Development and International Relations

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MASTER THESIS

The polycentric approach and how the EU could contribute to the cooperation on climate change through the Joint Partnerships.

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Abstract

In the last decades, the international community showed a certain ineffectiveness in the negotiations carried on to solve global warming and climate change, and the solutions reached are often criticized for their lack of real commitment and impact on the problem. These issues contributed to a new position called the polycentric approach to climate change. The approach proposes to not limit negotiations and actions to international and multinational fora but to try cooperation in as many shapes and levels as possible. An example could be the implementation of bilateral agreements. Thus, I considered it interesting to look at a type of bilateral agreement enacted by the EU. This type of agreement is called Joint Partnership and is a sort of continuous cooperation between the EU and another country on a wide range of fields from trade to human rights. There is, however, a type of Joint Partnership restricted to climate change and related issues. At the moment, the best example is the Joint Partnership on climate change between the EU and China. This Partnership, which started in 2005, encompasses goals and actions concerning energy, investments, and climate change in general. The goal of the thesis was then to see if the EU should invest on the Partnerships on climate change also with other countries and whether it has the potential to help cooperation on the problem.

The analysis was conducted through a policy analysis of the Partnership between China and the EU. The analysis followed the stages of the policy cycle and helped with the study of how the policy came to be, what it contains, how it developed, and the results obtained. The analysis showed how the actors managed to put down and reach some goals, mostly in terms of reduction of the energy intensity. However, the Partnership presents also some obstacles. During the years, external economic and political interests came across the Partnership and hindered its continuation. The presence of these interests, and the effects that they can have on the collaboration, show how this is still an unstable process.

At the end of the analysis, two theories were also applied. The neoliberal institutionalism theory and green theory. Both are looking at the international system, the challenge posed by climate change, and the cooperation between states but are highly different in the approaches used and conclusions reached. These differences were considered necessary to investigate the topic from opposite point of views and thus have a wider stance of investigation. Neoliberal institutionalism looks favorably to the type of collaboration presented by this analysis even though some small issues, like the lack of enforcement, are still questioned. The green theory instead is highly critical and would probably not consider the Partnership a good cooperation mechanism.

In the end, the answer to the research question was that yes, the Joint Partnerships could be an interesting approach according to the point of view considered, but some difficulties remain, and these should be resolved if we want the Partnerships to be effective in helping cooperation.

Table of content

INTRODUCTION

The idea for this thesis started with two considerations. Climate change is now recognized, more or less, as a "common concern of humankind" (Zukang, 2007). We need to remember how deeply international relations could be affected by it, not only with the increase in the numbers of refugees but also on the exacerbation of conflicts already in place. It became kind of apparent how this global challenge will require ambitious actions and changes to reduce its impact (Zukang, 2007). Thus, it seems almost normal to consider the global arena as the one that must address it. The second consideration is somehow connected to the first one. An interesting article by Valatsas (2019) was explaining how the multilateral approach used to address climate change can be considered, at least for now, more or less a failure (Valatsas, 2019). In his opinion, states should change their approach and invest in unilateralism even more if it comes from actors with the potential of being strong and impactful. In his analysis, in reality, he takes the example of the EU which in his opinion has the potential of making a difference (Valatsas, 2019). In this sense he says "to be successful, the EU will need to use its economic size and influence in trade and foreign policy if it is to drive climate action worldwide" (Valatsas, 2019).

But why does he consider multilateralism a failure? The first study advancing the possibility of a change in the climate appeared in 1859 from a research made by John Tyndall on the greenhouse effect (Sosa-Nunez & Atkins, 2016). Nonetheless, we will have to wait for 1979 for the first world conference on climate change (Zillman, 2009). In the following decades, meetings and conferences became more frequent and new ad hoc international institutions were created showing an increase in interest on the topic (Sosa-Nunez & Atkins, 2016). Unfortunately, despite this growing interest, we did not have what can be considered impactful results in this regard. Probably, at the moment, what is seen as the biggest achievement is the agreement signed in Paris in 2015. The agreement reached during COP21 is relevant because for the first time both developed and developing countries, for a total of 195 participants, met and decided on an important limitation. This limitation is to keep the increase in temperature to a maximum of 2°C (Paris Agreement, 2015). In reality, it is kind of unclear now if this agreement will even have the possibility to make a difference. At the moment, most of the countries are not in line with the 2°C increase and major polluters like the US decided to withdraw from it (Holden, 2019).

Looking at the European Union instead it has been one of the biggest supporters of the agreement and of actions to stop climate change in general. This commitment of the institution is underlined also in Article 191 of the Treaty on the functioning of the European Union (TFEU). In that article, the EU promises to implement actions to resolve environmental problems abroad and to

collaborate with other states and organizations to reach agreements to slow down the effects of climate change (TFEU, 2012). For now, it seems that the EU is at least trying to follow and respect this article. The EU is one of the most innovative and ambitious "countries" when it comes to climate change. Besides, it could be argued the importance of the EU as a diplomatic body able to propose and pass deals and agreements at the international level (Climate Action website). All these actions are often referred by the EU as a way to also shape and lead the global response to the problem (Green Deal, 2019). A global response that has to be reinforced through cooperation in the form of bilateral agreements with what the EU calls "key partners" (European Commission website). This type of bilateral cooperation started to gain the interest of researchers too (Cole, 2015).

The academic interest behind this thesis is then to investigate this new type of collaboration and if it could be a valuable tool for the EU to implement. Hence, the research question this paper will seek to answer is:

How can a polycentric approach help the EU to strengthen cooperation on climate change? What are the potentials of the Joint Partnerships on climate change?

As mentioned, many researchers now are advancing the possibility to have a more diverse approach to climate change. They argue how cooperation, in this case, should not be restricted to international agreements between a wide array of countries and propose different forms of collaboration (Cole, 2015). I found it interesting than to take a look at the Joint Partnerships which are a peculiar example of bilateral agreements. This tool that the EU started to use with different degrees of success is a sort of spread collaboration, it can be on a wide range of fields or only for specific issues, with another country or regional organization. The best example, and also the main focus of the analysis, will be the EU-China Joint Partnership on climate change. This Partnership is a long-lasting relationship that every year help the two actors meet and discuss common interests and achievement on energy and climate change (China & EU, 2005). Through the analysis of this Partnership and the results obtained this paper will try to explain whether Joint Partnerships on climate change can represent a valuable addition to the EU arrays of policies on climate change.

HISTORICAL OVERVIEW OF CLIMATE CHANGE AND THE EU

Evolution of the debate around climate change

This chapter will try to provide all the background information needed to have a better understanding of what will be discussed throughout the entire thesis. It will be a historical overview on topics such as climate change discussions at the international and European levels. In this way, I

aim to provide a comprehensive understanding of the key facts that later on will be relevant to the discussion of the analysis and to answer the research question. As mentioned in the introduction, climate change is not new on the scientific and political debates. Yet the response towards it can be characterized as slow at best. The first studies related to climate change started to appear already around the end of the 19th century but gained resonance only in the aftermath of World War II (Black, 2013). At the same time, the scientific findings were not accompanied by substantial interest and engagement at the political level, and we will have to wait 1979 to have the First World Climate Conference (Zillman, 2009). In the following years, a series of natural or human-made disasters contributed to a rise in awareness around the topic both in the public and political opinion. An example is the 1988 drought in the US. The drought which is one of the worst ever recorded in the US resulted in 5.000 related fatalities and damage amounting to $40 billion (The Weather Channel, 2013) and showing to the world the possible implication of global warming (Massey, 2012). The same year there was also the creation of the IPCC (intergovernmental panel on climate change) a scientific forum of the UN. The IPCC in the years studied the possible impacts of climate change and global warming on the planet and the societies while giving scientifically-grounded advice on how to act on it (IPCC website).

The Kyoto Protocol and the Paris Agreement: two important milestones

The rise in awareness around global warming and climate change contributed to reaching two important, even if highly controversial, milestones in the international negotiations on the topic. The first was the Kyoto Protocol adopted in December 1997 and entered into force in 2005 after a long ratification process (UNFCCC, What is the Kyoto Protocol?). The Protocol which at the moment sees the participation of 192 parties was a commitment made by 37 developed countries for the reduction of their greenhouse gas emissions. The reductions were in accordance with individually agreed targets set by the developed countries and entailed an average reduction of around 5% between 2008 and 2012 compared to the levels of 1990 (UNFCCC website). Many countries, including India and China, at the time, were not considered developed, and thus their commitments to the Protocol were purely on a voluntary base (CNN, 2020). This Protocol despite this result in the limitation of emissions was deeply flawed from the lack of adherence of the US to its commitments. Moreover, in 2011 Canada will also withdraw from the Protocol by calling back on the lack of participation of the US and China (CNN, 2020). In the end, the Protocol was renovated in 2012 for a new commitment period until 2020 but it never came into force and it is more or less considered replaced by the Paris Agreement (CNN, 2020).

The Paris Agreement signed in 2015 is considered as a "new course in the global climate effort" (UNFCCC, 2020). The Agreement, which at the moment has been ratified by 189 countries, has a fundamental difference compared to the Kyoto Protocol due to it not making differences between developed and developing countries. The main goal of the Agreement is the limitation of the increase in the global temperatures well below 2°C above the pre-industrial level while trying to limit the increase even further to 1,5°C (UNFCCC, 2020). At the time, the Agreement was considered a milestone in the fight against climate change and many looked at it favorably (Hultman, 2016). However, in 2017 Donald Trump, the US President, announced the intention to withdraw from it and made the decision official in 2019. Hence, if nothing changes the US at the end of this year will be the only country outside of the Agreement (Johnson, 2019). In addition to this, at the moment almost none of the countries are actually in line with the 2°C increase and with the current policies, the increase will probably reach 3°C by the end of the century (Climate Tracker, 2019).

A polycentric approach to climate change?

After this small overview of the history of the international negotiations on climate change, it can be said that the entire process has not been easy and probably not efficient either. We just saw how the two agreements which are considered some of the biggest achievements in this field were or are, somehow flawed by the lack of adherence and the difficulties in achieving the goals put in place. As a result, some scholars started to propose a more polycentric approach to climate change (Cole, 2015). The idea of a polycentric approach started in 2009 from a report made by Elinor Ostrom for the World Bank (Ostrom, 2009). In this report, Ostrom starts by arguing how climate problems are global in size and effects and thus require a global approach. In her words, a single country acting on it would be "a grossly inadequate effort" (Ostrom, 2009, p. 3). However, she points out how waiting for a global response to emerge from the negotiations is not the solution either. In her opinion, international negotiations resulted, for now, in failures and we do not have the time to wait for them to succeed (Ostrom, 2009). The problems are connected to the lack of willingness of the countries to put down limitations and the still open discussion on who should act. On this, she adds how acting in a single way, the international one, will not give us the complete picture of all the possible actions that we can use to solve the problem (Ostrom, 2009). In the topic of climate change and global warming, we still have an important lack of information and studies making it already difficult to even know the entire range of possible effects of the two phenomena. With this lack of information, it is technically not guaranteed that actions at the international level will succeed in contrasting the issue. Hence, the best way is to act on the problem is as many ways as possible (Ostrom, 2009). These mains problems and discussions are what made the author decide to use the world polycentric approach to climate change. In her opinion, the multilevel (such as national, regional, etc.) and multi-

actors (countries, individuals, but also bilateralism, multilateralism, etc.) approach would grant some results (Ostrom, 2009). Having more arenas open for discussions and also more actors involved in the process will improve greatly the communication on the topic, even better when it is a long-lasting communication, which will result in increased trust and as a consequence desire for cooperation (Ostrom, 2009).

Cole (2015) is also writing on the topic and define the polycentric approach as a process that "multiply opportunities for communication, trust-building, policy experimentation, and learning" (Cole, 2015, p. 115). For him, a restricted approach, for example, to only the Kyoto Protocol would not give the possibility of learning new ways of actions and limit the prospects of improvement. Hence, Cole agrees too on the benefits of long communication processes and he expands on the potentiality of cooperation on bilateral or limited multilateral foras (Cole, 2015). However, he argues how at the moment we do not have proof that a polycentric approach will produce better outcomes than using only international negotiations, but it is considered good to try anyway (Cole, 2015). In the end, the polycentric approach has all the potential to accelerate the process of climate stabilization. This approach will improve trust and as a consequence cooperation between actors with the potential of making bilateral and smaller-scale multilateral negotiation more desirable. It could also end with being a necessary condition for successful negotiation in UN-based meetings too (Cole, 2015).

This new perspective on how to partake in the cooperation on climate change will be used again later on in the analysis and conclusion chapters of this thesis. It will probably help give more fundaments to the possible potentialities of the Joint Partnerships as a new way to tackle the problem.

Climate change and the European Union

At this point, it is relevant to give some more background information on the main actor of the thesis which is the European Union. When it comes to climate change and the European Union it was in 1990 that the European Council for the first time put climate change on the agenda (Oberthür et al, 2010). Additionally, in the meantime, the European Commission and the member states were deciding on following a common position in international negotiations (Oberthür et al, 2010). In the following years, the European Union became one of the most ambitious organizations when it comes to climate change. It was pointed out how the EU was the one asking for "stringent international commitments" and "binding emission targets" for industrialized countries long before Kyoto (Oberthür & Kelly, 2008 p.3). In addition to that, in 2007 the member states decided with an independent commitment to reduce their emission of 20% by 2020 compared to 1990 even without an international agreement pushing for it (Fischer & Geden, 2015). Nonetheless, the EU was still not able to make an impact on international negotiations and agreements, which were still mostly lead by

the US. This changed when the US started to withdraw from different agreements, such as Kyoto, and later under the Trump administration (2017-ongoing) also from the Paris Agreement (Johnson, 2019), giving the EU the possibility to strengthen its role (Oberthür & Kelly, 2008). Of the same advice are Fisher and Geden (2015); they recognize, for example, how Bush's withdrawal from Kyoto made it possible for the EU to establish itself as the main actor in the negotiations (Fischer & Geden, 2015). In addition to that, the Kyoto protocol is often considered as one of the main achievements for the EU and its climate diplomacy. The Union's works made it possible to not only save the Protocol, with its subsequent entry into force in 2005 but also for the overall achievement of its goals. The Protocol was, in fact, struggling to enter into force, due to the previously mentioned withdrawal of the US. However, the EU managed to implement a diplomatic campaign that saved the Protocol (Oberthür & Kelly, 2008) and it contributed to convincing Russia to abide by it even though its adherence was uncertain (Oberthür et al, 2010).

The EU effectiveness on climate change and the internal instability

Up until now, we have dealt with an overview of the historical discussions around climate change both in general and with a specific focus on the EU. However, now it is time to include a critical perspective on how effective the European Union actually is on the climate change issue. Fischer and Geden (2015) explain that climate change is one of the fields where the member states have managed to speak with cohesion and as a single voice (Fischer & Geden, 2015). Nevertheless, the two authors also recognize how on certain occasions the internal instability has often resulted in a delayed or at best a feeble response. Their example was the failure of European diplomacy at the COP15, the climate conference in Copenhagen in 2009 (Fischer & Geden, 2015). Failure originated from the economic difficulties of the member states that took away the focus from the conference resulting in the substantial delay in the presentation of a cohesive European position (Fischer & Geden, 2015). The main issue with the EU is the constant need for a dialogue and sequential accord between 28, now 27, countries, and the European Commission. This coordination is often time-consuming and resource-heavy and thus limit the EU capacity to implement more ambitious policies (Fischer & Geden, 2015). Furthermore, the EU has limited competences in certain spheres as for example energy policies without forgetting the sensibility of certain issues and interests among the members (Fischer & Geden, 2015). All these problems have unfortunately the possibility to make the EU if not ineffective at least flawed, and thus hinder its role in the international approach to climate change.

