

Ruf, Julia Anna

**Working Paper**

## A policy analysis of the EU Emissions Trading System and its crisis

Working Paper, No. 82/2017

**Provided in Cooperation with:**

Berlin Institute for International Political Economy (IPE), Berlin School of Economics and Law

*Suggested Citation:* Ruf, Julia Anna (2017) : A policy analysis of the EU Emissions Trading System and its crisis, Working Paper, No. 82/2017, Hochschule für Wirtschaft und Recht Berlin, Institute for International Political Economy (IPE), Berlin

This Version is available at:

<https://hdl.handle.net/10419/149891>

**Standard-Nutzungsbedingungen:**

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

**Terms of use:**

*Documents in EconStor may be saved and copied for your personal and scholarly purposes.*

*You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.*

*If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.*



Hochschule für  
Wirtschaft und Recht Berlin  
Berlin School of Economics and Law

Institute for International Political Economy Berlin

# A Policy Analysis of the EU Emissions Trading System and its Crisis

Author: Julia Anna Ruf

Working Paper, No. 82/2017

Editors:

Sigrid Betzelt

Trevor Evans

Eckhard Hein

Hansjörg Herr

Birgit Mahnkopf

Christina Teipen

Achim Truger

Markus Wissen



# **A Policy Analysis of the EU Emissions Trading System and its Crisis**

Julia Anna Ruf

## **Abstract**

This paper provides a policy analysis of the EU Emissions Trading System and its crisis. The aim of the research is to give an answer to the question why the EU Emissions Trading System is in crisis and cannot be revised in an effective way. Therefore, the policy process of the revision of the EU Emissions Trading System for its third phase is analysed. The research is based on the theoretical assumptions of the historical-materialist policy analysis, which also serves as an analytical tool. The main result of the analysis is that the framing of neoliberalism has shaped the construction and the further revisions of the system. For this reason, the EU Emissions Trading System can be considered to be in crisis because it is based on neoclassical assumptions, which are not suitable for tackling the issue of climate change. Revisions will not lead to a success of the system as long as it is based on neoclassical economics. However, the current strength of neoliberalism makes a turning away unlikely.

**Keywords:** EU Emissions Trading System, Crisis, Revision, Neoliberalism, Historical-Materialist Policy Analysis

**JEL Codes:** O13, Q48, Q54, Q58

## **Contact:**

Julia Anna Ruf

Berlin School of Economics and Law

email: julia.ruf1@gmx.de

**Acknowledgements:** I would like to thank Prof. Dr. Markus Wissen and Prof. Dr. Hansjörg Herr for their support and helpful comments.

## 1. Introduction

The effects of climate warming become more and more visible by increased temperature of the atmosphere and oceans, the shrinking of snow and ice and the decline of the sea level (IPCC 2014: 2). These developments are assumed to have severe and inescapable impacts on humans and the ecosystem as “heat waves will occur more often and last longer, (...) extreme precipitation events will become more intense and frequent in many regions [and] the ocean will continue to warm and acidify” (IPCC 2014: 10). There is a 97 % consensus among scientists that humans are responsible for climate warming through the emissions of high amounts of greenhouse gases (Cook *et al.* 2016). Against this background, politicians are asked to find countermeasures to reduce emissions and stop further global warming.

As the EU is the third biggest emitter of greenhouse gases after China and the United States, it is especially important that the EU finds an effective way to reduce its emissions (Global Carbon Project 2015). The EU Emissions Trading System (EU ETS) is the EU’s core instrument for reaching a reduction in manmade greenhouse gases. This market-based instrument of emission allowances for specific industry sectors has been in operation since 2005. So far, two revisions were made, one for its second phase (2008-2012) and one for its third phase (2013-2020). The aim of the reforms was to counteract the occurred problems of the system. Although major changes to the system were introduced, the EU ETS is still not working as intended. Especially during the economic crisis, its weaknesses and lack of effectiveness were shown. As the EU has tried to revise and improve the EU ETS for eleven years, but a successful functioning has not yet been reached, it can be argued that the EU ETS is in crisis. Nevertheless, the EU sticks to this instrument as the best way for reducing greenhouse gas emissions.

The aim of this paper is to analyse the EU ETS and its crisis, guided by the research question: Why is the EU Emissions Trading System in crisis and cannot be revised in an effective way? In order to give an answer to this question a policy analysis of the revision of the EU ETS for its third phase is made. The policy process for this revision resulted in the EU ETS Directive 2009/29/EC, where major changes to the system were implemented. For this reason, the reform can be considered to be significant. However, it did not lead to better policy outcomes of the EU ETS.

The research is based on the theoretical assumptions of the historical-materialist policy analysis (HMPA). This theoretical approach is considered to be best suitable for analysing the EU ETS and its crisis for two reasons: First, it best reflects political reality because it assumes that the state and policies are a result of social struggles, which are shaped by historical

conditions. Secondly, the HMPA provides a tool for analysing social struggles. Accordingly, the analysis consists of the three steps: context, actor and process analysis.

