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The Rise and Evolution of Environmental Politics: A Comparative
Study of American and European Approaches

Supervisor

Ch. Prof. Antonio Trampus

Assistant Supervisor

Ch. Prof. Stefano Soriani

Graduand

Vittoria Dini

Matriculation number 866190

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List of Abbreviations, Acronyms and Initials

BAT	Best Available Technology
BPT	Best Practical Technology
CAA	Clean Air Act
CBD	Convention on Biological Diversity
CCS	Carbon Capture and Storage
CCUS	Carbon Capture, Utilization and Storage
CCX	Chicago Climate Exchange
CEC	Commission for Environmental Cooperation
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act
CETA	Comprehensive Economic and Trade Agreement
CFSP	EU Common Foreign and Security Policy
CITES	Convention on International Trade in Endangered Species
CJEU	Court of Justice of the European Union
COP	Conference of the Parties
CoR	Committee of the Regions
CO₂	Carbon Dioxide
CSR	Corporation Social Responsibility
CTE	Committee on Trade and Environment
CWA	Clean Water Act
EC	European Community
ECCP	European Climate Change Programme
ECE	Economic Commission for Europe
EEC	European Economic Community
EESC	European Economic and Social Committee
EGA	Environmental Goods Agreement
EIA	Environmental Impact Assessment
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency

EP	European Parliament
EPCRA	Emergency Planning and Community Right-to-Know Act
ESA	Endangered Species Act
ETC	Emissions Trading Scheme
EU	European Union
EUSFTA	EU-Singapore Free Trade Agreement
FIFRA	Federal Insecticide, Fungicide, and Rodenticide Act
FOIA	Freedom of Information Act
FTA	Free Trade Agreement
GAO	Government Accountability Office
GATT	General Agreement on Tariffs and Trade
GCF	Green Climate Fund
GDP	Gross Domestic Product
GEN	Global Ecolabelling Network
GHG	Greenhouse Gases
GMOs	Genetically Modified Organisms
Gt	Gigatonne, a thousand million tones
HS	Harmonized System
HSWA	Hazardous and Solid Waste Amendments
ICTSD	International Centre for Trade and Sustainable Development
IDMC	Internal Displacement Monitoring Centre
IEA	International Energy Agency
IED	Industrial Emissions Directive
IMPEL	Implementation and Enforcement Law
INDCs	Intended Nationally Determined Contributions
IOM	International Organization for Migration
IPCC	Intergovernmental Panel on Climate Change
IPPC	Integrated Pollution Prevention and Control
IT PGRFA	International Treaty on Plant Genetic Resources for Food and Agriculture
MCP	Medium Combustion Plant
MEAs	Multilateral Environmental Agreements

Mt	Metric Tons
MTNs	Multilateral Trade Negotiations
NAAEC	North American Agreement on Environmental Cooperation
NAAQS	National Ambient Air Quality Standards
NASA	National Aeronautics and Space Administration
NDC	National Determined Contributions
NEC	National Emissions Ceilings
NEPA	National Environmental Policy Act
NOAA	National Oceanic and Atmospheric Administration
NPDES	National Pollutant Discharge Elimination System
OECD	Organization for Economic Co-operation and Development
PoMs	Programs of Measures
POPs	Persistent Organic Pollutants
PPM	Parts Per Million
RCRA	Resource Conservation and Recovery Act
RMCEI	Recommended Minimum Criteria for Environmental Inspections
RUDs	Reservations, Understanding and Declarations
SCM	Subsidies and Countervailing Measures
SDGs	Sustainable Development Goals
SDWA	Safe Drinking Water Act
SDP	Social Democratic Party
SDSN USA	Sustainable Development Solutions Network United States
SEA	Single European Act
SO₂	Sulfur Dioxide
SIP	State Implementation Plan
SOTU	State of the Union
TAFTA	Transatlantic Free-Trade Agreement
TAPS	Trans-Alaska Pipeline System
TCDD	Tetrachlorodibenzo-p-dioxin
TEC	Treaty Establishing the European Community
TEU	Treaty on European Union
TFEU	Treaty on the Functioning of the European Union

TRI	Toxics Release Inventory
TSCA	Toxic Substances Control Act
TTIP	Transatlantic Trade and Investment Partnership
UN	United Nations
UNCCD	United Nations Convention to Combat Desertification
UNCED	United Nations Conference on Environment and Development
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNHCR	United Nations High Commission for Refugees
U.S.	United States
USA	United States of America
VEPs	Voluntary Environmental Programs
WBCSD	World Business Council for Sustainable Development
WCED	World Commission on Environment and Development
WFD	Water Framework Directive
WMO	United Nations World Meteorological Organization
WSSD	World Summit on Sustainable Development
WTO	World Trade Organization

Introduction

“The protection and improvement of the human environment is a major issue which affects the well-being of peoples and economic development throughout the world; it is the urgent desire of the peoples of the whole world and the duty of all Governments”. This was the proclamation of The United Nations Conference on the Human Environment, which took place in Stockholm from 5 to 16 June 1972. After World War II, environmentalism originated in order to respond to environmental pressures caused by harmful human activities, therefore acquiring a fundamental role in the global political framework over the last decades of the twentieth century and becoming one of the main political, economic and social issues of the twenty-first century. These environmental concerns became increasingly important for people and governments of countries all over the world, which started, with significant differences, to respond to these pressures through the elaboration of laws and policies designed to reduce environmental degradation.

As a consequence, environmental politics became an important aspect of the political agenda at national and international levels, involving governments, private corporations and also becoming a core component of the private sphere of many people around the world, mainly in the Global North. Although environmental politics has not always been positively embraced, especially by industries, and despite the fact that in some circumstances it was used mainly as an instrument to gain electoral support, it reflected the desire of that part of the population that was willing to adopt environmentally friendly lifestyles, mainly through a minimization of polluting activities, a sustainable and limited use of natural resources and a contribution to the protection and conservation of the surrounding environment. This era gave birth to the formation of the first environmental movements that in some cases evolved into official organizations, political parties, and institutions.

This thesis aims at providing an overview of the emergence of environmentalism and in particular environmental politics, analyzing mainly the different approaches by which the United States and the European Union handled environmental issues in the past and how these approaches evolved over time. Several aspects will be taken into account in order to explain the differing responses to these issues. The first chapter of this thesis is dedicated to the origins and evolution of environmental politics. First, a short section will describe how the United States and Europe initially responded to environmental concerns, highlighting the

differences in acknowledging the existence of threats to the environment. Secondly, a brief historical survey focusing on major transformations of the environment in the United States and in Europe will help to understand the origins of environmental awareness in the two continents, therefore leading to the foundations of environmental politics within their respective institutions. The third section will discuss how this transformation in political order led to broader inquiry by economists and philosopher about the impact of economic activity on the environment and its effects of the future of civilization. Finally, the different approaches to environmental politics will be explained through the analysis of the respective political systems and institutions, therefore exploring the degree to which they affect the implementation of environmental policymaking.

The second chapter of this thesis is dedicated to environmental policy making. First, the initial section will describe important multilateral environmental agreements, with a particular attention on the gradual shift in the mantle of leadership from the United States to the European Union. Later, major environmental policies implemented by the U.S. and the EU over the course of the past decades will be examined. Moreover, this thesis will present an analysis of legislation in the European Union and in the United States with respect to the principle of sustainable development.

The third chapter of this thesis will analyze the impact of an increasingly globalized world on the environment. The first section focuses on climate change policies and the political responses of the United States and the European Union to the Paris Climate Agreement of 2015, describing the different attitudes of Democratic and Republican administrations in the U.S. and the steps taken by the EU in order to fight global warming. This will be followed by an inquiry into the environmental impact of trade with a particular focus on the environmental provisions of major free trade agreements, such as CETA and NAFTA, put in place or negotiated by the U.S and the EU. The last section of this chapter concentrates on the increase of international migration flows to developed countries due to significant transformations of the environment in the Global South. In particular, this chapter will center on population movements from the Asian and the African continents to Europe and from Central America to the United States.

To conclude, the last chapter of this thesis will focus on the relationship between non-state actors and environmental problems and their influence on the development of environmental policies. The first section is dedicated to the emergence of environmental consciousness in the

United States and in Europe and the consequent birth of environmental movements in both continents. In addition, this paper will analyze the transition from social movements to the establishment of green parties and environmental organizations. Finally, the last section will be dedicated to the interplay between the public and private sectors, especially with respect to environmental issues and social responsibility.

I. Origin and Evolution of Environmental Politics in the United States and Europe

I.1 An Introduction to Environmentalism: American and European Reactions

One of the most emblematic and perhaps complex among the social movements arose in the past decades and strengthened especially after the spread of neoliberal globalization in the Western world in order to fight against the negative effects of its policies – both on individuals and on the environment – is environmentalism. This movement, thanks to its increasing dimension and institutionalization, had and still has a strong influence on politics, especially in the European Union and in the United States. Despite its internal divisions, due to the extremely large participation, environmentalism focuses on the preservation of the environment, shifting from destructive capitalist policies to policies fostering a sustainable use of the resources and by drawing attention to individual behavior. Among the causes promoted by environmentalism, activism related to climate change, water and air pollution because of greenhouse gas emissions are certainly some of the most relevant, and even recognized by some as a different new movement with their own objective. Concerning these major issues, many well structurally defined organizations were created with the great goal of opposing neoliberal policies and promoting alternative economic options based on their global justice movement identity.

While the book written by the ecologist Rachel Carson titled *Silent Spring* and published in 1963 – a groundbreaking exposé informing about the damaging impact of unregulated toxic chemical pollutants on humans and on the environment – brought environmental issues to the forefront of the American consciousness, Europeans believed that these problems did not exist in their own continent, considering it to be only an American phenomenon.

As Mark Stoll, environmental historian and Professor at Texas Tech University, writes, “Europeans simply didn’t want to believe that *Silent Spring* applied to them”.¹ This idea was largely confirmed by politicians, journalists and researchers from many different countries of both Western and Eastern Europe that affirmed during parliamentary debates, wrote in

¹ Mark STOLL, Rachel Carson’s *Silent Spring*, A Book That Changed The World, Environment & Society Portal, 2012. Available at: <http://www.environmentandsociety.org/exhibitions/silent-spring/why-europe-responded-differently-united-states>

newspapers, or declared through public speeches that all these concerns were not affecting Europe but on the contrary, reflected a situation that could only occur in the United States. On the one hand, Western countries such as France and the United Kingdom highlighted how their governments were protecting citizens from chemical pollutants. In particular, the French Society's Commission for Studying the Influence of Treatments on Biocenoses affirmed that "while the facts referred to by Miss Carson [were] probably true for USA [...] the belief that European, particularly French, legislation [did not] protect populations from the dangers of the excessive use of insecticides [was] wrong".² Moreover, many countries in Europe such as Spain, Ireland, Finland, and others, given their somewhat lower level of economic development relative to the United States, believed that they had the time necessary to learn from the mistakes of the U.S. to ensure that they could better protect their environment before rising economic prosperity threatened the environment. On the other hand, communist countries of Eastern Europe believed that environmental degradation was an inevitable byproduct of capitalist ideology. This belief stemmed from the fact that agriculture in Europe was different from American agriculture, characterized by very large farms, extensive monocultures and therefore a heavy usage of pesticides was necessary. In the same way, the application of fertilizers from airplanes was not a feature of fields in Europe, with the exception of East Germany. All of this was accompanied by the fact that Europeans' faith in their governments and scientists, as Mark Stoll writes, was greater than in the United States, leading the population of Europe to believe that they were protected from polluting substances that had a negative impact on the environment.

However, this belief did not last long; the series of environmental disasters that occurred on European soil soon made people cognizant of the problems affecting the environment and therefore the first movements arose, followed by the emergence of green parties. Among these environmental catastrophes that originated Europeans' environmental consciousness was the oil spill caused by the oil tanker *Torrey Canyon* that hit a reef, consequently causing heavy damage to maritime areas of northwestern France and southwestern Britain. Besides, the explosion in 1976 of a chemical plant in the Italian town of Seveso and the infamous accident of 1986 at the nuclear power plant in Chernobyl, Ukraine, which will be later described, played a fundamental role in the origin of environmentalism in Europe.

² Nathalie JAS, *Public Health and Pesticide Regulation in France Before and After Silent Spring*, History and Technology, 2007, 23:4, 369-388, DOI: 10.1080/07341510701527435

In the aftermath of a war in which the American continent remained essentially unscathed, the United States enjoyed more than ten years of economic prosperity and development while Europe still focused on rebuilding its shattered society. This wealth and power gave America the confidence to consider the potential downsides to the environment of this economic growth, and this growing environmentalism ultimately led to a much broader critique of the American capitalist system. Having suffered so much during the war, Europe was not yet prepared to question the benefits of its re-emergent economic growth. The strong economic growth that Europe enjoyed in the postwar period did not act as an immediate catalyst for the emergence of an environmental consciousness. Instead, this consciousness was an effect of the growing radicalism that arose in the second half of the twentieth century as Europeans searched for alternatives political arrangements to those that led the continent into two devastating wars.

I.2 The Origin of Environmental Awareness and Politics

In the past decades, environmental politics acquired a major role in the political framework of the United States, becoming a fundamental aspect for governments and private corporations' activities. Not only has it become a central feature for public and national affairs, but it also became a core component of the private sphere of many Americans, increasingly willing to lead a way of life aiming at the limitation of pollution, the preservation of the environment and the use of limited resources. Precisely, this environmental era begun after the end of World War II, where the first regulatory programs in public policy and decision making were initiated and that progressively developed into official institutions and new political parties. One crucial question arises: why did this interest towards the environment originate? To answer this question it is important to understand what changes the environment itself underwent in the past centuries and especially in the past decades, following the serious impacts that the human activities had on the planet.

Environmental transformations on the American territory begun centuries ago but it is only in the second half of the twentieth century that a considerable amount of scientific research started to be dedicated to environmental changes, causing therefore the development of an

awareness that gave rise to public consciousness, more and more involved in this process of understanding and private engagement.

An intensive use of the environment has its origin in the Native American populations, where their agriculture, hunting and fishing practices exhausted resources and forced them to move to new areas to find more resources. Similarly, the fire for hunting purposes and the irrigation systems all contributed to an intensive use of natural resources. However, the lack of newer technology, the small population and the ability to move to new territories represented a positive factor for the environment, in contrast to the arrival of the Europeans, bringing agricultural settlements and extraction of raw materials practices that involved the use of pesticides, fertilizers, irrigation systems and fossil fuels. The expansion towards west and what was called “land improvement”, a process through which agriculture was fostered thanks to the transformation of forests, marshlands and prairies into cultivable fields and farmland, together with the diseases, the animals and the plants imported from Europe, played all a significant role in the modification of the environment. Also hunting had caused an important change in the animal population of America; if on the one hand Europe’s forests were accessible only to aristocracy, American lands were on the other hand open to all people with no class distinction. Later on, new technologies including the beginning of industry, manufacturing and the elimination of waste, new techniques for raw materials extraction, the first means of transportation like steam trains and the discover of new sources of energy increased environmental changes.

More radical transformations occurred during the nineteenth and the twentieth centuries, when the human influence on the environment reached much higher levels, mainly through three important threats: a rise in goods consumption, a consequent increase in the industrial production and finally a significant population’s growth. These developments were accompanied by a drastic shift to coal used as combustible for transportation and industrial production that gradually replaced wood. First of all, consumption habits underwent a significant change, going through different phases, that is from basic necessities like housing and food, to conveniences like private means of transportation and equipment for the house, and finally to amenities like leisure time activities, hobbies or clothing, all features needed to guarantee a higher quality of life. All of this led to a major increase in the use of gasoline and electricity that worsened the impact of human behavior and habits on the environment. An increase of consumption led to a larger industrial production; this meant that the small

factories that were once established started to expand, producing more and more waste and pollution. The growth of the industrial economy led to two main harmful aspects for the environment, which is to say transportation and waste disposal, which were increasingly affecting the air and waters.

Concerning population, the transformations varied according to its density; the exhaustion of resources such as lumber and mines caused the collapse of those activities and consequently a radical decrease of the population. In the same way, areas that were once rich in crops, like the territories north of the Mason-Dixon Line³, New England and the Midwest, experienced an important loss of communities following the competition of the western territories characterized by a higher productiveness. All of this resulted in a great amount of empty land and the accumulation of the population in certain areas of the United States that certainly changed the surrounding environmental landscape.

The years after World War II were characterized by a population growth, especially thanks to liberal immigration policies, that reached its peak in the last decade of the century. This growth led to an increasing products consumption following the higher consumer spending possibilities obtained after the end of the war. Negative consequences for the environment were important but often, they tended to be ignored because of the impersonal and indirect link between them and the society. As the American author Samuel P. Hays affirms in his book *A History of Environmental Politics Since 1945*: “As long as the problem was evident in the immediate impact of a local factory, it led to public objection and outcry, but in a more global economy much of the environmental impact was more removed from where consumers consumed and hence that impact was more readily ignored”.⁴

Despite this feeling shared among the population, levels of pollution were dramatically increasing and expanding beyond the industrial plants and their neighboring areas; on the contrary, pollution was extending at regional and national level and by the 1980s non biodegradable synthetic toxic chemicals were found in areas of the world that were far from the source of pollution and that were resistant to biological processes and therefore long

³ The Mason-Dixon Line is a demarcation line that divides four American states and it constitutes part of the borders of Delaware, Maryland, West Virginia and Pennsylvania. It was the object of a border dispute resolution between the colonies of Delaware, Maryland and Pennsylvania and it was surveyed by Charles Mason and Jeremiah Dixon in the years between 1763 and 1767. Thereafter, it was generally considered the line separating the Northern United States and the Southern United States and it also represented the northern border that limited slavery to Southern States.

⁴ Samuel P. HAYS, *A History of Environmental Politics Since 1945*, Pittsburgh, Pa.: University of Pittsburgh Press, 2000. <http://www.jstor.org/stable/j.ctt6wrcjm>.

lasting in the water, the air or the land. In this way, the environment was being constantly challenged by new constructions; residential areas arose as well as commercial establishments and open spaces turned into permanent developments, all connected by a transportation network that was increasingly requiring polluting sources of energy. At this point, an interest towards new and less harmful forms of energy like wind and solar power originated, especially following the oil shortage that occurred in the 1970s where the United States had to resort to oil importations from foreign countries. In the same way, a major attention was given to nuclear power thanks to its low cost and low levels of pollution; however, it has later proven to be extremely expensive in terms of safety costs and very damaging in terms of nuclear waste disposal.

In other terms, the economic boom after the end of World War II and the increasing production and consumption processes of the following decades had significant consequences on the environment, started at a local level to later on expand to a regional, national and global level. Not only was this the case, but the scientific evidence that demonstrated the existence of the hole in the ozone layer showed how harmful human actions can be, reaching even the stratosphere above the Earth. The acknowledgment of these negative environmental consequences by the people begun to slowly affect private and institutional life of the Americans; this marked the beginning of a new era characterized by a greater attention towards the environment and the development of environmental values among the population. The history of environmental changes in Europe caused by human activity is very long and rich thanks to the connection and interaction between the environment and humans since ancient times. The impacts of human activities on the European environment have been significantly harmful since the cycles of deforestation and the degree of pollution of towns from the medieval to the industrial era that caused radical changes. Especially the Industrial Revolution, from the second half of the eighteenth century until mid-nineteenth century, initiated periods of strong exploitation of the environment, from mining to forest clearance and wetland drainage. Also, big factories and plants were built in those years, causing great amounts of waste that were mostly directed towards rivers and oceans. However, it is important to underline the fact that the consequences of anthropogenic actions have not been exclusively negative; on the contrary, men's management of the environment has in certain cases been helpful with no devastating impacts on nature. Piers Blaikie and Harold Brookfield confirm this in their book *Land Degradation and Society*: "Land management consists of

applying known or discovered skills to land use in such a way as to minimize or repair degradation, and ensures that the capability of the land is continued beyond the present crop or other activity, so as to be available for the next. There is no system of land use, anywhere in the world, that does not have agro-technical means with which to achieve or at least approach these ends, provided they are practiced in natural environments suitable for their employment”.⁵

Peter Brimblecombe and Christian Pfister identify in their book *The Silent Countdown: Essays in European Environmental History* deforestation as one of the causes that revolutionized the European environment in the past centuries. The clearing of forests, which was also obtained through pollution emissions, was considered as a natural process of human development in order to increase the amount of cultivable land and timber; in this way, more sources of energy such as firewood and food were available, as well as material used for construction purposes. In addition, the natural environment in Europe underwent significant transformations following the emissions of toxic substances that polluted the air, the water and the soil, causing devastating consequences for human’s health, welfare and property. Concerning this, Ilja Mieck, Professor at the Freie Universität Berlin, distinguishes six types of pollutions that had very negative impacts on Europe during the course of history. First of all, he takes into account the two types of historical pollution that were described by the two French historians Le Roy Ladurie and Goubert, which are bacterial pollution and industrial pollution. On the one hand, the first kind of pollution mostly derived from dirty and muddy streets where pavement and efficient sanitation still did not exist, polluted water deriving from households and work places and human feces, causing in this way the development of bacteria in putrefying materials and stagnant waters. This situation was evident in cities like Paris and Berlin in the second half of the eighteenth century where mud, excrements and dead animals were transported out of the cities.⁶ On the other hand, industrial pollution — evolved in the nineteenth century from artisanal pollution of air and water caused from the Middle Age to Early Modern time by some trades such as small workshops where leather and paper were made — derived from iron and chemical factories using large amounts of fossil fuel for

⁵ Piers BLAIKIE, Harold BROOKFIELD, *Land and Degradation and Society*, Methuen & Co Inc., London, 1987, page 284.

⁶ I. MIECK, *Reflections on a Typology of Historical Pollution: Complementary Conceptions*, in Peter BRIMBLECOMBE, Christian PFISTER. (eds) *The Silent COUNTDOWN*, Springer, Berlin, Heidelberg, 1990, page. 74.

their production processes. During this century, a great focus was on urban health and on how to improve it also through legislation, but at the same time authorities seemed not to be sufficiently interested in the conditions of the environment; therefore, there was not an interest towards the development of more efficient technologies in order to reduce pollution. As Peter Brimblecombe and Catherine Bowler write in their essay *Air Pollution in York 1850-1900*, “like other sanitary concerns, agitation about city smoke led to the inclusion of pollution control clauses in 19th-century sanitary legislation. Despite the passage of such well-meant laws, they seem to have been largely unsuccessful in bringing about any marked reduction of the smoke in British cities”.⁷ In addition, in Germany and especially the Ruhr region which was in the twentieth century the most industrialized area of the country and of Europe, factories were not expected to reduce pollution but were only required to pay for the damages caused, and as Brüggemeier states in his essay *The Ruhr Basin 1850-1980: A Case of Large-Scale Environmental Pollution*: “[...] the Ruhr, so my thesis goes, emerged as an area where industry was protected, not nature, or the environment. While attempts to establish nature preserves were not too successful in Germany, the Ruhr region effectively developed into an industrial preserve”.⁸

Industrial pollution of the nineteenth century was the first type to cause great damages on the environment, hitting very large areas such as entire towns and also provinces or regions, opposed to the artisanal pollution that was restrained and would not go beyond the small area surrounding the source of pollution also thanks to the natural regeneration power of water and air. The smoke coming out of factories represented a serious threat to human health but not as much as sulfuric exhalations derived from soda factories, especially in England, where they would destroy large cultivated fields and the vegetation of many regions. One of the most emblematic cases consisted in the opening of soda factories in an area close to the city of Liverpool in the 1860s that devastated the whole environment surrounding that area.⁹

The increased levels of pollution caused by industries in the nineteenth century did not occur without consequences; as a result, the decrees aiming at reducing the artisanal pollution

⁷ Peter BRIMBLECOMBE, Catherine BOWLER, *Air Pollution in York 1850–1900*, in Peter BRIMBLECOMBE, Christian PFISTER. (eds) *The Silent COUNTDOWN*, Springer, Berlin, Heidelberg, 1990.

⁸ Franz-Josef BRÜGGEMEIER, *The Ruhr Basin 1850–1980: A Case of Large-Scale Environmental Pollution*, in Peter BRIMBLECOMBE, Christian PFISTER. (eds) *The Silent COUNTDOWN*, Springer, Berlin, Heidelberg, 1990, page 211.

⁹ MIECK, *Reflections on a Typology of Historical Pollution: Complementary Conceptions*, in Peter BRIMBLECOMBE, Christian PFISTER. (eds) *The Silent COUNTDOWN*, op. cit., page 76.

coming from isolated factories or small laboratories evolved into official legislation with the objective of limiting polluting industries as a whole. The first example of anti-pollution legislation dates back to October 15, 1810 with the Napoleonic decree whose result was the need by 307 branches of industries recognized as polluting and environmentally harmful of an authorization by the local or regional police for any activity and operation.

Another type of pollution that hit the European territory is called fundamental pollution. By this expression, Mieck refers to the effects of human action on the environment that go beyond the damages of industrial pollution and start affecting the environment at a greater level, which is to say when entire countries or parts of continents are involved in the degradation process. An example on the European continent is the deforestation of the Mediterranean area that has been going on since ancient times because of the need of larger cultivable regions and monocultural agriculture. In this case, the development of new regulations appears to be more complicated because of the extension of the area involved, often international territories; therefore, national laws do not seem to be enough efficient. As Mieck writes, “[...] the term *pollution fondamentale* is based on the consequences, because this type of pollution no longer allows the selection of isolated factors. It affects the whole, consequently it means that in the grades of historical pollution, the *pollution fondamentale* was certainly a qualitatively new step”.¹⁰

Another category of pollution that interests the European continent is soil pollution, started in the nineteenth century and developed in the second half of the twentieth century. This type of pollution relates to soil destruction following intensified agriculture through the use of toxic substances such as pesticides, herbicides, nitrogen and phosphates, acid rain caused by industrial pollution and toxic waste products coming from chemical factories that use the soil as a landfill. In order to address these issues, the European Community and the Senate of Berlin organized in 1986 a symposium that lasted three days entitled *Scientific bases for soil protection in the European Community* in order to face the serious problems affecting the soil of the Member States of the Community.¹¹

The last type of pollution taken into account is the accidental pollution that refers to unexpected circumstances that can dramatically affect the environment, mainly through

¹⁰. MIECK, *Reflections on a Typology of Historical Pollution: Complementary Conceptions*, in Peter BRIMBLECOMBE, Christian PFISTER. (eds) *The Silent COUNTDOWN*, op. cit., page 78.

¹¹ European Commission, Press Release Database. Available at : https://europa.eu/rapid/press-release_IP-86-450_en.htm

accidents. This kind of pollution is unforeseen and uncontrollable and it has developed in the twentieth century through catastrophic accidents such as Chernobyl in Ukraine, Seveso in Italy in 1976 that resulted in the highest exposure to 2,3,7,8-Tetrachlorodibenzo-p-dioxin (TCDD), or the fire at an agrochemical storehouse in Basle in Switzerland that released toxic agrochemicals into the air and the rivers.¹²

I.3 Economic Theories and the Environment: An Overview of Environmental Thinking

The impact of economic activity on the environment led many economists to conduct research on the relationship between these two important elements. In particular, the major changes of the past centuries and started especially with the Industrial Revolution constituted the main cause of the order transformation in both the European and the American continents. The new and transformed order was the reason why many interrogations by economists and philosophers about the future of civilization arose, how it could guarantee its survival and overall how it was possible to reach higher standards of living following these radical changes at a global level. The objective was therefore to understand the human condition in relation to an environment that was being gradually affected by the latest discoveries and the development of new technologies. In this respect, different economic theories were developed, among which the classical economics theory, one of the first to originate during the industrial years, focusing on first principles trying to understand the fundamental laws that govern human interactions in society through rationalism as opposed to research of a more empirical nature. Among the classical economics school members, Thomas Robert Malthus developed a doctrine of population growth and resource scarcity: “Society has only the ability to increase agricultural production at an arithmetic rate while the number of mouths to be fed increases at a geometric rate. Hence, at some point, population will outstrip food supplies with calamitous results. [...] Economic scarcity refers to the decreased availability of

¹² MIECK, *Reflections on a Typology of Historical Pollution: Complementary Conceptions*, in Peter BRIMBLECOMBE, Christian PFISTER. (eds) *The Silent COUNTDOWN*, op. cit., page 79.

resources relative to the effort required to obtain them”.¹³ In his work *An Essay on the Principle of Population as It Affects the Future Improvement of Society*, published in 1798, Malthus focuses on the production obtained through agriculture and he affirms that if on the one hand the amount of land available and designated to cultivation was not infinite but it would eventually be exhausted, on the other hand he also argues that thanks to an intensification of cultivation and farming the same amount of land could provide a significant increase in the crops production. In this way, the owners of the land would be able to produce more thanks to supplementary workforce and maintaining the same quantity of cultivable fields; however, this augmentation would occur at decreasing rates. In other words, workers would individually produce less, obtaining diminishing returns.¹⁴ This idea derived from the fact that farmers were trying to increase the production in the intent of guarantee food to the entire population that was constantly growing. From this theory, Malthus foresees economic scarcity following the need of producing more through sacrifices that would be eventually higher than the benefices, all accompanied by an augmentation of the cost of agriculture, including labor force and equipment. In Malthus theory bears the idea that the constant population growth would cause high pressures on societies and that eventually the global economy would be dominated by these important costs, individual economic growth would collapse and cyclical periods of famine, plagues, wars and diminishing marginal returns would occur. As Robert Thomas Malthus writes in his book:

“That population does invariably increase where there are the means of subsistence, the history of every people that have ever existed will abundantly prove. And that the superior power of population cannot be checked without producing misery or vice the ample portion of these too bitter ingredients in the cup of human life and the continuance of the physical causes that seem to have produced them bear too convincing a testimony”.¹⁵ He believed that humanity would always live at the subsistence level. For Malthus, procreation was a natural and unstoppable force, an inherent part of the human condition. Thus, any increase in food production would ultimately lead to an associated increase in population as new children

¹³ Joseph E. DESTIEGUER, *Three Theories from Economics about the Environment*. BioScience, 1995, 45(8), page 29.

¹⁴ Diminishing returns, also known as principle of diminishing marginal productivity, is a principle in economics according to which if one factor of production is increased, maintaining all the other factors at a fixed level, there will be a moment in which the marginal output of the production decreases.

¹⁵ Thomas Robert MALTHUS, *An Essay on the Principle of Population, as it affects the future Improvement of Society*, with Remarks on the Speculations of Mr. Godwin, M. Condorcet, and Other Writers (London: J. Johnson 1798). 1st edition, page 11. Retrieved 10/7/2019 from: <https://oll.libertyfund.org/titles/311>

consumed the surpluses that could have been used to increase the quality of life of those already living. Humans could only control this process; only nature itself acted as a check on runaway population growth. Later on, Malthus thought evolved in modern times until it developed in the neo-Malthusian theory.