METHODOLOGY

Ontology and epistemology

Before dwelling further in the analysis of the case study selected for this paper, it is important to define the ontological and epistemological assumptions on which the research will be based on. These two are part of a whole called paradigm that Guba and Lincoln (1994) define as "basic belief system or worldview that guides the investigator, not only in choices of method but in ontologically and epistemologically fundamental ways" (Guba & Lincoln, 1994, p. 105). A paradigm then works through the lenses of epistemology, ontology, and the method. The ontology tries to give an explanation of what form and nature the reality has and what can be known about it (Guba & Lincoln, 1994). Ontology is thus considered the study of "being" (Scotland, 2012, p. 9) and it is based on the assumptions the researcher has on what reality is and on how things really are and work (Scotland, 2012). Epistemology instead explains the nature of the relationship between the knower and what it is possible to know by helping him understand how knowledge can usually be created, acquired, and communicated (Scotland, 2012). Epistemology is never an independent thing and its assumptions are connected to the ontology (Guba & Lincoln, 1994). The last two parts composing a paradigm which are methodology and methods are also affected by the epistemology and ontology chosen (Scotland, 2012). The methodology explains the process the inquirer, and later on, knower, follow to find whatever they think can be known. As mentioned, not all types of methodology are appropriate requiring a connection and restraining given by the two previous assumptions (Guba & Lincoln, 1994). This part is basically the plan of action the researcher decides to apply behind a particular chosen method. It gives also information concerning data and their analysis as for example how they were collected and according to which parameter (Scotland, 2012). While doing research we can have different ontological and epistemological assumptions and consequentially ways to see the reality which defines the paradigm that the researcher will use.

The paradigm chosen for this research is the critical theory and related positions (Guba & Lincoln, 1994) and the ontological assumption of this paradigm is called historical realism. In this paradigm, reality has been shaped over time by social, political, cultural, economic, ethnic, and gender factors. These factors ended with building structures that are now considered real so natural and immutable (Guba & Lincoln, 1994). According to Scotland realities are thus socially constructed and are under the constant internal influence (Scotland, 2012). The epistemological part is called subjectivist and is based on "real-world phenomena and linked with societal ideology" (Scotland, 2012, p. 13). Knowledge then is constructed socially and influenced by the power relations present in societies. Scotland to make it easier to understand use trees as an example. Trees are seen

differently or with a different meaning according to the institutions looking at them, hence the World Wild Fund will have a different perception of the tree compared to a logging company (Scotland, 2012). Methodology, in this case, is based on the assumption that reality is still shaped or derived by culture and history, no research is exempted from values and the starting point of research, or the researcher, is always preconceived. However, the critical paradigm says also that this reality can be changed and altered by human actions (Scotland, 2012).

Research question

The main aim of this MA-thesis is to gain a better comprehension of whether the Joint Partnerships could be valuable tools in the fight against climate change. The EU is an important actor which is called to play a significant role in environmental issues. Recognized are, for example, the EU's commitments to the implementation of ambitious internal policies, such as the curtailing of CO2 emissions, or the safeguard of a certain degree of regional environmental protection. Furthermore, the diplomatic efforts of the Union and their achievements are recognized in their effectiveness (Oberthür & Kelly, 2008). But in a time where climate change continues to gain in resonance and when international negations are starting to be under the scrutiny (Ostrom, 2009) I considered it interesting to look at a type of bilateral agreement enacted by the EU. The type of bilateral agreements chosen as a case study for this research is the Joint Partnership on climate change between the EU and China. The Partnership is a long-lasting collaboration, it started in 2005, between the EU and China. It encompasses goals and actions in regard to energy, investments, and climate change in general. It also gives the possibility to the two actors to meet and discuss between them on an annual base. For now, the EU has been able to carry on effectively this type of cooperation only with China. The goal of the paper is to see if the EU should invest in this type of cooperation also with other countries and whether it has really the potential to make an impact on climate change. The research question that this thesis will address is:

How can a polycentric approach help the EU to strengthen cooperation on climate change? What are the potentials of the Joint Partnerships on climate change?

Research design

The idea for this research started from an article discussing the potentiality of the EU and its impacts on the fight against climate change. The first idea then was to focus on the Green Deal, which is a new set of policies of the EU that were voted and accepted last year (Valatsas, 2019). However, the current situation with the COVID-19 pandemic and the possible repercussion on the economy and politics made me change focus. The change is due to the impossibility to predict whether the European

states will still be interested to approach climate change in the immediate future, and particularly in what it will be a post-pandemic scenario. Hence, the research was shifted to look at data a bit less recent with the hope to have more information on the EU commitments to climate change. The shift ended in changing the focus to the Joint Partnership between China and the EU which started in 2005 and that had already the possibility to produce some effects and results.

While writing this research it was considered necessary to start with literature or historical overview. The necessity came from the need to explore the historical patterns of the discussions on climate change, from its rise in awareness and importance to the more recent agreements and meetings on the matter. A particular focus is given to the EU involvement in it. The information collected will help with having the necessary background details to approach the topic with some basic knowledge. The thesis will continue then with the methodology chapter, which sets the guidelines for how the research was conducted, and the theory chapter that lays down the theoretical structure for the discussion. As for the research, it was deemed interesting to research exclusively the external policies of the EU on the environment, thus excluding the policies involving only the member states and the agreements between themselves. The motivations for this choice are mostly due to personal interests in the actions and role of the Union in the international system. As a result, for the analysis, it was considered interesting to base the research on the Joint Partnership on climate change between China and the EU. The long-lasting Partnership started in 2005 and at this date still continues. It entails discussions and commitments related to energy, investments, and climate change (China & EU, 2005) and it was deemed interesting to analyze the potentiality of such a type of cooperation. It would have been compelling to have a comparison or to enrich the research with other Joint Partnerships between the EU and some other countries. This would have permitted us to collect more information and from more sources, thus giving a better understanding of the possibilities of this type of collaboration. At this point, a clarification is needed. The EU already established various Joint Partnerships. A normal Partnership is a sort of general cooperation between the EU and another country on different pillars like the economy, trade, politics, etc. without going too much into a specific field (Men, 2014). The EU, at the moment, has mostly this type of Partnership. With China, however, it has also a Partnership that is specific to climate change (Men, 2014). This is why it was not possible for me to do a comparison with other countries. The other Partnerships are in fact or general or only at the first stages of implementation (Magoum, 2020) thus they are not a good example to counter to the Joint Partnership on climate change between EU and China.

As previously mentioned, the main goal of this paper is the analysis of the Partnership with an EU perspective. Thus, even though the data that will be used is part of the EU-China Partnership

the information on China will be strictly limited to the necessary information on the course of the collaboration and the results obtained.

Data collection

Due to the nature of this research and the time frame of this thesis, the data will be mostly secondary data and/or data collected online. The information needed to grasp whether the Joint Partnerships on climate change are valuable tools for the EU to implement with other countries are gathered through the analysis of some specific data. These data come from documents, mostly in the form of annual declarations, statements, etc. that are resulting from the Summits between China and the EU. As decided by the Partnership, the two participants are meeting every year for a Summit where they discuss common interests in regards to energy and climate (China & EU, 2006). At the end of the Summit, there is usually a Joint Statement where the parts are presenting the conclusion reached in that year. These documents were selected because they will give an idea of the commitments of the actors, what the Partnership usually entails, and how it developed during the years. Thus, it permits us to have a general idea on how a Joint Partnership would look like and if it has the possibility to reach some results. The time frame selected for these documents is limited to the time frame of the Partnership itself. The first Summit on climate change, and also the beginning of the relationship, was in 2005 (China & EU, 2005) and as of today, the Partnership is still an ongoing process. In reality, the analysis will have to stop with the 2019 Declaration because the 2020 Summit, which should have taken place around March, was postponed due to the pandemic (Emmott & Guarascio, 2020). This is unfortunate because as we will see later 2020 was the year when the objectives set up in 2005 were expiring (China & EU, 2005). It would have been interesting then to see what the new declaration would have looked like. It also seems that this year will be particularly difficult for the relations between the two actors (Brattberg & Le Corre, 2020), something that will be discussed more in detail later. Unfortunately, in addition to this, I could not find online the transcription for all of the declarations hence some years will not be present on the final analysis.

Policy Analysis

To answer the research question of this thesis a good part of the analysis chapter will be spent doing a policy analysis on the Partnership selected as the case study. According to Michael Hill (2004), there are many types of policy analysis but the one that will be used here is the analysis of policy content (Hill, 2004). In this type, one or more cases are investigated to try to understand how a policy emerged, how it was implemented, and what were the results achieved (Hill, 2004). I chose this method because I think it is in line with the information I need for the answer to the research question. My final goal is to understand whether Joint Partnerships on climate change are a good way

for the EU to push for collaboration on climate change. I consider relevant than to know how the main case, the Partnership between EU and China, worked, and which results were obtained. Having the entire spectrum of information on the existing Partnership will permit deeper analysis of this type of collaboration in general.

But what is policy analysis? Policy analysis is the process of investigating the implementation and impact of existing policies (called ex-post analysis) or/and options for new policies (ex-ante analysis) (Milovanovitch, 2018). These two can be complementary and often are done together. The goal of policy analysis is to break an issue in simpler elements to help understand the issue in consideration (Milovanovitch, 2018). The breaking into smaller pieces can be divided into three major steps. The first step is framing and understanding the problem. It helps with identifying, recognizing, and defining it, to frame the starting point of the analysis, visualize the data and pieces of evidence needed, which policies to look at, and who are the actors (Milovanovitch, 2018). In the case of an analysis of an existing policy, like in our case, the framing will be limited by the declared intentions of the policy and by the achievements already reached. The second step is the collection and analysis of the data and pieces of evidence for the policy which sometimes can include the difficulties in accessing data and/or attest to the reliability of the information found (Milovanovitch, 2018). Another step, the third one, is to interpret the pieces of evidence and describe the findings. The interpretation must be preceded by the description of the pieces of evidence, because of granting an easier and linear understanding of the interpretation for the reader (Milovanovitch, 2018). This part is related to the first step, the framing, which also gives us the information on what we want to find and whether the last step will answer our questions. Usually, the findings help with forming the basis for recommendations and conclusions or induce a complete reassessment of the problem (Milovanovitch, 2018). Lastly, the fourth and last step is to formulate some recommendations or just to outline the future options of the policy. The recommendations need to be based on the findings of the analysis as to not make them irrelevant for the case, they should also be as concise and understandable as possible (Milovanovitch, 2018). Milovanovitch (2018) is also stating how during a policy analysis it is always important to remember three majors real life "obstacles" (Milovanovitch, 2018). One is the difficulties in accessing the data and/or lack of it. The second is the so-called "parachute" conclusions and it is how in policies the priorities of action are not always set on reliable and extensive data, studies, and considerations (Milovanovitch, 2018). The priorities in policies are in fact often based on ideologies and purely political schemes even without data to back them up. The last difficulty is that policy analysis is not a linear process and entails often confusion, unexpected discoveries, several adjustments and revisions mostly in fields such as social sciences and humanities (Milovanovitch, 2018).

The policy cycle model

     The model chosen to carry out this policy analysis is the policy cycle model. It was selected because more in line with what this paper is trying to find out. As mentioned, the final goal is to understand whether the Joint Partnership could be a valuable choice for the EU. To have a full answer to this question, I deemed necessary to look at the entire life, or cycle, of the policy selected which in this case is the EU-China Joint Partnership on climate change. The cycle is made of different stages of the policymaking process: agenda-setting, policy formulation, decision making, implementation, evaluation, and policy change (Mwije, 2017).
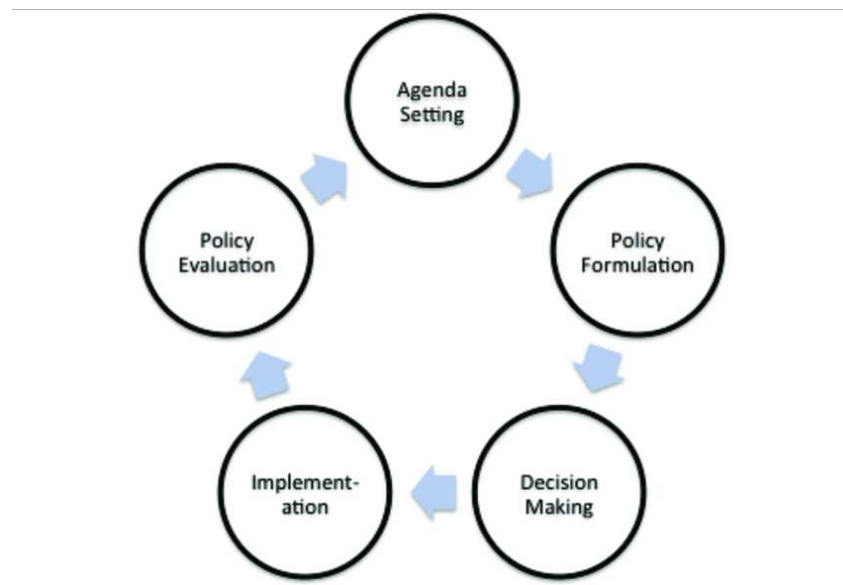
Figure 1: the policy cycle model. Source: Research Gate

     The first phase called agenda setting is when the problem identified enters in the discussions, thus come to the attention of governments and decisionmakers. Usually, the agenda-setting process is not automatic and relies on the public interest on a specific problem making the setting socially constructed (Mwije, 2017). However, we can have two types of agenda; one is the public agenda that depends on public opinion, and the formal agenda depending on decisionmakers and politicians. This entails agenda-setting that can be both bottom-up or top-down according to the case. It is always important to remember that the policymakers' ideologies influence the decision of which problem will be addressed (Mwije, 2017). The next stage in policy formulation. In this stage, proposals on how to resolve the issue are developed and the possible actions defined and discussed. It usually gives the possibility to develop the entire range of possible alternative solutions to the problem (Mwije, 2017). The next stage then, the decision-making phase, legalize as policy the solutions just found. It entails the selection of a solution between the one proposed to make it into law. Next, we have the implementation which is the execution of the plan the decisionmakers made during the previous

phases (Mwije, 2017). It often involves the creation of rules and regulations while creating ad hoc agencies or organizations to translate these into laws. It also requires the allocation of the resources that will be needed for the policy, and the division of the duties between the actors that will be involved in the process (Mwije, 2017). This stage is usually fluid due to its technical aspects and can go through changes and reconfigurations when needed. The right implementation is considered fundamental for the right outcome of the policy (Mwije, 2017). One of the last parts is the evaluation stage. It is the stage when the policy is assessed, and its implementation reached the wanted results. It usually looks at the goals reached, the resources spent, and if the process as a whole was efficient in its making (Mwije, 2017). The final stage in Mwije opinion (2017) is called the policy change and it is the improvement of a policy after the competition of the evaluation (Mwije, 2017). The changes in the policy can be small or substantial depending on the issues found during the evaluation. Usually, major changes are needed when the conditions change on the entire system for example trough political turnover, changes in governing coalitions or crises, and events of a certain impact (Mwije, 2017). After the changes are made the entire process goes back to the beginning and restart continuing as an iterative process that starts and develop over and over again (Mwije, 2017). This model is usually still relevant to the analysis of policies however it is not devoid of criticisms. The most important one is how this entire process is considered as too linear and thus not always the best representation of real-life policies (Mwije, 2017).