The paper is structured by first providing information about the EU ETS, its principles and functioning. In the following chapter, the main assumptions of the HMPA and its three-step analysis are depicted. Based on this theory, the policy analysis of the revision of the EU ETS for its third phase in chapter four is divided into context, actor and process analysis. Sources of information include secondary sources, legal texts as well as official and position papers of the actors. The empirical data is investigated against the background of the assumptions of the HMPA.

First, for the context analysis, two major conditions are considered to be significant as they resulted in the EU ETS being introduced and constructed in this way and as they influenced the revision process. The two conditions are the rise and dominance of neoliberalism and international climate action under the UN.

Secondly, for the actor analysis, political actors at the EU level, economic actors and environmental actors are regarded as the key players in the policy process of the revision of the EU ETS.

Thirdly, the policy process of the EU ETS revision is analysed at single stages of the conflict. In this regard the effects of the economic and financial crisis on the EU ETS are amplified.

Finally, the results of the context, actor and process analysis are brought together and evaluated. On this basis, an answer on the research question is formulated in the last chapter.

## **2. The EU Emissions Trading System**

### **2.1. Principles and functioning**

The EU ETS is a market-based instrument for reducing industrial greenhouse gas emissions, launched by the EU in 2005. It is an important item of the EU's climate policy and the heart of the EU's strategy for reducing man-made greenhouse gases as well as the biggest system of its kind worldwide (European Commission 2013: 2). It is applied in the 28 EU countries as well as in the three EEA-EFTA states, Iceland, Norway and Liechtenstein. The EU ETS covers about 45 % of the total greenhouse gas emissions of the EU from more than 11,000 companies (European Commission 2013: 2). The EU ETS is applied for carbon dioxide (CO<sub>2</sub>) emissions from "power and heat generation, energy-intensive industry sectors including oil refineries, steel works and production of iron, aluminium, metals, cement, lime, glass, ceramics, pulp, paper, cardboard, acids and bulk organic chemicals" and commercial airlines for flights to and from the EU, Iceland, Liechtenstein and Norway (European Commission

2013: 3). Moreover, it covers “nitrous oxide (N<sub>2</sub>O) from production of nitric, adipic, glyoxal and glyoxalic acids [and] perfluorocarbons (PFCs) from aluminium production” (European Commission 2013: 3). Companies of these sectors are forced to participate in the EU ETS. However, governments have the possibility to determine exceptional rules for specific small companies if their emissions are regulated by other instruments, for example fiscal instruments (European Commission 2013: 3).

The EU ETS is based on a ‘cap and trade’ approach (European Commission 2013: 2). This means in the first place that a cap or limit of the total greenhouse gas emissions is defined. According to this cap, a limited number of emission allowances is set, which operates as the ‘currency’ of the EU ETS (European Commission 2013: 2). One allowance is valid for an emission of one tonne of carbon dioxide or an equivalent amount of nitrous oxide or perfluorocarbons (European Commission 2013: 2). Allowances can be spent once only. Companies have to submit the amount of allowances for their emitted pollutants of the previous year until 30<sup>th</sup> of April of the following year. It is the companies’ duty to observe and account their emissions from every calendar year. This is verified by official inspectors. If they do not stick to that rule, companies are punished with an additional fine for each surplus tonne, they have emitted. The fine was set on €100 in 2013 for one tonne of carbon dioxide, nitrous oxide or perfluorocarbon, but increases every year according to the inflation rate in the Eurozone. An EU registry has been introduced where all allowances are accounted for (European Commission 2013: 4f.).

Companies may receive free allowances from their governments. If these are not sufficient, they can buy allowances from other companies which do not need them. If a company emits less than it has allowances for, it can either store those unneeded allowances for the future or sell them. The aim of this trade-approach is to cut emissions where the economic losses are the least and to encourage companies to increase efficiency and invest in low-carbon technologies (European Commission 2013: 2). Besides the allowances as the main ‘currency’, it is also possible for a company to buy credits from emission-saving projects in another country, for example in developing countries (European Commission 2013: 2). A condition is that the project must be approved by the Kyoto Protocol’s Clean Development Mechanisms (CDM) or Joint Implementation (JI) mechanism as a project with the outcome of significantly reduced emissions (European Commission 2013: 5). The CDM is “a flexible mechanism under the Kyoto Protocol that allows countries or companies to acquire Certified Emission Reductions that can be used to meet their own commitments by investing in projects in developing and newly industrialising countries (without themselves having to reduce

emissions)” (European Commission n.d.: 136). The JI is a “flexible mechanism under the Kyoto Protocol that allows countries or companies to acquire Emission Reduction Units generated from emission reduction projects to offset their own commitments. JI projects are implemented in countries that have an emissions reduction commitment under the Kyoto Protocol” (European Commission n.d.: 137).