Among the economists that produced important works on economics and the environment it is important to remember John Stuart Mill and his significant contribution especially through the book *The Principles of Political Economy* of 1848. His main idea consisted in the impossibility of maintaining a constant level of wealth in time in conjunction with a steady rise of human population and, if that would occur, it would be at the expenses of people's happiness. As Desteiguer states in his essay: "What was needed in order to improve the human condition [...] was a more immediate stabilization of population, reduction in aggregate consumption, and a more equitable world-wide distribution of wealth".¹⁶ Contrarily to what Malthus argued, Mill believed in human capacities to avoid cyclical periods of catastrophes; in order to do so it was however required to foster a decrease in human consumption. An intensive use of resources and land exploitation could, as well as a lack of agricultural and mineral production, lead to a gradual impoverishment of the quality of the environment and therefore of the human habitat. At the same time, human improvement was for Mill an important aspect that was not threatened by a stationary economic state but that was on the contrary promoted through social, cultural and moral progress.

Contrary to the classical economists approach which is focused on theories derived from the philosophy of natural law, a new doctrine of economic thought based on empirical analysis and mathematical equations to study different aspects of economics and where rational actors are seeking to best take advantage of their situation, develops at the end of the nineteenth century in England. One of the main aspects of this new doctrine was market efficiency and equilibrium in order to maximize profits and also the level of producers and consumers' satisfaction through the establishment of voluntary exchange prices between the two. According to this school, a rise in prices would encourage the development of new technologies able to provide an alternative product of the same quality or able to find a way to produce the same product for a cheaper price, thanks to the discovery of new raw materials; in this way, efficiency and replacement in the processes of production and consumption would certainly be fostered. In other terms, in the minds of neoclassicists, other systems different

¹⁶ DESTIEGUER, *Three Theories from Economics about the Environment*, op. cit., page 30.

from the market equilibrium would lead to a worsening of the resources allocation causing consequently a decrease in the level of human satisfaction. Despite the societal welfare that this new school of economic thought provided, there was however one missing element represented by the third parties that were not part of the market exchange and therefore lacking of any benefits deriving from it. In other words, one of the main negative externalities of market transactions was constituted by the environment. By explicitly internalizing externalities and making them a part of the analysis, it becomes possible to better understand the true cost of any transaction and possibly find solutions to the problem associated with it.

I.4 Political Systems and Institutions in the United States and in the European Union: How They Affect Environmental Policymaking

American federalism and its policies have always played a fundamental role for the environment. The idea behind the earliest regulations put in place consisted in a maximization of the profit obtained through the exploitation of the surrounding environment, including deforestation, an intensive use of lands and all natural resources available. A lack of awareness about negative environmental consequences of human actions resulted in a total domination of nature by the people, whose only concern consisted of finding any possible way to foster this exploitation. One of the concrete examples of this idea that the environment was owned by men and therefore unlimitedly exploitable with no greater repercussions was the Northwest Ordinance passed by Congress in the July of the year 1787, giving birth to the Northwest Territory, its governing structure and formulating the procedures through which new territories could be accepted and become new states of the Union. This Ordinance, involving a large section of the American territory, from the Ohio and Mississippi rivers to the area of the Great Lakes, represented one of the first causes of environmental changes on the American continent.¹⁷ This desire to control nature and the conviction that alterations in the environment would not lead to permanent damages – perhaps justified by the fact that

¹⁷ The document related to federal land control, the Northwest Ordinance of 1787, required the respect by every new state becoming part of the Union of the right of the federal government to the disposal and the management of public lands within state borders. Consequently, one of the conditions of this ordinance for the admission to the Union was that new states would give the federal government all the unclaimed lands.

industrial economy was still in its infancy at a smaller scale and that all its potential consequences were not yet known, represented in large part the main policy of the federal government on the environment.

Only later on, precisely in the second half of the twentieth century, the United States experienced a change in the approach towards the environment, starting to realize how impactful human activities could actually be on nature. As a result, one of the first signs of this desire of conservation and preservation of the environment for future generations was represented by the National Environmental Policy Act (NEPA), signed in 1970. The objective of this act was to ensure that federal agencies would properly study the environmental impact prior to the implementation of proposed actions.¹⁸

Robert E. Manley, in his essay titled *Federalism and Management of the Environment*, argues that there are four main ideas about the correlation between the federal system and the environment. First, he affirms that the environmental statutes all intend to make federalism work thanks to federal imposition of national standards on states through their implementation. In addition, he claims that the statutes provide in theory an effective cooperation between the federal government and the single states capable of pursuing the same objectives but the reality proves to be different, arising on the contrary new issues. Secondly, the predetermined objectives of the environmental laws that appear to be ideal end up failing because of political contrasts. In fact, on the one hand, the interests of states often conflict with the interests at a national level and the policies that the federal government wants to implement collide with economical and political realities within various state governments, in other terms at an intrastate level. On the other hand, environmental problems often do not transcend state boundaries; this means that the actions of a state with polluting industries might have repercussions and a negative impact on neighboring states, with the difference that the latter would not receive any of the benefits of the economic policy of the polluting state, merely its environmental cost. Thirdly, the author claims that environmental law and land-use law are two systems strictly correlated that provide regulations about the use of land within the country; however, no efficient integration between the two has ever

¹⁸ The National Environmental Policy Act (NEPA) was signed into law on January 1 in 1970 and the proposed actions whose environmental, social and economic effects had to be studied include different aspects among which permit applications; the adoption of federal land management actions; and the construction of highways and public facilities.

occurred, causing therefore a significant loss with regard to the appreciation of nature and outdoor recreation by humans and also to the economic efficiency.

Lastly, the issue of environmental policy is considered by the author mainly linked to the management of scarce resources in relation with the optimal allocation of natural resources; in other words, he concludes that an effective management of the environment seems not to be the core of neither the federal government policies nor the state policies.¹⁹

In the analysis of environmental policy in the United States it is important to distinguish a macro and a micro level. The federal government controls the former thanks to its commerce and treaty powers and three categories can be identified in this macro level:

1. Environmental statutes usually list national environmental policies and standards;
2. Treaties provide the means by which international agreements on the environment are established.
3. Interaction between the federal government and the states.

The establishment of federal guidelines, the requirement for states to adapt to these standards and the support to the states thanks to funding and research constituted all measures that were part of the standard approach of the last category. The states need an integration of their environmental regulations with their political subdivisions' policies related to the use of the land and this must be obtained through a method of intrastate coordination provided by the federal government; in the same way, issues arising between different states need a federal government intervention.

The latter, namely the micro level, is on the contrary managed by all the units that are not part of the central government and it can be divided into three categories as well, from an environmental point of view:

1. SIP, that is state implementation plans, including state administrative agencies and state statutes;
2. Environmental districts within a state where environmental problems in several areas of the state are managed by the state administration;
3. State political subdivisions including districts, counties and townships.

Cooperation and integration between the state policies and the policies of the state subdivisions would be required. It is often the case that land-use law is within the jurisdiction

¹⁹ Robert E. MANLEY, *Federalism and Management of the Environment*, *The Urban Lawyer* 19, no. 3, 1987, pages 661-81. <http://www.jstor.org/stable/27894519>.

of the political subdivisions of many states; these laws generally tend to be older than the environmental laws and therefore a real integration seems lacking, leaving aside the management of the environment.

As mentioned before, a large number of environmental policies were implemented in the 1970s both at federal, state and also local levels thanks to economic, political and social forces. As Manley writes, “As the legislation was passing through Congress there seemed to be a recognition that environmental regulation was an idea, the time of which had come, and no lobbying force could block it”.²⁰ Environmental protection had finally become a significant feature of federal and state law and an increasing number of policies was being implemented.

At the federal level, a tripartite system that includes the Legislative, the Executive and the Judiciary branches, is the base for the Environmental regulatory framework of the United States. The Legislative branch, represented by Congress with the House of Representatives and the Senate, has the authority of passing environmental laws and statutes, which provide the overarching objectives for the development of policies. Moreover, Congress can have a direct influence on the governmental authority thanks to formal and informal controls. The latter represents the Executive power, consisting of the Environmental Protection Agency and other agencies that have a purview on environmental issues, and it is responsible for the implementation of laws and policies passed by Congress. Finally, the Supreme Court has the final authority to determine the constitutional legality of laws passed by Congress and of actions taken by the executive branch in the implementation of legislation.

After a brief description of the political structure of the United States concerning passing, implementation and constitutionality of laws, this paper will now focus on the relationship between the federal government and states. The system of environmental policy in the United States is based on a model of shared responsibility between the state and the federal governments. The latter, which is represented by the Environmental Protection Agency (EPA), elaborates and fixes specific national standards that must be enforced by the agencies of the state government. These environmental policies were more easily implemented by states because of the constitutional Commerce clause that grants to Congress the power to

²⁰ Robert E. MANLEY, *Federalism and Management of the Environment*, op. cit., page 14.

regulate any commercial or social intercourse between different states.²¹ As a consequence, environmental policies often involve interstate relations and that is the reason why the Congress has the right to enforce states to implement these policies.

In addition to this reason related to the constitutional powers of the Congress, states were more easily willing to implement federal standards because of another power held by Congress, namely the power to concede or to end every source of funding coming from the federal government. This federal funding represented one of the main reasons that led states to the implementation of national regulations; in other terms, these congressional appropriations mainly depended on the willingness of state governments to adopt federal standards, and also on the willingness to avoid additional regulatory oversight from the federal government. All of this resulted in states enforcement plans for every field of environmental regulation; the federal government had to approve each of these plans and after the approval every state was granted the power of implementing the proposed regulations.

The procedure through which these policies are implemented by states involves four steps. The first stage concerns the approval by the Congress of a national policy which has to be determined by congressional statute and by administrative regulation. The second stage envisages that the states prepare a state implementation plan (SIP) that will be later examined by agencies of the federal government that have to approve it. During the third stage local and state governments must implement the federal policy in their jurisdiction in conformity with the state implementation plan. Lastly, statutory authorizations allow agencies of the federal government to enforce compliance with the federal standards in case the national policies are not respected and adequately implemented; this is possible through the reliance on legal and administrative proceedings against either the state itself or directly against the entity causing pollution.²² This is however a rare occurrence; the Council of the States has in fact determined that around 96 percent of the federal programs have been successfully delegated to the states.²³

²¹ The Commerce Clause relates to Article 1 of the Constitution of the United States, precisely Section 8 and Clause 3. It confers to the Congress the power “to regulate commerce with foreign nations, and among the several states, and with the Indian Tribes”. This Clause has usually been used to justify the exercise of legislative power over the activities of states and their citizens, creating specific controversial issues concerning the balance of power between the federal government and state governments.

²² Robert E. MANLEY, *Federalism and Management of the Environment*, op. cit., page 16.

²³ Environmental Council of the States. 2017. *Cooperative Federalism 2.0*. Washington, D.C.

Generally, most of the environmental statutes follow this procedure; examples of state implementation of federal standards are the Clean Water Act, the Safe Drinking Water Act, the Resource Conservation and Recovery Act and the Clean Air Act²⁴ that we will examine later. States must therefore produce a SIP and enforce it in order to control emissions from stationary sources on the state territory, ensuring that the total amount of emissions does not overcome the limitations imposed by federal standards. The means and the modalities through which these standards must be obtained are quite flexible and the state enjoys a significant level of discretion. This system, consisting in states exercising regulatory authority at the direction of the national government is known as cooperative federalism. It is therefore important to underline how acts like the one described above limit in some ways the autonomy of the state but at the same time they allow states to adopt different methods for pursuing the same objectives; in other words, the rules implemented can differ in various states. As a consequence, it is possible to affirm that, as Margaret H. Lemos writes in her article *State Enforcement of Federal Law*, “enforcement authority can exist independent of regulatory authority. That is, even where Congress has denied states any regulatory autonomy, it may offer them a role in enforcing federal law”.²⁵ In other words, this collaborative system envisages a division of responsibilities but at the same time a work of partnership and moreover, solid trust and coordination between state and federal governments are strongly necessary.

The majority of the environmental laws are federal but given the varying interests of the plethora of jurisdictions that exist at the local level, the enforcement of these laws would be inefficient if left to the central government. As a consequence, the states are given the power to enforce most of the major environmental laws that provide minimum unified federal standards. The reason behind this system lays in the fact that it is a lot more likely that a state with the power to do so could intervene in a more rapid way in order to face pollution problems at a local level. Moreover, as David R. Hodas writes in his essay *Enforcement of Environmental Law in a Triangular Federal System: Can Three Not Be a Crowd When Enforcement Authority is Shared by the United States, the States, and Their Citizens?*,

²⁴ 42 U.S.C. §7401 et seq. (1970). The Clean Air Act (CAA) is the comprehensive federal law that includes regulations of air emissions from sources that are both stationary and mobile. It also allows Environmental Protection Agencies to establish National Ambient Air Quality Standards (NAAQS) in order to guarantee public welfare and health and to control emissions of sources of air pollution.

²⁵ Margaret H. LEMOS, *State Enforcement of Federal Law*, 86 New York University Law Review 698-765, 2011. Available at: https://scholarship.law.duke.edu/faculty_scholarship/2516

environmental agencies at state level have a better understanding of the conditions of the environment that surround them and therefore they are able to develop more adaptable and innovative solutions for their local environment, as opposed to the federal government, which would not guarantee a direct interaction with the local community and that would have to deal with heavier federal bureaucratic practices. In addition, the control of law enforcement has generally been a duty of local and state police, as well as prosecutors and state or local courts.²⁶

Nevertheless, it is inevitable that the implementation of federal environmental policies at a state level creates both intrastate and interstate political disagreement. The 1970s offered a significant example of this situation. On the one hand, the embracement of national environmental standards would contrast with state economic development policies, forcing many plants to adapt to the new regulations through the investment in modernization and capital equipment that would certainly increase the costs of manufacturing. Consequently, this would lead many old plants to an inevitable closure, causing at the same time an increase in the rate of unemployment. The situation described led many elected governors to increase the procedure's time through which environmental policies were enforced because, as Manley writes, "it was in their interest to have approved plans, but to administer them ineffectively, lest they create unemployment and produce a cadre of angry voters. [...] A national declaration of public welfare with regard to the environment fades in the eyes of locally elected politicians who face a large block of voters who fear their jobs are threatened by national environmental goals".²⁷ On the other hand, the polluting effects of fossil-fueled power plants of the Midwest were heavily affecting other regions among which the northeastern region of the United States and some regions of Canada, causing therefore environmental problems at an interstate level. However, the implementation of federal policies appeared complicated because of the role played by state interests, prompted to favor their benefits to the detriment of environmental impacts on other areas.

The debate about the positive and negative aspects of federalism related to environmental policy has played a fundamental role in the political analysis concerning the way in which the

²⁶ David HODAS, *Enforcement of Environmental Law in a Triangular Federal System: Can Three Not Be a Crowd When Enforcement Authority is Shared by the United States, the States, and Their Citizens?*, Maryland Law Review, Vol. 54, 1995. Available at SSRN: <https://ssrn.com/abstract=2146818>

²⁷ HODAS, *Enforcement of Environmental Law in a Triangular Federal System: Can Three Not Be a Crowd When Enforcement Authority is Shared by the United States, the States, and Their Citizens?*, op. cit.

government of the United States should face environmental issues. As David M. Konisky and Neal D. Woods affirm in their essay *Environmental Federalism and the Trump Presidency: A Preliminary Assessment*, “for much of the past fifty years, U.S. environmental politics and policy has reflected a ‘tug-of-war’ between federal, state, and sometimes local authority”.²⁸

Two main schools of thought animate the debate: on the one hand, one side is represented by advocates of federal uniform standards in the whole country because of the regulation inefficiency deriving from authority decentralization and it is usually supported by Democrats; on the other hand, the opponent side is represented by advocates of state regulation, often promoted by Republicans, that underline the high level of inefficacy and the lack of adaptability of federal standards that do not take into account the relevant environmental, political, economical and social differences of various states.

The former opinion willing to impose national standards argues that by doing so, there would be less risk of reluctance towards the implementation of environmental policies that would be seen as a threat for polluting corporations. In fact, in order to avoid the expenses of reducing pollution they might resort to the relocation of the firms to areas with lower costs and lower regulations. In addition, it is believed that the federal government would perform a more equal function in the management of interstate disputes where pollutants in one state affect the environment of a bordering state or area. In this regard, David M. Konisky and Neal D. Woods point introduce in their essay titled *Exporting Air Pollution? Regulatory Enforcement and Environmental Free Riding in the United States*, the concept of free-riding, focusing on the question of whether these polluting effects on neighboring jurisdictions is in some way strategic and previously planned. The two authors affirm in their article that “the logic of the free-riding argument is that governments use their discretion to strategically determine where (and where not) to impose environmental protection requirements. In the United States, the argument suggests that state environmental agencies intentionally induce environmental externalities. Therefore, it is necessary to explicitly study measures of government behavior that could cause differences in pollution levels at or near jurisdictional boundaries”.²⁹

²⁸ David M. KONISKY, Neal D. WOODS, *Environmental Federalism and the Trump Presidency: A Preliminary Assessment*, *Publius: The Journal of Federalism*, Volume 48, Issue 3, Summer 2018, Pages 345–371, <https://doi.org/10.1093/publius/pjy009>

²⁹ David M. KONISKY, Neal D. WOODS, *Exporting Air Pollution? Regulatory Enforcement and Environmental Free Riding in the United States*. *Political Research Quarterly*, 2010, 63(4), pages 771–782. <https://doi.org/10.1177/1065912909334429>

The latter opinion, on the contrary, supports state regulation, arguing that they have a more precise knowledge of their environment and their local challenges to which they can respond by providing more adequate solutions thanks to a more accurate study of specific issues. Additionally, some argue that a higher state government responsibility would promote policy innovation and experimentation and this might lead to the creation of efficient regulations that could be adopted by different states, causing also potential competitive advantages for the industries in those territories.

The various American administrations of the past decades have been characterized by different approaches according to the political ideology and the priorities of the party in office, either in accordance or in opposition to the priorities of the states. This was clearly evident over the course of several administrations in the past decades where, during the presidency of George W. Bush for instance, the tendency of states with a Republican majority like the southern states was to be in favor of federal environmental agencies promoting deregulation and therefore state-led efforts. On the contrary, during Democratic administrations such as the Obama presidency, the same states that were previously supporting federal environmental agencies later turned against such interventions after a change in leadership. The situation had reversed, that is more democratic states were at that point defending the regulations of the federal Environmental Protection Agency especially on policies concerning greenhouses gas emissions, air and water pollution.

Nowadays, especially after the election of Donald Trump as President of the United States of America in 2016, federalism has been playing a central role for environmental policy, mainly through the activity fostering cooperative federalism of Scott Pruitt³⁰, appointed as Administrator of the Environmental Protection Agency and the trend adopted seems to go back to the past Republican administrations and a cooperative federalism that foster a prevailing role of the states. As we will see later in this paper, the administration of President Trump of the past three years concerning environmental policies has been quite efficient in the sense that many of the achievements of the previous presidencies were reversed, especially in terms of water and air pollution decrease and the disregard towards the causes and the effects of climate change.

³⁰ Edward Scott Pruitt is an American lawyer and Republican politician that was nominated by President Trump and then appointed by Senate of the United States as fourteenth Administrator of the EPA Environmental Protection Agency from February 2017 to July 2018. The current Administrator is Andrew Wheeler, confirmed by the Senate in February 2019.

The environmental policy of the European Union has its origins in 1972 on the occasion of the European Council that took place in Paris right after the first conference of the United Nations on environmental issues held in Stockholm.³¹ During this Council, the Member States represented by their Heads of Government or Heads of State came to the conclusion that a greater effort in order to foster the preservation and the conservation of the environment was strongly needed. For this reason, next to the original objective of economic expansion, a necessity of an environmental policy functioning as a common denominator for the European Community was at that point introduced and an action program was therefore needed. As a consequence, a new *Environment Title* was introduced by the Single European Act of 1987 and it provided the states with a first legal basis for a common policy on the environment, aiming at very broad objectives such as the preservation of the environment and the consequence protection of human health and animal habitats, a non intensive use of natural resources or the freedom to have access to information concerning environmental features.³² Later on, precisely in 1993 in the occasion of the Treaty of Maastricht, the environment became officially a policy area of the European Union and the codecision procedure, which is currently known as the Ordinary Legislative Procedure³³, and the vote based on a qualified majority in the Council were introduced.³⁴ In 1999, the Treaty of Amsterdam determined that environmental protection had to be integrated into all sector policies of the European Union, focusing a particular attention on fostering sustainable development. The most recent treaty, the Treaty of Lisbon of 2009, introduced climate change as a one of the main issues that have to be addressed, as well as sustainable development in relations with third countries.

³¹ The Stockholm Conference, officially known as the United Nations Conference on the Human Environment, was an international conference convened by the United Nations in order to focus a major attention on the environment and all the threats affecting it. It took place in Stockholm from June 5-16 of 1972 and it represented the first important conference concentrated on environmental issues at international level that considerably changed the international environmental politics and policy around the world.

³² A. M. FARMER, *Manual of European Environmental Policy*, Routledge, London, 2012.

³³ The standard procedure for decision-making within the European Union is the Ordinary Legislative Procedure, which was formerly known as codecision. This procedure envisages the approval by the elected European Parliament of the EU legislation together with the Council, represented by the governments of the Member Countries.

³⁴ A qualified majority represents the number of votes that the Council requires in order to adopt a decision when issues are debated on the basis of Article 16 of the Treaty on European Union and Article 238 of the Treaty on the Functioning of the European Union. Starting from November 2014, a new procedure concerning qualified majority voting has been adopted; this means that a qualified majority in a vote on a proposal by the Commission or the EU's Representative for Foreign Affairs and Security Policy is obtained if two conditions are respected. These conditions are: 55% of the countries of EU vote in favor and the proposal is accepted by states that represent at least 65% of the total population of the EU.

Currently, the legal basis of environmental policy in the EU is represented by Articles 11 and 191, 192, 193 of the Treaty on the Functioning of the European Union (TFEU). The action of the European Union, despite being competent in all the sectors of environmental policy, is limited by the principle of subsidiarity³⁵ and the necessity of unanimity within the Council in specific areas among which land and water resource management, selection of sources of energy, country and town planning and field of taxation.

The general principles of environmental policy in the European Union can be summarized as follows: “European environment policy rests on the principles of precaution, prevention and rectifying pollution at source, and on the ‘polluter pays’ principle. Multiannual environmental action programmes set the framework for future action in all areas of environment policy. They are embedded in horizontal strategies and taken into account in international environmental negotiations. Last but not least, implementation is crucial”.³⁶

These principles constitute general principles of common law which are not explicitly stated but become law through continual implementation by custom. They supersede national law thanks to the fact that the doctrine of the European Community Treaty takes precedence over the law of national governments.³⁷ Legal and political frameworks with the objective of minimizing the harmful environmental impacts of human activity are informed through the environmental principles mentioned above, who have played a significant role within the policy-making of the European Union since the 1970s, subsequently followed by the principles established in the occasion of the Rio Declaration on Environment and Development of 1992.³⁸ These four main environmental principles guiding the policy in the

³⁵ Article 5(3) of the Treaty on European Union (TEU) and Protocol (No 2) on the application of the principles of subsidiarity and proportionality. The principle of subsidiarity comes into effect when the European Union does not have exclusive competence in certain sectors and therefore, this principle determines the way in which actions must be taken by the EU, as opposed to Member States.

³⁶ Tina OHLIGER, *Environmental policy: general principles and basic framework*, Fact Sheets on the European Union, May 2019. www.europarl.europa.eu/factsheets/en

³⁷ Article 5 Treaty establishing the European Community (Consolidated version 2002) OJ C 325, 24.12.2002, p. 33–184 ELI: http://data.europa.eu/eli/treaty/tec_2002/oj

³⁸ Also known simply as the Rio Declaration, it consists of 27 principles aiming at guiding the 170 signatory countries in the implementation of measures in order to foster sustainable development. This document was provided during the “Conference on Environment and Development” (UNCED) of the United Nations, most commonly known as the Earth Summit and took place in 1992.

field of application of the law of the European Union are established by Article 191(2) of the Treaty on the Functioning of the European Union (TFEU).³⁹

The first one, the precautionary principle, is a risk management tool that promotes the implementation of regulations aiming at the protection of the environment even if there is still no evidence of a real existing risk for it. This principle states: “In order to protect the environment, the precautionary approach shall be widely applied by States according to their capabilities. Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation”.⁴⁰

The objective of the precautionary principle is to guarantee that the benefits deriving from a decision overcome the risks, which is to say that risk is not completely eliminated but it is certainly diminished. In the case of the identification of a risk for the environment and if scientific evaluation is not able to decrease the chances of harmful consequences, then an approach based on the precautionary principle is applied, particularly in areas like water and air quality, food safety, global warming, acid rain and the reduction of the use of chemical pollutants.

The prevention principle instead, is focused on preventing environmental damages caused by a lack of regulations. Despite the fact that these two principles are often taken into account together, contrarily to the precautionary one, this principle needs an evident risk that must have been officially attested to be applied. In 1973, the First EU Environmental Action Programme included this principle among its eleven objectives and later on, in 1983, it was applied to the policy related to waste disposal, among which wastewater, incineration or landfills. A basis for the application of the prevention principle in the law of the European Union was provided by the global treaty on waste, known as the Basel Convention on the Control of Transboundary Movement of Hazardous Waste and their Disposal that took place in 1989.⁴¹

³⁹ Consolidated version of the Treaty on the Functioning of the European Union. PART THREE - UNION POLICIES AND INTERNAL ACTIONS TITLE XX – ENVIRONMENT Article 191 (ex Article 174 TEC) ELI: http://data.europa.eu/eli/treaty/tfeu_2012/art_191/oj

⁴⁰ Rio Declaration on Environment and Development, 1992, Report of the United Nations Conference on Environment and Development. Available at: http://www.unesco.org/education/pdf/RIO_E.PDF

⁴¹ The Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal was adopted in order to regulate the disposal of hazardous wastes, in particular after the discovery that developed countries were exporting toxic wastes to areas of the developing continents and countries, especially in Africa, where there was a significant lack of environmental awareness and regulations.

The third one is the rectification at source principle, which aims at targeting the regulation of the pollution source as opposed to guide the regulation at a more general environmental level. It fosters the use and the development of technologies with a very low impact on the environment and encourages the adoption of measures in order to fight the levels of pollution and decrease it since its very first appearance. It is also important because it is used to help to provide justification for environmental regulations implemented by the European Union.

The fourth principle, recognized by the Organization for Economic Cooperation and Development in 1972, is the polluter pays principle (PPP) which that claims that the responsible party for polluting activity should face the costs deriving from its environmental and social damaging actions. It has been implemented by the Environmental Liability Directive⁴², which has the objective of preventing environmental pollution causing damages to waters and soil where protected species live. In addition, it envisages an appropriate management of extractive waste and of geological storage sites, and the adoption of safety regulations for offshore oil and gas operations. Otherwise, the polluter parties are also demanded to find solutions in order to reduce the negative impacts to a minimum. The idea that the whole society has to pay a significant price in terms of health, general welfare and quality of life has been replaced with the idea that the principal entities accountable for the impoverishment of the quality of waters, air and land have to provide an appropriate solution in order to decrease the disproportional public and private costs of harmful polluting activities. The polluters are demanded to internalize the costs of pollution in their production process so that the society does not have to face greater environmental issues afterwards. There is however a downside within this principle: it is difficult sometimes to determine the actual culprit because the source of pollution might be more than only one. When this case occurs, all the sources considered responsible for the polluting actions are required to bear the costs. Moreover, this principle has been used in the EU legislation through the Water Framework Directive, the Waste Framework Directive and the Landfill Directive; in this way, it has been useful in the occasion of several cases of environmental pollution and its management.⁴³

⁴² Directive 2004/35/CE of the European Parliament and of the Council of 21 April 2004 on environmental liability with regard to the prevention and remedying of environmental damage
ELI: <http://data.europa.eu/eli/dir/2004/35/2013-07-18>

⁴³ Anna LAVELLE, Jonathan WENTWORTH, *EU Environmental Principles*, Houses of Parliament, Parliamentary Office of Science & Technology, PostNote Number 590, November 28, 2018.

Environmental law in the European Union dates back to the 1970s but one of the conditions in order to make all the directives, regulations and decisions related to the protection of the environment effective is to finance and implement them at national, regional and local levels, according to Article 192(4) of the TFEU. Often, one of the main issues within the Union is the contrasting opinion among states, which sometimes causes an inadequate enforcement of environmental policies. For this reason, monitoring is essential at all levels in order to control the conditions of the environment and how properly Member States, regions and communities are enforcing EU environmental law.

After the adoption of an environmental act by the institutions of the EU, every Member State holds the responsibility to ensure its application in its national legal system.

In the years, many cases of insufficient enforcement of environmental policies of the European Union occurred; that is the reason why different mechanisms have been imposed both through Treaties and through the work of the Court of Justice of the European Union (CJEU). A general obligation of sincere cooperation by the States during the implementation of EU legislation is determined by Article 4(3) of the EU Treaty, which states: “Pursuant to the principle of sincere cooperation, the Union and the Member States shall, in full mutual respect, assist each other in carrying out tasks which flow from the Treaties. The Member States shall take any appropriate measure, general or particular, to ensure fulfillment of the obligations arising out of the Treaties or resulting from the acts of the institutions of the Union. The Member States shall facilitate the achievement of the Union's tasks and refrain from any measure which could jeopardise the attainment of the Union's objectives”.⁴⁴

Among the environmental legal acts, the directive is certainly the most used one and it imposes on Member States formal and substantive requirements, which is to say, proper and punctual implementation, its notification to the Commission and the draft of a report concerning the directive transposition into national legislation. However, the simple transposition is not satisfactory; the rules imposed with the directive must be efficient and impactful and it is a duty of the national authorities to verify that and there is no exception accepted that justifies a lack of implementation, neither of a political nor of a social nature.