Theoretical approach

It is useful now to give a brief overview of the two theories selected to help answer the research question. The two theories are the neoliberal institutionalism theory and green theory. Both are looking at the international system and the cooperation between states but are highly different in the approaches used and conclusions reached. That is why the two theories were considered interesting to use together mostly for comparison purposes. Both theories will be described in more detail in the next chapter (here pp. 15-27) which will be the theories chapter. For now, I will highlight just the major key points. The neoliberal institutionalism is a state-centered theory where states are the main actors of international relations (Taqwadin, 2013). The theory's main goal is to understand how these states cooperate and what are the possible benefits of such a process. According to the basic assumptions, cooperation in this theory is seen as a compromise between states' interests and their desire to maximize their own gains. Additionally, there is also a focal point on other actors' involvement, like the contribution of institutions, and the implementation of regimes to strengthen this cooperation (Taqwadin, 2013). In the last decades, moreover, this theory reserved a special emphasis on the environmental issue and cooperation on this matter (Saryal, 2015). The green theory instead is solely focused on climate change and environmental degradation (Ari & Toprak, 2019).

This focus makes the theory reach very different conclusions on how cooperation should work in the international system and mainly how countries should address the environmental problem. The main difference is probably the perspective on countries that in this theory are more of a problem than the solution and thus their participation should be limited. In the end, the theory also takes a look at the contribution of institutions and the contributions of regimes (Ari & Toprak, 2019).

The use of the two theories on this paper will permit a double approach and point of view on the results obtained from the analysis. In the analysis chapter, as it was already mentioned, there will be a policy analysis on the EU-China Joint Partnership on climate change. The analysis will give us the possibility to explore the functioning of the Partnership, the commitments involved, and whether it gave results in the years that it existed. The point of view collected will be very practical and based on observation of data and facts. To contribute to this point of view and have a deeper understanding of the value, if present, of the Partnership a more theoretical perspective will be needed. Thus, the two theories will be applied to the data collected to know if the Partnership could be an acceptable form of collaboration to tackle climate change also according to the theories selected.

Limitations

A research such as this includes several limitations. First, even though I will try to give as much information and data as possible it will be impossible to have the entire perspective on the Partnership. I found data to quantify the results and explain them and I found some information on how the negotiations developed during the years. However, it was impossible to know the full reasons behind certain choices made by the actors and events. This is due to the research being based on the materials I could find online and the impossibility to have direct information from the participants. These difficulties will result also in the lack of direct data for some of the years of the Partnership. A few of the annual Joint Declarations on climate change, like 2007 and 2011, were not present online making it impossible for me to directly use them on the analysis. The same is the 2020 Declaration missing because the Summit, for now, had to be postponed due to the pandemic. All the considerations and results that will be obtained from the analysis apply only for the period 2005 and 2019. Nobody knows how the Partnership will evolve from now on, mainly due to some recent obstacles as the current pandemic and some, more or less recent, political discordances between the two actors (Emmott & Guarascio, 2020). Furthermore, the aim of the paper is to suggest if the Partnerships on climate change are an interesting form of cooperation for the EU to implement with other countries. Thus, the results found in the analysis will be used to evaluate this possibility. We have to keep in mind however that the analysis is based on a case study on the relationship between China and the EU. All the findings then are susceptible to the peculiarity coming from the relationship

between those two actors. It will be impossible then to be completely sure about whether the same thing can be applied to other countries. Having different political, economic, etc. characteristics can in fact not grant the reaching of the same results. When analyzing the case study, for simplification, I will exclude the single voice of the member countries and will focalize exclusively on the EU commitments. However, it is good to always remember that in the end the EU is still an organization of 27 countries and thus, it is still the result of the cooperation, or non-cooperation, of these countries. I also recognize how difficult it is to approach climate change and the environmental issue in general. For this, I try to do my best on limiting the research on the information and limitations that directly apply to the case study and its explanation.

THEORIES

Introduction

In this chapter, I will spend some time exploring the two main theories that will later be used to understand, and comment on the data collected and foremost answer the research question. The two theories selected are respectively: 1) the neoliberal institutionalism and; 2) the green theory. The two are very interesting to put together as they are sort of in contradiction with each other. The contradiction is the result of two very different perspectives on the same topic and the conclusions the two theories reach. Neoliberal institutionalism is a more generally-focused theory but provides also a study of the environmental paradigm (Taqwadin, 2013). While the green theory is completely focused on environmental issues and how to answer them (Ari & Toprak, 2019). There are some main points that will be touched in this chapter. The chapter will look at the different ideas on the states' contribution to the fight against climate change. After this, there we will try to understand how the problem must be tackled and in which form the cooperation between countries, if present, will have to be. As mentioned, the two theories are very different in their assumptions. States play a very different role in the two of them and thus the type of actions we need to stop climate change will differ. Another main point is the role of institutions and regime in ensuring collaboration at the international level.

Neoliberal institutionalism

The events of the two World Wars deeply affected the international system and the relations between states. As a result, cooperation seemed to become slightly easier in the second half of the 20th century (Taqwadin, 2013). In this period, institutions like the UN or the IMF were created to regulate common interests and showed how countries with the right incentives and amount of willingness could have the possibility to ensure more effective cooperation and stability at the

international level. This keenness gave institutions the possibility to play a bigger role in international politics (Taqwadin, 2013). One of the theories trying to give an explanation of what institutions are, and what role they can play in the cooperation between countries is the neoliberal institutionalism theory. This theory started to gain attention with the emergence of global issues such as, for example, the environmental or national and international security problems (Saryal, 2015). All these challenges present a very peculiar form as they are considered a global threat affecting in some ways all countries. The global traits of the challenges make them potentially threatening and complicated to deal with by a single country (Taqwadin, 2013). Thus, these challenges ended with affecting how the international system works and how the countries perceive mutual cooperation.

Cooperation in neoliberal institutionalism

As already briefly mentioned above, the theory tries to explain how countries reach and establish cooperation within the international system, a system that is often considered as anarchic, uncooperative, and mostly competitive (Taqwadin, 2013). So, the key points of the theory are to try to understand why states seek cooperation and what are the benefits of such a process. An anarchic system, in fact, does not mean an impossibility of cooperation between states, but that they need to be helped reach it since they are not always going to make the necessary efforts (Saryal, 2015). Institutions help in this regard by developing arrangements that act as "focal points" for the states involved (Drezner, 2009, p. 65). The focal points are a common set of rules and norms that contribute to defining the substance of cooperation. This process reduces the transaction costs for the creation of rules and shifts the "arenas of international relations from power-based outcomes to rule-based outcomes" (Drezner, 2009, p. 65). The difference between the two is that in the power-based outcome the disputes are resolved without a set of decision-making criteria that were established in advance (Drezner, 2009). For Taqwadin (2013) instead, cooperation is made easier by the spillover effects the institutions have on states' behavior (Taqwadin, 2013). The main spillover is the regular and constant meeting schedule the states' representatives have to attend for the institution. These constant opportunities to meet between states give them the possibility to confront and communicate with each other and thus have the chance to find common interests and struggles. The ultimate goal is then to agree on common policies to protects said interests (Taqwadin, 2013). The author remarks how countries should focus more on the absolute gain instead of their own private interests and gains, as it could be possible for states to reach outcomes that are even more beneficial in this way. Saryal (2015) explains how cooperation is not at all a predictable phenomenon, and countries could still try to cheat or non-comply with the norms and rules set by the institutions (Saryal, 2015). Cooperation is likely only when the institutions promoting it are seen as mutually beneficial and relevant to secure their international interests. In this case, countries will voluntarily shift their resources and loyalty

towards the institution making the cooperation easier and far more likely (Saryal, 2015). Young (1989) also states how we do not have to expect perfect compliance with the rules of international arrangements. And he recognizes there is a possibility that we can encounter a total non-compliance from the members which could result in an institutional change. However, he regards this total non-compliance as a bit more far-fetched (Young, 1989).

But what do researchers of neoliberal institutionalism envisage when they talk about cooperation? By using Keohane's words cooperation "requires that the actions of separate individuals or organizations be brought into conformity with one another through a process of negotiations which is often referred to as policy coordination" (Keohane, 1984, p. 51). According to the author then, cooperation is fundamentally regarded as a process of policy coordination. Thus, a highly political process, where we need to obtain a change in the egocentric patterns of behaviors towards a more collaborative stance of the countries for it to work (Keohane, 1984). Keohane is also adding on how this change is often obtained. In his opinion, the possibility of obtaining a change is made feasible trough negative or positive inducements. He analyzes how persuasion or setting a good example are not efficient ways of obtaining this change, whether the threat of punishment or a promise of a reward is way more effective (Keohane, 1984). Furthermore, he also adds how conflict and cooperation are not two separate things, instead, conflict is often the ground of cooperation. A cooperative stance is, in fact, stimulated when one of the actors feels threatened in their interests by a potential conflict (Keohane, 1984). In the end, however, he argues how countries should try to control their egoistic behaviors, and if or when states become willing to cooperate than it will be easy to have a reduction in the level of disagreement. In this way, they could even be able to create norms, principles, and procedures that will help them cooperate even without a hegemonic power guiding them (Keohane, 1984). Saryal (2015) goes more in detail about the negative and positive inducements and argues how there is two mechanism trough which institutions wield their influence on states (Saryal, 2015). The first mechanism is called rationalist and, in this case, influence is based on material incentives provided by the institution in exchange for a compromise on the policies. This means applying sanctions to states which do not abide by the policies and boost countries who do it. Furthermore, specifically for developing countries, there is also the possibility to invest in capacity building. This method should help cooperation because it gives countries with a lack of resources the instruments needed to implement the policies (Saryal, 2015). The second one is instead the constructive mechanism where institutions create a set of norms, ideas, and identities that will help shape states' behavior and thus reshape their priority and interests. These sets of norms and identities could be created through the incentive of scientific research or proof of the necessity to actuate said policies (Saryal, 2015). Purdon (2014) has instead a slightly different idea of cooperation. In his opinion, once

a state becomes more involved in international institution cooperation should follow almost automatically (Purdon, 2014). This is due to the virtues of cooperation becoming self-evident to states once they become part of an institution even if in the beginning they all started from widely divergent national interests. According to his words then, neoliberal institutionalism seems to grant greater weight to international political processes than domestic policies. Thus, states' determination in whether or not to cooperate is entirely based on the international system (Purdon, 2014).

Regimes and their functions

Another fundamental concept according to this theory is regimes; these are to be understood as a set of norms and rules with the function of facilitating the making of specific cooperative agreements among governments (Taqwadin, 2013). The most widely accepted definition of regimes comes from Krasner and he defines them as a "set of implicit or explicit principles, norms, rules, and decision-making procedures around which actors' expectations converge in a given issue area of international relations" (Krasner as mentioned by Saryal, 2015 p.9). Even if widely accepted, this definition is not excluded from critiques as it is considered a bit too ambivalent and ambiguous. That is why Krasner simplifies the definition by outlining four core elements:

- Principles are theoretical statements on how the world is working and defines the purposes that the members are expected to follow. Some examples are the principle of separation of power, legitimacy, and representation (Rochester, 2010);
- Norms are a general standard of behaviors that identify the rights and obligations of states and can result in the imposition of certain consequences. A norm is, for example, the prescription of the use of force or the use of certain types of weapons in case of warfare (Romaniuk & Grice, 2018);
- Rules reconcile conflicts that may exist between principles and norms by giving more details on the specific right and obligation of the members, rules can usually be altered more easily;
- Decision-making procedures identify specific prescription of behaviors which regularly change every time a regime is consolidated and extended, it provides ways of implementing the principles and alter the rules (Saryal, 2015).

Moreover, principles, norms, rules, and procedures all contain injunctions about behavior: they prescribe certain actions and proscribe others, entailing obligations that cannot be enforced through a hierarchical legal system (Keohane, 1984). In short, regimes influence the creation of practice between countries, assign roles to the participants, and guides their interactions. As a consequence, cooperation is made easier because all the countries are compelled to behave the same

(de Vos, et al., 2013). Keohane (1984) however argues that we always need to keep in mind the presence of internal national interests. The countries are the ones establishing the rules and norms in international regimes, hence the norms resulting from the process are often weaker than in domestic societies due to the willingness of the countries to maintain a sort of control and sovereignty. This prevalence of sovereignty is what makes, in his opinion, regimes fragile, as they can always incur in conflict with what in the end shaped them (Keohane, 1984). Governments establish regimes to deal with problems that they regard as so closely linked that they should be dealt with together and with a single response. The scope of international regimes then is regarded as corresponding, in general, to the boundaries of a specific issue-area. These issues-areas are usually defined as sets of issues that are within common negotiations and by the same, or closely coordinated bureaucracies. Since the issue areas depend on actors' perceptions and behaviors their boundaries change gradually over time (Keohane, 1984). An example could be the regime on the ozone layer created by the Vienna Convention for the Protection of the Ozone Layer and the Montreal Protocol. Both helped with the establishment of a set of guidelines on how the countries had to act in regard to the ozone issue (de Vos, et al., 2013). The establishment of a regime is a process fueled by two important factors, the perception of people and societies on the issue and the rise of a specialized intergovernmental organization on the topic (Keohane, 1984). Saryal (2015) adds to this by arguing that regimes are often the predecessor of formal agreements. Furthermore, regimes are considered as giving more credibility to the obligations made under those agreements. However, he also suggests how other authors are of a different opinion since they argue on how you need a formal agreement before the creation of a regime (Saryal, 2015).

Young (1989) instead tries to identify different types of regimes. In his opinion, we have three types called imposed, spontaneous, and negotiated (Young, 1989). An imposed regime is when a superior state or elite imposes its ideas on the other actors part of the international system through pressure and enforcements. A spontaneous regime is instead when there is no conscious effort from the actors, and it works without the implementation mechanism. And lastly, a negotiated regime is when conscious self-reliant actors agree mutually on regulations through negotiations (Young, 1989). Always Young tries to quantify the effectiveness of a regime. Many authors are, for example, arguing how the creation of a regime itself is not enough to reach results, and what matters is whether it is actually effective or not. However, there is not a clear or unique definition of what it means for a regime to be effective (Saryal, 2015). Young then, as previously mentioned, tries to come up with some parameters to quantify the effectiveness of a regime (Young, 1989). There are two parameters. The first one is how much of what occurred after the creation of the regime would have not happened without it being in place. While the second one is how much norms and behaviors of the actors are

changing according to it (Young, 1989). Both of these definitions are still vague and open for discussion.

