotiated in 2009 but was never officially adopted (Bodansky, 2010). The countries took note of the accord and could submit pledges if they desired to participate. In 2010, there were 114 countries associated with the accord, and 73 of those countries sent pledges in (Bodansky, 2010). These pledges represented more than 80% of the world's greenhouse gas emissions. The United States, the European Union, China, India, Brazil, Russia, and Japan are some of the countries who associated themselves with the accord (Bodansky, 2010). The main goal of the Copenhagen Accord is to keep the global temperature rise to under 2 degrees by 2020 (Lau et al. 2012). To achieve this, the participating countries set their own emissions targets in the form of pledges. This accord endorses the Kyoto Protocol, but was created to solve some of the issues associated with that protocol. This accord is not a legal agreement, so the targets are not legally binding for participants. The Copenhagen Accord includes developing countries, unlike the Kyoto Protocol (Bodansky, 2010). The accord also created the Green Climate Fund which helps support developing countries act against climate change. Developed countries will donate 30 billion

dollars between 2010 and 2012, then they will donate 100 billion dollars each year after that until 2020 (Lau et al. 2012). This fund is supposed to promote climate action in the developing world.

The Copenhagen Accord is not an actual contract, because it was never adopted. It acts most similar to an incomplete contract. The emissions aspect is in the form of the pledges, so there was little negotiation, but emissions are still specified. The free riding issue in the Copenhagen Accord was reduced as developing countries received financial aid through the Green Climate Fund if they participated. There are a few issues with the accord. The first issue is that there is no accountability standard for countries who choose to participate. The accord is not a legal treaty, so there is no punishment procedure put in place for countries who failed to meet their pledges. Another issue is that the conference turned into a political battle which resulted in a political declaration instead of an environmental agreement (Dimitrov, 2010). One of the larger issues is that the pledges made are not large enough to meet the goal of the accord (Bodansky, 2010). Even if all the participants complete and meet their pledge targets, it will not stop the temperature from rising above 2 degrees.

The trade bargaining between countries at the conference did not go as hoped for. The world expected an agreement as a result of the conference, but the participants didn't think so optimistically (Dimitrov, 2010). Negotiations had been going on long before the conference in Copenhagen started. A month before the conference, the idea of a binding treaty was dismissed (Dimitrov, 2010). The countries participating did not compromise, so the negotiations failed. The participants had to do something so the world wouldn't think the UN system failed (Dimitrov, 2010). An agreement was proposed, but seven countries opposed it. The opposing countries thought the agreement was created undemocratically and was too weak to save the world. These countries included Nicaragua, Bolivia, Cuba, and Sudan (Dimitrov, 2010). The small island states were very upset the proposed agreement was rejected, because without an agreement to fight climate change their homes would be destroyed by the rising sea level. The opposition of these countries is one of the main reasons the accord was never officially adopted. Instead, the participants agreed on a short political agreement to keep the world at ease (Dimitrov, 2010). Overall, the accord was not very successful. It will not reach its goal even if all the participants reach their targets as said before (Bodansky, 2010). The conference was not successful either. The result was focused on politics rather than the environment, and it was only made so the

conference didn't look like a failure. The accord could have been much better, but because the negotiations were not successful the accord itself was not successful.

3.3 Paris Agreement

The last agreement is the Paris Agreement. The Paris Agreement went into force in 2016; at this time the targets made up 55% of total greenhouse gas emissions (United Nations Climate Change, 2018). The agreement includes some of the largest polluters including the United States, who is no longer participating, the European Union, and China (Clemencon, 2016). The Paris Agreement strives to reach several goals. One goal is to strengthen the global response to climate change (United Nations Climate Change, 2018). The main goal of the agreement is to keep the global temperature rise to under 2 degrees by the end of the century, and this goal is very similar to the Copenhagen Accord (United Nations Climate Change, 2018). The last goal is to help countries cope with and manage the impacts climate change has on the environment (United Nations Climate Change, 2018).

The Paris Agreement includes intended nationally determined contributions, also known as INDCs. INDCs were created before the conference began to make negotiations easier (United Nations Climate Change, 2018). This made everybody's position known, and the INDCs were used to avoid issues that arose during the Copenhagen Accord negotiations. There are also a few issues with the INDCs. They put the agreement on track for a temperature rise of 2.7 degrees to 3 degrees by 2100, and this is well above the agreement's goal of staying under 2 degrees (Clemencon, 2016). There is also a lot of room for interpretation in the INDCs; they are not very clear in what everybody's goals are (Clemencon, 2016). The United States INDC goal is based on 2005 levels and they aim to reduce greenhouse gas emissions by 26% to 28% by 2025 (INDC, 2015). The European Union INDC includes all of the EU's member states. Their goal is to have domestic reduction of greenhouse gas emissions of at least 40% relative to 1990 levels by 2030 (INDC, 2015).

There are many elements to the Paris agreement, but this paper covers the most important aspects. One of the most important elements is the goal of limiting the temperature rise. This is the main part of the agreement and the best way climate change can be fought. Another important element is the balance between man-made emissions and the removal by sinks. Most scientists interpret this as having net emissions reach zero by 2060 to 2080 (Clemencon, 2016). The third important element is the five-year review cycle; this is done to create long-term

development strategies and to provide updates on progress throughout the agreement (Clemencon, 2016).