The inhomogeneous character of the EU, deriving from very diverse political and institutional systems of the Member States and their national and regional administrations, makes it

⁴⁴ Consolidated version of the Treaty on European Union - TITLE I COMMON PROVISIONS - Article 4 ELI: http://data.europa.eu/eli/treaty/teu_2012/art_4/oj

difficult to respect deadlines and full implementation when adopting national and regional law. For instance, illegal landfills are still present on several EU States and moreover, according to the Communication from the Commission to the European Parliament (EP), the Council, the European Economic and Social Committee (EESC) and the Committee of the Regions (CoR) Improving the delivery of benefits from EU environment measures: “the costs of not implementing current legislation are broadly estimated at around €50 billion a year. These relate not just to environmental but also to human health impacts. For example, 20 % - 50 % of the European population lives in areas where the air quality breaches European limit values and the estimated annual costs in terms of health expenditure or days of work lost run to billions of Euros”.⁴⁵

In order to enhance the respect of EU laws related to the environment and to guarantee both the implementation and the enforcement in all the states, the European Parliament and the Council of the EU decided in 2001 to adopt the Recommendation 2001/331/EC that would determine non binding minimum standards for environmental inspections in the Member States (RMCEI).⁴⁶ This recommendation included the development of these environmental inspections, their execution, their evaluation and a study of their effectiveness. All of this was attainable especially thanks to the European Union Network for the Implementation and Enforcement Law (IMPEL), a network of representatives of the Member States’ bodies reliable for the safeguard and preservation of the environment, that was fundamental in the early stage of the Recommendation development and also later on when it was essential to ensure the implementation process. Member States have therefore to impose such standards on their citizens and provide efficient and adequate criminal sanctions to those whose actions create a serious threat or damage to the environment, such as illegal waste disposal; emissions of toxic substances in the water, land or air; illegal trade of protected species; and illegal trade of ozone-depleting substances. The 7th Environment Action Programme — which constitutes the EU environmental policy until 2020 aiming at protecting, conserving and boosting the natural capital of the EU, at making the EU a competitive green economy with low carbon emissions and an efficient use of the resources, and at fighting against the threats to the

⁴⁵ COM/2012/095 final COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS Improving the delivery of benefits from EU environment measures: building confidence through better knowledge and responsiveness.

⁴⁶ Recommendation of the European Parliament and of the Council of 4 April 2001 providing for minimum criteria for environmental inspections in the Member States ELI: <http://data.europa.eu/eli/reco/2001/331/oj>

environment that put health and welfare in danger⁴⁷ — established extending binding criteria at all administrative levels in order to guarantee an equal implementation and enforcement.

In order to obtain an efficient implementation of EU legislation, the European Commission produced in 2016 the Environmental Implementation Review and its objective is to monitor and reporting obligations under existing law in order to decrease the expenses and to simplify it.

In case of disrespect of the Treaties, Member States can avail of Article 259 TFEU⁴⁸ and the European Commission can avail of Article 258 TFEU⁴⁹ in order to bring actions before the Court of Justice against those States that are not fulfilling their obligations. In the case in which a Member State decides to take actions against another Member State, the Commission has to be previously informed and has to elaborate an opinion on the matter; however, this is a process that rarely occurs. Very particular conditions are necessary in order to allow individuals bring a case before the Court of Justice; therefore, it is more common to bring the case to a national court that might decide for the intervention of the Court of Justice. Otherwise, it is possible for individuals to submit a complaint to the Commission aiming at its intervention against the targeted Member State.⁵⁰

In the EU environmental legislation the European Parliament is fundamental. It underlined how inefficient the current state of implementation of environmental legislation is in the Member States and therefore several recommendations were proposed. Among these, a more

⁴⁷ Decision No 1386/2013/EU of the European Parliament and of the Council of 20 November 2013 on a General Union Environment Action Programme to 2020 ‘Living well, within the limits of our planet’ Text with EEA relevance ELI: <http://data.europa.eu/eli/dec/2013/1386/oj>

⁴⁸ Article 259 (ex Article 227 TEC) A Member State which considers that another Member State has failed to fulfill an obligation under the Treaties may bring the matter before the Court of Justice of the European Union. Before a Member State brings an action against another Member State for an alleged infringement of an obligation under the Treaties, it shall bring the matter before the Commission. The Commission shall deliver a reasoned opinion after each of the States concerned has been given the opportunity to submit its own case and its observations on the other party's case both orally and in writing.

If the Commission has not delivered an opinion within three months of the date on which the matter was brought before it, the absence of such opinion shall not prevent the matter from being brought before the Court.

⁴⁹ Article 258 (ex Article 226 TEC) If the Commission considers that a Member State has failed to fulfill an obligation under the Treaties, it shall deliver a reasoned opinion on the matter after giving the State concerned the opportunity to submit its observations. If the State concerned does not comply with the opinion within the period laid down by the Commission, the latter may bring the matter before the Court of Justice of the European Union.

⁵⁰ David LANGLET, Said MAHMOUDI, “EU Environmental Law and Policy”, Published to Oxford Scholarship, November 2016. Print, ISBN-13: 9780198753926 DOI: 10.1093/acprof:oso/9780198753926.001.0001

adequate communication between the States and between regional and local communities and authorities concerning the most proper measures to put into practice was encouraged.

Despite the Environmental Action Programme cited above, the European Parliament is currently asking for greater security related to investments promoting environmental policies and for a greater interest towards environmental issues that might be affected by other policies.⁵¹

⁵¹ OHLIGER, *Environmental policy: general principles and basic framework*, op. cit.

II. Environmental Policy Making

II.1 Multilateral Environmental Agreements: The Evolution of the Leadership Role of the United States and the European Union

According to many academics, in the past decades the United States have been showing on the one hand a high level of reluctance towards international environmental law, while on the other hand the European Union has been identified as the leading proponent of green regulations and multilateral environmental agreements (MEAs), replacing in this way the U.S. This trend of the American Administration, which became increasingly unwilling to sign and ratify major agreements, started in the early 1990s, letting therefore the EU take the lead, contrary to the previous decades of U.S. guidance in the 1970s and 1980s.

The American leadership begun in the 1960s when environmental issues first started to be addressed by the international community through the ratification of MEAs; however, this changed in the 1990s, when although the U.S. accepted to sign a series of important MEAs, among which the Convention on the Transboundary Effects of Industrial Accidents and the Convention on Biological Diversity of 1992, the Kyoto Protocol of 1997, the Stockholm Convention on Persistent Organic Pollutants and the International Treaty on Plant Genetic Resources for Food and Agriculture of 2001, they were never ratified. In addition, despite becoming a contracting party to the UN Framework on Climate Change, the International Tropical Timber Agreement and the UN Convention to Combat Desertification of 1994, many several others were not even signed, such as the Aarhus Convention on Information, Public Participation and Access to Justice of 1998 and the Cartagena Protocol on Biosafety of 2000.⁵²

⁵² The Convention on the Transboundary Effects of Industrial Accidents is a convention of the United Nations Economic Commission for Europe (ECE) that was signed in Helsinki, Finland on March 17, 1992 aiming at the protection of the environment and people against industrial accidents. It entered into force on April 19, 2000. The Convention on Biological Diversity (CBD) is a multilateral treaty with the objectives of promoting the conservation of biological diversity, a sustainable use of its components and aiming at sharing the benefits deriving from genetic resources in a fair and equitable way. It was signed in 1992 on the occasion of the Earth Summit in Rio de Janeiro and it entered into force on December 29, 2003.

As R. Daniel Kelemen and Tim Knievel affirm in their article *The United States, the European Union, and international environmental law: The domestic dimensions of green diplomacy*, “This aversion to multilateral environmentalism is often contextualized within what appears to be a broader aversion to multilateralism, particularly in regards to international legal regimes designed to protect the social, economic, and human rights”.⁵³

As mentioned, the United States’ position on MEAs considerably changed over time; in the new period characterized by more aversion towards multilateralism, the U.S. resorted to the use of RUDs, which is a package of reservations, understandings and declarations that became very common in major treaties of the late twentieth century and that favored the U.S. For instance, these RUDs would enable the United States not to provide obligatory funding, not to make modifications to their national programs and regulations, they allowed them to refuse binding amendments if not ratified by the Senate and finally to refuse compulsory dispute settlement. This instrument of ratification was applied to the United Nations Desertification Convention and an attempt to apply it to the Convention on Biological Diversity was made but eventually it was never ratified by the Senate.

Despite this attitude of the latest decades, the United States have demonstrated, as the two authors write in their article, that in the cases of agreements signed and ratified previously, they generally met the obligations established, as showed by the Government Accountability

The Stockholm Convention on Persistent Organic Pollutants is an international treaty with the objective of eliminating or decreasing the production of persistent organic pollutants (POPs) and their frequent use. It was signed in 2001 and it entered into force in May 2004.

The International Treaty on Plant Genetic Resources for Food and Agriculture (IT PGRFA) is a comprehensive international treaty aiming at the guarantee of food security. It does so thanks to the promotion of the conservation, exchange and a sustainable use of the plant genetic resources for food and agriculture on the planet. It is also known as the International Seed Treaty; it was signed in 2001 and became effective in 2004.

The International Tropical Timber Agreement of 1994 aimed at guaranteeing that the exports of tropical timber would be the product of sustainable work by 2000 and at the establishment of a fund in order to aid the producers of tropical timber to obtain the resources needed so that they could reach their goals. It was signed on January 26, 1994 and became effective on January 1, 1997, replacing the International Tropical Agreement of 1983. Later on, in it was in turn replaced by the International Tropical Timber Agreement of 2006.

Lastly, the United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa (UNCCD) aims at fighting desertification and at mitigating the effects of drought thanks to national action programs encouraged by international cooperation. It was signed on June 17, 1994 and became effective in December 1996.

⁵³ R. Daniel KELEMEN, Tim KNIEVEL, *The United States, the European Union, and international environmental law: The domestic dimensions of green diplomacy*, International Journal of Constitutional Law, Volume 13, Issue 4, October 2015, Pages 945–965. Available at: <https://doi.org/10.1093/icon/mov057>

Office (GAO) in 2002.⁵⁴ Moreover, during the Presidency of Barack Obama, the administration put efforts into the attempt to fulfill obligations of MEAs even if they did not represent one of the official parties, for example trying to adopt regulations and executive orders in accordance with the targets of the Kyoto Protocol and the Copenhagen Agreement of 2009. In June of 2013, the Climate Action Plan, which included regulations and executive orders aiming at setting a limit to the GHG emissions of new power plants, was released after the unsuccessful attempt to adopt new legislation related to climate issues because stopped by Congress. However, despite the U.S. was able to respect several agreements, it did not show the same capability in complying with the requirements of the Montreal Protocol of 1987⁵⁵; indeed, the United States never phased out a substance that deplete the ozone layer and therefore the country was accused of violation of the obligations.

Another feature of the attitude adopted by the United States towards MEAs was the difficulty of consenting and complying with new agreements' provisions. This happened despite the fact that this internalization would be possible through small modifications to their already existing laws, like in the case of the non ratification of the Basel Convention on the Transboundary Movement of Hazardous Waste and the Stockholm Convention on Persistent Organic Pollutants. The latter in particular, although it had obtained support from both Presidents George W. Bush and Barack Obama, was never ratified because of a stalemate situation in Congress, trying to pass laws that could ensure EPA's control over new pollutants that may be added to the list in the future within the Stockholm Convention. Contrary to the U.S., the European Union instead not only complied with the obligations of the Convention but in addition it created a mechanism through which new POPs to be eliminated were included in the list.

Interestingly, in the article mentioned above, the two authors give a definition of "disinterested commitment"; that is, to "[...] comply with and internalize an environmental treaty even where they [countries] oppose the substance of that treaty, this disinterested commitment provides strong evidence of principled commitment to international law. [...] Thus, the strongest form of commitment is evident when states support environmental treaties

⁵⁴ The Government Accountability Office (GAO) is an agency of the legislative branch of the American government providing evaluation, auditing and investigative services for the Congress. The GAO represents the supreme audit institution of the U.S. federal government.

⁵⁵ The Montreal Protocol on Substances that Deplete the Ozone Layer is an international treaty aiming at the protection of the ozone layer through the elimination of polluting substances which deplete it. The Protocol was signed on August 26, 1987 and became effective on September 16, 1989.

even when they oppose their substance”.⁵⁶ According to their analysis, the United States seemed not to have shown this feature, opposing environmental agreements especially in most recent times, with the non ratification of the Kyoto Protocol, the refusal of new targets for the post-Kyoto period and lastly, with the declared withdrawal intention from the Paris Agreement.

The lack of this aspect, on the contrary, seems not to characterize the Member States of the European Community in the period before the change of leadership. As previously noted, during the leadership of the United States concerning environmental agreements in the 1970s and in the 1980s the European Community and especially its Member States would not demonstrate their support for MEAs. However, it is necessary to underline the fact that, as opposed to the U.S., the countries member of the Community signed and consequently ratified all the most significant agreements of which the U.S. were a party giving a demonstration of what has been previously defined as disinterested commitment. In some cases, this reluctance showed towards agreements by EC members was overcome thanks to new scientific research that caused a change of position of governments, eventually leading them to foster the regulations imposed by the environmental agreements. Among the countries that experienced this change, Germany is one of the major examples, particularly concerning its view on the Montreal Protocol. Among the more than sixty MEAs that the European Union has signed or ratified since the 1990s, fulfilling the obligations of most of them, the major are the Convention on Biological Diversity, the Cartagena Protocol of 2000, the Convention on Biodiversity, the Kyoto Protocol and the Stockholm Convention on Persistent Organic Pollutants.

Through policies that the EU had already implemented, such as the Wild Birds Directive (79/409/EEC) of 1979 and new policies to be implemented like the Habitats Directive (92/43/EEC), the European Union was able to implement the Convention on Biological Diversity, which in 1998 saw the creation of a comprehensive Biodiversity Strategy whose aim was to expand the importance of biodiversity protection and conservation through its integration in many different areas of policy and by preparing action plans focusing on this subject. As a consequence, the EU-wide Natura 2000 network established the designation of protected areas by Member States, which represents today over 18% of the area of the EU and

⁵⁶ KELEMEN KNIEVEL, *The United States, the European Union, and international environmental law: The domestic dimensions of green diplomacy*, op. cit., page 949.

about 9,5% of the marine territory aiming at the protection of endangered species and eco-systems.⁵⁷

Later on, in order to increase the efforts to protect the environment and its eco-systems, the EU adopted in 2011 a new EU Biodiversity Strategy to 2020 (COM/2011/244) that includes six objectives among which the protection of species and habitats, the maintenance and restoration of ecosystems, a more sustainable agriculture and forestry together with more sustainable fishing activities, the control of invasive alien species, and the contribution for stopping the loss of global diversity. Moreover, the European Commission repeatedly took legal actions in the form of infringement procedure against those Member States that failed to implement such directives. A mid-term review of 2015 states that even if important progress has been made, efforts in the implementation and the enforcement must increase and be more ambitious in order to achieve the targets fixed. Moreover, strong partnerships and the application of the principles of the policies are necessary to reach the Strategy's objectives.⁵⁸

Another evidence of the European leadership in environmental issues is the passage of the Cartagena Protocol of 2000, a protocol whose objective is the safe use, handle and transport of genetically modified organisms (GMOs), overcoming the opposition coming from the United States. However, in this case the Cartagena Protocol reflected the policies of the EU concerning GMOs and therefore its interests, failing this time to show disinterested commitment, as opposed to previous agreements.

After the UE attempts to convince other countries to agree to a post-Kyoto agreement and many disappointing conferences in which it did not obtain positive results, the European Union has developed its own post-Kyoto strategy through the Climate and Energy Package of 2008 and its 20-20-20 Strategy. This package consists in binding legislation to guarantee that countries fulfill the climate and energy objectives for the year 2020, which include a 20% reduction of greenhouse gas emissions, 20% of EU energy production must come from renewable sources and a 20% improvement in energy efficiency.⁵⁹

⁵⁷ Nadine MÉZARD, Kerstin SUNDSETH, Susanne WEGEFELT, *Natura 2000 – Protecting Europe's biodiversity*, Directorate-General for Environment (European Commission), November 11, 2008. Available at: <https://publications.europa.eu/en/publication-detail/-/publication/e4d56202-545d-43d8-972c-6be52cc8fec3>

⁵⁸ REPORT FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT AND THE COUNCIL THE MID-TERM REVIEW OF THE EU BIODIVERSITY STRATEGY TO 2020, COM/2015/0478 final, October 2, 2015. Available at : <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52015DC0478>

⁵⁹ *2020 Climate and Energy Package*, Climate Strategies & Targets, Energy, Climate change and Environment, European Commission. Available at: https://ec.europa.eu/clima/policies/strategies/2020_en

II.2 Major Environmental Laws and Policies in the United States and the European Union

Starting in the mid-1960s and 1970s environmental issues acquired a very important position within the political agenda of the United States, both Democrat and Republican mainly thanks to the large support of the population for a reduction of pollution, the protection and the preservation of natural habitats and its wildlife. As a consequence, the inclusion of laws and policies related to the protection of the environment would correspond to electoral benefits for politicians. The level of public attention that environmental concerns received, augmented by the media led most presidents and their administrations of those years, among which the Democrats John F. Kennedy, Lyndon B. Johnson and Jimmy Carter and the Republicans Richard M. Nixon and Gerald Ford, to show support through actions in defense of the environmental cause. This political and social trend led to a “veritable flood of new environmental laws and initiatives” over the course of the two decades.⁶⁰ The year 1964 saw three bills on air pollution that were approved by Congress and that became ninety-seven by 1970. One of the first most important bills is the National Environmental Policy Act of 1969 (NEPA) and signed into law on January 1, 1970 by President Richard M. Nixon. With this law, all federal agencies and departments were required to monitor, evaluate and control their actions aiming at the protection and the conservation of the environment; they were asked to use standards of assessments set by NEPA into their processes of decision-making; and not less importantly, the law guaranteed people and organization the right to take legal action in order to shape or change environmental policies and to oppose to invasive construction projects that would be harmful for the environment. One example of project opposition was the Trans-Alaska Pipeline System (TAPS), whose construction was stopped for two years thanks to legal action taken by environmental groups, accusing the project of violating NEPA. However, the construction of the pipeline was finished in 1977 thanks to environmental impact statements (EIS) provided by the Interior Department. These EIS have been strongly opposed by corporations, which defined them as “an onerous example of regulatory overkill”.⁶¹ Despite this opposition, environmental organizations were able to block construction or to cause modifications on a large number of projects that would have hindered

⁶⁰ Kevin and Laurie HILLSTROM, *U.S. Environmental Policy and Politics: A Documentary History*, CQ Press, 2010, page 398.

⁶¹ HILLSTROM, *U.S. Environmental Policy and Politics: A Documentary History*, op. cit., page 428.

the environment through more than 2000 lawsuits against federal agencies for not respecting NEPA standards. Among the other things, the White House Council on Environmental Quality was created thanks to the National Environmental Policy Act.

Moreover, many new agencies, departments and boards both at the state and the local levels were established among which the most important was the Environmental Protection Agency created by the Nixon Administration in 1970 whose main objectives were to deal with environmental issues and to provide responses to citizens asking for action in defense of the environment. The two main areas demanding for regulations and for which action had to be taken were certainly air and water pollution, which represented the two fundamental environmental concerns of that period.

The large amount of environmental legislation could be explained through two main reasons; the guarantee of great support in the elections but also the increasing scientific research that proved the existence of a real menace on multiple aspects, from ecological obviously to repercussions on the economy and on citizens' health and safety. This legislation included one of the fundamental pillars of the American environmental legislation; that is, the Clean Air Act or Air Pollution Control Act of 1955. Initially, although there was scientific evidence proving an increase of gas emissions due to industries and means of transportations, this act consisted only in a funding measure for research that did not set federal standards but on the contrary, maintained states regulations on air quality. More than ten years later, the government in Washington produced the first law at a national level that established federal control on air pollution, followed by the Motor Vehicle Air Pollution Control Act in 1965, which set national standards for new vehicles. In 1967, the Air Quality Act was adopted, demanding states to implement plans aiming at controlling air pollution and introducing federal legal actions in case of weaknesses in the implementation.

Not surprisingly, this wave of environmental laws provoked negative reactions from some corporations and industries; however, this was not sufficient to stop Congress from implementing more laws, strongly supported by public opinion. In 1970 under Nixon's Presidency, standards for air quality at a national level were established by the Amendments to the Clean Air Act, in addition to the power to control gas emissions given to the Environmental Protection Agency.

In the same way, Congress passed in 1965 the first important law concerning water quality, namely the Water Quality Act, which established standards for the quality of water and

promoted pollution prevention. This act was followed in 1966 by the Clean Water Restoration Act and the inclusion of a financial penalties system for not implementing the regulations and by the Water Quality Improvement Act, through which the government acquired more authority on the control of pollution in bodies of water throughout the country. Despite these new acts, the action taken to fight water pollution did not seem satisfactory and therefore the Congress passed in 1972 an Act to amend the Federal Water Pollution Control Act, most commonly known as the Clean Water Act. The new scope was the creation of a program for pollution control through regulations concerning the dispersion of polluting waste into waters and the creation of standards for the quality of surface waters as well. After reactions from the industry, considering the act too strict and expensive, a less ambitious version of the act was passed. However, there have been consequently attempts to reconcile the two versions, despite strong opposition. Finally, in October 1972, despite the veto imposed by President Nixon, Congress was able to approve Amendments to the Clean Water Act and therefore reconcile the two bills, becoming “[...] one of the last landmark pieces of environmental legislation of the ‘golden age’ of environmentalism”.⁶²

After the Watergate scandal that caused the resignation of President Nixon in August 1974, the new Presidency of President Gerald Ford mainly took actions in order for the government institutions to reacquire credibility, in addition to concentrating on economic policy and the energy crisis. Although the focus of the Ford’s Administration was not on environmental issues, it still passed two important acts, namely the Toxic Substances Control Act and the Resource Conservation and Recovery Act.

After the election of President George W. Bush, although his position reflected the Republican worries related to strict regulations that according to them would hinder industries, he still took actions in order to promote environmental policies because this would result into electoral support. Therefore, Amendments to the Clean Air Act were proposed in order to adapt it to the new challenges posed by the evolution of air quality in the previous decades. Receiving large support in Congress, the Clean Air Act Amendments were signed by Bush and became effective on November 15, 1990. The main modifications concerned the introduction of a cap-and-trade system in order to take actions against acid rain and the strengthening of the Environmental Protection Agency’s regulations of hazardous air pollutants, which are substances like gases, benzene, hydrogen chloride, dioxin, compounds

⁶² HILLSTROM, *U.S. Environmental Policy and Politics: A Documentary History*, op. cit., page 401.

or elements like chromium and mercury that have dramatic impacts on health, among which cancer. Also, the amendments included a plan to impose federal standards for air quality on all urban areas over a period of twenty years. However, the main gap of these amendments consisted in the total absence of regulations concerning greenhouse gas emissions.

Despite this shortcoming in the act, the Clean Air Act has been generally considered positively, estimating that the emissions of the main air pollutants, such as carbon monoxide, sulfur oxides, nitrogen oxides, lead and ozone, have decreased by 73% despite the growth of American GDP by 250%. Acid rain has been estimated to have decreased by more than 70% in the northeast and the Midwest of the U.S, causing important positive consequences on human health, namely significant reduction of diseases in children in targeted areas like Southern California, as Kristie Ross, James F. Chmiel and Thomas Ferkol, researchers at the School of Medicine at Case Western University in Cleveland, Ohio and at Washington University in St. Louis, Missouri, write in their article titled *The Impact of the Clean Air Act*. The article states that “[...] analyses determined that the Clean Air Act regulations prevented 205,000 premature deaths and avoided millions of other non-fatal illnesses, including severe cardiac and respiratory diseases. When expressed in economic terms, the benefits were estimated as much as \$50 trillion as compared with implementation costs of \$523 billion”.⁶³ Moreover, as Daniel S. Greenbaum writes in his article *The Clean Air Act: Substantial Success and the Challenges Ahead*, the regulations imposed on gas emissions of vehicles decreased the levels of ambient carbon monoxide in the area of Los Angeles, reaching levels of 8 PPM⁶⁴ in 2017 compared to 40 PPM in the 1960s.⁶⁵ Together with improvements to the environment and health, the Clean Air Act had positive effects also on the economy, despite contrary opinions, leading to economic growth, replacement of old factories with polluting methods of production with industrial efficiency and innovative technologies.

However, many challenges still remain today; for instance, studies show that the United States Governments, through the National Ambient Air Quality Standards, are underestimating the negative health effects of air pollution. Besides, the progress that have been made are not

⁶³ Kristie ROSS, James C. CHMIEL, Thomas FERKOL, *The impact of the Clean Air Act*, *The Journal of pediatrics* vol. 161,5, 2012: 781-6. DOI:10.1016/j.jpeds.2012.06.064

⁶⁴ Parts Per Million (PPM) is the system used to measure the level of carbon monoxide (CO) concentration. 100 PPM CO correspond to 100 molecules of CO for every 999 900 molecules of air.

⁶⁵ Daniel S. GREENBAUM, *The Clean Air Act: Substantial Success and the Challenges Ahead*, *Environmental Health & Science, Health Effects Institute in AnnalsATS* Volume 15 Number 3, March 2018. Boston, Massachusetts, December 19, 2017, ORCID ID: 0000-0002-8789-2667 (D.S.G.). Available at: <https://doi.org/10.1513/AnnalsATS.201710-763PS>

reducing pollution levels fast enough and therefore there are more than 125 million people that live in areas of the United States with unhealthy air. Importantly, even if the Clean Air Act is currently applied in certain cases to combat climate change, it was not specifically designed to reduce greenhouse gas emissions.⁶⁶

The previously mentioned Resource Conservation and Recovery Act (RCRA), which became effective on October 21, 1976 after it was signed into law by President Ford, included regulations aiming at the control of municipal and industrial waste that was growing at an accelerate rate. This act constituted an amendment to the first law regulating solid waste disposal, namely the Solid Waste Disposal Act of 1965. The federal Hazardous and Solid Waste Amendments (HSWA) made in November 1984 included the elimination of land disposal of hazardous waste and a drastic reduction in waste production and an environmental recycle of toxic waste before its disposal. This law currently establishes the rules for an appropriate process of dealing with both toxic and non toxic solid waste, including production, transportation, treatment, storage and disposal.⁶⁷ The other act signed into law by President Ford in 1976 is the Toxic Substances Control Act. This act enables the EPA to demand control of chemical substances and or mixtures through reports, records, testing and restrictions. Even if it applies to many substances, food, cosmetics, drugs and pesticides are not included. The last update to this act was made during the Obama's Administration, through the Frank R. Lautenberg Chemical Safety for the 21st Century Act (Lautenberg Chemical Safety Act) which obtained approval both from the House of the Representatives and the Senate. Among the main improvements it is important to mention risk-based chemical assessments, increased public transparency regarding information on substances and increased funding for the EPA.⁶⁸

The origin of environmental policy in the European Union dates back to approximately the same period of the United States, namely the 1960s, when a greater attention to environmental issues was being developed. As opposed to the Treaty on the Functioning of the European Union (TFEU), more commonly referred to as the Treaty of Rome⁶⁹ of 1957 in which there

⁶⁶ GREENBAUM, *The Clean Air Act: Substantial Success and the Challenges Ahead*, op. cit., page 297.

⁶⁷ Resource Conservation and Recovery Act (RCRA) Laws and Regulations, United States Environmental Protection Agency. Available at : <https://www.epa.gov/rcra/history-resource-conservation-and-recovery-act-rcra>

⁶⁸ Summary of the Toxic Substances Control Act, United States Environmental Protection Agency. Available at: <https://www.epa.gov/laws-regulations/summary-toxic-substances-control-act>

⁶⁹ The Treaty of Rome, renamed the Treaty on the Functioning of the European Union (TFEU) by the Treaty of Lisbon of 2009, was signed on March 25, 1957 by the six first countries among which Belgium, France, Italy,

was no reference to environmental concerns, the European Community for the first time in 1973 produced a program aiming at the protection of the environment: the First Environment Action Programme. This interest towards the environment was developed following the first United Nations Conference on Human Environment in 1972, known as the Stockholm Conference, where the six Member States asked for increasing support for international environmental policy. After a disappointing result, a meeting that took place in October 1972 in Paris established the importance of environmental protection aligned with economic growth and that was eventually translated into action through the First Environment Action Programme, which covered the period from 1973 to 1976 and was adopted in the form of a declaration while the second, third, fourth and fifth programs had the form of a resolution. All of these were adopted by the Council and the Member States. Currently, thanks to the introduction of an amendment by the Treaty of Maastricht⁷⁰, the programs are adopted by the Council and the European Parliament (EP), following the ordinary legislative procedure.

Among the objectives of the First Environment Action Programme are the general and basic principles of environmental policy described in the last section of chapter one. Moreover, this program establishes, among others, the production of environmental impact assessments (EIA) before the start of a project; a non intensive use of natural resources; transparency of information; and the promotion of environmental education. In order to achieve these goals, the Community and the Member States engaged in actions aimed at the reduction of pollution, at the improvement of the quality of the air, and at an increasing international cooperation.

The Second Environment Programme, covering the period 1977-1981 did not provide significant changes. It focused on the reduction in the use of toxic substances through control measures. The Third Environment Action Programme was adopted in 1983 and completed in 1986, during a period in which the acknowledgement of environmental concerns was rapidly increasing and a relative greater power was being given to the European Parliament. This led the Community to give priority to the integration of environmental policies with policies related to other sectors; among these policies, some regarded the transportation of toxic waste

Luxembourg, the Netherlands and West Germany and it created the European Economic Community (EEC). It later came into force on January 1, 1958.

⁷⁰ The Treaty on European Union, previously known as the Maastricht Treaty aimed at fostering European integration and the Member States of the European Economic Community signed it on February 7, 1992. The main act of this treaty was the foundation of the European Union and the establishment of its pillars that lasted until the Lisbon Treaty of 2009. Under this treaty, the EEC was renamed European Community, referring to the expansion of competences of the Community beyond merely economic purposes. It also included the provisions that established the Euro currency.

and its consequent noise, the development of innovative and cleaner technologies and the protection of the marine environment in the Mediterranean area.

The Fourth Environment Action Programme introduced new and more rigorous environmental requirements; it was adopted in October 1987, after the Single European Act⁷¹ was signed into law, and lasted until 1992. One of the main objectives of the fourth program was the reduction of pollution through more efficient preventive measures capable of stopping the transition of pollution from one environmental sector to a different environmental sector; that is, for instance air pollution that affects waters.

The period 1993-2000 was covered by the Fifth Environment Action Programme, titled *Towards Sustainability*, and it was adopted in February 1993, one year after the Treaty of Maastricht. The name suggests that the focus of this program was on limiting energy production and consumption and on reusing and recycling goods in order to reduce waste amounts and protect and conserve the environment and its natural resources. The innovative aspect of this program was the introduction of new instruments, among which legislative ones, market-based instruments, financial assistance instruments and instruments providing training and information capable of conveying abilities to develop innovative and clean technologies. Later, in 2002, the Sixth Environment Action Programme was adopted by the European Parliament and the Council, covering the period 2002-2012 and developing a new feature that “presents the environment dimension in a comprehensive strategy for sustainable development”.⁷² The main concerns of this program were on global warming, biodiversity and ecosystems, use of natural resources, waste disposal and quality of life. In order to achieve important goals on all these sectors, it became obvious that economic growth could not be associated with harmful environmental impacts anymore and that it was urgent to reduce GHG emissions in order to limit the effects on climate.