State-centrism and the actors on international relations

We have probably already remarked how the neoliberal institutionalism theory is a state-centric theory. States are according to the researchers the most important actors in international relations and they influence it thanks to their specific interests and objectives (Taqwadin, 2013). States are considered rational-choice driven actors thus acting with the intention to reach a maximization of their benefits they can obtain, and as a consequence tend to prioritize themselves. This tendency however is also the main obstacle to cooperation (Taqwadin, 2013). On the same advice is Saryal (2015), he also explains how states are rational actors in international politics (Saryal, 2015). This rationality finds expression in a gain-maximizing behavior, especially in situations where competition is high and where cooperation can entail absolute gains instead of reaching only relative gains in a single-issue area (Saryal, 2015). Rationality is also showed or implied in the disinterest countries often have towards the gains of other actors seen that they are, as previously mentioned, focused only on their maximized gains. However, even if the theory is state-centered states are not the only actors we have in international relations. Cooperation between states is facilitated by other actors as for example NGOs and institutions (Saryal, 2015). Taqwadin (2013) is also adding in this regard. According to him, transnationalism and complex interdependence are also central points of this theory (Taqwadin, 2013). The world is now more pluralistic in terms of actors, so not just based on the states' own role and decisions, as they have become more and more dependent on each other. This is also due to the complex interdependence, a term used to indicate how the current system is not based anymore on military power, as we saw in the past, but more on the increase of links between states and non-states actors. Links are now available thanks to the presence of more channels that allow interaction between actors even across national boundaries (Taqwadin, 2013).

To sum up, neoliberal institutionalism is a state-centric theory where states are still the main actors in international relations. When global issues and challenges started to rise, countries recognized the need for cooperation to address the challenges. However, they are part of an anarchic system and have often the goal to maximize their own gains. To collaborate then they need the help of institutions and regimes. Both ensure the creation of guidelines on how to behave, make the countries meet, and share their interests thus facilitating the creation of a common strategy. Moreover, the existence of rewards or punishments are incentives for the countries to collaborate more effectively.

The environment paradigm according to the neoliberal institutionalism theory

Now that we have touched and looked through the main points and arguments of this theory we need to go deeper on a new and important perspective, the environmental one. The environmental issue is an interesting perspective of this theory. As I previously mentioned, the theory started to gain interest once we started to see the surfacing of challenges that were not limited anymore to a single country or region. The environment is now probably the best example of this. It is not only an incredibly threatening problem which will probably have important repercussion for all countries but due to its nature must be approached in a global and coordinated way (Taqwadin, 2013). The neoliberal institutionalist theories recognize according to Taqwadin the need to create institutions and regimes where to transfer the control of climate change-related issues. Moreover, these two spaces are also where countries and all other actors can discuss and combine their interests (Taqwadin, 2013). Neoliberal institutionalism theorists look at cooperation on environmental issues favorably. In their opinion, states should not have a problem in working together in this case as the competition in this field is very low and environmental "goods", like clean air or ocean preservation, are not the exclusive possession of one country and thus free of competition or personal gains (Taqwadin, 2013). Saryal (2015) is also recognizing the importance of cooperation on this issue (Saryal, 2015). He points out how in this case the theory follows a less state-centric point of view as countries are not the only actors needed to tackle climate change. States here are in fact accompanied by an additional set of actors. The first set of actors are for example NGOs and industries which in this case become as important as states (Saryal, 2015). The second set, but mostly only in international environmental politics, is the European Union an organization playing an important role in the negotiations of climate agreements and is itself part of many institutions. And last the institutions (Saryal, 2015). Institutions are helping with converging states' opinions and actions towards common policies thanks to their mediating role that makes reaching comprehensive solutions easier. In addition, they could contribute to national policies-making by keeping track of the environmental degradation, and the actions against it, of all the member states (Saryal, 2015). The author entails how institutions however would be not that effective on creating a common environmental policy by themselves and thus requires working among parameters of regimes. He stresses how "no new area of international relations is devoid of regimes, where countries are not circumscribed by the existence of a mutually accepted set of rules" (Saryal, 2015, p. 9). This is even more true for the author when it comes to climate change and the environment, see how many regimes here became institutionalized and often resulted in agreements (Saryal, 2015). Taqwadin brings the example of the IPCC (Intergovernmental Panel on Climate Change), an institution created when climate change started to attract attention in the world (Taqwadin, 2013). The IPCC helped motivate the political actions of the states through

scientific up-to-date information and suggestions on how to act in this regard. In the author's opinion, the IPCC showed how an institution could help guide the policy-making mechanism and how climate change became effectively a global concern (Taqwadin, 2013). Kutting (2004) is instead a bit critical of regimes. She explains how theorists of regimes focus almost exclusively on explaining cooperation between states or other actors who are competing for power and influence in a situation of anarchy (Kutting, 2004). Thus, the focus is predominantly on the regime and not on its relationship with other actors or institutions which are external to it. In addition, they fail to look at concerns that are technically external to the specific regime but are connected to it either way (Kutting, 2004). The author critiques this way of seeing regimes, and mostly the environment one because due to its complexity and overarching nature a wider and interrelated focus is necessary. She takes the example of how studies are focused mainly on environmental governance and politics but do not add economy to the picture, showing as a result an overall lack of forecasts and insight in the topic (Kutting, 2004). Another critique on the theory, but this time generally on its assumptions, is made by Taqwadin. He critiques how the theory takes for granted that once a problem is recognized as relevant, all actors will be immediately willing to address the issue efficiently and cooperatively (Taqwadin, 2013). The solution will also be reached without obstacles and with the cooperation of all countries, something that in reality is usually pretty unlikely. In addition, they do not recognize the difficulties of climate agreements and the complexity of the negotiations due to the belief that countries are autonomous, rational, and unitary actors (Taqwadin, 2013).

Green theory

The green theory, a theory that how we will see is highly focus on environmental degradation and climate change is the result of the recent increase of importance of the environmental issues both at the social and political level. I already mentioned how in the last decades, climate change and the related problems acquired more and more visibility when its effects and knowledge on the topic increased.

The three waves of the green theory

There have been three main "waves" of green theory. The first wave was in the early 1990s when the theory was recognized as a new theoretical approach (Eckersley, 2007), and it emerged as a challenger to liberalism and socialism (Ari & Toprak, 2019). The first wave was a result of the increase in the political discussion around climate change and the beginning of the effects of the problem on the environment and societies (Eckersley, 2007). Furthermore, the 1980s saw the surface of green parties in several countries mainly in Europe. The first wave of green theory criticized both capitalism and communism for their focus on industrialization even with all their differences of

perspectives on this topic (Eckersley, 2007). This critique was based on the still taken for the granted idea of progress where growth and technologies could be sustained indefinitely with the earth's resources (Eckersley, 2007). The green theory however was against this idea and thought that technology and development were instead the problems, and resources were not unlimited making this human-nature relation unbalanced (Eckersley, 2007). The researchers sought to highlight in this period how some core institutions such as markets and states are irrational from an ecological standpoint and suggested grass-roots democracies and ecologically sustainable communities as the right alternatives to follow (Eckersley, 2007). Furthermore, many scholars of green theory began to reject the idea of anthropocentrism and shifted to a more ecology-center philosophy called ecocentrism (Eckersley, 2007), a term that I will define in detail a bit further down on this chapter.

A new philosophical perspective on the humans' place on nature and the relationship between the two contributed to the beginning of a new wave of the theory (Eckersley, 2007). The new perspective was highlighting the difficulties of granting justice and human rights connected with the environment while at the same time excluding completely market and economy (Eckersley, 2007). Hence, the second wave saw further development of some key concepts and the debates with other schools of thought. These changes contributed to making the theory more interested in transnational aspects (Ari & Toprak, 2019). This helped to trans-nationalize the scope of many concepts and institutions by always keeping in mind the environmental problems. The theory then started to look differently at many core concepts such as environmental justice, environmental rights, and the notion of green states (Eckersley, 2007).

In the end, the third wave made the green theory more interdisciplinary with a new cosmopolitan view (Ari & Toprak, 2019). This wave developed at the end of the decade and was connected to an increase in the debates outside of the international relations field in terms of, for example, feminism that showed the lack of gender perspective on the theories of international relations (Eckersley, 2007). These new discussions contributed to helping green theories acquire more radical arguments from outside the discipline of international relations too. The drawing upon arguments from outside the discipline made it possible for the theory to come into contact with cosmopolitans orientations from which the theory also took inspiration (Eckersley, 2007). Again, this new wave ended with the theory reinterpreting some of the central aspects of international relations like security, development, and justice (Eckersley, 2007).

Environmentalism and green theory

According to some authors before dwelling into green theory we need to differentiate between green theory and environmentalism, terms that are often used interchangeably but which entail

different assumptions (Ari & Toprak, 2019). The first big difference is environmentalists think climate change can be tackled within the current economic, social, and political framework. Green theory, instead, argues that the current system needs to be challenged, and possibly changed, to reach results, as the existing structure is the reason we have climate change in the first place (Ari & Toprak, 2019). Always connected to the structure, environmentalists explain that the international elites are the ones that must address the challenge and states, as the only recognized actors in the international system, are the only one that can act to solve it. The green theory however has a completely different view on this, since it argues that states are not going to be able to solve the problem, as they are the main culprit for its exacerbation (Ari & Toprak, 2019). The last main difference is the worldview used by these two approaches. Environmentalists have a more anthropocentric point of view in their analysis while green theorists are more eco-centric: these two ways of looking at things are almost opposites as we will see below (Ari & Toprak, 2019). Anthropocentrism is the point of view used by the environmentalists and it is a human-centered worldview. Hence, nature is considered part of human values so, for example, they are concerned with environmental problems, but they think that humans can resolve them through international collaboration. Ecocentrism instead argues how humans are not distinguished and should not be prioritized from the rest of nature, as humans are an integral part of it. This is a very nature-based worldview where humans are in no way superior to the other creatures and deny their supremacy over them (Ari & Toprak, 2019). This perspective should also draw attention to the limits of the knowledge humans have on the natural world. Nature is probably way more complex than what we will ever imagine. As a consequence, all kinds of interventions whether technological, economic, or political on nature should be carefully practiced due to the high possibility of producing major social and ecological costs (Eckersley, 2007). However, some critiques were made on this regards as it is considered unfeasible having a complete ecocentric focus and that at least a partial anthropocentric view is needed in international relations (Ari & Toprak, 2019).

The role of states and of other actors in the green theory

An interesting aspect, very different from the one we earlier saw with the neoliberal institutionalism theory, is the involvement and importance of states in environment protection. Nation-states are not the main actors in the green theory, and they are often criticized as the main contributors to environmental degradation. The degradation is exacerbated by the tendency of states to protect their national interests while keeping ignoring what are consider more global issues (Ari & Toprak, 2019). In fact, for the theory, states are usually acting only in environmental problems that directly affect them. Furthermore, some authors also explain how environmental problems are just too big for countries to address them properly (Hay, Lister, & Marsh, 2006). At the same time, a small

part of theorists is still looking with suspicion to states, but recognize how a strong state willing and able to efficiently collaborate can still be beneficial when it comes to shaping international politics (Ari & Toprak, 2019). This is even more important on the environment discussions, or for the redistribution of resources between states in the global system. Thus, states can be considered sometimes as the necessary evil (Ari & Toprak, 2019). Other authors also add to the difficulties to establish the role of states on the issue. Hay et al. (2014) for example explain how the central contradiction is between the global character of the environmental problems and the separation of political institutions in territorially organized states (Hay, Lister, & Marsh, 2006). The main argument (Hay, Lister, & Marsh, 2006) is that states will always be oriented towards the protection of the interests of those within their national borders, and will never be open to purse the necessary international cooperation to avoid environmental collapse. It is already clear how states' stance in the international system and their roles is kind of contested even within the theorists. Nonetheless, what is common between the majority of green theorists is that we need decentralization of power away from the central states (Hay, Lister, & Marsh, 2006). The authors additionally reflect on how this is probably connected to the historical origin of the green movements, and thus most of the environmental approaches, which are usually nor right nor left-wing and more often of anti-political stance, and even if the green theory tries to take a step back from such a limited view of states it is still partially based on it (Hay, Lister, & Marsh, 2006). The arguments against this decentralized approach and relegation of states on the side of the international system are related to the nature of the environmental issues. These issues are considered by some theorists as just too wide and global for states to not take part in it. Besides, a decentralized stance can help with local problems but could hinder collaboration in global problems due to them being too concentrated in their relative-gains logic (Ari & Toprak, 2019). As Paterson says states are at the same time too big and too small to address these problems, big because environmental problems need to be addressed at the local level, and too small because some of these problems are just too big for the single state to resolve (Paterson as mentioned by Ari & Toprak, 2019). Eckersley (2007) is also a bit critical of this idea of states. In her opinion, the greens' idea of states could be right per se, but it is based on an unrealistic concept of states as static things which is not the case in reality. States are instead continuously undergoing re-formation and where new purposes and contradictions can be added or changed (Eckersley, 2007).

When it comes to other non-state actors, the green theory is also looking favorably to them. These actors are considered essential because through attending, criticizing, and influencing the negotiations they could help provide new forms of accountability for the states (Eckersley, 2007). The theorists look at what Eckersley calls "deterritorialized governance" (Eckersley, 2007, p. 258) which is for example the transnational initiatives of NGOs, mostly in the environmental sphere, and

the private practices of industrial and financial corporations (Eckersley, 2007). These ensembles of actors and approaches could be recognized, according to the theory, as a new and hybrid version of authority, an authority which could overlap the boundaries of the state or bypass the hierarchical form of governance that we traditionally had in the international system (Eckersley, 2007).

Economy, development and regimes

The green theory has also a peculiar way to look at the economy and development. Both concepts are frowned upon by the researchers of this theory due to their large effects on nature and the resources (Eckersley, 2007). They think that the growth of the economy already reached its limits and an additional increase would just contribute further to climate change and the environmental problems we already have (Ari & Toprak, 2019). Additionally, the economy and capitalism have uneven impacts on the different ecosystems and human communities with some actors having bigger effects than others on environmental degradation (Eckersley, 2007). Another motivation is because the economy is often one of the biggest obstacles in environmental discussions as all countries are more conscious about their economy and its preservation than the environment (Ari & Toprak, 2019). Related to this consideration is the green theory explanation on how economic actions should be taken at the local level while still being conscious of global issues, their main motto in this regard is "think globally act locally" (Ari & Toprak, 2019, p. 171). Green theorists are thus against extensive trade and consumption, but they argue on how these could be carried on by just being more conscious of the environment when they are done (Ari & Toprak, 2019). Many debates aroused also around the so-called ecological modernization (EM) where the economy would go through a green transformation to be more environmental-friendly. Even if it could be considered a feasible idea it is still contested by some researchers as growth, in their opinion, in whichever forms we present it, is still highly unbeneficial for the environment (Hay, Lister, & Marsh, 2006).