There are also a few drawbacks to the Paris Agreement. First, the emissions reduction targets are not legally binding (Clemencon, 2016). It is possible that future agreements will consider this feature, but the Paris Agreement did not. Another missing element is financial aid specification (Clemencon, 2016). The agreement did not establish an aid program where developed countries would provide a specified amount of climate aid to developing countries to promote climate action. Some money is still being donated due to "...the principle of common but differentiated responsibility, developed countries are obligated to provide climate financing to developing countries" (Zhang et al. 2017). There are funds for developing countries, but the amount of aid being donated is not specified in the agreement. There is also no liability clause in the agreement. If a liability clause was included, then it would make countries that are historically responsible for the buildup of greenhouse gases pay developing countries for loss and damage caused by climate change stemming from those gases (Clemencon, 2016). A liability clause would make countries who have been increasing the world greenhouse gas emissions levels pay countries who are still developing and are not yet contributing to the buildup of emissions. Also, there is not a mechanism put in place to hold participants accountable if they do not reach their targets, and this is similar to both the Kyoto Protocol and the Copenhagen Accord.

The Paris Agreement is an incomplete contract; it only specifies emissions, and it does not specify investments. As stated before, financial aid for developing countries was not specified, so investment in green technology is not included in the agreement. The five-year review cycle could potentially cause the holdup problem. If actions are to be revised during the review period, then countries will not invest as much before the review period. The holdup problem does limit the free rider issue because free riding won't be as beneficial if countries are putting off investing. The free rider problem will also be limited because of the INDCs. When submitting their INDCs, each country has their own best interest in mind.

The negotiation in the conference turned out in the United States favor. In the end, the United States got everything they requested (Clemencon, 2016). The United States did not want legally binding commitments. Their argument was if the targets are legally binding, then not as many countries will participate and countries will put out targets lower than what they are

capable of achieving (Clemencon, 2016). They also did not want binding financial aid commitments or a clause holding them liable for damage they have caused by climate change (Clemencon, 2016). The developing countries tried to negotiate with the United States, but they would not budge on any of the issues. The developing countries decided to give in and sign the agreement, because this agreement was better than no agreement at all (Clemencon, 2016). How did the United States get everything they wanted? One method used was to exploit China. China had been growing and no longer had the same interests as developing countries; their interests changed because of their economic growth and wealth accumulation (Clemencon, 2016). China's CO₂ emissions rose to 6 tons per person, whereas India was only at 1.5 tons per person. The developing countries expected China to reduce their growing emissions, and the United States took advantage of that (Clemencon, 2016). The European Union also did not want to hold up another climate agreement, so the United States took charge of negotiations (Clemencon, 2016). One other situation that helped the United States is the fact that the developing countries agreed to the contract even if it wasn't exactly what they wanted. As stated before, the developing countries took what they could get, because the agreement was still better than nothing.

The United States ended up withdrawing from the Paris Agreement after controlling the negotiations and getting everything they desired. The Trump administration withdrew the United States, and they immediately stopped implementing the agreement on June 1st, 2017 (Zhang et al. 2017). There are a few reasons this decision was made. First, the Trump administration has close ties with the fossil fuel industry (Zhang et al. 2017). Many individuals in the administration benefit greatly from the lack of climate action and the lack of regulation on climate change. Another reason is that Trump's mindset is America first. He thinks it makes the United States look weak, and that it hurts employment and traditional energy industries (Zhang et al. 2017). What happened after Trump withdrew? First, it is now much more difficult for the agreement goal to be reached (Zhang et al. 2017). The United States is a large polluter, so now other countries will have to compensate for the United States pulling out. There is also now room for another country to take leadership in climate action negotiations (Zhang et al. 2017). China, who will most likely take charge, and the European Union have room to wiggle in to take the reins. The withdrawal also leaves a large financing gap in the existing climate aid program; the United States was the top donor in climate aid (Zhang et al. 2017). It is more expensive for developing countries to meet their goals. Now, the United States is free riding on the other countries' effort

(Zhang et al. 2017). They are receiving the benefits but are no longer putting any work in. One last implication is that the Paris Agreement is “lead by example” (Zhang et al. 2017). The withdrawal could turn the agreement in the wrong direction, and if other countries decide to withdraw as well then the 2-degree goal will be impossible to reach.

4. Conclusion

Climate change is a prominent threat to the world. It threatens not only the environment but the livelihood of the people living on this planet. In order to survive, our future development must be sustainable, and that is only possible by thwarting the risk climate change poses. This paper reviews the theoretical literature that examines various facets of the IEAs and the issues on which negotiations are based. The paper also examines the effectiveness of the previous climate change agreements (such as the Kyoto Protocol, the Copenhagen Accord, and the Paris Agreement) and provides insights on how IEAs are attempting to combat climate change but are not always succeeding due to other issues including politics.

The Paris Agreement is still in progress and should be watched closely as the withdrawal of the United States could possibly create a major impact on the agreement. The funds for climate aid in the Paris Agreement will also be an element to watch. The United States was previously the largest contributor, so now which country will step up to take their place? Will climate aid be as large and will the change in the amount of climate aid impact the course of the Paris Agreement? IEAs are complex webs that are sometimes difficult to unravel. They can come with many complications but are useful tools to use to fight climate change, protect our environment and promote sustainable development.

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