The Seventh and last Environment Action Programme is currently in force and its strategy covered the period from 2013 to next year, 2020. This last program introduces an important difference compared to the other ones; that is, the extension of its period of application. Despite the official end of the program is 2020, it envisages measures that will be hopefully

⁷¹ The Single European Act (SEA) constitutes an important revision to the Treaty of Rome of 1957 and it established the objective of the creation of a single market by the European Community by December 31, 1992. This act was signed on February 17, 1986 in Luxembourg and a few days later on February 28, 1986 in The Hague, but it became effective only on July 1, 1987.

⁷² LANGLET, MAHMOUDI, *EU Environmental Law and Policy*, op. cit., page 31

applied until 2050. These measures aim at fostering the protection of the environment in the EU and of the EU citizens' health; at an increased integration of environmental policies into other sectors and a major development of environmental awareness through dissemination activities; at implementing environmental laws in a more effective manner and especially, at turning the European Union into an global economy based on low fossil fuels power sources and on resource efficiency. The previously mentioned 20-20-20 strategy setting climate and energy targets and the reduction of environmental impact caused by consumption are the means by which the objectives of this program should be achieved.

As mentioned before, appropriate environmental impact assessments (EIA) are necessary in order to pursue the development of a project that might have negative environmental consequences. For this reason, the first proposal of the European Commission for a directive on EIA dates back to 1980. However, only five years later, in 1985, the Directive 85/337/EEC on the assessment of the effects of certain public and private projects on the environment was adopted. Later on, some amendments were made first in 1997 and then in 2003, respectively to make the EIA procedure more effective and to strengthen the requirements on public participation and access to justice. These amendments turned into Directive 2011/92/EU on the assessment of the effects of certain public and private projects on the environment, to which further amendments were made in 2014 in order to provide better protection of the environment. The EIA Directive does not ensure specific results concerning environmental protection but it does set precise requirements to follow before the development of a project.

In 2001, Directive 2001/42/EC on the assessment of the effects of certain plans and programmes on the environment, also known as strategic environmental assessment Directive (SEA), was added to the EIA Directive and its objective was an increased environmental protection by taking it into account when developing programs and plans and by fostering sustainable development.

Concerning the industrial sector, the first legal act taken was the Directive 96/61/EC concerning integrated pollution prevention and control (IPPC) of 1996, which has been later codified Directive 2008/1/EC in order to adapt to the emission trading system (ETS) of the EU. This directive aimed at controlling industrial pollution affecting water, air and soil and limiting gas emissions. Moreover, new plants whose activities are described in Annex I of the directive must obtain an environmental permit released by the authorities of the Member

States.⁷³ An insufficient implementation and therefore difficulties in obtaining environmental objectives led the EU to the proposal of a new directive that would include the old one and six other sectoral directives concerning industries and their impact on the environment. As a result, Directive 2010/75/EU on industrial emissions (integrated pollution prevention and control) (IED) was signed into law in 2010. It is based on Article 192(1) TFEU and it includes rules related to industrial pollution regulation, to integrated prevention, to the reduction of waste production and to emissions decrease. All polluting industrial activities are covered by the Directive except for activities related to research and development and countries are required to guarantee that every polluting plant obtained the environmental permit.

Another sector to which the EU started to pay increasing attention in the 1970s was air pollution, by setting standards to follow on emissions and air quality. One of the first directives adopted was the Air Quality Framework Directive in 1996 focused on control of the quality of the air. Later on, other directives established thresholds for polluting substances. In 2008, following several amendments, all these directives were unified under the Directive 2008/50/EC on ambient air quality and cleaner air for Europe, that together with the Directive 2001/81/EC adopted in 2001 and establishing air pollutants emissions limits for Member States, constitute the most important legal acts concerning air quality. The objective of the Ambient Air Quality and Cleaner Air for Europe directive is to set targets to reach in terms of ambient air quality in order to reduce negative impacts on the environment and consequently on human health. This is achievable through an increased cooperation between countries, through efforts to keep levels of pollution low where they already exist and work towards the reduction of levels where needed, through transparency of the information also released to citizens and through a constant monitoring of the situation.⁷⁴

Moreover, the Strategy on Air Pollution of 2005 was followed by the most recent Clean Air Policy Package of 2013 that contains measures aiming at the improvement of air quality through a decrease in carbon emissions deriving from energy plants, transportation, industries and also agriculture. The latter, which was adopted on December 18, 2013 by the European Commission, includes a Clean Air Programme for Europe with measures that guarantee that the targets set are reached as fast as possible and with new objectives for air quality until

⁷³ The IPPC Directive, Environment, European Commission. Available at : <https://ec.europa.eu/environment/archives/air/stationary/ippc/summary.htm>

⁷⁴ Directive 2008/50/EC of the European Parliament and of the Council of 21 May 2008 on ambient air quality and cleaner air for Europe, OJ L 152, 11.6.2008, p. 1–44. ELI: <http://data.europa.eu/eli/dir/2008/50/oj>

2030. The Clean Air Programme also states that EU's quality standards for air quality are lower than other countries of the Global North. Besides, the package includes a proposal for Directives on the reduction of national emissions of certain atmospheric pollutants called the NEC Directive and on limitation of emissions of certain pollutants into the air from medium combustion plants called the MCP Directive.⁷⁵

According to a research titled *The final policy scenarios of the EU Clean Air Policy Package*, which analyzes the possible key scenarios following the implementation of the package, further cost-effective air quality improvements are very likely: “[...] full application of readily available technical emission reduction measures in the EU could reduce health impacts from PM by another 30% and thereby gain more than 70 million life-years in the EU. It could save another 2,500 premature deaths per year because of lower ozone concentrations. Further control of agricultural emissions could protect biodiversity at another 200,000 km² of ecosystems against excess nitrogen deposition”.⁷⁶ Nevertheless, these environmental improvements, according to the results of the research, may demand additional emission control costs of approximately 47 billion Euros per year, a total of 0.3% GDP, about an additional half of the current costs under the existing legislation, which are approximately 88 billion Euros per year.

Finally, the EU has been adopted important regulation concerning another field, which is water quality. The first comprehensive approach aiming at the protection of waters dates back to October 23, 2000 with the Water Framework Directive or Directive 2000/60/EC establishing a framework for Community action in the field of water policy (WFD). Its adoption aimed at the development of a new form of management that could integrate all the aspects of water environment so that they could become sustainable and effective and all Member States were required to adopt new environmental objectives for the protection of bodies of water in the EU. Among the main objectives are the promotion of sustainable water use; the protection of aquatic ecosystems and the prevention of their degradation through reduction of toxic substances discharges; and the mitigation of the environmental impacts of

⁷⁵ Clean Air Programme, Environment, European Commission. Available at : https://ec.europa.eu/environment/air/clean_air/index.htm

⁷⁶ Markus AMANN, Jens BORKEN-KLEEFELD, Janusz COFALA, et al., *The final policy scenarios of the EU Clean Air Policy Package*, Report number: TSAP Report # 11, version 1.1a, Affiliation: International Institute for Applied Systems Analysis, 2014. Available at: https://www.researchgate.net/publication/271501675_The_final_policy_scenarios_of_the_EU_Clean_Air_Policy_Package

droughts and floods.⁷⁷ This Directive, as many scholars affirm, represented a very important legal act for the European Union, causing significant improvements in environmental protection and in the management of natural resources. However, as Nikolaos Voulvoulis, Karl Dominic Arpon and Theodoros Giakoumis write in their article *The EU Water Framework Directive: From great expectations to problems with implementation*, it could have had a more significant and positive impact on sustainable water management in the EU if its implementation had been different, allowing the WFD to be applied in its full potential. As the authors state: “[...] the role of ecological status as a performance indicator, better characterization of river basins (including analysis of pressures, impacts and economic analysis), improving monitoring to capture the interactions between stressors, ensuring that PoMs aim to improve system state by managing pressures, improved participation and interdisciplinarity to address the complex issues associated with water management, all call for a transition towards systemic thinking that can only be achieved with real transformational change”.⁷⁸

II.3 Sustainable Development and Environmental Law: An Analysis of Legislation in the European Union and the United States

On the occasion of the Rio Declaration on Environment and Development that took place in Rio de Janeiro from June 3 to June 14, 1992, the concept of sustainable development was largely promoted, consequently acquiring a significant role in the international political, economic and social arena. This concept meant that a close relationship between economic growth and protection of the environment and social progress had to be developed, while guaranteeing all countries the right to grow from an economic stand point.

However, in 1987, a report of the World Commission on Environment and Development, also known as the Brundtland Commission⁷⁹, titled *Our Common Future*, had already introduced

⁷⁷ David LANGLET, Said MAHMOUDI, *EU Environmental Law and Policy*, op. cit., page 225.

⁷⁸ Nikolaos VOULVOULIS, Karl Dominic ARPON, Theodoros GIAKOUMIS, *The EU Water Framework Directive: From great expectations to problems with implementation*, Science of The Total Environment Volume 575, 1 January 2017, Pages 358-366. Available at: <https://doi.org/10.1016/j.scitotenv.2016.09.228>

⁷⁹ The World Commission on Environment and Development (WCED), later known as the Brundtland Commission, had the objective of promote sustainable development and encourage countries to adopt strategies

the idea of sustainable development through an analysis of the relationship between development and the environment: “Humanity has the ability to make development sustainable to ensure that it meets the needs of the present without compromising the ability of future generations to meet their own needs. The concept of sustainable development does imply limits – not absolute limits but limitations imposed by the present state of technology and social organization on environmental resources and by the ability of the biosphere to absorb the effects of human activities”.⁸⁰ Although it presents some limits, the report also states that a new economic development can be achieved through a proper management of social organization as well as new technologies.

After the spread of this concept at a global level, many countries around the world started to integrate it in their environmental legislations and policy, among which the European Union and the United States. In particular, the EU’s Fifth Environment Action Programme previously mentioned strongly focused on the notion of sustainable development, expanding the concept to the sixth and seventh programs, as well as other legal acts. For instance, the Treaty of Amsterdam⁸¹ included sustainable development as one of the objectives of the EU, as demanded by some Member States before the signing of the treaty. Although this idea was included in the treaty, environmental issues did not receive great attention, being the focus more on economic development, price stability, a highly competitive social market economy and full employment and social progress.⁸²

However, the link between sustainable development and environmental protection is highly promoted by both the TFEU and the TEU. The former, precisely its Article 11 states: “Environmental protection requirements must be integrated into the definition and implementation of the Union’s policies and activities, in particular with a view to promoting

aiming at the promotion of a sustainable development. It was established by the United Nations in 1983 and it published the *Brundtland Report*, or *Our Common Future*, a report that strongly promoted the concept of sustainable development, by which the Rio Conference was largely inspired. It was replaced in 1988 by the organization Center for Our Common Future.

⁸⁰ World Commission on Environment and Development. *Our Common Future*. Oxford: Oxford University Press, 1987. Available at: <https://sustainabledevelopment.un.org/content/documents/5987our-common-future.pdf>

⁸¹ The Treaty of Amsterdam amending the Treaty on the European Union, the Treaties establishing the European Communities and certain related acts, amended the Treaty of Maastricht of 1992, conferring the European Parliament of powers that were previously in the hands of national governments, such as immigration policy, foreign and security policy (CFSP), the adoption of civil and criminal laws and the adoption of institutional changes for EU expansion. It was signed on October 2, 1997 and became effective on May 1, 1999.

⁸² Consolidated version of the Treaty on European Union - TITLE I: COMMON PROVISIONS - Article 3 (ex Article 2 TEU).

sustainable development”.⁸³ The latter instead, introduces the idea of sustainable development as a *principle* to follow in order to foster economic and social progress and this decision “[...] reflects the Member States’ opinion that ‘sustainable development’ has evolved into a legal principle”.⁸⁴ A real definition is not provided by the treaties but they give guidance on how to realize sustainable development; that is, through the integration of policy sectors. This concept refers to the fact that policies related to different areas, such as for instance economy, environment, education, health care, should not be treated separately but should instead be integrated, formulating policies that take into account the objectives of all the other policies of other areas.

Concerning Member States, they must comply with the objectives of sustainable development every time actions in policy areas under the law of the European Union are taken, according to the principle of sincere cooperation in Article 4(3) TEU: “Pursuant to the principle of sincere cooperation, the Union and the Member States shall, in full mutual respect, assist each other in carrying out tasks which flow from the Treaties. The Member States shall take any appropriate measure, general or particular, to ensure fulfillment of the obligations arising out of the Treaties or resulting from the acts of the institutions of the Union”.⁸⁵ In addition, Member States must also respect principles of sustainable development when part of international agreements. However, Member States are not obliged to comply with the objectives of sustainable development in areas under their own purview.

In addition, also the EU Charter of Fundamental Rights presents sustainable development as a principle through which environmental protection must be integrated into policies of the EU. Contrary to EU legislation, which focuses on sustainable development as an objective to reach but without providing a precise definition, EU policy documents give instead a definition. According to the Strategy for Sustainable Development of 2001 — added to the Lisbon Strategy adopted in 2000 by the Council as a development plan for the EU economy in order to turn it into the “most competitive and dynamic knowledge-based economy in the world by 2010” — sustainable development was given a definition that highly recalls the Brundtland Commission’s one but that goes beyond. This definition affirms that sustainable development

⁸³ Consolidated version of the Treaty on the Functioning of the European Union, PART ONE – PRINCIPLES, TITLE II - PROVISIONS HAVING GENERAL APPLICATION, Article 11 (ex Article 6 TEC).

⁸⁴ David LANGLET, Said MAHMOUDI, *EU Environmental Law and Policy*, op. cit., page 43.

⁸⁵ Consolidated version of the Treaty on European Union - TITLE I COMMON PROVISIONS - Article 4, ELI: http://data.europa.eu/eli/treaty/teu_2012/art_4/oj

shall meet the needs of the current generation without sacrificing the necessities of future generations, especially through an assessment of the impacts of certain policies on other policy sectors. Moreover, the Strategy introduces, in addition to the protection of the environment, the protection of human health, of fundamental rights, it fosters social cohesion and the preservation of cultural diversity, it encourages the establishment of an efficient financial system and the eradication of poverty.⁸⁶ Despite the definition provided, the policy documents do not mention the measures through which sustainable development should be implemented. As a result, as Sander R. W. van Hees writes in his article *Sustainable Development in the EU: Redefining and Operationalizing the Concept*, “[...] this definition cannot serve as a basis either for policy-making, holding the EU accountable, or as a basis for a company’s CSR policy. It is – in other words – not a *workable* definition”.⁸⁷

Later on in 2006, a new Strategy for Sustainable Development was adopted by the European Council, presenting environment protection as one of the pillars and providing some guidance on implementation of sustainable development in a practical way through the elaboration of eight policy-guiding principles. In addition, some fundamental issues challenging the adoption of a sustainable development were defined; among these were the reduction of harmful impacts of production and consumption, and a lack of integration of environmental concerns into other policies. Moreover, this Strategy’s objectives are biodiversity preservation, sustainable use of natural resources and increased environmental protection and quality. The European Commission has been releasing reports with regard to the Strategy for Sustainable Development and although several positive measures have been implemented, there are still unsustainable approaches that must be changed. In other terms, sustainable economic growth has reduced the growth of environmental damage but only to a certain extent. The economic development fostered in the Europe 2020 Strategy is defined through the three adjectives smart, sustainable and inclusive, making economic growth the core of the question. This, according to Van Hees, will make it more likely for the EU to interpret the word development as merely economic development. However, the term sustainable modifies it and will require pursuing this economic growth by reaching positive achievements for the environment and the general welfare. Therefore, the creation of more jobs, revenue and

⁸⁶ Sander R.W. VAN HEES, *Sustainable Development in the EU: Redefining and Operationalizing the Concept*, Utrecht Law Review, May 8, 2014. Available at: <https://www.utrechtlawreview.org/articles/abstract/10.18352/ulr.269/>

⁸⁷ Sander R.W. VAN HEES, *Sustainable Development in the EU: Redefining and Operationalizing the Concept*, op. cit., page 65.

entrepreneurship opportunities will have to be accompanied by, among others, clean energy production and consumption, biodiversity protection and conservation, reduced gas emissions. However, the EU commitment to meet the goals of the United Nations 2030 Agenda for Sustainable Development⁸⁸ seems strong, through the current gradual transition towards a low-carbon economy and a resource-efficient and circular economy. In order to respond to the 2030 Agenda, the EU adopted the European Consensus on Development in June 2017, which fosters a “balanced and integrated approach to the economic, social and environmental dimensions of sustainable development”, with a focus on poverty eradication, inequalities and discriminations.⁸⁹ Importantly, the relationship between economic development and different questions related to other policy sectors such as climate change, international migration and humanitarian aids is strongly emphasized.

In the case of the United States, most federal environmental laws do not explicitly mention the concept of sustainable development; therefore, in order to analyze to what extent American legislation takes into account this idea, it will be necessary to comprehend the structure of major environmental laws.

Among the major American laws, the Clean Air Act, discussed in the previous chapter, establishes that all regions and states meet the National Ambient Air Quality Standards (NAAQS), determined only according to the harmful impacts of pollutants on public health and welfare and not on their implementing cost, as decided by the Supreme Court.⁹⁰ When implemented, the Clean Air Act allowed states to set their own limitations on pollutants so that they could respect standards imposed by NAAQS but with the amendments of 1977 established minimum requirements concerning gas emissions, therefore considerably reducing the liberty of action of states. In addition, in order to guarantee an appropriate protection of the environment and consequently on public health, mandatory limitations on gas emissions caused by sources of air pollution are imposed despite NAAQS are met. In short, the Clean

⁸⁸ The 2030 Agenda for Sustainable Development was adopted on September 15, 2015 by Governments and Heads of States of all 193 UN member-countries at a historic UN summit. It includes 17 Sustainable Development Goals (SDGs) and 169 targets and it aims at mobilizing countries' efforts in order to promote a sustainable economic development, eradicating poverty, fighting global warming and inequalities.

⁸⁹ New European Consensus on Development - 'Our world, our dignity, our future', European Commission, June 2017. Available at: https://ec.europa.eu/europeaid/sites/devco/files/european-consensus-on-development-final-20170626_en.pdf

⁹⁰ Kenneth R. MEADE, *Supreme Court Issues Decision in Case Challenging EPA's Revised National Ambient Air Quality Standards*, WilmerHale, February 28, 2001. Available at: <https://www.wilmerhale.com/insights/news/supreme-court-issues-decision-in-case-challenging-epas-revised-national-ambient-air-quality-standards-february-28-2001>

Air Act determined that the economic costs deriving from these environmental requirements do not have to be taken into account when implementing these measures and that standards of environmental quality have to be respect at any cost. In other words, the Clean Air Act aims at guaranteeing a precise level of environmental protection with the objective of drastically reducing air pollution without considering implementing costs and other economic impacts. As Michael P. Healy writes in his article titled *The Sustainable Development Principle in United States Environmental Law*, this trend followed by the Clean Air Act can be classified under what he defines the “thumb on the scale approach” to sustainable development. By this expression the author refers to the fact that either environmental protection or economic growth is fostered by a legal act. Concerning the CAA, Healy affirms that the environmental protection and quality that make one half of the sustainable development principle is “plainly” fostered and favored.⁹¹

Differently from the Clean Air Act, the Clean Water Act of 1972 establishes environmental protection in terms of control of point-source emissions through available technologies for pollution control without providing a desired level of environmental quality and limits on pollution and it has no mandatory nature as the CAA. This creates a sort of ambivalence concerning the protection of the environment and therefore impacts on public health. The CWA foresees permits available for plants and factories that discharge pollution, such as the National Pollutant Discharge Elimination System permit (NPDES), whose pollution limits depend on the plants and factories available technologies. Among the major standards based on available technology are best practicable technology (BPT), already existing and in use and applied to conventional pollutants, and best available technology (BAT), that might be used because available and applied to hazardous a non-conventional pollutants. The Environmental Protection Agency must ensure that polluting sources adapt to the newer technologies available but this availability depends on an analysis of the costs and benefits of the pollution control and if the costs are higher than the environmental benefits, this technology might be rejected. In addition, contrary to the CAA, under the CWA, not all the surface waters of the United States are required to have quality levels so that to ensure healthy fishing and swimming. Moreover, although states establish quality standards that have to be consequently reviewed and approved by the EPA, the CWA establishes however some

⁹¹ Michael P. HEALY, *The Sustainable Development Principle in United States Environmental Law*, 2 Geo. Wash. J. Energy & Envtl. L. 19, (2011). Available at: https://uknowledge.uky.edu/cgi/viewcontent.cgi?article=1109&context=law_facpub

requirements, such as defining standards for water quality. In other terms, through this approach, “[...] the environmental improvements won by the CWA result from the application of pollution controls that are generally affordable” if a states does not decide to adopt expensive environmental measures despite their cost. Therefore, the thumb on the scale approach results very different when the CAA and the CWA are examined: on the one hand, the CAA’s regulation of criteria pollutants focuses on the importance of environmental protection and quality while on the other hand, the CWA fosters environmental quality only when this protection is affordable and does not affect the economic gains.⁹²

A second approach examined is the “balancing approach”, in which a balancing of the costs and benefits of actions required by environmental laws is examined. This approach presents the competing features of sustainable development, which are environment protection and economic development. Among the laws following this approach we find NEPA of 1970, which requires that environmental effects are taken into account before any governmental action. More precisely, NEPA does not impose on agencies an analysis of benefits and costs but it does require an assessment of the environmental consequences prior taking actions.

However, if an environmental assessment analyzing harmful impacts has been produced, agencies are not required to make modifications to the action proposed, as established by the Supreme Court. In other terms, NEPA seems not to prevent environmental degradation caused by governmental actions if this degradation has been examined previously by agencies and the negative consequences on the environment of this action are considered of less importance compared to the benefits achievable.

Another law using the balancing approach is the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), which provides regulations for the use and selling of pesticides and similar products, allowed only after their registration and the production of guidelines by EPA. Moreover, in this case as well, an analysis of the costs and benefits is required by FIFRA in order to let EPA take regulatory action that allows the selling of these products. Contrary to NEPA, which allows taking actions even if considered environmentally impactful, FIFRA allows the selling of pesticides only if the benefits obtained from their use overcome the costs. Finally, the Endangered Species Act of 1973 (ESA), which aims at ensuring the conservation of ecosystems for endangered and threatened species, follows the

⁹² Michael P. HEALY, *The Sustainable Development Principle in United States Environmental Law*, op. cit., page 27.

same balancing approach. The Supreme Court, after the case *Tennessee Valley Authority (TVA) v. Hill*, in which the construction of a dam was said to violate the ESA, established that environmental and biodiversity loss would be of a much greater importance than the economic loss from the non construction of the dam. In response to this, Congress amended ESA in 1978 making modifications to the unconditional protection for threatened and endangered species. In addition to the amendments, an Endangered Species Committee was also established by Congress in order to examine exemption requests by agencies, which are positively accepted if at least five members of the Committee agree. This vote is mainly based on two criteria: on the one hand, there must be no other viable alternatives to the agency action, on the other hand, the action taken serves the interests of the society and the benefits are much higher than the benefits of a different action that would guarantee species protection and conservation. Briefly, development is fostered by ESA only when there are major benefits that outweigh the negative impacts on the environment and when it is approved by the majority of the Committee members.

The third and last approach analyzed by Michael P. Healy in his article is the shifting approach that will be described in the next paragraphs. Among the laws using this approach is the Toxic Substances Control Act (TSCA) of 1976, which aims at the protection of the environment and humans by toxic chemicals mainly through two regulatory systems and importantly, without affecting economic growth. The first consists in dissemination activities and spreading information on these hazardous substances and the problems related to them, and the second consists in the establishment of regulatory controls in order to help people protecting from possible risks. Moreover, the substances included in the act are subjected to four regulatory approaches. The first one is used for substances that are not in the inventory of chemical substances of TSCA and that is managed by EPA. Any company that wishes to produce a substance not on the list needs to provide sufficient justification for doing so; in other words the benefits of producing the chemical outweigh the damages to the environment. However, since the company itself is conducting the analysis as opposed to the EPA, there is a strong incentive to overemphasize the benefits and underemphasize the cost. The second one requires a continuing analysis and review of products that are already being manufactured and sold. Despite already meeting minimum standards necessary for its distribution, this approach requires the continued monitoring and release of data relevant to the environmental risks of these products, even if there has been no specific incident demonstrating the potential

for harm. The third permits the EPA to require specific testing in order to produce data to understand the environmental impact of specific substances that may be of particular danger. This approach is particularly demanding given that no account must be given to the economic benefits of these products. Instead, only their cost in terms of environmental damage must be considered. The fourth and last approach permits the EPA to directly regulate certain products that have been demonstrated to have adverse consequences on the environment. Although this approach may be the most burdensome in terms of regulatory oversight, given that the EPA can directly insert itself into the marketplace, it is still only permitted to implement the minimum amount of regulation necessary to eliminate the excessive environmental damage. In other words, even when the EPA is allowed to impose regulations on these companies, they must still consider the economic impact of those regulations. To conclude, the least burdensome approaches in terms of regulatory oversight also tend to focus more on the environmental cost of the production and distribution of toxic chemicals than on the potential economic benefits. Meanwhile, the more direct approaches require a delicate balancing act between the costs and benefits of these products, thereby taking into account both sides of the equation with respect to sustainable development.

With respect to air pollution, the Clean Air Act amendments of 1990 take several different approaches depending upon the perceived risks. The minimal overarching standards imposed by the act depend upon the available technology and tend to emphasize economic growth over environmental protection. However, additional regulations may be imposed upon specific forms of air pollution that have been demonstrated to cause undue harm either to the environment or to human health. In these circumstances, the extent of the regulation depends upon the specific risks. When it comes to environmental damage, the CAA requires a nuanced approach that attempts to finally balance the costs and benefits of the production processes that lead to a degradation of air quality. However, when it comes specifically to human health risks, the CAA mostly ignores the environmental impact and concentrates solely on the harm caused to citizens.

The Resource Conservation and Recovery Act (RCRA) provides, as described in the previous chapter, regulations on the management, processing and disposal of toxic wastes that may be hazardous for human health and the environment and it concerns only solid waste, as defined by the act. The ways through which waste is considered hazardous have been established by the EPA and the Amendments of 1984 impose the prohibition of land disposal in the absence

of an appropriate treatment of the toxic waste in order to significantly reduce the risks for the environment and human health. This requirement only mentions a minimization of the movement of hazardous waste that may cause heavy damages on the environment and human health, therefore emphasizing mainly the side of sustainable development that concerns environmental protection. As a result, “litigation that grew out of industry challenges to EPA regulations implementing the RCRA treatment standards reinforces the understanding that RCRA’s statutory standard focuses on protection of human health and the environment rather than on economic development”.⁹³ A very important aspect of the RCRA is the fact that it aims at protecting from the threats deriving from toxic waste through two methods. The regulation first tries to avoid harmful consequences of land disposal of toxic wastes through an initial treatment in order to make them meet health-based standards of safety, and in a second phase technological controls are required in order to guarantee the absence of residual threats deriving from the substances’ disposal.

The Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980 aims at efficiently responding to the release of toxic substances into the environment or at preventing such release. The act does not set any limit or amounts for hazardous substances released into the environment to reach in order to take cleanup actions; on the contrary, a threat is sufficient to lead governments and other parties to conduct response actions. This highly emphasizes the act’s engagement in the protection of the environment and human health side of sustainable development. As just mentioned, response actions can be taken by the state, by the EPA, or even private parties and this reflects the possibility of a faster cleanup action that does not necessarily have to come from the government. Moreover, cleanup standards are imposed in order to foster the protection of human health and more efficient and durable solutions are preferred, despite the higher economic costs. However, the strict requirements imposed by CERCLA caused high expenses for businesses willing to invest in areas with industrial contamination activity, therefore affecting economic development. As a consequence, in order for states to encourage the redevelopment of these industrial sites, state voluntary cleanup programs reducing cleanup requirements for those industrial sites that suffered relatively less environmental damage were adopted. The incompatibility arose between CERCLA and these state voluntary cleanup programs was

⁹³ Michael P. HEALY, *The Sustainable Development Principle in United States Environmental Law*, op. cit., page 34.

addressed by Congress in January 2002 through the enforcement of the Small Business Liability Relief and Brownfields Revitalization Act, which established that companies that followed the voluntary state cleanup requirements would not be subject to the additional demands of CERCLA. Thus, many states worked to adopt a more balanced approach to rehabilitating environmentally damaged sites by imposing less strict environmental cleanup measures on certain less damaged brownfields in the hopes of encouraging economic development. On the other hand, those sites that suffered more environmental damage were still subject to the strict federal requirements that focus mainly on the environmental rehabilitation of these sites regardless of the potential economic cost. Thus, two different approaches were used depending upon the severity of the problem of the industrial sites.

The Safe Drinking Water Act (SDWA) specifies two different levels of acceptable water pollution; the first is the maximum level of pollution that would require absolute no risk to human health, whereas the second is a more relaxed standard that takes into account the current economic cost of technology to purify drinking water. It is only the second more lenient standard that is legally enforceable. However, the act also requires the organizations that clean drinking water to issue reports to the public notifying them of the quality of their public water supply. Thus, consumers will know whether their public drinking water meets both standards simultaneously. If consumers live in an area where the public drinking water cannot meet the stricter pollution requirements, they can choose to pursue other options of obtaining water that meets the stricter standard themselves, thereby providing an opt-in option for stricter environmental safety controls with respect to public drinking water. This opt-in option contributes to the avoidance of risks that might arise from the enforceable standard, which could conceivably endanger human health.

In addition to this analysis of the integration of sustainable development into U.S. legislation, the 2019 US Cities Sustainable Development Report provided by the Sustainable Development Solutions Network United States (SDSN USA)⁹⁴, shows that cities in the United States are not close to reach the goals set by the UN Agenda but on the contrary, have still to work a lot in order to meet them by 2030. As the report shows, the sectors in which the most

⁹⁴ The Sustainable Development Solutions Network United States (SDSN USA) is a network established in December 2018 that includes researchers, thought leaders and knowledge creators that work in order to create expertise on the Sustainable Development Goals in the United States. It has more than 120 members from 41 different states and it aims at achieving the SDGs set by the United Nations 2030 Agenda through research and collective action.

progress has been made are, with significant variations among cities and communities, water and land, which correspond to goals number six, Clean Water and Sanitation and goal number 15, Life and Land. On the other hand, it is demonstrated how little progress has been made on gender equality, fighting hunger, clean and affordable energy and innovation in industries and infrastructures. Importantly, collaboration and transfer of competences are strongly recommended and limitation of specific administrations or political parties should not harm the progress. As the report states: “the SDGs collaborative, international framework is an opportunity to bridge those limitations and move citizen-led initiatives towards implementation”.⁹⁵

⁹⁵ *The 2019 US Cities Sustainable Development Report*, Sustainable Development Solutions Network United States, 2019. Available at: <https://s3.amazonaws.com/sustainabledevelopment.report/2019/2019USCitiesReport.pdf>

III. The Environmental Impact of Globalization

III.1 Climate Change and the Paris Climate Agreement: Political Responses of the European Union and the United States

Among the greatest concerns that arose following the development and the evolution of environmentalism, climate change is certainly the most relevant of the last decades, reaching extremely high levels of media attention, in addition to political ones, especially in most recent times. Global warming and its devastating effects represent a fundamental challenge for the current political and economic order and despite some measures have been taken at a global level in order to reduce its negative consequences on the planet and therefore on human beings, many nations are attempting to address the inevitable damages but refuse to address the more fundamental causes that affect contemporary environmental problems.