When it comes to regimes the green theory has a different stance compared to neoliberalist. The theory sees environmental regimes as the embodiment of moral norms that cannot be reduced to states' interests (Eckersley, 2007). Researchers make the example of the regimes for the protection of endangered species or the oceans which do not reflect only the states interests in these aspects but are grounded deeper in different motivations such as the cultures and values of the countries, in the role of scientific research, etc. (Eckersley, 2007). Furthermore, the author explains how regimes in this theory are sometimes considered as great accountability systems important to promote a more critical deliberation between countries (Eckersley, 2007). However, the green theorists are often worried about how some regimes, mostly of economic nature, tend to overshadow or undermine the creation and progression of environmental regimes (Eckersley, 2007).

Conclusion

In conclusion, the two theories analyzed are very different in their main assumptions. The neoliberal institutionalism theory is a state-centered theory where states are still the main actors in the international system and cooperation. NGOs and institutions play more of a supporter role, but it has been granted them certain importance on the process. The green theory instead is very critical of states due to their contribution to climate change and the degradation of the environment. States that are not the central actors anymore, however, it seems there is still a bit of indecision on which role they play in the international system and mostly in the environmental discussions. Here the other external actors are also looked favorably not for their help in the cooperation but for their influence on the accountability of the system. The main division is probably the different worldview the two theories have. The neoliberal institutionalism is still anthropocentric based where humans and their social construction are still central, while green theory rejects this idea and look at the world with an ecocentric stance. Here humans are not superior or external to nature but fully part of it. The ecocentric stance results in the green theory being very critical also of economy and development. In the theory's opinion, we already reach the maximum level of development and any further growth will just end in contributing even more to the environmental issue. Their opinion on regimes is also in contradiction. For neoliberals, regimes are looked at as the outcomes of bargains between states where interests have the priority. While in green theory regimes are based on moral norms and values which are not thus limited to interests. Furthermore, it is interesting to see how the two theories analyze cooperation to tackle environmental issues. The neoliberals use more of a global approach, they recognize how environmental degradation is a global issue and as such requires a global response thanks to states' cooperation and institutions or regime intervention. The green theorists instead are a bit more confused about what is required. However, they are more or less convening on the need for a decentralization of the response with a more national or even local approach.

The two theories, in the end, will be used in the discussion part of the next chapter to assess if the Joint Partnerships on climate change are a valuable form of cooperation for the EU to implement with other countries. The many differences between the two theories will permit us to look at the topic from two points of view and thus have a wide range of analysis.

POLICY ANALYSIS

Introduction

This chapter constitutes the core of the thesis and it will be an essential part to answer the research question. It starts with a policy analysis of what can be considered an interesting example of

bilateral agreements. This bilateral agreement is the so-called "Joint Partnership on Climate Change between China and the European Union" (China & EU, 2005 p. 3). The Partnership is an agreement between the EU and China that started in 2005 and continues to this day. During the first Joint Statement, the Partnership was defined as a "high-level political framework" (China & EU, 2005 p. 2) to "strengthen cooperation and dialogue on climate change and energy between the EU and China" (China & EU, 2005 p. 1). The cooperation between the two is based on annual Summits between the parts where they discuss energy and climate change and decide on commitments on regards to for example emissions, investments, and negotiations (China & EU, 2005). The information and data for the analysis will be based on the Joint Declarations which are the documents where the commitments and decisions taken during the Summits are written down. They were chosen for the analysis because they permit an easier visualization of the points discussed in the Partnership. The analysis will be based on declarations from 2005 to 2019. Unfortunately, the 2020 Summit should have taken place in March 2020 in Beijing, but due to the COVID-19 pandemic, the Summit was postponed until further notice (Emmott, 2020).

The analysis will be carried on through the policy cycle model which permits scrutiny of all phases of the policy cycle from the agenda-setting to the final evaluation. It will help look at how the policy came to be, what it is, how it develops, and if it was "successful" in reaching the goals set. The chapter will be then divided into different subchapters. The first subchapter (pp. 29-34) will be a description of the issues the policy tries to address. There will be an overview then of climate change and more in detail energy consumption, energy resources, and international cooperation on the matter. The overview will have all the data necessary for the comprehension of the problems. In the same part, the agenda-setting, so how the problem came to the attention of the policymakers (Mwije, 2017), will also be looked at. The second subchapter (pp. 34-37) will go deeper into the policy itself. It will present the goals and discussions carried on in the Partnership between the two actors. This represents the second and third phases of the policy cycle called policy formulation and decision-making. Here is where policymakers, after having identified the problem, discuss the alternative solutions on how to solve the problem and then choose and legalize the solution that fits best with their case (Mwije, 2017). The next subchapter (pp. 37-38) will deal with how the policy is chosen will be implemented. This is related to the implementation phase of the policy cycle and it is how the policy will be executed (Mwije, 2017). The subchapter following (pp. 38-43) is the evaluation part of the cycle. Here all the results obtained will be discussed and scrutinized, there will some critiques and overall it is where the assessment of the policy will happen. The final part of the policy cycle will be next. In this subchapter (pp. 43-45) there will be a recap of all the major points discussed before and some recommendations on how the policy could be changed will be added. The chapter then will finish

with the discussion (pp. 45-49) where the policy will be discussed and the theories precedentially chosen will be applied. This is the part where we should be able to lay down if the Partnership is "successful" and if the EU should invest in this type of bilateral agreements. Basically, it is the part that should help with answering the research question. This analysis trough the cycle model will hopefully help thus with reaching a wide comprehension of the policy.

Definition of the problems to address and the agenda setting

As mentioned in the introduction to this chapter, in this subchapter there will be an overview of the problems the policy selected so the Partnership on climate change between China and the EU will try to address. There will be much data and information on climate change, energy, energy resources, and negotiations. Some figures were also added to make the visualization of the data more direct. This will also be the part where the agenda-setting of the policy chosen will be presented.

The anthropocentric impact on climate change

Climate change is almost concordantly recognized nowadays as an anthropocentric, or man-made process. Anthropocentric because human influence ended up having repercussions on the environment and its structure (IPCC, 2014). For example, as it is showed in figure 2 below, greenhouse gas emissions caused by human activity increased extremely compared to the pre-industrial level. The anthropocentric emissions passed from a level around 3 GtCO2/yr (annual level of CO2 emissions) of the pre-industrial period to around 35 GtCO2/yr today. The increase in the emissions resulted in the concertation of greenhouse gases which also skyrocketed. This increase probably contributed to exacerbating global warming by making the warming process faster (IPCC, 2014). One of the results, according to the IPCC (2014), is the period between 1983 and 2012 that measured as the warmest period of the last 1400 years in the northern hemisphere (IPCC, 2014). And as we can see always from figure 2 below, it already started to have effects on the sea level and the global temperatures, and in the last decades, both saw an increase in their measures. In the future, if the process continues, it is considered extremely likely to see an increase in extreme events as hurricanes and storms with also important effects in water availability, coastal degradation and heat waves (IPCC, 2014).
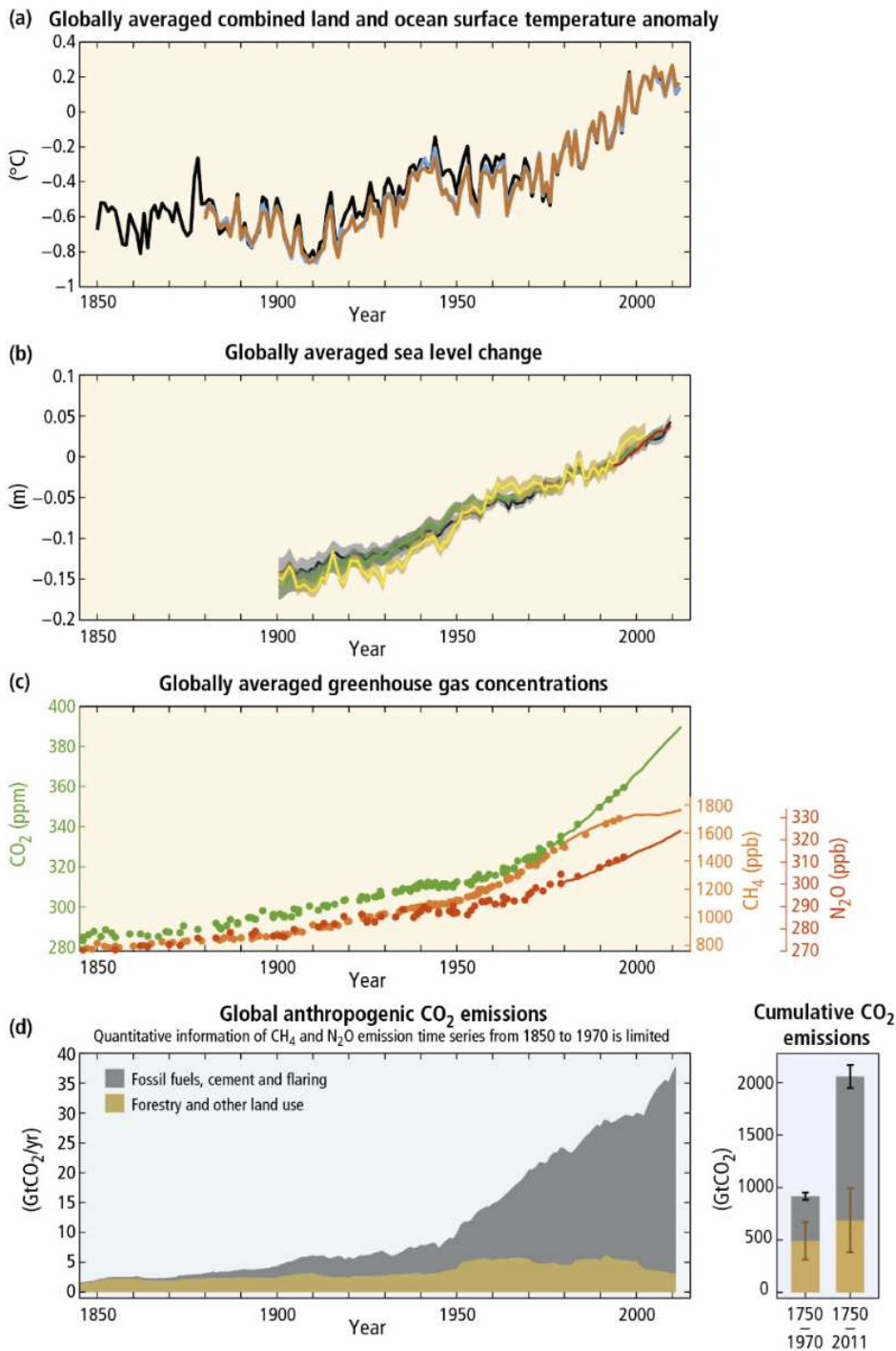
Figure 2: global increase in temperatures, sea levels and emissions from 1850 to today. Reprinted from: IPCC, AR5 Synthesis Report *Climate Change 2014:* Summary for policymakers Graphics

Thus, the only way to address the topic and slow down the warming is through a limitation of the human impact. It is for sure not an easy task and will encompass most of our daily-life activities and behaviors, particularly in the Global North. Many countries are however starting to partially address the problem. Nonetheless, the IPCC argued how between 2000 and 2010 even though some

sort of mitigation policies were implemented the world still saw a sharp increase in emissions (IPCC, 2014). This increase is mostly connected to the growth in population and the fast development of countries such as China and India which contributed greatly to the growth in their national measurements. Another factor is the high increase in the use of coal as energy supply after the gradual decarbonization process we saw in the previous years (IPCC, 2014). Linked to this, energy is still one of the biggest contributors to greenhouse gases. In 2010, for example, electricity and heat production accounted for 25% of the emissions without considering the indirect contribution of other sectors like transportation or agriculture.

In the same year, the CO2 emissions caused by fossil fuels also saw a sharp increase (IPCC, 2014).
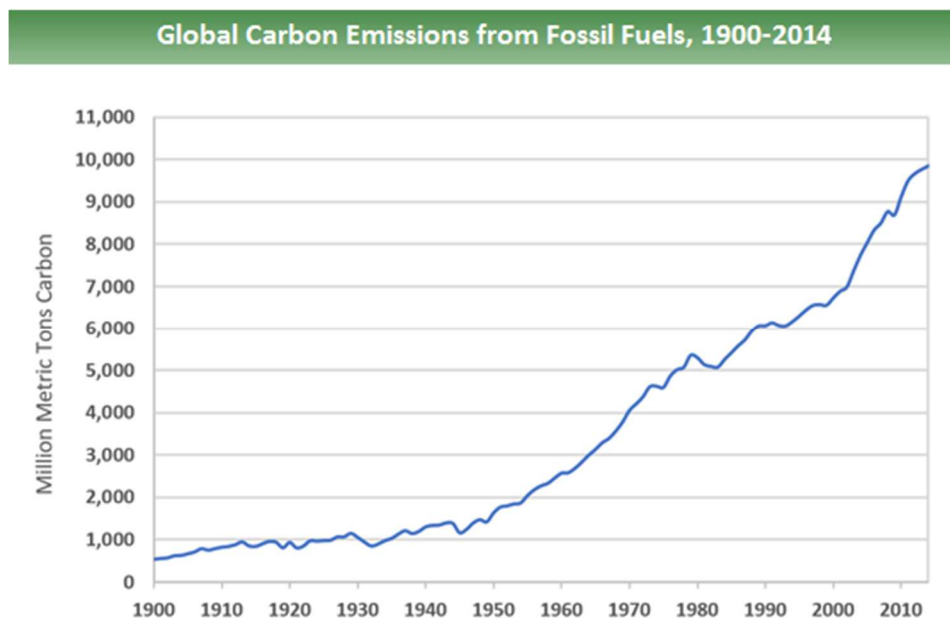
Global Carbon Emissions from Fossil Fuels, 1900-2014

Figure 3: Global Carbon Emissions from fossil fuels 1900-2014. Reprinted from: US Environmental Protection Agency, Global greenhouse gas emissions data

As it is possible to see in figure 3, CO2 emissions from fossil fuels registered a 90% increase from 1970 to 2010, and in the last century, levels passed from around 500 MtCO2 (Metric tons of carbon) to almost 10.000 MtCO2 (EPA, 2020). In the same period, these emissions were produced for 78% by the combustion of fossil fuels and industrial processes with deforestation and land use taking second place (EPA, 2020). As of today, coal is still the most used fossil fuel. According to the International Energy Agency (IEA 2019), coal in 2018 was causing 44% of the CO2 emissions related to energy (IEA, 2019). Furthermore, the IEA tried to estimate the impact of fossil fuels on the global increase in temperature. The results showed how the CO2 emitted only by the combustion of coal

contributed to an increase of over 0.3°C out of 1°C in the global average annual surface temperature compared to the pre-industrial level (IEA, 2019). As a result, decarbonization and a reduction of the energy demands, or a more efficient way to produce it, are some of the key actions to likely keep the increase of degrees around 2°C (IPCC, 2014). To reach this goal, however, countries will have to cut their emissions of greenhouse gases from 40 to 70% by 2050 compared to the level of 2010 and reach zero-emission by 2100 (IPCC, 2014). The IPCC warned countries on addressing the issue by following and protecting their interests. The organization argues how most greenhouse gases tend to mix globally and accumulate over time thus individual actions are usually ineffective. The IPCC then asks countries to collaborate to reach a common solution and uniquely address the problem, the same could be said of climate change and environmental degradation (IPCC, 2014). Another point the IPCC stresses is cooperation in research and development due to their important knowledge spillovers (IPCC, 2014).

Cooperation on climate change

As already mentioned in the literature review, however, cooperation has been challenging in the international system. The two most notable examples of cooperation up until now are the Kyoto Protocol and the Paris Agreement. The first one was signed in 1997 came into force in 2005 and today it has 192 members (CNN, 2020). The protocol was adopted as a commitment from the industrialized countries to reduce their greenhouse gas emissions. These 37 industrialized countries, plus the European Community, had to reduce their emissions by 5% compared to the 1990 levels between 2008 and 2012 while developing countries were given the choice to voluntarily comply (CNN, 2020). The protocol, unfortunately, had important issues that compromised its efficiency. The first one is the lack of adherence to the protocol by the US, one of the biggest polluters, and later on also the withdrawal of another important polluter like Canada. Furthermore, China and India were considered developing countries and thus their commitment was just on voluntary bases. In the end, in 2012 the Protocol should have been renovated but on this day it never came into force, and now it is mostly considered replaced by Paris (CNN, 2020). The Paris Agreement was signed in 2015 in Paris and since then it has been ratified by 187 countries (Britannica, s.d.). The countries now have to try to keep global warming well under 2°C, or even better 1.5°C, to exclude the worst effects of the change in temperatures. However, the lack of a control system and enforcement mechanisms left many people disappointed towards this Agreement. Besides, in 2017 Donald Trump, the president of the US, decided to withdraw from the Agreement thus excluding the second biggest polluter from its obligations (Encyclopedia Britannica).

China and the EU

All the information just presented are important to keep in mind because they help give a background to the policy I will go to analyze. Now, to add a bit more to this I will give some information only on the two actors involved in the policy. China has been from 2006 first in terms of CO_2 emissions, and as of today, it emits 27% of the global emissions of CO_2 (Ritchie & Roser, 2019). The EU instead produces 9.8% of the global emissions and is the third biggest emitter after China and the US. It is recognized how China, the EU, and the US are covering more than half of the global emissions. Thus, they are considered essential to reduce global emissions altogether (Ritchie & Roser, 2019). It must be noted, however, how the sharp increase of emissions in China, and Asia in general, is due to the fast development the area saw in the last decades. The improvement of the standard of life thanks to the reduction of poverty and the increase in the economy and industrial production made the emissions increase accordingly (Ritchie & Roser, 2019). The EU, instead, is seeing a constant fall in CO_2 emissions. As we mentioned previously, to reduce these emissions a shift from coal-based, or in general fossil fuels-based, energy is required. China in this sense is still highly dependent on coal. In 2005, the year of the beginning of the Partnership on climate change between China and EU, China was the second country for energy-related carbon emissions following the US. And by itself was accounting for 18% of the total global emissions caused by this fuel (Ritchie & Roser, 2019). The EU instead in 2005 was already reducing its dependency on coal and saw a 0.8% decrease in greenhouse gases compared to 2004 (EEA, 2007). When it comes to the participation of China and the EU in the two climate agreements, China was not considered a developed country at the time of Kyoto thus its participation was purely on a voluntary base. The EU, at that time European Community and made of just 15 countries, was between developed countries and committed to reducing its emission by 8% between 2008 and 2012 (CNN, 2020). In the case of Paris, both parts are members of the agreement.

The data illustrated up until now show how climate change is a pressing matter. The studies conducted on the topic and the results obtained, in this sense a great contribution came from the IPCC (Black, 2013), which showed the challenges that climate change poses on humanities and the international system. However, the international system has not been able to effectively address it. The overview showed also how China and the EU are still very part of the problem and thus will have to be part of the solution. It can be said that the data collected is what helped the agenda-setting for the policy that will be analyzed in this chapter. We saw how the agenda-setting is the phase where the problem is identified and come to the attention of the policymakers (Mwije, 2017). The results obtained by the many studies conducted on the topic presented the relevance of the problem and it arrived at the attention of both policymakers and society. Policymakers have already started to address

the problems, both nationally and at the international level. This interest in acting on the problem is probably also incentivized by public opinion. A recent study highlighted how 47% of the Europeans think that climate change is the biggest challenge in their lives a number that reaches 73% in the Chinese population (Fleming, 2020). On the presentation of the policy cycle and the agenda-setting phase it was written how usually the agenda can be set through a top-down or bottom-up approach depending on if the agenda depends on the opinion of the public or the policymakers (Mwije, 2017). I think that in our case it could be both, the issues are pressing enough to have attracted the attention of both. The issues presented in this first subchapters however are not all the issues connected to climate change but just the one that will be touched by the policy analyzed.

Overview of the policy

In this subchapter, the analysis will go deeper into the policy itself. Trough the words of the annual Joint Declarations on climate change between China and the EU there will a presentation of the main goals, activities, and topics discussed by the two actors as part of the Partnership. The overview will be done by highlighting the changes and addition made in the different years, while always remembering that the main points are constantly the one presented in 2005. This subchapter will represent phases two and three of the policy cycle. The phases of policy formulation and decision-making entail the decision on the actions that will be carried on to address the problem and their sequential transformation into laws (Mwije, 2017).

The Joint Partnership on Climate Change between China and the EU

The "Joint Partnership on Climate Change" between EU and China was announced in September 2005 as the outcome of a bilateral Summit the two participants just finished. It was created to "strengthen cooperation and dialogue on climate change and energy between the EU and China" with "concrete actions" (China & EU, 2005 p. 1). The bases of this collaboration are two action plans, one on clean coal and one on energy efficiency and renewable energies which the two actors signed at the beginning of 2005. The Partnership was created to guarantee a follow-up process to these two plans by setting a regular review process of the commitments enlisted there (China & EU, 2005). However, we can consider strictly Partnership only the activities that started after September 2005. From there on the Partnership expanded throughout the years, and it started to include more actions and activities, but always on climate and energy, or update the preexisting ones (China & EU, 2005).

The key actions of the Partnership

The main dimensions of the Partnership are energy consumption and coal (China & EU, 2005). This part is both a political and economic cooperation for the development of clean and efficient energy, technologies, and coal while also investing to reduce their costs. The reduction of

costs has the objective to promote the "deployment and dissemination" (China & EU, 2005 p. 2) of these technologies.

One of these new technologies is the zero-emission coal cited in the first Joint Declaration (China and EU, 2005). This "zero-emission coal" will be reached through a new set of technologies called Carbon Capture, Utilization, and Storage (CCUS) that should help greatly with the reduction of CO_2 in the atmosphere (CCUS Project Network, 2020). These technologies should help capture the CO_2 emissions from the energy and industrial sectors by storing it underground, and thus limit its presence in the atmosphere. The technology is considered to be a key strategy to limit massively the emissions of CO_2 and one of the only ways to abide by the Paris Agreement. However, we are still at the beginning of research and utilization, so the costs are still high and its implementation very limited (CCUS Project Network, 2020). For the utilization of energy in general the two actors have also decided to set down some related goals for 2020. The first and common goal is to improve their economies' energy intensity (China & EU, 2005). Energy intensity is a measure used in statistics to calculate the energy efficiency of an economy. It is calculated by looking at the units of energy used per unit of GDP, and the result indicates how well a particular economy can convert energy into a monetary output (Bathia, 2014). Thus, a lower energy intensity represents an efficient allocation of energy resources and represents the economy's ability to generate wealth and a higher quality of life (Martinez and Wagner, 2019). The energy intensity however can be influenced by many factors such as the productions of goods or even the weather condition of that specific country (Bathia, 2014). Hence, it is normal for developing countries, and most fast-developing countries, to have a high level of energy intensity due to the high level of energy production that the development requires. Usually, though, countries tend to reduce this level of intensity once the development slows down or it reaches a stable level of growth (Martinez and Wagner, 2019). In this regard, in the 2005 Joint Declaration China promised to reduce the energy intensity of its economy by half, by 2020. While the EU promised for the same year to reduce its energy consumption by 20%, by simultaneously increasing its energy efficiency (China & EU, 2005).

The political cooperation on climate change

The second important dimension of the partnership is more strictly focused on climate change. To address this issue, the two actors commit to investing in research to acquire a better understanding of its impacts, costs, and adaptation (China & EU, 2005). They also promise to enhance their cooperation in raising public awareness and to strengthen the institution involved in the fight against climate change. This collaboration is then connected also to international negotiations where the two parts promise to exchange views and find common key issues. In the Declaration, the Kyoto Protocol

is also often mentioned and the two commits to respect its principles and the goals set during the negotiations (China & EU, 2005).

During the years the two actors decided to "enhance coordination and cooperation to further implement and upgrade" the Partnership (China & EU, 2009 p. 1). They announced their willingness to intensify dialogue on policies and cooperation primarily on climate change, while also expanding the areas they want to focus on by adding, for example, sustainable urban development, capacity building and regional cooperation (China & EU, 2009). In 2009, for the first time, in the annual Joint Declaration, the two actors also mentioned developing countries. The mentioning was mostly in anticipation of the following COP15 taking place in Copenhagen in the same year. They outline how financial support and technology dissemination directed to developing countries will be an important outcome of this meeting in Denmark. Moreover, in their opinion, to address climate change further we will need ambitious targets of emissions reduction for developed countries and the implementation of the necessary national mitigation actions by developing countries (China & EU, 2009). These mitigation actions will have to be supported by finances and technologies coming from the developed countries which will help them also with capacity building and the transition to the low carbon economy (China & EU, 2009).

In the end, in Copenhagen, the parties decided to jointly mobilize 100 billion dollars per year by 2020 to help developing countries to address their needs in terms of mitigation actions (China & EU, 2015). However, apart from this small success the COP15 was more or less considered a failure by many (Vidal, Stratton, & Goldenberg, 2009). Always in terms of developing countries in 2018, the two actors will start to cooperate with these states through a "triangular cooperation" (China & EU, 2018 p. 13) to promote the access to sustainable energy, energy efficiency and to reduce emissions. They state that priority will be given to the least developed countries and small islands developing states (China & EU, 2018).

The two milestones of the international negotiations on climate change

On the matter of international negotiations, it is interesting to take a look at how in the years the focus on Kyoto Protocol shifted towards the Paris Agreement, and from 2014 onwards how the Kyoto Protocol sort of disappeared from the Declarations. This is probably connected also to the disappearance/oblivion of the Protocol after 2012 (CNN, 2020). The Paris Agreement instead appears for the first time in the Partnership in 2014 when the two actors promise to cooperate on the following COP taking place in Paris (China & EU, 2014). They hoped to achieve a legally binding agreement in terms of climate change. The same goes for the 2015 Statement, where the two parts are still hoping for a legally binding agreement which should be, this time, applicable to all countries (China & EU, 2015) as opposed to the limitations of Kyoto (CNN, 2020). After 2015, the Paris Agreement is

mentioned often as a "historic achievement" (China & EU, 2018 p. 10). The two argue how it will accelerate the attainment of a global low-emissions society and improve climate-resilient development. Moreover, the Paris Agreement shows how multilateralism and shared political will can help to address global challenges. Both actors, in the end, restate their commitment to the Agreement and their willingness to act in its favor (China & EU, 2018).

Implementation of the Partnership

The implementation according to the policy cycle model is the execution of the plans made by the policymakers in the other phases (Mwije, 2017). In our case, the implementation will be the execution of all the goals and activities aforementioned in the previous subchapter. It usually involves the allocation of resources and the creations of rules or agencies that will help translate the commitments into laws. It is often a fluid stage thus can be changed and reconfigured when needed (Mwije, 2017). In the Partnership, all the information on how the implementation will work are contained in the 2006 Joint Declaration.

In 2006 a Joint Declaration called "rolling working plan" laid down the actions the two actors will enact to reach the goals established in 2005 and the future directives of the Partnership (China & EU, 2006). The first, and main way is the continuation of the annual Summits between the parts. The Summits are considered essential as highly political follow-up mechanisms that are useful to also provide further guidance, when necessary, and to ensure the best continuation of the Partnership (China & EU, 2006). Another system for political coordination is the so-called "bilateral consultation mechanism" that involves representatives from the Chinese government on the areas addressed, and the EU presidency and commission. The idea is to provide political coordination and guidance to the Partnership. Besides, it should help strengthen the negotiations and dialogues on climate change policies and key issues at the international level. This mechanism requires scheduled meetings at least once or twice, when needed, per year (China & EU, 2006). Furthermore, the Declaration also mentioned the involvement of the EU environment counselors' groups. These groups will ensure direct cooperation with the relevant Chinese minister, but most importantly are essential to reach cooperation between the member states of the European Union. In the end, it is also written that the partners need to grant a constant exchange of information on the activities that are necessary to contribute to the goals of the Partnership (China & EU, 2006).

The same 2006 Joint Declaration presents some past and future activities the two actors decided to carry. In the 2005-2006 period, exponents of the two parts met through bilateral consultations and workshops. Most of these were encounters where policymakers or members of the private sector met and discussed topics relevant to the Partnership. An example is the workshop "the development of clean coal policy for China" that took place in Beijing in July 2006 (China & EU,

2006). Other important activities the two partners will continue to follow also in the future are bilateral consultations associated with the UN Climate Change Conferences. In 2006, for example, there were two bilateral consultations. The first one was a debrief of the COP11 that took place in Montreal in December 2005. The second one in October was instead in preparation for the Conference in Nairobi which was scheduled to take place in November 2006. As for other future actions for now the two parts are more focused on research and consultations on the topics discussed in the 2005 Joint Declaration. The objective is to reach a better understanding of which obtainable goals to set or how to reach a certain level of reductions (China & EU, 2006).

Evaluation of the policy and troubles with the Partnership

It is time now to go to one of the last phases of the policy cycle. This phase is the evaluation of the policy, hence in the next few paragraphs the policy will be assessed, and it will help to quantify the level of success of the policy itself. The China-EU Joint Partnership is about to celebrate the fifteenth anniversary and in 2020 it is also the year when some of the objectives expire (China & EU, 2005). Thus, this section of the analysis will address two main questions: did the cooperation between the two actors worked? And did they manage to reach some results?

The cuts in emissions and the energy dilemma in China

Starting by looking at the basic assumptions of this Partnership as written down in 2005 we can see how the main field of cooperation between the two was energy and emissions (China & EU, 2005).