In a world where economic growth has become the primary goal to pursue in modern politics, therefore fostered by the modes of production and consumption, it seems difficult for countries to transform the foundations of their economies, especially in the Western world, mainly Europe and the United States, adopting policies that would consequently inhibit economic growth. At the same time, in a world ruled by economic globalization it becomes difficult for developing countries to adopt new environmental measures because of their willingness to reach living standards of America and Europe; for this reason the U.S. and Europe have to engage even more in order to aid and foster an environmentally-friendly transition of the economies.

Moreover, the politics that revolves around climate change issues is influenced and determined not only by scientific data obtained through experts' scientific research but also by interest groups that refuse to believe that climate change constitutes a real menace for the planet or they believe that humans are not able to coordinate their action in order to prevent it. Despite a scientific consensus attesting the reality and the gravity of the issue, there still are skeptical attitudes among politicians, especially among right-wing parties, that turn actions in order to minimize the negative impact of men on climate into a political contestation, rather than a scientific one. This scientific consensus is well depicted in the article written by James Powell where he states: "By my definition, 24 of the 13,950 articles, 0.17% or 1 in 581,

clearly reject global warming or endorse a cause other than CO2 emissions for observed warming”.⁹⁶ Aiming at demonstrating the wrongness of the common belief among people according to which scientists do not identify a correlation between human activity and climate change, James Powell analyzed 13 950 scientific articles published between the period from January 1, 1991 to November 9, 2012. The results proved that only 24 articles rejected global warming or did not recognize men as the main responsible for global warming.

Although the fact that the science of climate change has become a more important political issue in recent years, the science behind it had already been known for decades before it became well known to the public and evidence of this lies in the fact that the United Nations have been addressing this issue since the 1960s. Later on, precisely in the 1979, the World Climate Conference was held on 12-23 February in Geneva where scientists from different disciplines organized working groups in order to collect data about climate change. This Conference eventually led in 1988 to the establishment of the Intergovernmental Panel on Climate Change (IPCC) by the United Nations World Meteorological Organization (WMO)⁹⁷ and UNEP⁹⁸ in 1988. Before any public publication, governments of nations have to approve the IPCC findings, which so far have provided useful information about the effects of human activity on the environment and consequently on the role played by men in the changes that global climate is undergoing, especially underlining population and mostly economic growth as the main causes for global warming.⁹⁹

Global governance aiming at a political project with the objective of creating new institutions in order to find solutions is therefore envisaged by many but at the same time hampered by others within the political world. As a consequence, the past decades have been characterized mostly by individual and regional solutions rather than international and multilateral solutions, which seems not to be sufficient given the strong interdependence of nowadays economic and ecological systems, the current globalized economy, the fact that the effects on

⁹⁶ James Lawrence POWELL, *Why Climate Deniers Have No Scientific Credibility, In One Pie Chart*, DeSmogBlog, November 15, 2012. Available at: <http://www.desmogblog.com/node/6662>

⁹⁷ The World Meteorological Organization WMO is an intergovernmental organization designated as a specialized agency of the United Nations involving 193 Member States and Territories with its headquarter in Geneva, Switzerland.

⁹⁸ The United Nations Environment Programme, founded in June 1972 after the United Nations Conference on the Human Environment, is the program responsible for the coordination of the environmental activities of the organization and helps developing countries with the implementation of environmental practices and policies.

⁹⁹ IPCC, *Summary for Policymakers*, in Climate Change 2014, Mitigation of Climate Change, Contribution of Working Group III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change, <http://mitigation2014.org/report/summary-for-policy-makers>

the environment do not harm exclusively the areas and territories involved but the negative consequences do not know borders, and also the fact the natural resources are not unlimited on the planet. These constitute only some of the reasons why regional solutions cannot work in the globalized world of the twenty-first century. In addition, as Lucia Najšlová, Senior Research Fellow at EUROPEUM-Institute for European Policy in Prague, writes in her article that “[...] climate change has a strong human rights dimension and the inaction of some states will have repercussions on rights of citizens of other states. Thus, the current crisis is hardly manageable without transnational coordination and a joint commitment to a set of principles that can be globally enforced via a mechanism that holds all major actors accountable”.¹⁰⁰

As mentioned before, one of the key challenges for politics of climate change is the strong distinction between developed and developing countries, where the former tend to be held responsible for the most damages on the global environment following their high levels of greenhouse gas emissions in the past and where the latter demand possibility of development in order to obtain Western world lifestyles, therefore drastically increasing their level of pollution. This division inevitably leads to a raise in the competition of the international system where individual national interests prevail on global interests, obstructing in this way the elaboration of a global common politics.

According to the International Energy Agency (IEA)¹⁰¹, the demand of energy in 2018 increased causing a raise in the global energy-related CO₂ emissions of 1.7%, reaching 33.1 Gt CO₂, the highest level of growth since 2013. Emissions from all fossil fuels raised and two-third of these emissions come from the generation of electricity; among the fossil fuels, coal alone used to generate power reached more than 10 Gt CO₂, most of which comes from the Asian continent. Countries like China and India in Asia, together with the United States were responsible for 85% of the net emissions raise, whereas some European countries like France, Germany and the United Kingdom, together with Mexico and Japan saw a decrease in their carbon dioxide emissions. This major increase was due to an increase in the consumption of energy needed by a strong global economy and also to weather conditions in

¹⁰⁰ Lucia NAJŠLOVÁ, *The EU and the US in the Politics of Global Climate Change Governance: Avoiding the Crucial Questions*, Rome, Istituto Affari Internazionali, October 13, 2014. Transworld papers. Available at: <https://www.iai.it/en/pubblicazioni/eu-and-us-politics-global-climate-change-governance>

¹⁰¹ The International Energy Agency, founded in 1974 to aid countries to face important disruption in the supply of oil following the oil crisis of 1973 and 1974, provides today accurate analyses, data and statistics mainly in four areas such as Energy Security, Economic Development, Environmental Awareness and Worldwide Engagement, advocating policies that foster affordable, reliable and sustainable sources of energy for its 30 member countries.

different areas of the globe following power demands for heating and cooling systems. In the period between 2014 and 2016 emissions did not increase thanks to the results obtained by the improvements of energy efficiency and the use of low-carbon technology that allowed the world economy to grow despite a reduction of coal demand. The following two-year period of 2017 and 2018 saw a completely different situation, with increased levels of CO₂ emissions following the economic growth that required a higher consumption of fossil fuels because the alternative sources of energy could not keep up with the demand. According to the International Energy Agency's findings, coal resulted in the single largest cause of the increase of global temperature after finding that the carbon dioxide emissions from coal combustion alone was responsible for 0.3°C of the 1°C global average annual temperature increase since the years before the Industrial Revolution.

Precisely in the United States, if the year 2017 saw a decrease in the gas emissions, the year 2018 was characterized instead by a raise of 3.1%, mostly due to weather conditions. Although this increasing trend of the past two years, the United States constitutes the country that faced the greatest decrease in the years, keeping its current emissions at the same level of 1990, that is 14% and 800 Mt of CO₂ below the highest levels reached in 2000.

At the same time, Europe's 2018 emissions fell by 1.3% or 50 Mt compared to 2017, mostly because of the 4.5% decline that occurred in Germany following a reduction in oil and coal consumption, mainly in the energy sector. This decline was possible thanks to the use of renewable sources of energy that reached the record percentage of 37% in Germany and 35% in the United Kingdom, where coal consumption decreased of 5%. In France instead, the reduction of gas emissions was possible thanks to its nuclear plants and hydroelectric power stations that decreased the necessity to use fossil fuels in 2018 compared to the previous year. This means that despite the general global increase of gas emissions and a less effective implementation of energy efficiency policies compared to 2017, the use of renewable resources still underwent an increase in 2018, avoiding an even greater increase in the emissions that would have reached 215 Mt. Europe played a fundamental role in the transition to renewable sources of energy, together with China, and this use of alternative energy, including nuclear energy, contributed to the reduction of emissions that would have otherwise seen a 50% augmentation.

In addition to the transition to less harmful sources of energy, some other strategies aiming at containing gas emissions have been put in place in 2018. Europe for instance, is developing

five new projects concerning the realization of large-scale carbon capture, utilization and storage facilities (CCUS), whereas the United States is expecting future investments in the field.¹⁰²

The United States and the EU, due to both their historical and current levels of gas emissions, even if with several differences, certainly play a central role in the global environmental politics, and they are therefore able to influence the international debate, despite the numerous challenges to their leadership coming from developing countries. In this sense, the efforts by the European Union and the United States in order to decrease the level of carbon emissions in the developing world are sometimes perceived by these countries as “carbon colonialism”. By this expression, academics mean that the carbon-fixing projects, like carbon trading, open up the possibility for a new form of colonialism that uses climate policies to cause a transformation of the traditional means of developing countries, especially in relation to monoculture plantations. In fact, this form of agriculture is often described by corporations and governments of developed countries as capable of removing CO₂ from the atmosphere and that is why these carbon-neutral projects have been imposed on developing countries. Heidi Bachram explains this concept in her essay *Climate Fraud and Carbon Colonialism: The New Trade in Greenhouse Gases*: “As with the colonialism of old, this new colonizing force justifies its interference through moral rhetoric. As the colonizers seek to resolve climate change, they conveniently ‘forget’ the true source of the problem. With the looming climate crisis and the desperate need for action, the resulting course recommended by corporations and government is not analyzed critically. The debate is transformed, shifting the blame onto the poor masses of the global South. Lost in this discourse is the reality that the world’s richest minorities are the culprits who have over-consumed the planet to the brink of ecological disaster. Instead of reducing in the rich countries, a carbon dump is created in the poor countries. Thus rich countries can continue in their unequal over-consumption of the world’s resources”.¹⁰³

Although the United States and the European Union have adopted measures in the past decades in order to reduce carbon emissions, they still represent two of the regions of the world where the energy consumption per capita is the highest, surpassing low and middle-

¹⁰² Global Energy and CO₂ Status Report. International Energy Agency. 26 March 2019. Available at: https://www.eenews.net/assets/2019/03/26/document_cw_01.pdf

¹⁰³ Heidi BACHRAM, *Climate fraud and carbon colonialism: the new trade in greenhouse gases*, *Capitalism Nature Socialism*, 2004, 15:4, 5-20, DOI: 10.1080/1045575042000287299

income countries.¹⁰⁴ Moreover, this situation puts into question the seriousness of more economically advanced nations to adequately combat global climate change, especially with regard to their request for the adoption of environmental measures to developing countries, which are in turn requesting financial assistance. As Lucia Najšlová writes in her paper, “the position of the U.S. and the EU in the politics of global climate action is thus determined by the carbon-origins of their wealth and by continuing high-levels of consumption. While the West/North is the world’s major source of climate finance (funds for mitigation and adaptation measures) in parallel, it continues to subsidize carbon intensive economy.”¹⁰⁵

Despite the high levels of gas emissions, the United States and the European Union have played a leader role in the actions taken in relation to global warming but their initiatives at the international level have not always been successful due to specific dynamics of their own domestic politics. In addition, the concern of climate change has not been among the priorities of the bilateral cooperation between the EU and the US, focused instead more on economic growth and on the guarantee of reliable and inexpensive sources of energy. The actions in order to achieve these objectives certainly do not coincide with the need to reduce carbon emissions; on the contrary, the Transatlantic Free-Trade Agreement (TAFTA/TTIP)¹⁰⁶, whose negotiations never came to an end, had economic growth, creation of new jobs and increase of extraction of natural resources among the main objectives.

The actions taken by the United States in order to fight pollution started in 1970 with the Clean Air Act (CAA), which constitutes a federal law implemented in order to keep pollution at a national level under control and it establishes that regulations for the protection of citizens from harmful pollutants transported through air must be enforced by the Environmental Protection Agency (EPA). The Clean Air Act therefore represents now the main means through which federal regulations concerning greenhouse gas emissions are

¹⁰⁴ World Bank, World Development Indicators: Energy Production and Use. Available at: <http://wdi.worldbank.org/table/3.6>.

¹⁰⁵ NAJŠLOVÁ, *The EU and the US in the Politics of Global Climate Change Governance: Avoiding the Crucial Questions*, op. cit., pages 44,45.

¹⁰⁶ The Transatlantic Free Trade Agreement is a proposal aiming at the creation of a free-trade agreement between North America and Europe that has been made since the 1990s. The negotiations for the agreement Transatlantic Trade and Investment Partnership between the United States and the European Union have started in 2013 but never came to a conclusion. The main objectives of the Agreement were the removal of the principles of national preference and protectionism with the consequent access to the respective public markets of the United States and of the European Union; the mitigation of regulatory barriers among which health, environmental, safety standards; the elimination of custom duties for trade of goods; and the definition of new rules for investments and trade in order to facilitate imports and exports.

passed in the United States. Under the Administration of President Barack Obama several steps towards an increase of environmental regulations have been made. For instance, in September 2013 the EPA proposed to set for the first time national limits concerning carbon pollution for new power plants; one year later, in June 2014, the Clean Power Plan was proposed, setting national limits for power plants already existing. Among the other measures put in place in the past years during Obama's Administrations there are the 2012 new gas emissions standards for passenger cars, light-duty trucks and later on for medium and heavy-duty vehicles; emission reductions of volatile organic compounds, sulphur dioxide (SO₂) and air toxics from oil and natural gas systems; the setting of energy efficiency new standards for new appliances requiring electricity, established between 2009 and 2011 by the Department of Energy; and new regulations concerning non-greenhouse gas for power plants and large factories, especially for what concerns mercury and different air pollutants.¹⁰⁷

Despite the willingness of the Democratic Presidency under Barack Obama to pass more legislation related to climate change issues, the economic crisis of 2008 made it difficult and most senators, both Democrats and Republicans but with a majority of Republicans, seem to be more focused on policies concerning the rise of unemployment in the country and the strengthening of U.S. energy independence rather than on environmental regulations. In addition, as mentioned before, the fact that many representatives of the Republican Party do not recognize climate change as a real and threatening issue has contributed not to pass more environmental laws. As Tina Ohliger writes in her article, "during the last years, Congress interest in air quality or climate issues was dominated by efforts to prevent the Environmental Protection Agency from promulgating and implementing new emission control requirements".¹⁰⁸

However, although the priorities seemed to be focused on economic growth issues, Barack Obama's second term still promoted investments in renewable energies in order to reach lower levels of gas emissions and to decrease the dependence on oil exporter countries; moreover he encouraged the consumption of domestic natural gas in order to foster energy independence while at the same time using less polluting sources of energy. Aiming at reaching all these objectives, President Obama declared new plans addressed to fight global

¹⁰⁷ Tina OHLIGER, *U.S. Climate Change Policy*, Directorate General for Internal Policies, Policy Department A: Economic and Scientific Policy. IP/A/ENVI/2015-02 PE 536.321, April 2015. Available at : [http://www.europarl.europa.eu/RegData/etudes/STUD/2015/536321/IPOL_IDA\(2015\)536321_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/STUD/2015/536321/IPOL_IDA(2015)536321_EN.pdf)

¹⁰⁸ OHLIGER, *U.S. Climate Change Policy*, op. Cit. page 14.

warming after his re-election in 2012. These included the Plan for a Strong Middle Class & a Strong America and the State of the Union (SOTU) that however only remain plans because of the urgency to take actions in other subjects like immigration regulations, gun control, federal budget or terrorism threats coming from North Korea. In 2014 though, the EPA announced a plan for a 30% reduction of carbon dioxide emissions by 2030, a plan that not surprisingly saw evident opposition from the coal industry given the alleged negative effect that it would have on jobs.

In the climate change debate, it is important to underline that also the U.S. Army has recently started to take into account feasible opportunities to reduce their dependence on fossil fuels and therefore they began to use renewable sources of energy in battle zones. Importantly, “Although military can hardly be considered the best friend of environment, it is only beneficial that the military and affiliated institutes which do enjoy trust in circles where climate scientists do not, have started giving more serious consideration to climate debate. The fact that a conservative institution such as the US Military is taking climate change and the evidence produced by climate scientists so seriously is certainly a blow to the arguments of non-believers towards”.¹⁰⁹

Most importantly, climate change politics in the United States has been experiencing radical changes since the presidential election in November 2016 of Donald Trump. Under his administration, federal policies related to global warming have been and keep being dismantled because of the Republican trend to deny climate change and climate science research. Above all, the most important presidential act by President Trump has been the announcement of the withdrawal from the Paris Agreement and the cease of its implementation on June 1, 2017. This decision perfectly reflects his political strategy aimed at the opposition to the actions at national and international level for the limitation of the effects of climate change, a strategy that is shared by the current Acting Administrator of the Environmental Protection Agency Andrew W. Wheeler¹¹⁰ and especially the former Administrator Scott Pruitt. As Frank Jotzo, Joanna Depledge and Harald Winkler write in their article, “this stance apparently is rooted in his [Trump] administration’s electoral

¹⁰⁹ NAJŠLOVÁ, *The EU and the US in the Politics of Global Climate Change Governance: Avoiding the Crucial Questions*, op. cit., page 44.

¹¹⁰ Andrew R. Wheeler is an American attorney who has been nominated by President Donald Trump and confirmed as Deputy Administrator of the Environmental Protection Agency in April 2018. On July, 9, after Scott Pruitt’s resignation, he became the Acting Administrator of the EPA.

populism and economic nationalism, a particular interpretation of individual liberty and a conviction that humanity has a right to exploit nature”.¹¹¹ In addition, this rejection to deal with environmental concerns by the new Republican administration seems to be rooted also in the tendency of isolationism of the United States and the dismissing of multilateral institutions that could exert a certain level of influence on the nation and therefore bind them to unwanted actions that might harm their main objective, namely economic growth, geopolitics and trade. The United States already showed evidence of this attitude in the past, in particular on the occasion of the support withdrawal by former President George W. Bush from the Kyoto Protocol and the consequent refusal to submit it to Congress for its ratification in 2001 in fear of negative impacts on the American economy. The actual withdrawal from the Paris Agreement cannot be formalized until November 4, 2019, however taking effect only a year later. For this reason, the upcoming presidential elections create high levels of uncertainty especially due to the design of the agreement, which allows the American presidential executive branch to either join or withdraw from the agreement with no need for Congress’ approval. This situation might actually have two very different outcomes in the case of a re-election or in the opposite case of the election of a different candidate, who would easily rejoin the agreement through administrative decision.

Moreover, as the authors affirm in their article, a major fear is caused by the uncertainty that does not officially classify the United States as country still participating in the Paris Agreement or already outside of it. This uncertain situation poses an important challenge onto the international climate negotiations; that is, as long as the United States do not officially withdraw from the Agreement, they can still participate in the negotiations and this might also mean a block of the negotiations or even the imposition of undesired options that might be negative for the other participating countries.

Despite the announcement of the withdrawal produced reactions from the entire international political arena, “it stands to reason that Trump’s impact on climate policy will remain strongest domestically”.¹¹² The most impactful actions taken were in fact at national level, deleting most of the environmental achievements of the Obama’s Administration, among which the suppression of federal incentives for low-carbon investments, regulations changes

¹¹¹ Frank JOTZO, Joanna DEPLEDGE, Harald WINKLER, *US and international climate policy under President Trump*, *Climate Policy*, 2018, 18:7, 813-817, DOI: 10.1080/14693062.2018.1490051

¹¹² JOTZO, DEPLEDGE, WINKLER, *US and international climate policy under President Trump*, op. cit., page 814.

in order to foster high-carbon developments in coal and oil production and consumption, the elimination of motor vehicle emission standards and especially the Clean Power Plan. According to a New York Times analysis, based on research from Harvard Law School, Columbia Law School and other research, more than 80 environmental regulations have been eliminated. The list of regulations presents mainly two types of policy changes that are rollbacks in process and regulations that were officially reversed. The article written by Nadja Popovich, Livia Albeck-Ripka and Kendra Pierre-Louis also states that “[...] the Trump administration’s environmental rollbacks could significantly increase greenhouse gas emissions and lead to thousands of extra deaths from poor air quality every year, according to a recent report prepared by New York University Law School's State Energy and Environmental Impact Center”.¹¹³

In addition to the dismantle of many of the policies implemented under Obama’s Presidency, Trump’s actions among which cuts in funding for programs related to climate change will strongly damage institutions and for a long time, both regulatory institutions like the Environmental Protection Agency and research institutions that work in order to help climate science like the National Oceanic and Atmospheric Administration (NOAA) and the National Aeronautics and Space Administration (NASA). Despite these damaging actions provoked by policies ignoring climate change as a serious threat to the planet, some research and estimations claim that “[...] the negative impact of one term of a Trump Presidency may be manageable and reversible, but two terms would be far more damaging”.¹¹⁴

Another negative consequence of the announcement of the United States withdrawal from the Paris Agreement is the end to all financial contributions to the Green Climate Fund (GCF)¹¹⁵, to which Obama had donated 1 billion dollars but the pledge of the remaining two billion dollars was cancelled by the new administration. This aspect represents a serious issue for climate cooperation, especially in developing countries, because the U.S. withdrawal might

¹¹³ Livia ALBECK-RIPKA, Nadia POPOVICH, Pierre-Louis KENDRA, *83 Environmental Rules Being Rolled Back Under Trump*, The New York Times, June 7, 2019. Available at: <https://www.nytimes.com/interactive/2019/climate/trump-environment-rollbacks.html>

¹¹⁴ JOTZO, DEPLEDGE, WINKLER, *US and international climate policy under President Trump*, op. cit., page 815.

¹¹⁵ The Green Climate Fund (GCF) is a newly created global fund that supports the efforts of developing countries to act in order to contrast climate change. The main objective is to limit or decrease their greenhouse gas emissions, leading them to low-emission and climate-resilient development. The Fund was created by 194 countries that are part of the United Nations Framework Convention on Climate Change (UNFCCC) in 2010, and it engages in order to give equal funds to mitigation and adaptation and it supports the objective of keeping global warming below 2 degrees Celsius.

cause even less political and financial support for adaptation to climate impacts and its damages.

At the same time, some academics claim that the Trump's Administration alone will not be able to stop the transition to less polluting sources of energy, despite their enhancement of coal and oil industries. Renewable energy sources like solar and wind power are already less expensive in some cases compared to fossil fuels and thanks to new technologies their production cost keeps decreasing. Moreover, natural gas is often replacing coal for new installations on economic grounds. As a consequence, "the U.S. Administration simply does not have the power to stem this tide, and if it did, it would impose economic damage on the country".¹¹⁶ Plus, non-federal actors, among which corporations but also states and cities, are playing an increasingly fundamental role in clean energy politics. A large number of U.S. states already use green instruments like renewable portfolio standards and other states like California extended their cap-and-trade program and tightened the cap under the carbon trading program North-Eastern Regional Greenhouse Gas Initiative. Moreover, states and cities have agreed to provide their National Determined Contributions (NDC), as agreed under the Paris Agreement, within their own jurisdiction. In addition, on May 2 of this year 2019, the Democrats in the House of Representatives showed their support for the Paris Agreement through the Climate Action Now Act, passed the House 231 to 190, and preventing federal funds from being used to leave the Paris Agreement and compelling the government to respect national climate pledges. Despite the positive signs showed by the Democrats willing to pursue a Green New Deal for clean energy jobs, sustainable development and environmental justice, a resolution that had already been submitted to Congress in February by Congresswoman Alexandria Ocasio-Cortez¹¹⁷. However, this act is not likely to be passed by the Senate, controlled by Republicans, in addition to the veto threat by the White House.¹¹⁸

The announcement of the U.S. withdrawal from the Agreement also created new opportunities at a global level, especially opening up new forms of multilateral cooperation, in particular

¹¹⁶ JOTZO, DEPLEDGE, WINKLER, *US and international climate policy under President Trump*, op. cit., page 815.

¹¹⁷ Alexandria Ocasio-Cortez is an American activist and politician, member of the Democratic Party, who became the youngest woman ever elected in New York's congressional primary election in June 2018. She currently serves as the U.S. Representative for New York's 14th congressional district.

¹¹⁸ Natalie SAUER, *House passes bill opposing Trump Paris Agreement withdrawal*, Climate Home News, May 2, 2019. Available at: <https://www.climatechangenews.com/2019/05/02/congress-passes-bill-opposing-trump-paris-agreement-withdrawal/>

between superpowers like Europe, China and India, which could benefit from each other's coordinated climate action.

The situation in the Europe has been and seems to still be different. Since the 1990s, the European Union has implemented measures aiming at fighting climate change in a more determined way and obtaining more successes than the United States. Among these, the development of ways to share between Member States and different economic sectors the effort demanded in order to decrease gas emissions. Moreover, the EU is a major party in all most influent international agreements and its policy instrument of carbon trading have been taken as example in many other areas of the world. It acted as a leader in the promotion of environmental targets like ensuring that the average global temperature would not exceed 2°C compared to pre-industrial times and that greenhouse gas (GHG) emissions at a global level would halve in the period from 1990 and 2050. The political situation around climate change and the implementation of policies in the European Union is however made more difficult by the member states, where sometimes it turns out to be complicated to reach consensus. In particular, after the inclusion in the European Union in 2004 of eight new countries that were part of former communist central and eastern Europe, the difference between Western States and countries of Eastern Europe seems to reflect in part the differences between the developed and the developing countries at a global level, being the latter more willing to focus on enhancing their economy in the attempt of catching up to the economic development of the Western European countries, therefore giving less priority to issues concerning global warming.¹¹⁹ The disparity in clean-technology industrial sectors between Western countries and these new Member States had the result to limit the implementation of environmental policies, particularly from the Czech Republic, Slovakia, Poland and Hungary. Moreover, as in the United States, the financial and economic crisis of 2008 had the effect of slowing down green regulation in favor of industrial competitiveness and creation of jobs. Despite this, the EU was able to decrease its GHG emissions by 8% under the Kyoto Protocol and by 2015 gas emissions levels reduced by 23% from 1990.¹²⁰

All these achievements regarding environmental issues also reflect the desire to create and develop a distinct European identity recognizable at a global level. In fact, as Andrew Jordan

¹¹⁹ NAJŠLOVÁ, *The EU and the US in the Politics of Global Climate Change Governance: Avoiding the Crucial Questions*, op. cit., page 44.

¹²⁰ Andrew JORDAN, Tim RAYNER, *Climate Change Policy in the European Union*, Subject: Policy, Politics, and Governance, August 2016 DOI: 10.1093/acrefore/9780190228620.013.47

and Tim Rayner write in their essay: “Regarding the potential of climate policy to develop a specific European identity on the global stage, the EU has indeed at times increased its standing, often clearly distinguishing itself from the positions of other actors such as the United States”.¹²¹ In addition, since the 1990s, the structure of the European Union with its different levels of governance seems having facilitated the development of important environmental policy, increasing the willingness of Member States to adopt regulations that would have not adopted at a national individual level. Moreover, “In this way, the EU’s open and pluralistic governance structure—its “polycentricity” can be regarded as beneficial. Policymakers were apparently less troubled than they would be in a single national government by electoral concerns and the vicissitudes of public opinion”.¹²²

One of the most important moments in environmental policy history for the European Union, as mentioned before, is the Kyoto Conference of the Parties (COP) to the UNFCCC in December 1997, where an agreement that would guarantee a share of the emissions among Member States in order to give less developed countries an opportunity for economic growth and therefore a raise in gas emissions while the most developed countries would decrease their emissions by 15% by 2012 compared to 1990, that later were reduced to 8% in order to make the objective more likely to be achieved. In March 2000, in order to reach this gas emissions reduction, the European Commission started the development of common and coordinated policies by means of the European Climate Change Programme (ECCP), whose most important policy was the EU emissions trading scheme (ETS). Through this policy, considered the most efficient way to reduce gas emissions, an approximate 40% of the total greenhouse gas emissions of the EU could be allocated and traded in a carbon market. At the beginning, Member States were allowed to decide their own national allocations plan, with the possibility of being rejected by the European Commission in case this was considered insufficient for the Kyoto’s objectives. The Emission Trading Scheme Directive was adopted in 2003 but the first phase only started in 2005, quickly acquiring popularity. This was due to the fact that it constituted a useful measure from which all parties could benefit. First of all, it was a cost-effective instrument for industries, which could also gain profit through the selling of allowances; it represented an environmentally-friendly measure, aspect that was well accepted by green parties in the Parliament; and moreover, this effective carbon trading

¹²¹ JORDAN, RAYNER, *Climate Change Policy in the European Union*, op. cit., page 5.

¹²² JORDAN, RAYNER, *Climate Change Policy in the European Union*, op. cit., page 5.

system had the result of giving the European Union a leadership role in the international climate politics arena, contributing to the development of its own identity.

In order to do so, the Kyoto Protocol needed to be ratified for it to come into effect; this meant that after the withdrawal of the United States announced by President George W. Bush in 2001, the EU had to exert some pressure on Russia. This resulted in the EU's support for Russia to enter the World Trade Organization, in addition to the changes to the terms through which gas produced by Russia could enter the European Single Market.

At this point, the EU was seen globally as the leader that could initiate a low-carbon post-industrial revolution and in the period from 2003 to 2009 it adopted an important climate and energy policy package that extended carbon trading until 2020; and directives on renewable sources of energy, energy services and combined heat and power; and a directive setting up a legal framework for safe carbon capture and storage (CCS). This, consisting in a series of technological processes for the extraction of CO₂ from large point sources and its consequent permanent storage underground, was considered a very important step for the European decarbonization process. All these actions towards an even greater greening of the EU differentiated Europe from the unpopular positions in which the United States found itself, thanks to the acknowledgment that climate change actions costs were far lower than future expenses deriving from damages caused by inaction.

Despite these successes, the 2009 United Nations Climate Change Conference, known as the Copenhagen Summit, turned out to be deeply disappointing. Many of the most polluting countries in the world refused the emission decrease target of 80-95% by 2050 proposed by the EU and this caused also the refusal of the unilateral increase in the EU's mitigation target to 30% from Member States of Eastern and Central Europe but also Germany, especially following the financial crisis of 2008.

The leadership role of the EU was reacquired in December 2011 during the negotiation of the *Durban Platform*, where a new and comprehensive agreement regarding mitigation and adaptation actions in order to keep the rise of temperature below 2°C was proposed. Members of the UNFCCC agreed to submit Intended Nationally Determined Contributions (INDCs) by March 2015 that were required to be sufficiently effective in order to respect the 2°C target. Later, in October 2014, the European summit set up a 2030 Climate and Energy Policy Framework aiming at reducing total emissions by 40%, at producing 27% of energy from renewable sources and at improving energy efficiency of 27%. This Framework was possible

only through financial compensation and exemption conceived to eastern and central Europe Member States.