Energy Production China in Mtoe

Energy Consumption China in TWh
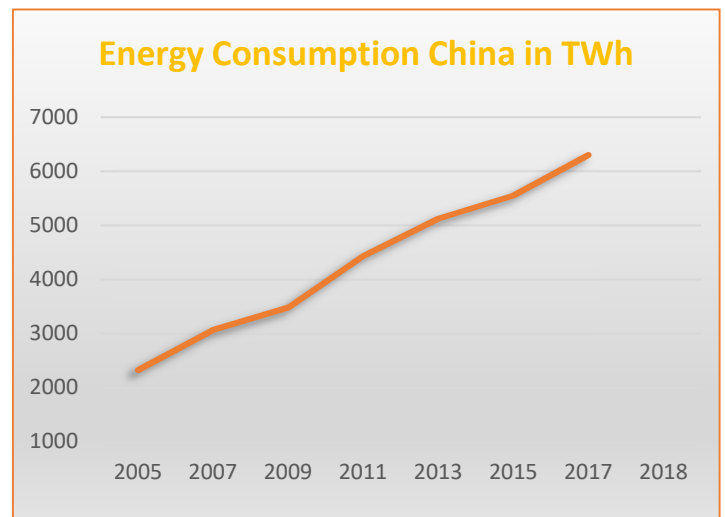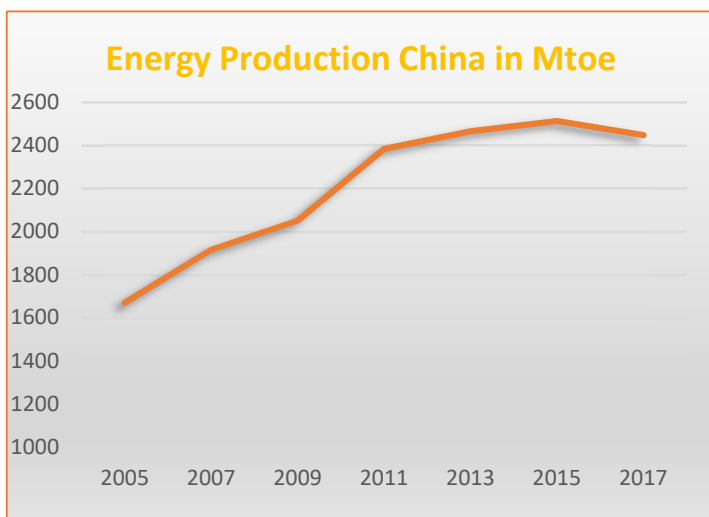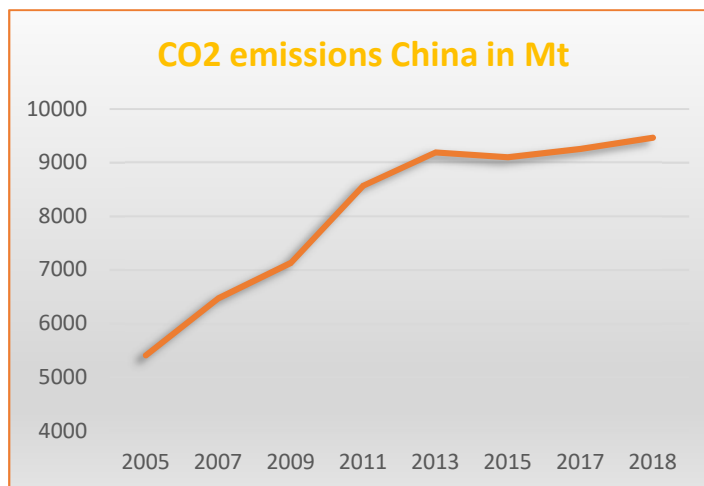
Figures 3, 4 and 5: differences in China's energy consumption, production and CO2 emissions from 2005 to 2017-2018. Source of the data: the IEA page on China.

Starting with China, according to the International Energy Agency energy production and consumption continued to rose. As showed in figures 3 and 4, both energy production and energy consumption increased from 2005, the year of the first Joint Declaration on climate change (IEA, IEA China, 2018). The energy production started from a level of 1671 Mtoe (Million Tonnes of Oil Equivalent) and arrived at 2449 Mtoe in 2017 clearly showing an increase. In figure 3, however, it is possible to notice a slowdown in their increase from 2011 to 2015, the year of the peak of the levels, and after that a slight decrease. Energy consumption instead, as shown in figure 4, steadily increased from 2324 TWh (terawatt hour) in 2005 to 6302 TWh in 2017 (IEA, IEA China, 2018). This increase resulted in China becoming the largest energy consumer in the world in 2009, and in 2018 it reached the highest growth in consumption since 2012. This growth is mainly driven by the strong industrial demand in the country and by the increase in the number of cars and thus of fuel used for transportation (Enerdata, 2019). A similar increase can be seen for the CO2 level of China as showed in figure 5. The levels of CO2 went from 5408 Mt (million metric tonnes) in 2005 to 9258 Mt in 2017. As for energy production, here too we can see stability in the levels from 2013 to 2016 with even a slight decrease in 2017 (IEA, IEA China, 2018). However, in 2018 there was a new increase of 3.1% due to a step back of the country in the shift from coal to gas (Enerdata, 2019). Nevertheless, when looking at these values we need to keep in mind the incredible economic growth China had in the last years. Its GDP went from 2.286 trillion US$ in 2005 to 12.143 trillion in 2017 touching peaks of annual growth of 14% in 2007 (WorldBank, 2020). As I mentioned previously, the development of the economy, and even more a fast development as the one China is currently doing, requires a huge amount of resources and thus also energy. For the levels of energy consumption, this correlation can be seen by looking at the energy intensity. As we saw, energy intensity is the units of energy used

39

per unit of GDP (Bathia, 2014) and its levels saw an important reduction of 40% between 2000 and 2018 (Enerdata, 2019). This decrease resulted probably from the creation of energy efficiency policies directed towards energy-intensive industries and sectors. In regards of the Partnership period, in 2005 the energy intensity of China was of 0.224 koe/$2015p (Kilogram oil equivalent per USD at the constant exchange rate, price and purchasing power parities of the year 2015) and it went down to 0.131 koe/$2015p in 2018 (Enerdata, 2019). We saw then in this period a reduction of almost half, a result well in line with the goal China set in the 2005 Joint Declaration (China & EU, 2005). An important decrease was also in the CO2 intensity that similar to the energy intensity is the units of CO2 emissions per unit of GDP. Between 2005 and 2018 China went from 0.689 KCO2/$2015p to 0.393 KCO2/$2015p showing a strong reduction of emissions while still having an important economic growth (Enerdata, 2019).

A problem in China is, however, the still high dependency on coal. Coal consumption in China continued to rise and in 2017 it was covering more than 60.4% of the energy supply (IEA, IEA China, 2018). The consumption of coal is connected to the high dependency of the Chinese industry to this energy supplies, the industry sector, covers more than 60% of the entire coal consumption (IEA, IEA China, 2018) and mostly thanks to sectors such as steel, chemicals, and cement (Enerdata, 2019). In reality, between 2013 and 2016 the consumption of coal saw some drops in the levels, but in 2018 the increase restarted. This new increase is connected with a recent slowdown in the growth of the Chinese economy and the gas supply. These two facts made the country lower the emphasis on a shift from coal to gas, and thus partially put aside the idea to green the economy while at the same time maintain prosperity (Enerdata, 2019). Nonetheless, it is important to point out that other energy sources are also steadily increasing (IEA, Global Energy & CO2 Status Report 2019, 2019).

The EU and its partial improvements

Going instead to energy production in the EU we can see how it continues to steadily decrease (Enerdata, 2019). The decrease is connected to the decline in the production of electricity from nuclear plants, the depletion of resources of oil and gas, and the more stringent climate policies (Enerdata, 2019). As for the energy consumption, as can be seen in figure 6 below, in the EU it saw a decrease of 5.7% between 2005 and 2017 (EEA, Final energy consumption by sector and fuel in Europe, 2019). The level was still in line with the trajectory to reach the 20 % energy efficiency target set for 2020 (China and EU, 2005). Unfortunately, as of 2017, only 16 member states were actually in line or below the trajectory of the national target of reductions while 12 (Austria, Belgium, Bulgaria, Cyprus, Denmark, France, Germany, the Netherlands, Poland, Spain, Hungary, and Ireland) were not in line at all, making the possibility to reach the goal set for 2020 increasingly uncertain (EEA, Final energy consumption by sector and fuel in Europe, 2019).

Final energy consumption by sector, EU-28, 1990-2017
(million tonnes of oil equivalent)

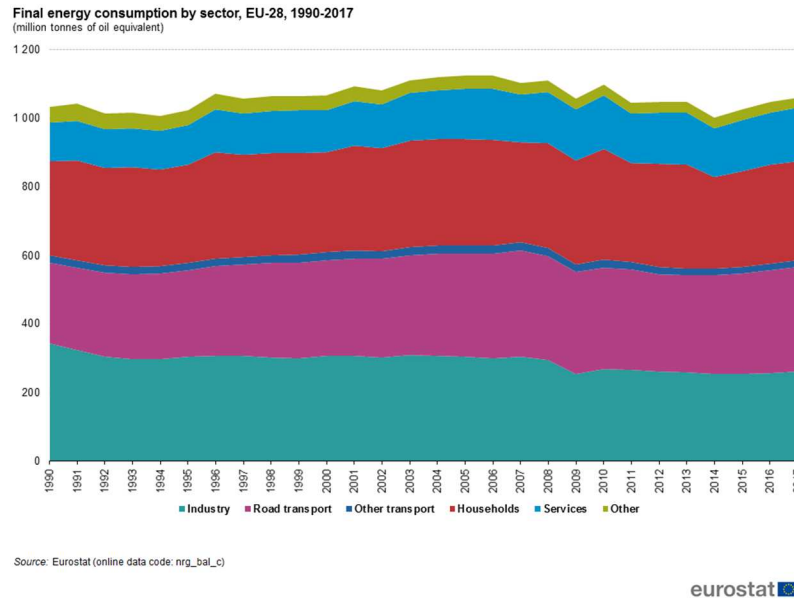Source: Eurostat (online data code: nrg_bal_c)

eurostat

Figure 6: final energy consumption by sector between 1990 and 2017 in the EU-28. Source: EEA (2019), *Is final energy consumption decreasing in Europe?* Retrieved from: https://www.eea.europa.eu/data-and-maps/indicators/final-energy-consumption-by-sector-10/assessment

Energy intensity, however, continues to improve (Enerdata, 2019). The EU is now the region with the lowest intensity in the world. In 2018 alone there was a decline of 3.1% which was a new peak of reduction. It is argued that this decrease could be the result of improved weather conditions and mild winters (Enerdata, 2019).

As for coal, it is not the main supplier of energy anymore (IEA, Global Energy & CO2 Status Report 2019, 2019). 2018 was the sixth year in a row when coal consumption decreased in Europe. This trend is due to a reduction in its use in the power sector where the energy generated started to shift more and more towards renewables and oil or gas (IEA, Global Energy & CO2 Status Report 2019, 2019). The motivations are connected to stricter climate policies that incentivized the competition from renewables and gas and made the cost of CO2 emissions higher (Enerdata, 2019). It is important to notice how renewables are instead increasing constantly in the world, led by China and Europe. These two alone contribute to two-thirds of the global total (IEA, Global Energy & CO2 Status Report 2019, 2019) and cover now around 36% of the energy supply in Europe and 26% in China (Enerdata, 2019). The continuous investments in these supplies, mostly solar and wind, made the relative technologies affordable also for developing countries which are extending their usage too (Enerdata, 2019).

As for zero-emissions coal, the technologies are still costly and energy-intensive, making an extensive consumption of this product still difficult (Global CCS Institute, 2017). As of 2017, only two facilities were operating, both of them in the US, and 9 others spread in the rest of the world were

41

in the early stages of development. China is, at the moment, one of the biggest investors and is in the early stage of the development of various facilities. The EU instead had some problems with the deployment of this technology. It had been held back by policy reversals and some large-scale facilities have not been able to reach the final decision in terms of investment (Global CCS Institute, 2017). However, Europe still has created through Horizon 2020 a fund that grants 41 million euros of investments from 9 individual countries such as Germany, Greece, and the Netherlands. Between China and the EU, there is also a program called "China-EU cooperation on Near zero-emissions coal", or NZEC, that grants funding of 4.5 million US$. Furthermore, there are two separate programs between China and two member states like Italy and Germany (Global CCS Institute, 2017).

The cooperation in the international negotiations

When it comes to the cooperation of the two actors in the international negotiations for common climate change actions the results are a bit mixed. In the Joint Partnership, the Kyoto Protocol was often mentioned as an important arena for collaboration (China & EU, 2005). However, China in the Protocol was in the developing countries group, thus all its actions were merely on a voluntary base (CNN, 2020). Hence, it will be a bit difficult to see whether it worked or not for this country, without considering its strong economic growth and the related CO_2 emissions. In Kyoto, the European Community, at that time made by 15 member states, committed to a common 8% reduction of the emission compared to the 1990 levels between 2008 and 2012 (CNN, 2020). A target of reduction higher than the other members of Kyoto. And according to the European Commission, the 15 member states managed to reach a common reduction of 12.2% between 2008 and 2012 (European Commission, 2013). For the Paris Agreement instead, it is still too soon to have the final results. However, according to the Climate Action Tracker as of today, neither of the two actors is actually in line with maintaining the increase below 2°C (Tracker, 2020).

The final point I want to make in regards to whether these partnership works is to look at how the negotiations progressed. Unfortunately, more than once in the years between 2005 and today, other interests came in between the Partnership and sometimes stopped it altogether (Bocse, 2018). The reasons behind these bumps in the road are mostly political or economic interests. The biggest example is for example in 2017. During this year, China refused to sign the Joint Declaration due to tensions between the two actors around trade and market issues. Such as the obstacle in accessing the Chinese market by European investors (Bocse, 2018). Another delay was also in 2016 when the Dalai Lama visited the European Parliament and as a consequence, China canceled a meeting between the climate change committees of the two actors scheduled for the same year (Bocse, 2018). These issues are expected to come up again this year. Again, the relationship between China and the EU has been

unstable recently due to problems in trade and economy. Besides, Germany recently asked the EU to be more assertive on human rights violations in China (Brattberg & Le Corre, 2020).

Conclusions and recommendations

The Joint Partnership on climate change between the EU and China is a long-lasting political and economic cooperation between the two actors. It covers relevant fields as energy, emissions, and international cooperation. The partnership during the years set goals and expectations in terms of emission reduction, technological investments, and various forms of cooperation. But as we saw in the previous sections there have been different results. Some important achievements were surely obtained. Maybe the best example of this is the somehow remarkable reduction China did on its energy intensity between 2005 and today. Overall, both actors saw some sort of reductions in energy consumption and production. The EU, in reality, will probably miss the goal set for the energy consumption set by 2020 but we have to recognize that, at the moment, it is still one of the most efficient actors in the world in terms of emissions. Coal instead is in constant decrease, but still cover an important part of the energy production of China. Its usage could also start to increase again if the tendency to shift back to coal will continue. Improvements were also made for the technologies used towards zero-emission coal. China is one of the biggest investors in this sense and started the development of different facilities. The EU remained a bit behind mostly due to bureaucratic reasons. In international relations, the two partners managed to cooperate or at least reach the outcomes expected. The two most important arenas for cooperation were the Kyoto Protocol and the Paris Agreement. The Kyoto Protocol already ended, and in the case of the EU, it managed to reach the reduction of emissions promised. China instead of a developing country was participating just on a voluntary base. In Paris, both parts ratified the agreement, but it is too soon to see the results yet.

Looking at these results, it seems that the Partnership could be a valuable policy for the EU to implement with other countries. It would for sure in some way help strengthen collaboration at the international level even if only in a bilateral way. But we have to consider some serious problems too, unfortunately. Politics and national interests are still a threat to cooperation on climate change. The same Partnership was often slowed down by economic rivalry or differences in opinions. Thus, if the EU wants to make these types of partnership work it should push for some sort of control system, a control system that is entirely lacking at the moment. Another important addition is the need for enforcement. An enforcement mechanism could help make the relation more structured and possibly reach better results through maybe economic sanctions or rewards. However, this lack of enforcement is a trend of climate negotiations in general. I would argue then on the need for a policy change as the policy cycle suggest (Mwije, 2017). In this phase, after having completed the evaluation the policy could be changed on the points considered in need of improvement (Mwije, 2017). The

change I would personally do is to add a control system which will permit a smoother relationship between the part and would grant a sort of continuity to it. However, of course, it is not my choice to make and the decision should come from the policymakers involved in the Partnership even if I see it as highly unlikely.

Discussion

Up until now, this chapter has dealt with an in-depth analysis of the case study selected. The case study is the "EU-China Joint Partnership on climate change", a bilateral partnership that started in 2005 and since then has been focused on energy and climate change issues. Made of annual summits between the two actors it establishes some goals on the limitation of emissions on $CO2$ and energy usage while investing in development and research for new and more efficient technologies.

In these 15 years, the Partnership was often updated and changed when needed, the best example is the shift from the Kyoto Protocol to the Paris Agreement. the cooperation has also obtained some successes. In the evaluation part of the analysis (see here pp. 39-44), we pointed out that in a certain sense the Partnership can be considered successful if we consider the goals achieved. However, these successes also present some problematic issues, concerning for instance the negotiations processes, when external interests influenced and slowed down the dialogue between the two associates. Like in 2016 when the visit of the Dalai Lama to the European Parliament resulted in the cancellation of a meeting by China (Bocse, 2018). Now it will be discussed whether this Partnership is successful also according to the two international relations theory selected for the case. The two theories, that were described in detail in the theory chapter (see here pp. 16-28), are the neoliberal institutionalism and the green theory. The green theory is completely environment-centered in its assumptions while neoliberal institutionalism began from a broader perspective and then included also a focus on the environment. Both theories look at how cooperation works or should work between the countries, what is required, and which actors should be involved. Even if similar on the focus they are very different, almost opposite, in the conclusions. The following paragraphs will then offer a more theoretical perspective on the topic and should help with having an additional point of view in addressing the research question. In the end, the policy analysis and this theoretical perspective will tell us if the Joint Partnerships are an interesting and valuable addition to the EU external policies on climate change, and thus something they should apply more extensively with other countries too.

Neoliberal institutionalism

Seen the relevance of climate change in this case study and on this paper in general, the first theory was selected due to its new perspective on this topic. This is nowadays considered one of the biggest threats in the world and as such is of great interest to the theorists of institutional neoliberalism

(Saryal, 2015). According to the theory, all global issues are very challenging to address due to their impacts and effects spread to all countries. Hence, the response needs to be a coordinated and common approach coming from all countries (Taqwadin, 2013). It is important to notice how collaboration on climate change should not be a problem as the non-exclusivity of the "environment goods" should not create competition (Taqwadin, 2013). In their opinion, however, the control on the coordination of these issues must be passed to institutions and regimes. Institutions schedule regular meetings between the members, and they represent an arena for them to meet and share their opinions and interests (Taqwadin, 2013). Having the countries meet and share their interests should contribute to finding a common ground. Cooperation then will become easier thanks to the spillover deriving from this process (Taqwadin, 2013) but only when institutions are seen as mutually beneficial and relevant to secure interests (Saryal, 2015). Always according to Saryal, institutions can help ensure cooperation through the implementation of two mechanisms (Saryal, 2015). The first is the rationalist mechanism which comprehends material incentives as sanctions or rewards. The second mechanism is instead the constructive one and works through the creation of norms, ideas, and identities. The example made by the author in this case is the relevance of scientific research that proves the necessity of certain policies. Both mechanisms, in the end, could contribute to enhancing the willingness to cooperate of the countries (Saryal, 2015). When applied this theory to the case study of this paper we can already see that institutions are not present. In the Partnership, there is no institution, and with institution I mean a third party, regulating the cooperation between the two partners from above. It is for sure an important arena for the two to discuss and find common ground, but they never established some kind of third actor to control them. This preclude also the presence of control and enforcement mechanisms which is also a personal critique moved towards this type of collaboration. The collaboration then is based purely on the willingness of the parties and their diplomatic efforts, but nothing can ensure the achievement of the goals or the continuation of the collaboration when one of the parts is against it. Or it can be argued that we have something similar to the second mechanism, the constructive one, where enforcement is made by values and ideas or, for example, scientific research. This could maybe be the case for our Partnership even without the presence of an institution.

However, the theory says institutions are also helped in their goal by regimes (Taqwadin, 2013). Regimes could be of different types as negotiated, imposed or spontaneous (Young, 1989) but they all are a set of principles, norms, rules and decision-making procedure helping actors with converging their expectations when it comes to issues of international relations (Krasner as mentioned by Saryal, 2015). The issues covered by the regimes are often specific and require the possibility to be discussed together (Keohane, 1984). The rise in awareness of the issue and it becoming relevant both in politics and among the society is what creates regimes. Regimes contribute to laying down

behaviors the countries need to follow, the behaviors tend to change over time, and they can help to apply rights and obligations on the states to ensure their collaboration (Saryal, 2015). Unfortunately, regimes lack a hierarchical legal system thus there is often no way to enforce the obligations (Keohane, 1984). Regimes are then not perfect and Keohane argues how national interests are still relevant and the sovereignty of states makes the entire structure kind of fragile (Keohane, 1984).

The Partnership on climate change between the EU and China could be considered as based on a regime. We saw how regimes are helping states converge their expectation and lay down behaviors the countries need to follow. Furthermore, according to some authors, regimes are even more important and present in climate change-related cooperation (Young, 1989). The presence of a regime such as one on energy consumption or climate cooperation could reinforce the Partnership. It would be easier for the two associates to converge their expectations and list behaviors the two need to follow in terms of energy and climate change. These areas are also deeply intertwined and connected making discussion between them easier (Keohane, 1984). However, there is an important critique to point out on this theory. Theorists take for granted that cooperation will work almost automatically between countries once they understand the importance of collaborating on a specific topic. The critics point out how this is not what we saw in reality, and the past showed how collaboration sometimes takes years to be achieved (Taqwadin, 2013). The collaboration between China and the EU was also not immediate compared to when climate change started to be considered as an issue we had to wait until 2005 to have the first Joint Declaration that kicked off the Partnership. And even after that, cooperation did not continue smoothly and sometimes was challenged by personal interests and discordances between the parts. As a final addition, Young tries also to give us some parameters on how to quantify the efficiency of a regime (Young, 1989). In his opinion, to measure efficiency we need to see how much of what happened is due to the regime and whether the behaviors of the countries were influenced by it (Young, 1989). These are of course difficult parameters to quantify. Even if we consider the Partnership as based on a regime I still think it is not easy to say how much this was influential. Personally, for now, most of the things that happened during the Partnership, as the cut in emissions or the negotiations in the international system, do not seem so ambitious to show how the cooperation impacted the actions of the actors. The activities carried on and the goals achieved seem more connected to the normal course of the events and actions the two would have probably done either way for instance because resulted from technological advancements. Nonetheless, these are personal speculations, and in the end, it is impossible to say something sure on this regard.

According to this theory then, the Partnership could have the characteristics to be seen as a first step in the right direction. If we look at it as based on a regime than yes it has potential, maybe

just not in an efficient way, to influence the actors' behaviors and the EU should apply it to also other countries. There is a possibility than in the future of having also something more concrete with the presence of institutions to back it up. However, for now, the main issue remains. There is a lack of enforcement and the regime, and as a consequence, the Partnership seems still fragile and easily shaped or impacted by external interests.

Green theory

The green theory is a theory completely focused on environmental degradation. It tries to understand the international system's contribution to the problem and how cooperation should work from now on. The theory is highly critical of many aspects of the current system and on how to address climate change (Ari & Toprak, 2019). These considerations are based on the particular point of view the theory has. It is based on what is called an ecocentric point of view which sees humans as part of nature and not above it, and thus not able to fully understand nature and how their activities impact it (Eckersley, 2007). The current international system is considered the main culprit, together with countries, of the current problems with the environment and its exacerbation (Ari & Toprak, 2019). States are also guilty of their continued perseverance on protecting their interests instead of dealing commonly with a problem as important as environmental degradation (Ari & Toprak, 2019). For Hay et al. (2014) in this case, the central contradiction is between the global character of the environmental problems and the territorially organized states (Hay, Lister, & Marsh, 2006). States in this way will always be oriented towards the protection of the interests of those within their national borders (Hay, Lister, & Marsh, 2006). To overcome these dilemmas the theorist asks for a decentralized approach to the problem may be by acting at the local level (Hay, Lister, & Marsh, 2006). The Partnership then would be highly criticized by this theory. First, the two main actors are countries, or groups of countries, which are not favorably seen by the theory. Then we saw how they sometimes tended to put their interests, mainly of political or economic nature, in front of the main importance of the Partnership which is to combat climate change. Moreover, this confirms the problem of having actors that have to answer to a nationally restricted territory and population. The interests that we saw almost stopping the collaboration, for example in 2017, were of purely economic-related interests and it was a division on how the European economy was impacted by the intrusion of the Chinese goods and investment (Bocse, 2018). Furthermore, the Partnership does not entail actions at the local level but the national or even international ones. Making this Partnership not the right way to approach the problem according to the theory.

Going on with the theory another important point is the difference in what regimes are. Regimes here are seen as an embodiment of moral norms and that makes them stronger than single country interests (Eckersley, 2007). These norms are made of values and cultures of the countries,

47

the impact of scientific research, etc. and are great accountability systems promoting critical deliberation between countries (Eckersley, 2007). Hence, the Partnership could also be considered as based on a regime here and it could be seen as an important arena for the critical deliberation between the two actors. Nevertheless, it is a bit more difficult to understand whether values, culture, and research are the ones leading the Partnership. The environment is for sure an important topic in the international arena and thus it could be argued that now it is part of the values and cultures of the actors. Furthermore, scientific research can still play an important role in framing the importance of the problems. But to me, it does not seem stronger than the single national interests because, as we saw, national interests are still relevant in the case of the Partnership's negotiations and continuation. In the end, the last observation I want to make is how economy and development are perceived by the theory. It has already been said how the ecocentric view used by the theories recognizes how humans do not understand fully their impact on the environment (Eckersley, 2007). This opinion shape how economies and development are perceived by the theory. Both are considered inherently bad due to their effects on nature and that humanity already reached the maximum level of development (Ari & Toprak, 2019). Moreover, the same problem can be seen with the green transformation of the economies through new technologies. It could be a feasible idea but growth, for some authors, in whichever forms it comes is still highly unbeneficial (Hay, Lister, & Marsh, 2006). Hence, in our case study, the focus given to the development of new technologies and economic development, in general, would probably not be considered as a good approach to climate change either.

Summary of the analysis

The analysis chapter has been mostly an extensive analysis of a policy that is this case is the "Joint Partnership on climate change between China and the EU". This Partnership that started in 2005 and still goes on is developed through a set of Summits and meetings on specific topics connected to climate change. The main focuses of the cooperation are energy consumption, energy production, and the resources used in technological investment and international cooperation on climate change. In the evaluation subchapter, it appears as if the Partnership between China and the EU is working. Both actors managed to reach some goals, mostly in terms of reduction of the energy intensity, while others have been trickier to measure. The difficulty is mainly with the case of China and the fast growth in its economy that contributed to high increases in the measurements like the CO2 emissions. Moreover, the evaluation showed also the difficulties of continuing such a type of collaboration. More than once other interests came across the Partnership and hindered its continuation thus rendering the entire process kind of unstable.

Going to the theories part it seems like one is more positive than the other. The neoliberal institutionalism could see the Partnerships as based on a regime that would make the cooperation easier, but they also recognize how the lack of mechanisms ensuring this cooperation rend the entire system flawed. Maybe then, there is the possibility to continue with this sort of bilateral agreement but only if an additional step is made and the necessary institutions are created. The green theory instead is way more critical. The main issue is the nature of the actors, both countries or group of countries, and the predominant importance of their national interests. According to the theory, this will not help at all address the problem and it could even contribute to exacerbating it even more. In reality, it could be argued that also here the Partnership is based on some kind of regime if we look at the definition given by the theory. The main issue is unfortunately how it takes for granted the relevance of the regime on the single national interests, a relevance we did not see in our case study.

CONCLUSIONS

Throughout this research, it was alluded to how cooperation is considered essential to stop or slow down climate change (IPCC, 2014), but at the same time, international negotiations demonstrated to be relatively slow and ineffective. The ineffectiveness of negotiations and the difficulties on reach solutions contributed to a new position called the polycentric approach to climate change. The polycentric approach argues the need of having new paths to address the problem (Ostrom, 2009). The researchers are proposing to not limit the negotiations to international and multinational fora but to try cooperation also in smaller scales and in different levels such as bilateral agreements. These new ways should grant better effectiveness of the cooperation between countries. Or at least, help policymakers understand which is the best way to act and the benefits, or difficulties that can be encountered (Cole, 2015). In conclusion, in light of the new considerations on a more polycentric approach to climate change, it seems as if new paths of collaboration must be found. A new way could be the implementation of Joint Partnerships, a type of collaboration used by the EU. But it is difficult to say whether Joint Partnerships are a good form of bilateral agreements.

This type of cooperation has been analyzed in this paper through the lenses of a particular case study which is the "Joint Partnership on climate change between China and EU". As we saw in the analysis, the goals put down by the two actors in our case were more or less obtained, and it is a way for the two associates to discuss their interests and find common grounds. Personally, I also think it is a way for the members involved to show some sort of commitment to the climate change cause, which is always an important achievement mostly if it helps convince other countries too. Nonetheless, there are still some issues with the Partnerships. One is for sure the difficulties to have negotiation continuing smoothly and without bumps in the road. The Partnership between China and

the EU showed that sometimes other interests mainly of economic or political nature have the precedence on climate change and can destabilize the cooperation. And most important, I think that this cooperation, which is only political, lack of enforcement mechanisms and controls that are needed to grant the required discipline.

The research question was the following:

How can a polycentric approach help the EU to strengthen cooperation on climate change? What are the potentials of the Joint Partnerships on climate change?

If we use the consideration expressed by the polycentric approach, then the EU to strengthen cooperation on climate change should not only focus its attention to intranational negotiations but should invests in other way of cooperation too. A good example could be the implementation of bilateral agreements. But could these bilateral agreements be the Joint Partnerships? Well, it depends on which point of view we use to look at it. At the moment, there is a lack of examples and research on the topic making the answer a bit tricky. Nonetheless, the data collected through the existing Partnership between China and the EU show that it helps reach some results even though cooperation is still problematic sometimes. We also need to consider, as it was mentioned, on whether the same format could work once applied to other actors with a different relationship and characteristics.

Personally, I would not exclude it. I think it is an interesting tool which could have positive effects on the behaviors of the countries. Laing down goals and activities while having constant opportunities for cooperation and discussions can always help countries feel more pressured in reaching said goals. The only problem for me is the lack of enforcement making the entire process not as impactful as it could be, but I recognize how it would be difficult for the countries to limit themselves in this sense. Moreover, as the researchers of the polycentric approach suggest (Cole, 2015), at the moment, all the ways we can find to strengthen cooperation on climate change in the international community are more than welcome.

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