In 2014, Donald Tusk, who was then Prime Minister of Poland and at the same time President of the Council, proposed a new policy plan, known under the name of Energy Union, focused more on energy security than climate change targets, where the attention was on strengthening the electricity transmission systems of the EU, full use of coal and shale gas stocks and purchase of gas. Soon, the focus went back on climate change issues when the European Commission changed the name into *Energy Union with a forward looking climate policy*.

In December 2015, the Paris Agreement focuses on transparency and national accountability in order that countries ensure the implementation of the commitments set through the INDCs. In addition, a review issued every five years is advocated by the European Commission in order to check the developments and the actions taken to fulfill the 2°C target, which became 1.5°C, the new aspirational temperature objective. This agreement foresees a reduction of gas emissions of 60% compared to 2010 levels by 2050 but in practice, it does not introduce a system that compels countries to respect the objectives.

According to Jordan Andrew and Tim Rayner, it is possible to explain the relative less powerful economy of the European Union compared to the United States by asserting that the EU in the past years has been focused on playing a role of directional leadership; that is, through “leading by example with bold unilateral policymaking, in anticipation of a demonstration effect”, giving the world examples of innovative measures and giving itself very ambitious objectives to achieve.¹²³

It is once again very important to underline the structure of the European Union, where some of its Member States are becoming more willing to pursue a political emancipation, especially countries of central and eastern Europe, but also lately countries where populist leaders are increasingly gaining power, demanding for national sovereignty and more intergovernmental decision making in issues like climate policy.

The refusal by some Members of the EU of the proposal by the governments of France, the Netherlands, Belgium, Sweden, Denmark, Spain, Portugal and Luxembourg to increase EU climate action is proof of this. In May of the current year 2019, this proposal was submitted to the European Commission in order to adopt “an ambitious long-term strategy with the

¹²³ JORDAN, RAYNER, *Climate Change Policy in the European Union*, op. cit., page 15.

objective of reaching net-zero greenhouse gas emissions by 2050 at the latest”.¹²⁴ Among the countries that did not sign the non paper were Germany, Italy and Poland and despite the commitments of other Member States “[...] EU contributions to the Paris goals are so far falling short. An analysis due to be published tomorrow by Carbon Market Watch, a think-tank, found ‘a serious lack of commitment on behalf of governments’ in Italy, Hungary, Poland and Romania in particular”.¹²⁵

In conclusion, the European Union and in the United States seem to have very different approaches to climate change politics; if on the one hand the EU has passed a comprehensive legislative framework on environmental issues, in the other hand the U.S. have not experienced major changes in environmental law in the past years, but on the contrary are experiencing rolling back of some of the acts adopted by the Obama’s Administration. In addition, if on the one hand the policies related to climate change of the Member States of the EU are coordinated in order to achieve common objectives, on the other hand the situation in the U.S. results more fragmented given the establishment of different regulations at federal and state level.

III.2 The Environmental Impacts of Free Trade Agreements: An Analysis of Environmental Provisions in Major FTAs of the U.S. and the EU

The second half of the twentieth century has been characterized by an opening and a consequent important expansion of international trade that had never been seen before. According to the World Trade Organization, global trade has experienced an increase of twenty-seven folds in volume terms since 1950, causing an augmentation of the level of world GDP that grew by a factor of eight since the same year. Consequently, the share of global trade in world GDP increased from 5.5% to 20.5% from 1950 to 2006.

¹²⁴ Non paper on Climate for the future of Europe, Joint non paper on Climate for the future of Europe by the Netherlands, Belgium, Denmark, France, Luxemburg, Portugal, Spain and Sweden, May 8, 2019. Available at: <https://www.euractiv.com/wp-content/uploads/sites/2/2019/05/Non-paper-Climate-FR-SE-PT-DK-LU-ES-NL-BE.pdf>

¹²⁵ Frédéric SIMON, *Germany, Italy, Poland snub call for net-zero carbon EU by 2050*, Euractiv, Published on May 7, 2019, updated on May 8, 2019. Available at: <https://www.climatechangenews.com/2019/05/08/germany-italy-poland-snub-call-net-zero-carbon-eu-2050/>

Among the reasons that allowed this trade expansion at a global level the development of new technologies certainly plays a fundamental role, radically decreasing transportation and communications costs; in particular, naval and air transportation became a lot more efficient following the introduction of containers on ships and jet engine that were able to transport greater amounts of goods and in much reduced times. In addition to new technologies, the elimination of measures restricting commerce was essential for the development of international trade, where regional, unilateral, bilateral or multilateral agreements considerably increase production and therefore trade at a global level.

However, this expansion that represented a very important achievement of the twentieth century did not evolve without repercussions and negative impacts. In fact, world trade enlargement and evolution became a core part of climate change politics, given the effects that the former has on the latter, particularly in terms of augmentation of greenhouse emissions due to an increase of international transportations.¹²⁶

In this section we will try to understand to what extent trade affects the environment and therefore global warming, focusing in particular on the major trade agreements involving the United States and the European Union.

Despite the potential of free trade agreements that would be able to foster environmental actions taken both by companies and individuals, many researchers have been rather demonstrating an opposite situation. In the first case for instance, free flows of goods after the elimination of tariffs and standards could help businesses working in the field of renewable energies to have a more competitive access to capital, suppliers and skills needed in order to develop their production. In the second case instead, trade agreements could reduce the price of many products fostering a greener lifestyle, therefore individually contributing to climate change actions through the purchase of less expensive green products like electric cars or the through the installation of renewable energy systems like solar panels. Moreover, one of the many positive effects of free trade could be the elimination of subsidies destined to fossil fuels and extensive and poor agricultural practices, consequently boosting the development of more environmentally-friendly ways to pursue economic growth.

However, although these potential outcomes are advocated by some, evidence shows an opposite trend, characterized by a parallel raise in trade of carbon-intensive products among

¹²⁶ The World Trade Organization, *The impact of trade opening on climate change*, Trade Topics. Available at: https://www.wto.org/english/tratop_e/envir_e/climate_impact_e.htm

which a large amount of fossil fuels commerce, therefore contributing to an increase of gas emissions. Most importantly, free trade agreements could also have the effect of considerably restricting the freedom of a country to implement and enforce environmental policies because of the potential threat of reducing the liberties imposed by the same international agreements, for instance through the ban on imports of goods that might be harmful for the environment, consequently leading to trade disputes because trade principles among which non-discrimination or open borders were not respected. According to a report by The Economist Intelligence Unit titled *Climate change and trade agreements: Friends or foes?* published in March of the current year 2019, states that “trade-climate policy conflicts are not hypothetical. Canadian trade officials opposed an EU effort to label tar sands as a ‘highly polluting’ energy source in its Fuel Quality Directive rules. The US lambasted an EU definition of renewable that restricted US exports of soybeans as a biofuel feedstock as a ‘barrier to trade’”.¹²⁷ As a consequence, the World Trade Organization settlement mechanism was called by the governments of these countries in order to challenge environmental policies that seem to violate the rule of free trade.

In other words, it is still debated whether trade liberalization has been causing positive or harmful effects on the environment. However, it is evident that agreements on climate and agreements on trade rarely take the each other into account; a research conducted by the International Centre for Trade and Sustainable Development (ICTSD) mentioned in the report shows that only 6% of National Determined Contributions refers to trade barriers decrease, and only 11% takes into account commerce regulation based on climate change concerns. Moreover, most trade agreements do not consider the threat posed by environmental changes such as global warming and for this reason researchers affirm that trade deals should increasingly adapt to climate change politics and not having more and more climate change policies forced to be adapted to trade regulation.

However, the WTO has in the past worked in order to foster a closer connection between trade and the environment, for instance through the creation of the Committee on Trade and Environment (CTE) on the occasion of the Uruguay Round¹²⁸ of talks in 1995. This

¹²⁷ *Climate change and trade agreements: Friends or foes?*, The Economist Intelligence Unit Report, Commissioned by International Chamber of Commerce, March 2019. Available at: <https://iccwbo.org/content/uploads/sites/3/2019/03/icc-report-trade-and-climate-change.pdf>

¹²⁸ The Uruguay Round represented the eighth round of multilateral trade negotiations (MTN) within the framework of the General Agreement on Tariffs and Trade (GATT) consisting of 123 countries as member

committee aimed at identifying the links between trade and environmental policies and at integrating environmental concerns into rules of the WTO and later on in 2001, after the Doha Round¹²⁹ its jurisdiction developed acknowledging the importance of environmental protection and preservation also through the elimination of trade barriers and tariffs on environmental goods and services. Despite this willingness to foster environmental protection, the Committee on Trade and the Environment did not evolve as it had been foreseen. One of the main explications coincides with the ambiguity of the definition of environmental goods, in constant evolution thanks to the development of new technologies, and therefore it results complicated to elaborate regulations due to the heterogeneity of the products targeted, in addition to the heterogeneity of the members of the WTO, where developing countries consider environmental policies of developed countries as ways to obstruct exports from the former and therefore promote domestic production.

In order to expand the commerce of environmental goods, that in 2015 reached 1 trillion US dollars at a global level and 238 billion US dollars in United States exports, the idea of an agreement aiming at fostering trade even more by decreasing tariffs on environmental products was developed and in 2014 18 members of the WTO started a series of negotiations for an Environmental Goods Agreement (EGA) with the objective of promoting exportations, getting a less expensive access to clean technologies and supporting countries willing to reach their NDCs targets. The Agreement was highly supported by the European Union that, according to estimations made in 2016, affirmed that it could increase trade of environmental products by 21 billion Euros. Despite this initial excitement, the negotiations were slowed down by different factors among which the determination of environmental goods but also politics. Once again, a major concern was represented by the categorization of products according to the World Customs Organisation's Harmonised System (HS) codes¹³⁰, which

parties. Thanks to this round the World Trade Organization was created. Among the objectives of the Round was the expansion of GATT rules on trade to new sectors such as services, agriculture, intellectual property, etc.

¹²⁹ The Doha Development Round is the last round of trade negotiations within the WTO and it started in November 2001 with the ministerial-level meeting in Doha, Qatar. Its main goal was to obtain lower trade barriers and the modification of rules of trade at a global level. However, the negotiations are not progressing due to significant contention between developed and developing countries, as well as between the United States and the European Union on the area of agricultural subsidies, considered as trade barriers.

¹³⁰ The Harmonised System (HS) Classification, known also as HS Nomenclature, is the Harmonized Commodity Description and Coding System of the World Customs Organization' and according to it, a unique six-digit HS code is associated to every group of products. Adopted in 1983 by the Customs Cooperation Council, this system provides an identification of the product to customs authorities, therefore able to apply the correspondent import duty or other trade measures.

made it difficult to identify whether individual products were environmental or not. Besides, the United States tried to conclude the agreement before the new presidential elections and therefore under the Obama Administration, more likely to accept such an agreement.

We will examine now to what extents free trade agreements in which the European Union and the United States figure as members take environmental concerns into account.

The interest towards environmental concerns in free trade agreements origins in the 1990s with the North Atlantic Free Trade Agreement between the United States, Canada and Mexico. However, the environmental provisions of this and other trade agreements were still non-binding and the language used is considered rather vague and not sufficiently effective. Moreover, there was no attempt to coordinate a common legal framework concerning environmental issues across national borders, nor explicit targets for gas emissions reduction despite the efforts to promote international cooperation on environmental concerns by the Declaration of the United Nations Conference on the Human Environment of 1972, also known as Stockholm Declaration, or the Rio Declaration on Environment and Development in 1992.

Concerning the European Union and the United States, if on the one hand the free trade agreements of the former usually focused on a broader range of issues, among which timber and fishing regulations, the free trade agreements of the latter tended to present chapters specifically dedicated to environmental provisions, like the above mentioned NAFTA, which included a different agreement mainly on the environment, known as the North American Agreement on Environmental Cooperation (NAAEC). This Agreement recognized the rights of the members to apply restrictions on market access if the products did not comply with the rules of multilateral environmental agreements (MEAs) that they had signed. In this way, the United States, under the aegis of the NAAEC, attempted to punish those signatories who unduly harmed the environment through their trading practices by limiting their access to the American market. This is in stark contrast to the European Union, which tends to utilize less coercive methods of ensuring compliance to the environmental provisions of free trade agreements, such as the promotion of cooperation and diplomatic solutions.

According to a research conducted by The Economist Intelligence Unit, free trade agreements could support climate change action if they integrated seven main opportunities in their provisions. The first opportunity derives from the elimination of tariff barriers on environmental goods and services, which according to a study conducted by the World Bank

in 2017, would raise the volume of trade by 14% in clean energy technology and by 60% in energy efficiency products. A major concern in traditional free trade agreements is that often this distinction between green and non green products is ignored, while in more recent free trade agreements of the European Union such as the EUSFTA EU-Singapore Free Trade Agreement whose negotiations on goods and services ended in 2012, the elimination of tariff barriers on environmental products is fostered, though not through binding commitments. In the same way, the second opportunity comes from the removal of non tariff barriers to trade through harmonized coordination. In the European Union, the Commission has proposed a voluntary Single Market for Green Products, tested between 2013 and 2018, in order to provide the Product Environmental Footprint and Organization Environmental Footprint methods as a common voluntary way for Member States to measure the environmental performance of their products, given the confusing range of methods provided according to the Member State market.¹³¹ In the United States instead, the program Energy Star has been implemented by the Environmental Protection Agency, a government program focused on energy efficiency that has provided accessible information to consumers and companies since 1992 and that has been exported to other areas of the world such as the European Union, Canada, Switzerland and Taiwan.¹³² However, as in the previous case, the Free Trade agreement involving the EU and Singapore includes a chapter dedicated to the reduction of non tariff barriers but at the same time it once again invites country to develop a strong cooperation through consultation or the use of eco-labelling and fair trade methods. Moreover, the use of international and regional standards is, wherever possible, fostered as a basis for national regulations on renewable sources of energy. Another free trade agreement involving the EU and taking into account the elimination of environmental non tariff barriers is the Comprehensive Economic and Trade Agreement (CETA) between Canada and the European Union, which has one provision concerning this issue but it only invites the parties to make efforts in order to foster trade and investments also through NTBs reduction or elimination.

The third opportunity would be a limitation of fossil fuels subsidies, namely government action reducing the cost of energy production through fossil fuel, which according to the OECD and the International Energy Agency correspond to approximately over 370 billion US

¹³¹ Single Market for Green Products Initiative, European Commission, Environment, Sustainable Development. Available at: <https://ec.europa.eu/environment/eussd/smgp/>

¹³² Energy Star Overview, About Energy Star, Energy Star. Available at: <https://www.energystar.gov/about>

Dollars. A drastic reduction of fossil fuels subsidies would promote low-carbon energy production and consequently limit the harmful impacts of gas emissions. Once again, free trade agreements would be an optimal instrument that could contribute to this decrease but the Agreement between the EU and Singapore, although it has a provision stopping subsidies, does not include the coal industry in the limitation of subsidies. However, the FTA includes references to the need of reducing fossil fuels subsidies and greenhouse gas emissions and the need for a transition to low-carbon power. Despite this, the agreement allows the use of subsidies if indispensable for reaching a goal of public interest. The agreement between Canada and the European Union does not include any provisions concerning the limitation of fossil fuels subsidies.

The fourth opportunity is carbon taxes, given its polluting impact on the environment, contributing to global warming through its emission. Carbon taxes are imposed on some countries or areas in the world, where companies are more incentivized to move to areas without this polluter pays approach. According to the Carbon Pricing Leadership Coalition, in 2018 only 46 national and 24 subnational jurisdictions were adopting this approach and therefore, in order to solve this discrepancy border adjustment carbon taxes would be necessary. Even if it does not specify this method, CETA foresees cooperation focused on carbon market in order to work towards climate change policies. However, “the almost complete absence of border adjustment carbon taxes from FTAs indicates how contested such taxes are. The lack of any clear and rigorous methodology for calculating embedded carbon is one constraint, as it would potentially allow countries to use embedded carbon as an excuse for other forms of trade protection”.¹³³

The fifth opportunity is represented by government purchases of environmental goods and services, therefore promoting the development of green actions by buying clean technologies or recycled materials. The European Union for instance, already adopted guidance in the form of national green public procurement criteria available for public agencies that want to purchase goods or services. Public authorities and major consumers within the European Union can therefore decide to buy environmentally friendly goods and services fostering a sustainable consumption and production.¹³⁴ According to the research, free trade agreements could foster green procurement and the two FTA of the EU both with Canada and Singapore

¹³³ Climate change and trade agreements: Friends or foes? The Economist Intelligence Unit Report, op. cit.

¹³⁴ Green Public Procurement, Environment, European Commission. Available at : https://ec.europa.eu/environment/gpp/index_en.htm

present a chapter on the liberalization of public procurement markets and provisions concerning the environment are included. CETA allows parties to develop environmental standards and objectives in their tender specifications, as long as it is transparent and non-discriminatory. In addition, the FTA EU-Singapore adds the promotion of common standards, allowing parties to use eco-labels and green labels from both parties in the formulation of their tender specifications.

The sixth opportunity is the approval of non-discriminatory renewable energy subsidies that would contribute to the decrease of GHG emissions. However, fossil fuels subsidies still remain much more common. An important example of country that developed as a global leader in solar power sector is Germany, which in the 1990s started to promote zero interests loans on 12.5% of the cost of solar energy systems. The role of FTAs could be important, by promoting or limiting these renewable energy subsidies. The WTO agreement on Subsidies and Countervailing Measures (SCM) in fact allows subsidies only in the case that they do not prevent foreign competition, not preventing subsidies to individual consumers and particularly not in the services sector. CETA and the EU-Singapore free trade agreements follow this trend, integrating the SCM's obligations; the former adds a link between the rules concerning subsidies exceptions and the objectives to reach in order to fight global warming in each country, allowing exceptions for the adoption of green rules. The latter as well permits renewable energy subsidies in case of environmental objectives if indispensable for reaching a public interest goal, if they do not affect trade in any measure.

The seventh and last opportunity consists in international cooperation, necessary to meet the targets set during the Paris Agreement. This cooperation is strongly fostered in the FTAs where the European Union is a party and they include provisions affirming the necessity to put efforts together in order to properly integrate trade in environmental policies so that it does not result harmful for the environment. However, these provisions are once again non-binding, and they do not refer explicitly to the Paris Agreement's targets. Despite this, the EU-Singapore free trade agreement fosters dissemination of information and international forums that promote cooperation on environmental consequences of trade like the WTO and the UN Environment Programme (UNEP). Moreover, together with CETA, it makes references to the UNFCCC Agenda 21¹³⁵ and the Johannesburg Plan of Implementation on

¹³⁵ The United Nations Framework Convention on Climate Change (UNFCCC) is an international environmental treaty aiming at stabilizing greenhouse gas emissions in the atmosphere in order to prevent harmful impacts on

Sustainable Development.¹³⁶ Also, the EU-Canada CETA agreement promotes international cooperation on mitigation and adaptation policies, as well as energy efficiency, low-carbon technologies and carbon market policies, fostering the production of information regarding the implementation of the agreement's provisions for transparency purposes towards its members.

Regarding the free trade agreements of the United States, it is important to analyze the North American Free Trade Agreement with Canada and Mexico. The negotiations of this agreement, that came into force on January 1, 1994, generated concerns about the future of environmental regulations and standards that could undergo a weakening in favor of trade liberalization. Mainly, although being the first free trade agreement including environmental protection and mentioning sustainable development in its preamble, Chapter 11 was considered controversial. The reason lied in the fact that it established a framework of rules providing investors of the member countries with dispute settlement procedures designed to provide timely recourse to an impartial tribunal.¹³⁷ In particular, this chapter allows foreign investors to take action against the government of a country, in which they invested for passing legislation aiming at the protection of the environment. This might affect the investments and the profit of the investing company while at the same time challenging governments willing to pass environmental legislation in absence of a proper mechanism able to defend them. This situation may lead governments not to adopt environmental measures fearing the threat of a claim. As a consequence, this caused several legal actions among which the *Methanex v. United States* where the former sued the U.S. state of California for blocking importations of a toxic fuel additive that caused a leak into groundwater, consequently affecting the environment and people's health. This shows that despite the introduction of environmental standards in contemporary FTAs, "[...] the continued inclusion of clauses in the recent FTAs similar to Chapter 11 could deter both developed and developing countries

the planet and on the global climate, and consequently on human beings. It was adopted on May 9, 1992 that entered into force on March 21, 1994 after the ratification by a sufficient number of countries. However, it does not impose binding limits of the GHG emissions on countries and it does not include enforcement mechanisms.

¹³⁶ The Plan of Implementation of the World Summit on Sustainable Development was agreed on the occasion of the Johannesburg Declaration on Sustainable Development adopted at the World Summit on Sustainable Development (WSSD) in 2002. It fosters the commitment by nations to promote a sustainable development while promoting multilateralism as a way to achieve it.

¹³⁷ The North American Free Trade Agreement (NAFTA) - Chapter 11 – Investment, Global Affairs Canada, Government of Canada. Available at : <https://www.international.gc.ca/trade-agreements-accords-commerciaux/topics-domaines/disp-diff/nafta.aspx?lang=eng>

from passing necessary environmental regulation to protect their natural resources in the future”.¹³⁸

However, NAFTA did include several environmental provisions in its text that were nevertheless criticized by environmentalists as too weak and inadequate. As a consequence, the Administration under President George H. W. Bush proposed the negotiations for an environmental side agreement, supported by the North American Commission for Environmental Cooperation (CEC).¹³⁹ NAFTA and its side agreement were ratified after the change of the administration in January 1993 and modified by the Clinton Administration, giving a much larger number of provisions dedicated to the environment and also to labor. As Dale Colyer writes in his book *Green Trade Agreements*, “thus, NAFTA became the first major trade agreement to include environmental provisions, provisions that are more extensive than most subsequent trade agreements with environmental provisions”.¹⁴⁰

More precisely, the environmental agreements included in the main NAFTA agreement are in the preamble and in chapters 1, 7, 9, 11 and 21. In the preamble, three of the fifteen purposes take the environment into consideration stating the need for carrying out activities respecting environmental protection and conservation, the need for the promotion of sustainable development and the support for environmental laws elaboration and implementation. The environmental provisions in the chapters refer instead to the precedence of the main NAFTA agreement in case of inconsistencies with the environmental agreement with exceptions for three MEAs that are the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), the Montreal Protocol on Substances that Deplete the Ozone Layer and the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal and two bilateral agreements that are the Agreement between the Government of Canada and the Government of the United States of America Concerning the Transboundary Movement of Hazardous Waste and the Agreement between the United States of America and the United Mexican States on Cooperation for the Protection and

¹³⁸ Hena SCHOMMER, *Environmental Standards in U.S. Free Trade Agreements: Lessons from Chapter 11*, Sustainable Development Law & Policy, Fall 2007, 36, 84. Available at: <https://digitalcommons.wcl.american.edu/cgi/viewcontent.cgi?referer=https://www.google.com/&httpsredir=1&article=1153&context=sdlp>

¹³⁹ Scott VAUGHAN, *NAFTA's Environmental Record: History, outcomes, impacts and options*, June 2017, IISD International Institute for Sustainable Development. Available at : <https://www.iisd.org/sites/default/files/publications/nafta-environmental-record-commentary.pdf>

¹⁴⁰ Dale COLYER, *NAFTA's Environmental Provisions. In: Green Trade Agreements*, Palgrave Macmillan, London, 2011. Available at: https://link.springer.com/chapter/10.1057/9780230346819_4

Improvement of the Environment in the Border Area. The other chapters include provisions related to sanitary and phytosanitary measures allowing them to choose the adequate level of protection for human, animal or plant life or health; standards-related measures giving the parties the right to set their desired levels of protection and sustainable development; the invite to parties not to lower domestic health, safety and environmental standards in order to attract investors; and the harmonization of environmental standards. Despite these environmental provisions and the modifications bringing improvements in the Uruguay Round, Steve Charnowitz wrote in his article that “there are several ways in which NAFTA remains an unfinished structure. First, some of the critical provisions are vague or ambiguous. Second, the Standards' chapter leaves out process standards. This means that trade regulations aimed at the environmental externalities of production will fall under GATT, rather than NAFTA, rules. Third, NAFTA fails to recognize any rights of subnational governments. Fourth, NAFTA's list of objectives do not include any environmental goals”.¹⁴¹

After the election in 2016 of President Donald Trump, the environmental politics of the United States underwent a significant change, reflecting increasingly skeptical opinions towards the advantages of free trade and the rise of populism, promoting protectionism. In addition to the elimination of many green policies implemented during the previous administration, Trump's Administration is working towards the renegotiation of NAFTA, which seem to have considerable effects on environmental actions. The new NAFTA includes 34 chapters and a new Agreement on Environmental Cooperation that will replace the old one previously mentioned, whose preamble mentions the importance of a green growth, pursuing the same objectives of the CEC. The Environment Chapter, which is the 24, includes provisions that appear to be rather general, vague and that are non-binding. Moreover, there is no mention of climate change in the chapter. This caused reactions from the part of Democrats, which are demanding modifications that might be accepted in exchange for approval in Congress. However, it does include provisions regarding fishing subsidies and their impactful effects; despite this, no attention has been given to fossil fuels subsidies.

One of the main improvements of the new agreement is represented by the elimination of the energy proportionality clause in Article 605. Through this clause, NAFTA prevents Canada from reducing fossil fuel production too quickly by linking its current energy export

¹⁴¹ Steve CHARNOWITZ, *NAFTA: An Analysis of its Environmental Provisions*, Environmental Law Reporter, February 1993. Available at: <https://elr.info/sites/default/files/articles/23.10067.htm>

requirements to the historical average over the previous three years. Even if Canada were able to reduce its carbon footprint by limiting the demand for domestic energy production or by increasing energy efficiency, these gains would be at least partially offset by the continued export of fossil fuels to other countries. The absence of this clause represents a positive aspect given that the production of natural gas and oil in Canada constitute the largest source of gas emissions. Another step forward is represented by the partial removal of Chapter 11, previously discussed. However, this achievement comes more from Trump's "Administration's displeasure with Chapter 11 [that] seems to stem from a more general antipathy to internationalism. Trade Representative Robert Lighthizer has noted with respect to ISDS that he is 'troubled by the fact that nonelected non-Americans can make the final decision that the United States law is invalid, that being 'a matter of principle' that he finds 'offensive'".¹⁴² Concerning the relation with Mexico, a part from the oil and gas industries that have some protection due to their strong opposition, investors' claims have to be submitted to local courts first.

If the removal of Chapter 11 benefits regulators, the introduction of Chapter 28, a new chapter on Good Regulatory Practices benefits multinational businesses instead, like in other agreements including CETA, the free trade agreement between the European Union and Canada. The new NAFTA introduces also for the first time the dispute settlement to which regulatory practices are submitted. This Chapter gives corporations the opportunity to influence regulations, in addition to putting a significant burden upon regulatory agencies that wish to implement new environmental policies. One more important effect that the renegotiation of NAFTA will have is based on the absence of the precautionary principle in Chapter 28, making it difficult to adopt precautionary policies in order to protect the endangered populations. Despite the fact that many scholars affirm that the precautionary principle has never been supported and applied in the United States in the same way it has been in Europe, the renegotiations of NAFTA will obstruct even more its members' willingness to pursue the adoption of a precautionary approach. As Kyla Tienhaara, Canada Research Chair in Economy and Environment and Assistant Professor in the School of Environmental Studies and Department of Global Development Studies at Queen's University, Canada, writes in her article *NAFTA 2.0: What are the implications for*

¹⁴² Kyla TIENHAARA, *NAFTA 2.0: What are the implications for environmental governance?*, Earth System Governance Volume 1, January 2019. Available at: <https://doi.org/10.1016/j.esg.2019.100004>

environmental governance? that “Unfortunately, [...] NAFTA 2.0 generally continues in the tradition of modern trade agreements in that it has very little to do with trade and a great deal to do with empowering certain ‘rent-seeking interests and politically well-connected firms’. Although it will be more difficult for investors to challenge regulatory action to protect the environment under NAFTA 2.0, it will also be more difficult for governments to develop and adopt regulation in the first place”.¹⁴³

III.3 Environmental Change and International Migration: Emigration from the Global South to the European Union and the United States

The impacts of human activity on the earth have been causing important environmental modifications, especially concerning global climate and its gradual warming. Consequently, this resulted into degradation processes of water and soils causing significant transformations of natural habitats and eco-systems that are currently threatening socio-economic activities in areas of the world that are the most affected. Populations living in these regions – which often undergo periods of drought, food and resources scarcity, harmful meteorological events and where the rise of the level of the sea is a serious threat, causing therefore risks for agriculture – found themselves forced to start migration processes, involving large-scale movements of people first, but also movements of capital and goods. In addition, social disruption caused by wars and political conflicts contributes to environmental degradation and consequent migration flows. The connection between transformations of the environment and migration was acknowledged for the first time in the early 1990s, precisely when the High Commission for Refugees (UNHCR) recognized environmental degradation as one of the reasons that induce massive movements of people.¹⁴⁴ This link seems to be confirmed by data from the Internal Displacement Monitoring Centre (IDMC), which records that 265.3 million people were relocated in different regions within their country for reasons related to natural disasters

¹⁴³ TIENHAARA, *NAFTA 2.0: What are the implications for environmental governance?*, op. cit., page 3.

¹⁴⁴ The Office of the United Nations High Commissioner for Refugees (UNHCR) is a program of the United Nations established in 1950 after World War II, aiming at the protection of refugees, stateless people and displaced communities, through efforts for the assistance towards local integration, voluntary repatriation or resettlement to a third country. UNHCR is a member of the United Nations Development Group and its headquarter is located in Geneva, Switzerland.

in the period from 2008 and 2018, especially in South and East Asia and in islands of the Pacific Ocean, numbers that might increase if climate change does not decelerate.¹⁴⁵

Environmental changes are not a new occurrence on earth; some species have become extinct and major transformation on different natural environments occurred. However, this did not prevent evolution from happening. Things may be different nowadays; because of the increase of human activities endangering the planet and particularly the speed at which they are developing, it is possible that some systems may not be ready to adaptation. Many are the effects of anthropogenic activity, most of which are drastically affecting the environment and consequently climate. Pollution of air and waters, deforestation and desertification, intensive use of land and its consequent degradation, scarcity of fresh water and disposal of toxic waste are some of the negative impactful factors caused by men.

Interestingly, these massive movements of people, goods and capital caused by environmental transformations can in turn have the effect of negatively affect new environments and increasingly contribute to new and different environmental challenges. It has been demonstrated how demography can participate in the process of deterioration of the environment. As Martin Beniston, Honorary Professor and Director of the Institute for Environmental Sciences at the University of Geneva in Switzerland, writes in his paper published in the book *Environmental Change and its Implications for Population*, “high population growth in many parts of the world is linked to environmental damage because local inhabitants attempt to maintain or improve their resource base and economic level through the over-exploitation of their environment. This is carried out in general without any long-term environmental management strategy; resources can thus become rapidly depleted or ineffective”.¹⁴⁶ Elements of daily basic life that can be considered very easily accessible by Western societies, such as food, water or pharmaceuticals are not necessarily abundant in poorer areas of the world. Since these resources strongly depend on environmental factors, any change might cause irreversible consequences that would further worsen this disequilibrium between developed and developing countries.

¹⁴⁵ Environmental Migration, Migration Data Portal, July 25, 2019. Available at : https://migrationdataportal.org/themes/environmental_migration

¹⁴⁶ Martin BENISTON, *Issues Relating to Environmental Change and Population Migrations. A Climatologist's Perspective*, 2004, in Unruh J.D., Krol M.S., Klot N. (eds) *Environmental Change and its Implications for Population Migration*. Advances in Global Change Research, vol 20. Springer, Dordrecht. Available at: https://doi.org/10.1007/978-1-4020-2877-9_1

Despite the evidence that environmental changes cause forced non voluntary migrations, it is also possible to consider them as indirect consequences of political and economic policies implemented in the past, leading to a drastic increase of greenhouse gas emissions and therefore to global warming. As already mentioned, many negative consequences of climate change could affect agriculture and therefore the quantity of crops produced, which constitute a very important source of food for many areas of the world.

In the United States for example, the drought occurred in 1988 in the Midwest, one of the most important regions for the production of cereals, caused a drastic decrease in the output of corn that led importations of corn in the United States to surpass the exportations, an event that had not occurred since World War II. This situation may happen again in the future if global temperature keeps increasing because of the irreversible physiological damage that higher temperature could cause on some plants, causing therefore a serious crisis in the global food supply. A similar situation could be caused by heavy rains, particularly during germination and fruit development.

These migration flows caused by environmental degradation for which many developed areas of the world are accountable have increasingly heavier impacts on the Western world, especially in areas such as the European Union and the United States. In this regard, a study of 2017 conducted by Anouch Missirian and Wolfram Schlenker, both researchers at Columbia University in New York City, demonstrates a strict connection between temperature fluctuations and the increase of asylum applications to the European Union, as part of the large migration crisis across the Mediterranean Sea started in 2014. Their study, in which the number of asylum applications was examined in a total of 103 source countries, shows that the applications reached 1.5 million in 2015 and that agricultural areas that were directly affected by meteorological changes played a fundamental role in the migration flow towards the EU. The source countries taken into account in this research are members of the Organization for Economic Co-operation and Development (OECD) and the period in which the applications were reported goes from 2000 to 2014. The average annual number of asylum requests is 351 000, whose majority comes from Asian countries such as Afghanistan and Iraq with 140 000 applications, followed by 46 African countries and 11 European countries not part of the EU with 100 000 applications; the rest of the applications come from 16 countries of the American continent. The findings revealed that temperatures above the average are more likely to decrease the number of asylum applications in cold countries whereas the

opposite occurs for hot countries. The close link between temperature fluctuations and asylum requests is confirmed by the fact that in countries where the average temperature reaches 20°C, the number of applications is low whereas it rises with temperature either too hot or too cold. This explains why the number of applications coming from European countries non members of the EU is considerably lower than the number of applications issued by hotter countries in Africa and Asia. The study also shows how countries in which the average temperature fluctuates between 19.9°C and 21.4°C, considered the optimal temperature, are the ones from which the lowest number of applications is reported; in fact, this temperature results optimal for cultivation and it therefore reflects constant food availability that reduces considerably with both very hot and very cold temperatures. Moreover, both temperatures and precipitations are analyzed and the research shows how less impactful precipitations are on migration flows.

Another interesting feature of this study is represented by the non linearity of the changes in the number of asylum applications. As an example, if the temperature registers a raise by 1°C, a 6% increase of applications will occur; if the temperature raise corresponds to 5°C, then this warming causes a 175% increase of applications.

Another interesting finding is that gross domestic product has shown fluctuation according to the temperature, even in industrialized countries and also when it is not related to agricultural activities. Both for agricultural outputs and for GDP, very hot temperatures turn out to be worse than very cold temperatures and improvements in both factors would lead to less criminality, less conflicts and less aggressive behavior. It is also interesting to underline how this research finds asylum applications due to environmental conditions more likely to be accepted by the European Union, “suggesting that destination countries classify the additional cases [environmental degradation] as more deserving than the average applicant and see them as refugees and not economic migrants”.¹⁴⁷ The EU countries accepting the most applicants are divided into two categories, namely the 14 richest and the 14 poorest and the study finds out that the majority of applicants are accepted by the 14 richest countries. Briefly, the results of this research “support the assessment that climate change, especially continued warming, will add another ‘threat multiplier’ that induces people to seek refuge abroad. Weather

¹⁴⁷ Anouch MISSIRIAN, Wolfram SCHLENKER, *Asylum applications respond to temperature fluctuations*, Science December 22, 2017: Vol. 358, Issue 6370, pp. 1610-1614 DOI: 10.1126/science.aao0432, Available at: <https://science.sciencemag.org/content/358/6370/1610>

impacts in low income source countries will not be confined to those countries or regions but will instead likely spill over into developed countries through increased refugee flows”.¹⁴⁸

The same trend appears to occur in the United States as well, where global warming is increasingly affecting migrants from Central America who are fleeing their countries to enter the United States. As Lauren Markham, writer and journalist focused on refugees and immigrants issues in Central America as well as child migration into the United States, writes in her article that the asylum seekers coming from Guatemala, Honduras and El Salvador, from which the highest number of immigrants to the U.S. comes, are some of the most vulnerable places affected by environmental degradation and global warming, in addition to economic, political and safety reasons, despite their contribution to greenhouse gas emissions was relatively little. The raise of the temperature by 0.5°C since 1950 and the expectations of a further increase in the future by 1-2°C by 2050 had a damaging impact on weather conditions, causing rainfall that impoverished the quality of the soil and damaging cultivated fields and their crops that turns into lack of food, described as the main reason that leads people to migrate to the United States by a report of the United Nations.¹⁴⁹ Moreover, the occurrence of storms, droughts and floods is increasing and all of this has a negative impact on the development and spread of diseases on communities and local economies. The U.S. Agency for International Development has predicted that in the next years longer periods of draughts will occur, causing an increase of arid regions in Guatemala that will affect agriculture while an approximate 10-28% of coastline is expected to be lost in El Salvador by the end of the twenty-first century, together with the destruction of the mangrove forests caused by rising sea levels and its marine eco-system. Not only will this affect marine life but also local economies relying on fishing. Moreover, in the summer of 2018, an emergency was declared by the government of Honduras, El Salvador and Guatemala due to food shortages, affecting 2 million people across the Northern Triangle. Climate change has also been identified by scientists as responsible for the development of a pathogen that destroyed plantations of coffee, consequently affecting laborers' incomes.

In the past years during the Obama's Administration, Congress was able to duplicate the funding addressed to the region in Central America, increasing the funding towards programs

¹⁴⁸ MISSIRIAN, SCHLENKER, *Asylum applications respond to temperature fluctuations*, op. cit. page 4.

¹⁴⁹ Food Security and Emigration-Why people flee and the impact on family members left behind in El Salvador, Guatemala and Honduras. International Organization for Migration (IOM), The UN Migration Agency, August 2017.

dedicated to climate and agriculture, reaching therefore \$754 million in 2016 compared to the \$338 million in 2014. Later on, after the election of President Trump, his Administration attempted to cut this funding but the proposal was rejected by Congress, which passed a budget of which \$530 million is directed towards the region in Central America. However, as a punishment for not being able to stop migration flows directed to the United States, President Trump suspended a part of the funds allocated for 2017 by Congress and all the funds for 2018.¹⁵⁰

It is therefore clear how climate change is affecting poorer countries and the rolling back of domestic environmental regulations and cuts in aids to Central America by the Administration of President Trump will, according to Lauren Markham “do quite the opposite, for as much waste and imperfections as there are in international aid, aid in Central America has been vital for creating community safety programs, job skills development and government accountability standards. It has also helped with drought mitigation and supporting climate-resilient agricultural practices. In other words, foreign aid to Central America – a place unduly hit by climate change – is supporting the kind of climate change resiliency that will keep people from having to leave in the first place”.¹⁵¹

In conclusion, as Robert McLeman, Associate Professor of the Department of Geography and Environmental Studies at Wilfrid Laurier University, writes in a report in 2017, “the physical impacts of climate change are set to become the fastest-growing driver of involuntary migration and displacement globally, beginning in the middle of this century. States that are already politically fragile are the most likely future epicenters for climate-related violence and forced migration events.”¹⁵²

¹⁵⁰ Georgina GUSTIN, Mariana HENNINGER, *Central America's choice: Pray for rain or migrate*, InsideClimate News, NBC News, July 9, 2019. Available at : <https://www.nbcnews.com/news/latino/central-america-drying-farmers-face-choice-pray-rain-or-leave-n1027346>

¹⁵¹ Lauren MARKHAM, *How climate change is pushing Central American migrants to the US*, The Guardian, April 6, 2019, Available at: <https://www.theguardian.com/commentisfree/2019/apr/06/us-mexico-immigration-climate-change-migration>

¹⁵² Robert MCLEMAN, *Migration and Displacement in a Changing Climate*, Epicenters of Climate and Security: The new geostrategic landscape of the anthropocene, The Center for Climate Security, June 2017, Edited by Caitlin E. Werrell and Francesco Femia. Available at : https://climateandsecurity.files.wordpress.com/2017/06/12_migration-and-displacement.pdf

IV. Non-State Actors and the Environment

IV.1 The Emergence of Environmental Consciousness in Europe and in the United States and the Formation of Environmental Movements

Starting from the late 1960s, major transformations occurring throughout the world became the object of a very complex area of study and research. These deep and radical changes have come to be known as social movements, taking on a significant role in modern history. This term refers to a series of actions taken by either single individuals or collective initiatives, all of them with heterogeneous points of view, with the common intent of expressing opinions and often dissent towards a whole variety of distinct issues. Social movements are often identified with popular activism, manifesting itself in different forms and diversified intensity of collectivity engagement, acting with considerably different levels of radicalism. The second half of the twentieth century has been characterized by these movements, sometimes involved in political organizations with ideas and values standing against the ruling power. Originally, social movements concentrated primarily on labor and nations issues; later in the 1960s, actions were instead related to different subjects, such as for instance the fight for women's rights, ecology or minorities' struggle for equality. Later on, the new millennium saw the outburst of mobilizations fighting against the globalization process and events of such magnitude seem to lead to a real global challenge whose features reflects both past class movements and new social movements' characteristics. The emergence of these most recent waves of varying protests publicly supporting or attacking social transformations, whose interdependence is not always easily recognizable, is now known as "global justice movement". It is exactly within this frame that the environmental movement arose, developing over time and acquiring different features in different areas of the world. Particularly, in this chapter we will try to examine how the environmental movement originated in the United States and in Europe and to underline the similarities and differences. The basic concern for the environmental movement is the relationship between humans and the natural environment, how the former is affecting the latter and in which ways it is possible to stop this process of environmental deterioration. The reasons behind the origin of this movement may lay both in the desire to create a better world for future generations and for the

earth itself, through the protection and the preservation of ecosystems and biodiversity but also in the more personal interest of a healthier and less polluted community that might not have the same capacity to get access to natural resources that have been destroyed by harmful human activities. In order to fight for nature's rights or against human destruction, movements formed by people, organizations or other entities start taking shape. Especially in the past decades, the environmental movement and the organizations that are part of it are playing a fundamental role within governments, being able to form partnerships, to establish international environmental agreements and to work towards the increase of global awareness concerning environmental issues that are affecting the entire world. The institutionalization of these environmental movement organizations led the Spanish sociologist Manuel Castells to affirm in his book *The Power of Identity* that the environmental movement is "the most comprehensive and influential movement of our time".¹⁵³

It is important to underline that the environmental movement is strictly connected to politics. It is evident, in fact, that the objective of collective action for environmental causes has been and still is the acquisition of a stronger role within the political arena in order to fight against groups with contrasting interests and to persuade others to listen to and embrace their cause. To this regard, Kate O'Neill affirms in her essay *The Comparative Study of Environmental Movements* that "[...] environmentalism is political: environmentalists have to engage with powerful political actors, from the state to multinational corporations, and must work within particular political contexts (both stable and rapidly changing) to achieve their goals".¹⁵⁴

The environmental movement originated as a comprehensive movement that splintered later on into more specific subgroups, addressing different issues such as climate change for instance, the protection of animals and in particular endangered species, the equitable use and access to natural resources or the risks deriving from industrial activity, all of them developing their own organizations and networks.

Originally, environmental movements mostly involved a specific wealthy elite that engaged itself in the promotion of environmental awareness in order to convince policymakers to take actions fostering the preservation of the environment. Later on and nowadays, the movements became much more comprehensive and started to involve a larger part of the population,

¹⁵³ Manuel CASTELLS, *The Power of Identity*, Oxford: Blackwell, 1997.

¹⁵⁴ Paul F. STEINBERG, Stacy D. VANDEVEER, *Comparative Environmental Politics: Theory, Practice, and Prospects*, MIT Press, 2012. Available at: <http://www.jstor.org/stable/j.ctt5vjs7f>.

turning into a “phenomenon that occurs across class, racial, and ethnic divides”.¹⁵⁵ In both the United States and in Europe this evolved environmental activism originated in the 1960s and 1970s; if on the one hand in the United States it emerged also thanks to the best-selling book *Silent Spring* written by the ecologist Rachel Carson, on the other hand, the movement in Europe was strongly connected to student movements and antinuclear movements that could be seen more generally as movements promoting a broader social cause rather than a simple environmental one.

Moreover, in the United States, another precise event of significant importance is considered fundamental for the origin of the modern environmental movement, namely the first Earth Day, a celebration that took place on April 22, 1970. This nation-wide event, where more than twenty million people participated all across the United States, was created by U.S. Democrat Senator Gaylord Nelson from Wisconsin that had already been an essential force concerning environmental conservation during the administration of President John Fitzgerald Kennedy. Earth Day represented an opportunity to emphasize the protest against environmental issues that were affecting the country and the rest of the world, turning environmental concerns into real political concerns.

A common feature of environmental movements in both the U.S. and Europe was the institutionalization of environmental movement organizations that adopted a well defined structure, increasingly acquiring power within politics. Among the organizations that emerged in the United States, it is important to cite two of the most ancient, respectively the Sierra Club and the National Audubon Society, that developed into powerful and effective structured organizations nowadays able to influence government policies and American corporations. The first one, founded in 1892 by John Muir in order to foster the protection of the mountains in California, and whose current objective is to encourage people to protect natural resources and to make an equitable use of them, aims at guaranteeing at the same time the protection and the preservation of the natural and the human environment,¹⁵⁶ The second one, founded in 1896 by Harriet Hemenway and Minna B. Hall, focuses nowadays on the conservation of

¹⁵⁵ STEINBERG, VANDEVEER, *Comparative Environmental Politics: Theory, Practice, and Prospects*, op. cit., page 119.

¹⁵⁶ Sierra Club, About Us. Available at : <https://www.sierraclub.org/about-sierra-club>

natural ecosystems, especially of birds and their habitat in order to protect the biological diversity on the earth.¹⁵⁷

In Europe instead, environmental movements represented the right opportunity for the rise of green parties, assuming an important role that led them to a real competition for political representation with other parties already well established in the political arena.

Concerning environmental movements, Brian Doherty and Timothy Doyle in their article *Beyond Borders: Transnational politics, social movements and modern environmentalism*, classify them into three main categories: the post-material movements, the post-industrial movements and the post-colonial movements. According to the authors, the movements arose in the United States can be identified as post-material movements, while those originated in Europe belong to the post-industrial category. Contrary to the post-colonial movements — characterized by the dichotomy of colonizers and colonized where the latter have to face issues related to environmental security such as the right to get access to basic resources necessary for their survival like clean air and water, fire and land — post-material movements in the United States had a focus on the preservation and protection of endangered animals and natural habitats. To this regard, the two authors write in their book that “[...] the environmentalism of the minority world is constructed as largely post-materialist: more interested in the rights of ‘other nature’, which are implicit in conservation, threatened species and wilderness campaigns”.¹⁵⁸

In Europe instead, different environmental ideologies originated through post-industrial movements. The attention of environmentalists was at that moment on the damaging effects of industries on the environment through high levels of pollution and degradation, together with the radical exploitation of natural resources whose use was destined to industrial plants. Besides the concerns related to the preservation of the natural environment and its biodiversity typical of post-materialism, European ecology movements started acknowledging new sets of issues focused primarily on social inequalities based on ethnic minorities, gender and or sexual orientation. On the other hand, the environmental movements in the United States did not seem to include these concerns into their list of environmental issues, or better, they were not considered as relevant as the preservation of nature, and therefore left behind on

¹⁵⁷ Audubon, About Us. Available at: <https://www.audubon.org/about/history-audubon-and-waterbird-conservation>

¹⁵⁸ Brian DOHERTY, Timothy DOYLE, *Beyond borders: Transnational politics, social movements and modern environmentalisms*, Environmental Politics, 2006, 15:5, 697-712, DOI: 10.1080/09644010600937132, page 706.

their scale of priorities and not included in politics.¹⁵⁹ This can be better understood if we take into consideration the nature of environmental movements in the two areas. In fact, it is important to underline that on the one hand, the European approach towards social movements has always been focused on critique and the attempt to understand the reasons why social movements originated. On the other hand, the United States has developed a contrasting tradition, based mainly on a more nominalist approach aiming at the understanding of the movements' features, how they act and in what circumstances the protests take place. In other words, "the European tradition emphasising understanding ideology in relation to social structure; the US tradition focused on explaining specific protest actions".¹⁶⁰

Despite these differences concerning the environmental movements in the two areas and contrary to the environmental movements originated in the South of the world that tend to remain emancipator forms of environmentalism without gaining real power within the political arena, there is an important common aspect characterizing environmental movements in the United States and in the European Union. That is, environmental movements in the North of the world tend instead to turn into governance movements, acquiring a significant role in politics and therefore becoming an integral component of policy making.

It is however important to highlight the fact that even if the terms North and South refer here to industrialized countries and industrializing or countries not yet undergoing the industrialization process, nevertheless considerable inequalities among countries still exist. To mention a well-known example, the environmental movements in the United States can be very different if we think on the one hand of the environmental justice movement originated in African-American communities in the early 1980s in order to oppose the environmental movement of the 'white elite' that did not produce sufficient results in the previous decades. The movement's main concern was the unequal distribution of pollution, often affecting mostly minority and poorer communities; on the other hand, the movement focusing on the preservation of nature originated in the North West interested a very different part of the population, mainly the wealthier minority.¹⁶¹

¹⁵⁹ DOHERTY, DOYLE, *Beyond borders: Transnational politics, social movements and modern environmentalisms*, op. cit., page 706.

¹⁶⁰ DOHERTY, DOYLE, *Beyond borders: Transnational politics, social movements and modern environmentalisms*, op. cit., page 703

¹⁶¹ DOHERTY, DOYLE, *Beyond borders: Transnational politics, social movements and modern environmentalisms*, op. cit., page 706.

In the last decades of the twentieth century the concern towards environmental issues had reached high levels in most of the European countries but with diverse priorities, interest causes and types of collective action, as Christopher A. Rootes writes in his article *Environmental movements and green parties in western and eastern Europe*. However, the correlation between this environmental consciousness and the rise of environmental movements is not, according to the author, simple to define. As an example, two European countries where environmental consciousness reached high levels and where environmental problems were therefore considered also as political problems, namely the Netherlands and Denmark, the support for the formation of Green parties was considerably low. Another case is the one of Sweden, which had on the contrary a Green Party that gained popularity but did not have an autonomous environmental movement even if a great environmental consciousness characterized the country. On the other hand instead, countries like France, Belgium, where there was a much lower level of environmental awareness and environmental movements compared to the northern countries, green parties obtained a relative bigger success. Another case is the one of Italy, where the awareness about environmental issues affecting citizens was high but at the same time the environmental movement did not reach high levels of development, nor did green parties, with very little electoral support.

Despite the great importance of environmental social movements around the world, a denial trend towards environmental problems such as global warming started in the 1980s, becoming a fully-fledged attack on environmental science and becoming a real counter-movement. David Schlosberg, Professor of Environmental Politics at the University of Sidney, writes that this attack “has been based on the production of lies developed by the fossil fuel industry through industry-funded conservative think-tanks, laundered through conservative foundations, spun and repeated by right-wing media outlets, and adopted as ideology by the Republican Party.”¹⁶² The Environmental Counter-Movement has been working towards the maintaining of energy policies that allow an unlimited use of fossil fuels through the denial of scientific research’s results attesting an urgent necessity to limit carbon emissions to a set level. “To accomplish this goal in the face of massive scientific evidence of anthropogenic climate change has meant the development of an active campaign to manipulate and mislead the public over the nature of climate science and the threat posed by climate change”, writes

¹⁶² David SCHLOSBERG, *On the origins of environmental bullshit*, July 25, 2017. Available at: <http://theconversation.com/on-the-origins-of-environmental-bullshit-80955>

Robert J. Brulle in his essay *Institutionalizing delay: foundation funding and the creation of U.S. climate change counter-movement organizations*.¹⁶³

The existence of this counter-movement is also confirmed and well depicted in the book written by Naomi Klein, *This Changes Everything. Capitalism vs. The Climate* in which she points out that a higher percentage of left-wing politicians and their supporters believes that human actions have been having a disruptive impact on the environment and therefore on the climate, compared to the percentage of right-wing politicians and supporters. According to a Yale's research, people with strong "egalitarian" and "communitarian" worldviews, more inclined to support social justice and collective action and wary of the excessive influence of corporations tend to believe, on the one hand, in scientific research proving the existence of climate change. On the other hand, people with strong "hierarchical" and "individualistic" worldviews, often hostile to welfare policies addressed to those on the lower end of the income distribution, including minorities, supporting industry and the neoliberal theory of individual responsibility tend to consider the environmental movement as "a Trojan horse designed to abolish capitalism and replace it with some kind of green communitarianism" and moreover that climate change "has little to do with the state of the environment and much to do with shackling capitalism and transforming the American way of life in the interests of global wealth redistribution".¹⁶⁴ Since its emergence, the counter-movement has been defending policies implemented by neoliberalism, such as free flows of capital and goods, reduction in tax rates and privatization of assets owned by the state and they have been strongly emphasizing the fact that "limitless pursuit of profit were nothing to apologize for and offered the greatest hope for human emancipation that the world had ever known".¹⁶⁵ The counter-movement represents for its supporters a war against the causes promoted by modern environmentalism, such as increasing industry regulation, a more equitable redistribution of resources, higher taxes and reintroduction of welfare policies and state intervention, all seen as an affront to the incredible capacity and right of the humankind to subjugate Nature and exercise control over it.¹⁶⁶ In conclusion, environmentalism, through its global mobilization, has been working towards an increased awareness of human action's impacts on the

¹⁶³ Robert J. BRULLE, *Institutionalizing delay: foundation funding and the creation of U.S. climate change counter-movement organizations*, February 2014, page 12.

¹⁶⁴ Naomi KLEIN, *This changes everything: Capitalism vs. the Climate Change*, Simon & Schuster, 2015, pages 28, 31, 32.

¹⁶⁵ Naomi KLEIN, *This changes everything: Capitalism vs. the Climate Change*, op. cit., page 33.

¹⁶⁶ Naomi KLEIN, *This changes everything: Capitalism vs. the Climate Change*, op. cit., page 36.

environment and to make people aware that, as Naomi Klein writes, “we are not apart from nature but of it. That acting collectively for a greater good is not suspect, and that such common projects of mutual aid are responsible for our species’ greatest accomplishments. That greed must be disciplined and tempered by both rule and example. That poverty amidst plenty is unconscionable”.¹⁶⁷

IV.2 The Origin of Green Parties and their Evolution in Europe and in the United States

Among the important consequences of the development of social movements, the rise of green parties across the globe is certainly one of the most significant and tangible one. After the end of World War II, the world political arena, more precisely in the Western countries, was dominated by liberal, social democratic and conservative forces, from which the new green parties wanted to distinguish. Also, the emergence of new social and political movements can be explained by the occurrence of social change that causes a transformation in the priorities of values in Western societies, which is to say a shift from materialist values to post-materialist values. However, the emergence of these new political parties was not monolithic, on the contrary, some of them started to expand their field of interest, moving away from the mere ecological ideals but also developing new sets of concerns increasingly related to social and human rights and international relations. First of all, it is important to highlight the fact that two types of green parties exist: the conservative ones that developed a strong environmental identity and the ones that elaborated a New Left policy agenda. The latter share principles and ideals with the Left and therefore they tend to consider themselves as members of the Left; they reject the capitalist system and push for radical reforms of the modern society but at the same time they are also opposed to the hierarchical and bureaucratic corporatism of the socialist system as an alternative for capitalism. In addition, green parties reject the ideology common to capitalists and socialists that is based on the exploitation by men of nature.¹⁶⁸

¹⁶⁷ Naomi KLEIN, *This changes everything: Capitalism vs. the Climate Change*, op. cit., page 53.

¹⁶⁸ Matthias KAELBERER, *The Emergence of Green Parties in Western Europe*, *Comparative Politics* 25, no. 2, 1993, pages 229-43, DOI:10.2307/422353. Page 231

Later on, some green parties were able to obtain great successes within the political sphere, exerting significant power within the government of some countries, as in the famous case of Germany and other European countries where the political structure allows them to be influential; in other cases, as in the United States, the influence exerted by green parties never reached the same amount of success and they were therefore forced to express their opinions in different ways and try to obtain popular and political consensus through using less direct strategies.

In Europe, the majority of the first green parties developed an identity that was strictly connected to New Left ideals, whereas in Austria and Switzerland these parties had to face a moderate competition with more conservative green parties. As Matthias Kaelberer affirms, “[...] green parties in western Europe show an ecological orientation (specifically a rejection of nuclear power plants), advocate individualism, self-determination, women's rights, and unilateral disarmament, and display direct participatory sentiments”.¹⁶⁹

Moreover, the political configuration of green parties in Europe appeared very similar, with nonhierarchical structures and unorthodox protest behavior. The supporters of the green parties as well shared similarities, mostly young students or people with a high level of education belonging to the middle class.

Among the most important examples of green parties, the German Greens, *Die Grünen* is the original name, is certainly the first one. Their origin lies in the fact that the other German parties across the entire political spectrum of the 1970s did not take environmental and social issues into sufficient consideration and therefore they felt the need to institutionalize what was until that moment a mere environmental movement focused on nuclear power plants and issues related to people's life conditions with no official structure. More precisely, the 1980s were the years during which the complete transition from a social movement to a political party occurred; most importantly, 1983 represented a major year for this evolution, mainly thanks to two specific events. On the one hand, the favorable vote of the German Parliament to the deployment of nuclear missiles on German soil caused the formation of the political party and the entry in political elections; on the other hand, the government coalition of the Greens with the Social Democratic Party was frowned on by some members of the party and a controversy within it occurred. The result was the division of the party into two wings, the *Realos*, fostering political realism and the *Fundis*, remained attached to fundamental

¹⁶⁹ KALBERER, *The Emergence of Green Parties in Western Europe*, op. cit., page 231.

principles. Throughout the years, the German Greens became a fundamental part of the political system against which they were previously fighting and despite their moderate electoral success, varying from 5 to 10m percent of votes, they were however exerting a great influence on other more powerful parties that were consequently forced to adopt environmental issues so that they could guarantee to receive their share of the electorate.

The American case is significantly different from the one in Germany. According to the members of the green movement in the United States Fritjof Capra and Charlene Spretnak, and their book *Green Politics: The Global Promise*, published in 1984 after travelling through Germany, the United States seemed ready to experience the same kind of political movement. After obtaining a large support, a conference gathering environment experts, activists and theorist was organized by Charlene Spretnak on the campus of Macalaster College in the city of St. Paul, Minnesota in August 1984, aiming at the formation of an American Green Party that could play a relevant role within the political arena as well as the one in Germany. As a result, the Committees of Correspondence was created. The duty of the committees was to organize local green organizations and to coordinate the communication between them. Later on, in 1991 the Committee of Correspondence was replaced by the Greens/Green Party USA, conceived as in order to appease the discrepancies between the members fostering a major active political participation and those more attached to grassroots mobilization. However, this compromise was not sufficient for the unity of the movement which consequently split into different green parties at a state level, creating in this way the Association of State Green Parties in 1996. Four years later, in 2000, the Association underwent another transformation, becoming The Green Party of the United States, on the occasion of Ralph Nader's¹⁷⁰ second presidential campaign.¹⁷¹

According to Spretnak, “[...] the Green Party only began to offer an alternative to the mainstream parties when it moved away from the dogmatic Marxism and anarchism of some of its more radical members”.¹⁷² These radical members were represented by the

¹⁷⁰ Ralph Nader is an American political activist, attorney and author, born in 1934 who was a well-known advocate for environmentalism, the rights of consumers and government reforms and who ran for President of the United States three times as an independent candidate for the Green Party.

¹⁷¹ Kenneth F. WARREN, *Encyclopedia of U.S. Campaigns, Elections, and Electoral Behavior*. Los Angeles: Sage, 2008, page 289.

¹⁷² Frank ZELKO, *The Origin of Green Parties in Global Perspective*, Symposium at the GHI, May 26, 2004. Co-sponsored by the GHI and the Heinrich Bo“ ll Foundation of North America. Conveners: Frank Zelko. (GHI) and Marc Berthold (Heinrich Bo“ ll Foundation).GHI BULLETIN NO. 35 (FALL 2004), page 180. Available at : https://www.ghi-dc.org/fileadmin/user_upload/GHI_Washington/Publications/Bulletin35/35.179.pdf

Greens/Green Party USA, the more fundamentalist wing of the movement, strongly willing to engage in collective action in order to cause important changes rather than politicize the movement, as opposed to the more pragmatic Green Party USA, fostering environmental changes through the political sphere with elected candidates, keeping however social activism as a powerful tool.¹⁷³ According to the supporters of the more fundamentalist wing, the US Greens constituted the result of many years of student movements of the New Left in the 1960s and that is why grassroots activism was far more fostered and electoral politics was rejected. In addition, in defense of this more radical movement, “[...] social ecologists had provided an ideological and organizational focus for many activists who were searching for a form of politics outside the American mainstream and for an ideology that explained the link between environmental deterioration and social inequality”.¹⁷⁴ For many academics linking the environmental movement in the United States to New Left ideologies, the problem lied in the fact that these progressive movements were lacking “[...] of grounding in an ecological paradigm and sensibility”¹⁷⁵ and, as opposed to the conservative green parties, they did not develop a well defined ecological identity.

Despite what the society believed and was expecting from the U.S. Green Party, concerns regarding the condition of the environment did not occupy the first place in their list of priorities, deciding instead of identify the Green Party with ideologies of a more traditional sectarian leftist character, more generally known as social and racial justice. As a consequence, it has argued that in order to become a more powerful party and globally recognized, the American Green Party should have developed its own personal objective, different from the ones targeted by the New Left movement in the 1960s. In fact, as also Matthias Kaelberer writes in his article *The Emergence of Green Parties in Western Europe*, “Green parties of the New Left variety have established fairly comprehensive ideological agendas and draw support from a network of various new social movements. Environmental concerns are only one center of attention among a variety of other issues, most important among them women's rights, peace, and civil liberties”.¹⁷⁶

Green parties across the world tended to gather people with strong ideals and people with a strong pragmatism and this represents the reason why many discrepancies and divisions

¹⁷³ WARREN, *Encyclopedia of U.S. Campaigns, Elections, and Electoral Behavior*, op. cit., page 289.

¹⁷⁴ ZELKO, *The Origin of Green Parties in Global Perspective*, op. cit., page 181.

¹⁷⁵ ZELKO, *The Origin of Green Parties in Global Perspective*, op. cit., page 182.

¹⁷⁶ KAELEBERER, *The Emergence of Green Parties in Western Europe*, op. cit., page 230

occurred within these parties. Concerning this, John Rensenbrink, emeritus professor of political science at Bowdoin College in Maine and Green Party activist, explains this contrasting ideas taking into account the distinction between *Ethics of Intention* and *Ethic of Responsibility* identified by Max Weber.¹⁷⁷ In the first case, people develop strong principles and ideologies and are much less likely to modify them and compromise seems not to be a solution for them. On the other hand, people who follow an Ethics of Responsibility tend to develop a much stronger pragmatism and that leads them to be much more adaptive, finding strategies and calculating risks. Despite the fact that they have strong ideas as well, this second category is much more open to accept compromise. According to Rensenbrink, this explains why the Green Party in the United States faced divisions during the first fifteen years of its history. The same idea can be applied to the German case with the separation between *Realos* and the *Fundis*.

In Europe, in countries like the United Kingdom where the electoral system makes it really difficult for third parties to gain electoral victories, the Greens were throughout the 1980s focused on their ideals, adhering to their ideologies and not open to compromise in order to attract a larger audience and support. As a result, their objective was the production of very long and detailed manifestos and policy documents. Sara Parkin, green political activist and founder of the Forum for the Future¹⁷⁸ together with Jonathon Porritt and Paul Ekins, affirmed that, despite the role played within the European Parliament thanks to the proportional representation system, “the electoral system and the drain on financial resources means the U.K. party still suffers from the tyranny of the volunteer and an enduring ambivalence about power”.¹⁷⁹

Green parties obtained discrete success in Europe, especially in northern countries like Sweden, Finland or Latvia, where a Green Prime Minister, Indulis Emsis, was elected in 2004. The same year saw the establishment of the European Green Party, when thirty-two green parties from twenty-nine countries gathered together thanks to a strong cooperation

¹⁷⁷ Max Weber, born on April 21, 1864 in Erfurt, Prussia, Germany and died on June 14, 1920 in Munich, Germany, was a German sociologist and political economist who wrote, *Protestant ethic*, his most famous work, where he analyses Protestantism and capitalism. His focus on objectivity in scholarship and the analysis of the reasons behind human action had a very strong influence on sociology.

¹⁷⁸ The Forum for the Future, created in 1996, is a registered charity and non-profit whose objective is the promotion of sustainable development through the work in partnership with government, business and other types of organizations, in order to reach a sustainable future in the fastest way possible. The current CEO is Sally Uren and the offices are located in the United Kingdom, in the United States, in Singapore and India.

¹⁷⁹ ZELKO, *The Origin of Green Parties in Global Perspective*, op. cit., page 183.

between them in order to form a coalition in the European Parliament, considered as a very important success for the green political movement, both at national and global level. As a result, as Matthias Kaelberer writes, “[...] green parties in western Europe have succeeded in keeping the balance between their heritage in social protest movements and their integration into the established political system. They have introduced new issues into the realm of policymaking and have attempted to keep up new forms of participation”.¹⁸⁰

In the United States instead, the role of the Green Party is in a sense marginal because of the role played as a third party. One of the main differences between the influence of green parties in Europe and in the United States is strictly connected to the electoral system. In fact, whereas green parties gain seats in the Parliament in many continental European democracies according to the percentage of voters that supported them thanks to a proportional representation electoral system, the electoral system of the United States makes it difficult for small political parties to compete. Per Urlaub, associate professor of German studies at the University of Texas describes this in his article, affirming that “proportional representation makes it possible for small parties to gain a toehold and build a presence in government over time”.¹⁸¹ Contrary to many countries in Europe, the first-past-the-post electoral system, where the party with the most votes takes them all and therefore wins, prevents smaller parties from gaining any political power. As a consequence, “American voters choose their leaders within a de facto two-party system in which other parties often have trouble even getting their candidates’ names onto ballots”.¹⁸² Evidence of this lies in the fact that the American Green Party has never obtained a congressional seat but it won some seats only in few elections at a state-level. One of the most significant moments of the history of the American Greens, as mentioned previously, is represented by the presidential election of 2000 when Ralph Nader and Winona LaDuke¹⁸³ won 2.8 percent of the votes, causing a quite relevant controversy according to which the success obtained by the Greens only contributed to the victory of the Republican Party of George W. Bush, taking a high percentage of votes away from the Democratic Party of Al Gore.

¹⁸⁰ KAELEBERER, *The Emergence of Green Parties in Western Europe*, op. cit., page 241.

¹⁸¹ Per URLAUB, *In Europe, the Green Party is a force. In the U.S., it's irrelevant. Here's why*, The Washington Post, October 19, 2016. Available at: <https://www.washingtonpost.com/posteverything/wp/2016/10/19/in-europe-the-green-party-is-a-force-in-the-u-s-its-irrelevant-heres-why/>

¹⁸² URLAUB, *In Europe, the Green Party is a force. In the U.S., it's irrelevant. Here's why*, op. cit.

¹⁸³ Winona LaDuke is an American environmentalist, writer and economist whose activity is focused on sustainable development and preservation of tribal land. She ran twice for Vice President of the United States with the Green Party of the United States, in 1996 and 2000.

In addition, another reason why the American Greens seem not to occupy an influential role the same way they do in Europe is their radical position and the lack of willingness to reach compromise, indispensable for governing. As seen in the past, more extreme positions and a relevant distance from the political process did not lead to success, as in the German case of the moderate *Realos* and the fundamentalist *Fundis* in the 1980s and 1990s, where the former finally prevailed over the latter. To become a governing party the Greens in Germany had to abandon the conservative identity and start developing compromise abilities in order to become more powerful; they had therefore to create a coalition with the center-left Social Democratic Party (SDP) in 1998, a coalition that aided them in the transition from activism to politics. However, this shift from activism to political participation raised many critiques among the supporters of the more radical wing, a critique that evolved into physical violence on the occasion of the government coalition's support for the use of military force in a campaign against Serbia led by NATO in 1999. Despite this event, the German Green Party maintained a strong support until 2005 when the coalition split, and even afterwards, thanks to their ideals and principles that became a fundamental part of the German political culture. As a consequence, the German government has hitherto supported alternative sources of energy. In conclusion, the American electoral system and the strong attachment to radical positions with no possibility of compromise do not offer the American Greens the same opportunities offered to European Greens. As Per Urlaub writes, the Green Party candidates in the United States “[...] have remained activists who are true to their base instead of developing policy positions that would appeal to a broader audience. By doing so, they weaken their chances of winning major races even in liberal strongholds”.¹⁸⁴ For this reason, environmental concerns are more likely to be taken into account mainly if the two major American parties, the Democrats and the Republicans, introduce them into their political agenda. Instead, “climate change, dwindling energy resources and growing human and economic costs from natural disasters will do more to promote ecological consciousness and political change in mainstream America than the radical rhetoric of the U.S. Green Party”.¹⁸⁵

¹⁸⁴ URLAUB, *In Europe, the Green Party is a force. In the U.S., it's irrelevant. Here's why*, op. cit.

¹⁸⁵ URLAUB, *In Europe, the Green Party is a force. In the U.S., it's irrelevant. Here's why*, op. cit.

IV.3 The Relationship Between Corporations and the State: Social Responsibility and the Environment

In the past decades, the role played by businesses within the state became increasingly important, exerting a more and more significant influence on economic but also political issues in order to increase personal benefits and economic gains through institutional changes within the state. This has been recently verified especially in the field of politics on the environment through a strong environmental engagement that led many firms to participate and elaborating voluntary environmental programs (VEPs). These programs constitute a means to face environmental harmful impacts that are not sufficiently opposed and therefore reduced by existing regulations. The objective of VEPs is to promote environmental and social outcomes, going beyond governmental policies and taking proactive actions aiming at the protection of the environment. To guarantee efficient results, some of the voluntary environmental programs develop mechanisms of monitoring and sanctioning so that the disequilibrium between states minimized.¹⁸⁶ Therefore, corporations have recently become an active participant in the production of environmental regulations, acting in order to take advantage of the opportunities that the state offers in exchange for a greater control on the environment. As Deborah Rigling and Erika Weinthal write in their essay included in the book *Comparative Environmental Politics: Theory, Practice and Prospects*, “As economic trade becomes ever more transnational and supply chains even more elongated, corporations are increasingly filling a void in the global economy as the suppliers of regulatory governance. [...] Through their participation in voluntary initiatives, corporations are the creators of social knowledge about the pairing of economic growth and environmental governance”.¹⁸⁷

The relationship between corporations and environmental groups has become now fundamental but a completely reversed situation characterized the years in which the first environmental movements started developing. In fact, the role of firms has on the one hand always been seen as a producer of economic prosperity for the state, thanks to the creation of jobs and the promotion of government actions through taxation. However, all of this resulted

¹⁸⁶Aseem PRAKASH, Matthew POTOSK, *Voluntary Environmental Programs: A Comparative Perspective*, December 2012, *Journal of Policy Analysis and Management* 31(1):123 – 138 DOI: 10.1002/pam.20617

¹⁸⁷ STEINBERG, VANDEVEER, *Comparative Environmental Politics: Theory, Practice, and Prospects*, op. cit., page 143.

in an impoverishment of environmental conditions. On the other hand, the development of Corporation Social Responsibility (CSR) — which is a concept developed after the introduction by international organizations of regulations based on the principles of sustainable development in order to foster economic growth and environmental protection at the same time¹⁸⁸ — has precipitated a change. As a consequence, a new approach has developed, which envisages that the best interests of a company in terms of increasing its profits and the interests of the society to maintain a healthy and not polluted environment can finally coincide. In other words, nowadays the objective of CSR is well represented by the definition elaborated by the World Business Council for Sustainable Development (WBCSD) that states: “the commitment of business to contribute to sustainable economic development, working with employees, their families, the local community and society at large to improve their quality of life”.¹⁸⁹

To this regard and representing the new approach developed, many corporations engaged themselves in environmentally sustainable initiatives; among these the British Virgin Group Limited owned by Richard Branson, decided in 2006 to invest all the revenue from the travel companies that are part of the Group in order to fight climate change; in addition, another British food company, Tesco, became the leader in the food industry thanks to its willingness to measure the quantity of carbon emitted during production and to radically decrease the consumption of energy; or the American giant Walmart, declaring its plan to use only renewable energy, producing sustainable goods and zero waste.¹⁹⁰

Moreover, through this voluntary action taken by corporations, they are assuming roles more and more significant and becoming increasingly independent from the state and gaining more autonomy in relation to environmental matters. Plus, not only do they have more autonomy, but, as Porter and Kramer affirm in their article *Strategy and Society: The Link Between Competitive Advantage and Corporate Social Responsibility*¹⁹¹, firms have also the

¹⁸⁸ Katarzyna HYS, Liliana HAWRYSZ, *Corporate Social Responsibility Reporting*, China-USA Business Review, ISSN 1537-1514 November 2012, Vol. 11, No. 11, 1515-1524. Available at: https://www.researchgate.net/publication/268925189_Corporate_Social_Responsibility_Reporting

¹⁸⁹ The World Business Council for Sustainable Development (WBCSD) is a global organization including more than 200 leading businesses that collaborate in order to foster the adoption of the principles of sustainable development and a consequent transition to a sustainable world. Available at: <https://www.wbcsd.org/>

¹⁹⁰ STEINBERG, VANDEVEER, *Comparative Environmental Politics: Theory, Practice, and Prospects*, op. cit., page 145.

¹⁹¹ Michael E. PORTER, Mark R. KRAMER, *Strategy and Society: The Link between Competitive Advantage and Corporate Social Responsibility*, Harvard Business Review 84, no. 12 (December 2006): 78–92. Available

opportunity of increasing their competitive advantage thanks to lower expenses through a diminishment of their harmful impacts and a consequent improvement of their reputation.

As Hys and Havrysz affirm in their article, corporations have the ability to influence the political decision-making in order to promote their own interests thanks to their better structured organization and to their ability of using resources in the attempt of convincing government agencies to adopt measures that would be favorable for them, contrarily to the inhomogeneous character of other groups represented by citizens who are not really able to shape policy with the objective of fostering their interests.

At the same time, the idea that the privileged position of firms can contrast democracy through exerting pressures on political decision-making, especially in the United States by trying to pressing Congress to adopt laws in their favor, is however shared by many. In fact, the government of the United States has been trying to limit the political influence of corporations for a long time; it is possible to find evidence of this attitude in the old Sherman Antitrust Act passed in 1890 that authorized the government to prevent businesses from coming together in order to artificially restrict output aiming at maximizing profits and create a monopoly.¹⁹²

In the past decades, businesses have tried to limit the imposition of new regulations that would create new expenses and through their powerful influence they have tried to contrast the elaboration of environmental standards to respect, their implementation and enforcement. As an example, the American administration of former President W. Bush showed how important and influent businesses were in the political arena. A proof of this consisted in the national energy plan designed by the Energy Task Force led by Vice President Dick Cheney, which clearly demonstrated the strict connection between the Department of Energy and businesses. This close relationship between politics and corporations representatives was in

at: <https://www.comfama.com/contenidos/servicios/Gerenciasocial/html/Cursos/Columbia/Lecturas/Strategy-Society.pdf>

¹⁹² The Sherman Antitrust Act of July 2, 1890 was the first antimonopoly measure passed by Congress of the United States in order to prevent anticompetitive practices in the marketplace. The constitutional power to regulate intrastate commerce held by Congress functioned as a base for this act. The Sherman Antitrust Act was named after Senator John Sherman of Ohio who worked as a chairman of the Senate finance committee and the Secretary of the Treasury during the presidency of Rutherford B. Hayes. Other laws providing the same kind of protection already existed and had been passed by some states; however, these laws only applied to companies within the state.

fact revealed by documents released under the Freedom of Information Act¹⁹³ that gives all American citizens freedom to request government documents and used in this case by environmental groups in order to have real evidence.

However, the origin of Corporate Social Responsibility in the United States dates back to the beginning of the 1970s when few American corporations started to voluntarily adopt practices that would benefit the environment. In addition, despite the initial opposition, firms had to finally adopt new environmental standards that had been established thanks to the passage of new environmental legislation such as the Clean Air Act in 1970 and the Clean Water Act in 1972, requiring corporations the adoption of new and less polluting technologies and better standards of safety in order to protect societal health and welfare.

At the same time, Europe found itself in a similar situation. European corporations had to adapt to new regulations aiming at improving their environmental standards; in fact, businesses had to develop operational and managerial abilities in order to both guarantee economic profit while at the same time respecting and protecting the environment. Initially, businesses were required to establish minimal environmental safeguards mandated by legislation; later on, the same firms realized that they could actually use their environmental consciousness in a way to enhance their competitive advantage and therefore they started to conceive environmental protection not only as a cost but also as an opportunity. Therefore, by engaging more in environmental standards, they can project a positive public image that can enhance the perception of consumers which will be more likely to address to these businesses. Moreover, the pursuit of conducting business in a more environmentally friendly way can provide the development of new technologies and new practices that would lead to competitive advantages. An example of this competitive advantage is constituted by the substitution of chlorinated fluorocarbons with new solvents in 1978, after it was discovered that the former substances were harmful for the ozone layer; consequently, businesses could decrease operating costs and foster their production using safe substances.¹⁹⁴

¹⁹³ The Freedom of Information Act (FOIA) gives citizens the right to make a request in order to have access to records and information of federal agencies. These data are generally available to public as long as they are not kept classified and protected by any of the nine exemptions included in the law or by one of three special law enforcement record exclusions.

¹⁹⁴ Katy WOLF , Azita YAZDANI, Pamela YATES, *Chlorinated Solvents: Will the Alternatives be Safer?*, *Journal of the Air, Waste Management Association*, 1991, 41:8, 1055-1061, DOI:10.1080/10473289.1991.10466899

Both in the United States and Europe, a similar approach towards environmental regulations has been developed in the last decades of the twentieth century. If initially companies were taking a very aggressive approach towards environmental legislation, actively working to prevent new regulations from coming into practice, later on a new and more nuanced approach was developed. In other terms, instead of taking an approach that is always confrontational, businesses start thinking in a more strategic way about how they should deal with environmental policies, thinking more deeply about how to shape them in order to obtain benefits rather than simply additional costs, basically developing a more flexible and strategic approach. This environmental shift for businesses both in the United States and in Europe had also been possible thanks to their strong and powerful role within global economy and therefore, they had the possibility to use resources in order to promote environmental strategic practices within their organization but also to other companies at both national and international levels. In 1990, this trend was particularly evident thanks to the initiative in which the Global Environmental Management Initiative was created by leaders of famous corporations such as Eastman Kodak, DuPont, and Procter and Gamble. This initiative aimed at promoting environmental, safety and health excellence at a global level thanks to the sharing of information and practices that would help other corporations to develop environmental quality, also thanks to their environmental management organizations with employees dedicated to corporate environmental affairs.¹⁹⁵

This new approach resulted in market-based and voluntary programs developed especially in the 1980s, where firms were increasingly able to manage the effects of their operations on the environment. As a consequence, the nature of the relationship between corporations and governments underwent a significant change; the need by governments to formulate more and more environmental regulations to reduce the harmful impacts of businesses on the environment was reduced by the increasing environmentally friendly practices of businesses which, at the end of the 1990s had adopted more than fifty voluntary environmental programs in the United States while European businesses had participated in more than three hundred voluntary agreements. In the U.S. many firms decided to take part into the Chemical Manufacturer Association's Responsible Care program in order to adopt environmental standards mandated and sponsored by the industry sector and not by the government in fear of stricter regulations coming from the latter after the explosion at Union Carbide Bhopal in

¹⁹⁵ HYS, HAWRYSZ, *Corporate Social Responsibility Reporting*, op. cit. page 150.

1984.¹⁹⁶ Two years later in fact, the EPA's Toxics Release Inventory (TRI)¹⁹⁷ imposed on American businesses very strict regulations aiming at revealing toxic chemical emissions.

Given the reticence of the government to implement direct regulations on businesses, the government agencies started to foster voluntary environmental programs (VEPs) aiming at inviting businesses to go beyond basic environmental standards set by traditional compliance measures including a decrease of pollution, the negative effects of energy use and global warming. The objective was to encourage firms to engage in a process in which both economic growth and environmental protection are strongly promoted.

In the United States, the administration of Bill Clinton was particularly characterized by a strong development of VEPs and this fostered a period of collaboration between the private sector and the government that benefitted the environment and the formulation of initiatives aiming at its protection. However, it is necessary to underline that among these initiatives, many were still serving the interests of businesses, able to use resources to foster favorable policies. VEPs are also interpreted as responses to the fears of stricter government regulations, and therefore they are used by businesses as means to have a better understanding of their environmental impact, for instance through the Environmental Protection Agency Climate Leaders¹⁹⁸ launched in 2002 and that is no longer valid and the Chicago Climate Exchange (CCX)¹⁹⁹. Thanks to these two VEPs, businesses are able to track and manage

¹⁹⁶ An accident at the Union Carbide pesticide plant in Bhopal, India, occurred on December 2, 1984. The consequences were disastrous: more than 30 tons of highly hazardous gas were released in the air, precisely the methyl isocyanate and other toxic substances. Many people lived in that neighborhood and more than 600,000 people were exposed to the lethal gas, causing many victims, in addition to eyes and throats burning and nausea. The deaths were first estimated to be 3,800 and then 16,000. However, the latest estimates by the government count more than 15,000 victims over a period of several years.

¹⁹⁷ The Toxics Release Inventory (TRI), which was established by Section 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA), represents an important tool that informs people on hazardous chemical releases and on the availability of activities aiming at the prevention of pollution reported by federal and industrial facilities. Thanks to this instrument, governments, local communities, agencies, businesses and others have the opportunity to base their decision and policy-making on information and data released by the Toxics Release Inventory.

¹⁹⁸ Climate Leaders is a program of the Environmental Protection Agency of the United States and it aims at the reduction of greenhouse gases. It was created in 2002 as a partnership involving the government and the industry and it is no longer valid today. The objective of the program was to provide guidance to businesses willing to develop and pursue strategies to combat climate change. Moreover, a great attention was focused on cost-effective greenhouse gases emissions decrease and projects based on energy efficiency, receiving assistance and support from the EPA.

¹⁹⁹ The Chicago Climate Exchange (CCX), which was created in 2003 and is no longer active, was a voluntary greenhouse gas emission cap and trade system adopted in North America. It offered multiple ways of meeting the standards imposed: the first method was reducing internal GHG emissions, the second one was through

greenhouse gas emissions before the government can set new federal requirements or to adopt new regulations related to gas emissions. In other words, VEPs represented a way to rehabilitate the relationship between private businesses and the government; the latter in fact promotes the opportunity for employees training and research for the development of new technologies through the participation in VEPs.

The situation in Europe concerning business-state relationships was different; as opposed to the United States, firms and governments did not have the same confrontational relation, on the contrary, their cooperation allowed a simpler and faster development of corporate social responsibility. This close relation between private and public sectors was able to create new initiatives and develop new policy instruments among which VEPs; all of this happened even if government regulations were certainly predominant during the 1980s and the 1990s in Europe. One voluntary environment program example was for instance the Climate Change Agreements in the United Kingdom, where many businesses participated in order to decrease the use of energy. In addition, among the initiatives taken by European governments it is important to underline the introduction of ecolabelling which is according to the Global Ecolabelling Network (GEN) “a voluntary method of environmental performance certification and labeling that is practiced around the world” and which recognizes products or services that respect transparent environmental standards, providing market incentives and consumers’ ethical beliefs.²⁰⁰ The first ones created were the Blue Angel label in Germany in 1978, followed by the AB Agriculture Biologique in France in 1985 and later on by Legambiente Turismo in Italy in 1997.²⁰¹ In 1992, the EU Ecolabel was established, recognized in Europe

trading emissions allowances with other members of the exchange, and the last method was purchasing offsets, therefore acquiring the right to emit carbon emissions from other members of the program. The limit on the usage of offsets to comply with standards was 50%. In the initial period from 2003 to 2006 all members of the exchange agreed to reduce their GHG emissions by 1% every year below their annual average emissions over the period from 1998 to 2001, reaching in this way a decrease in emissions of 4% before the end of the fourth year. Later on, over the period from 2007 to 2010, another 0.5% reduction in gas emissions was agreed by members in order to reach 6% below the level of the period from 1998 and 2001 before the end of 2010.

²⁰⁰ Global Ecolabelling Network. What is ecolabelling?. Available at: <https://globalecolabelling.net/what-is-ecolabelling/>

²⁰¹ The Blue Angel was created by the German government and an independent Jury awarded some environmentally-friendly products that offered a greener alternative to other products offering the same function. Each one of the labels recognizes that a specific product pays great attention to one or all the protection objectives, among which health, water, climate and resources.

Organic products that have the logo, which has been the national logo of France for organic products since 1985, need to contain more than 95% of organic components and their production and processing must be based within the European Union. In addition, these organic products must receive a certification by one of the inspection groups according to EN 45011.

and at global level. It attests the environmental excellence of a product or a service through its life-cycle, which is to say through the extraction of raw material, to its production, to its distribution and finally to its disposal.²⁰²

To conclude, despite the differences in the nature of the business-state relationship in the United States and Europe, it is possible to say that corporate social responsibility originated as a preventive action in order to avoid stricter government regulations and by doing so, governments were able to adapt their intervention in environmental governance and at the same time, this self-regulation put into practice by firms contributed to create new actors fostering environmental protection and sustainability.

Legambiente Turismo is the Italian label for eco-tourism and it applies to any kind of lodging business. Its objective is to work in order to support tourists in the adoption of environmentally-friendly behaviors and to decrease their impact on the environment of the destination when moving. At the same time, Legambiente Turismo wants to raise the quality of the environment, together with the comfort and invite both tourists and local businesses to adopt sustainable lifestyles. Available at: <http://www.ecolabelindex.com/ecolabels/?st=region=europe>

²⁰² The EU Ecolabel criteria provide demanding guidance addressed to businesses that are willing to reduce their impact on the environment and ensure efficient environmental actions by using controls from third parties. Moreover, businesses that want to develop new lines of products can use the EU Ecolabel criteria for being assisted and supported in the adoption of environmentally-friendly activities and practices. Available at: <https://ec.europa.eu/environment/ecolabel/>

Conclusion

Starting in the aftermath of World War II environmental concerns started to be a core component of the political, economic and social sphere of countries around the world; however, the initial responses of the United States and of Europe were divergent. If on the one hand the United States first acknowledged the environmental downsides of the period of economic prosperity and growth that they had been experiencing for decades, on the other hand Europeans, still focused on the reconstruction of their economy after World War II, initially considered environmental concerns only as an American problem that was not affecting them. However, this trend soon changed after a series of environmental disasters occurred in Europe, which gave birth to public environmental consciousness in the old continent as well.

The intensive use of natural resources had its origins in the Native American populations for agriculture, fishing and hunting purposes. However, it is only after the European colonization, with the introduction of agricultural settlements, extraction of material practices, pesticides, fertilizers and fossil fuels that the environment underwent significant changes. Later on, population's growth, increasing industrial production, and the rise of goods consumption exacerbated the already existing problems and therefore pollution became a serious threat to the environment. In the same way, Europe had been living for centuries practices harmful for the environment such as deforestation processes in order to foster agriculture. In addition, different types of pollution had been affecting Europe, from bacterial pollution caused by poor sanitation systems to artisanal, soil and industrial pollution, which reached their worst level in the twentieth century.

As a consequence, the 1960s saw the rise of social movements and in particular the environmental movement, whose objective was to stop the degradation of the environment caused by harmful human activities. In the United States the movement was strongly linked to the reactions of people after the publishing of the book *Silent Spring* by Rachel Carson while in Europe it was largely connected to student and antinuclear movements promoting a more general social cause. If on the one hand the U.S. movement is considered as post-materialist, on the other hand, the movement in Europe is considered as post-industrial. The former focused mainly on the protection and preservation of natural habitats and ecosystems, while the latter soon developed new focuses, such as broader social inequalities. In both cases, one

of the consequences of environmental movements was the origin of green parties. Some European and American environmental organizations acquired a precise structure and through institutionalization became real political parties. However, their role in the two continents has been influential in divergent ways; the proportional representation electoral system of many countries of Europe allowed these parties to gain significant support, while the first-past-the-post electoral system of the United States made and still makes it difficult for third parties to gain any political power, in addition to their more radical positions less willing to reach compromise with other political parties.

Moreover, environmental concerns became relevant for the private sector as well. Initially, the implementation of environmental legislation caused negative reactions by corporations, which were purposely working in order to contrast or influence these new regulations. In a second moment, starting in the 1980s, a more strategic approach was adopted and the concept of social responsibility originated. As a result, both in the United States and in Europe market-based and voluntary programs started to be developed by firms in order to control the impact of their activities on the environment, realizing that this could foster their competitive advantage and promote their reputation.

Although the United States and the European Union have adopted measures in the past decades in order to reduce carbon emissions, such as the Clean Air Act, the Clean Water Act in the former and the Environment Action Programmes and EU Directives in the latter, they still represent two of the regions of the world where the energy consumption per capita is the highest. The American and European approaches to climate change seem very different. Under Democratic administrations, especially with President Barack Obama, several steps towards an increase of environmental regulations have been made. However, Republican administrations have been and still are reluctant to consider environmental issues. Lately, climate change politics in the United States has been experiencing radical changes, in particular since the presidential election in November 2016 of President Donald Trump. Under his administration, federal policies related to global warming have been and keep being dismantled because of the right-wing trend to deny global warming and climate science research. On the other hand, since the 1990s the European Union has passed a comprehensive legislative framework on environmental issues, implementing measures aiming at fighting climate change in a more determined way and obtaining more successes than the United States. Therefore, the position of leadership on international environmental law passed from

the United States to the European Union, when the U.S. began opposing many multilateral environmental agreements, while the EU became the leading supporter. Emission Trading Scheme Directive was adopted in 2003, contributing in giving the European Union a leadership role in the international climate politics arena. Nevertheless, European countries where recently populist leaders have been increasingly gaining power have been demanding for national sovereignty and more intergovernmental decision-making in issues such as climate policy. Moreover, although the notion of sustainable development has been integrated in the legislation of both the United States and the European Union and despite the efforts to reach the environmental goals set by the UN 2030 Agenda for Sustainable Development, the environmental harmful impacts of a sustainable economic growth have reduced but only to a certain extent. Therefore, in order to comply with the objectives of sustainable development, an increasing attention on the environmental side of this dualistic notion will have to outweigh the attention on the economic development side.

Concerning free trade agreements, although a significant number of provisions in the main FTAs of the European Union takes into account the protection and conservation of the environment, a more coherent relationship between trade and environmental policies will be necessary. Besides, non-binding commitments and a vague and sometimes ambiguous language do not contribute to an efficient protection of the environment. Environmental protection would be fostered through the elimination of tariff and non-tariff barriers, the limitation of fossil fuel subsidies, the introduction of carbon taxes, green procurement, non-discriminatory renewable energy subsidies, and a more effective international cooperation. In the same way NAFTA, despite being the first major free trade agreement to introduce environmental provisions, has been however considered too vague and inadequate. This situation seems not to improve with the renegotiations of NAFTA that, despite including a new Agreement on Environmental Cooperation, remains rather general and non-binding, in addition to a total absence of references to climate change.

Among the other concerns, environmental degradation has been causing migration flows to the Global North, especially to Europe and the United States. In particular, a strict connection between increased temperatures and the rise of asylum applications from Asian and African countries to the EU has been demonstrated. In the same way, a similar trend has been verified in the American continent, where the highest number of immigrants to the U.S. comes from

the countries the most affected by environmental degradation and climate change, namely the Northern Triangle of Central America.

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