Credits from a wide range of projects are allowed, except for nuclear energy, afforestation or reforestation or destruction of industrial gases (European Commission 2013: 5). The aim of this credit system is that through the investments in carbon-saving projects a low-carbon development in developing countries will be supported (European Commission 2013: 5).

## **2.2. Trading periods**

In 1997, 37 industrialised countries and the EU adopted the Kyoto Protocol that entered into force in 2005. It set legally-binding greenhouse gas reduction targets of 5 % against 1990 levels for the time period from 2008 to 2012 (UNFCCC 2014b).

Consequently, the EU had to implement policy instruments for reaching the Kyoto target. The Commission issued a green paper in March 2000, which laid down the foundation for the EU ETS (European Commission n.d.: 7). The political negotiations resulted in the Emissions Trading Directive (Directive 2003/87/EC) and the ‘Linking Directive’ (Directive 2004/101/EC), which connected the EU ETS to the flexibility mechanisms (CDM and JI) of the Kyoto Protocol. The EU ETS entered into force in 2005, three years before the commitment period of the Kyoto Protocol started (European Commission n.d.: 7).

The first trading period, which can also be seen as the pilot phase of the system, lasted until 2007. Its main aim was to establish the needed infrastructure for carbon trading so that the system could smoothly work from the second phase on (European Commission n.d.: 7). The EU ETS was first constructed as a decentralised system, where key decisions were left to the national states and they determined their individual caps in the national allocation plans. The total cap of emissions in the EU was the sum of the national caps and amounted to 2058 million tCO<sub>2</sub> (European Commission n.d.: 19). Allowances, in this phase as well as in the second phase, were allocated for free based on historical greenhouse gas emissions. This method is called grandfathering (European Commission n.d.: 40). Moreover, the system concentrated on carbon dioxide emissions from the power sector and energy-intensive industry sectors. Furthermore, the industries were just allowed to use credits from the CDM (European Commission n.d.: 7). The first phase showed that a pricing of carbon and a cap and trade approach among 27 countries was possible (Wettestad 2014: 68). However, in this time period the amount of allowances appeared to be too high, which caused their prices to decline

rapidly in 2006 and fall to zero in 2007 (European Commission 2013: 4). The single states had allocated huge numbers of allowances that covered all or more than the companies needed (Skjærseth and Wettestad 2010a: 105).

The second phase of the EU ETS lasted from 2008 to 2012, which was also the commitment period of the Kyoto Protocol. The number of allowances was reduced by 6.5 % in this time period and the cap amounted to 1859 million tCO<sub>2</sub> (European Commission n.d.: 19, 2013: 4). Furthermore, Norway, Iceland and Liechtenstein joined the EU ETS (European Commission n.d.: 19). Moreover, industries were allowed to also use credits under the JI. In the end of the second phase, the scope of the EU ETS was extended with the inclusion of aviation from 2012 onwards (European Commission n.d.: 7).

The third trading period started in 2013 and will last until 2020, just like the second commitment period of the Kyoto Protocol, which was adopted in Doha in December 2012 (European Commission n.d.: 7). There, the participants agreed upon a reduction of greenhouse gas emissions by a minimum of 18 % compared to 1990 levels (UNFCCC 2014b). The EU ETS revision for its third phase was influenced by the EU's greenhouse gas emissions reduction targets of -20 % until 2020 and -80 to -95 % until 2050, compared to 1990 levels (European Commission 2013: 3). The EU ETS revision for the third period introduced significant changes to the system, with the aim of solving the emergent problems of surplus allowances. The first new item was the setting of an EU-wide cap on emissions, which is reduced by 1.74 % each year (European Commission 2013: 3). The cap for the third trading period amounted to 2084 million tCO<sub>2</sub> in 2013 and is decreasing in a linear way by 38 million tCO<sub>2</sub> per year (European Commission n.d.: 19). In the third phase, 31 countries participate in the EU ETS, with Croatia being the newest member joining in 2013 (European Commission n.d.: 18). Furthermore, the scope of the EU ETS has again been extended to also include nitrous oxide and perfluorocarbon from aluminium production (European Commission n.d.: 19). Additionally, the free distribution of allowances is progressively replaced by an auctioning system (European Commission 2013: 4). It is planned that the cost-free distribution of allowances will be abolished by 2027 (European Commission 2013: 3).

Since 2013 power generators do not receive any free allowances. Exceptions have been made for some power plants in Bulgaria, Cyprus, the Czech Republic, Estonia, Hungary, Lithuania, Poland and Romania. They are allowed to receive free allowances until 2019 if they invest at least as much money in modernisation as the allowances are worth (European Commission 2013: 3). In 2013 more than 40 % of all allowances of the EU ETS were distributed by auctioning (European Commission 2013: 3). These allowances are given to the national

governments who then hire companies to carry out the auctions. Nevertheless, the auctions are open for customers from any member country of the EU ETS. Most countries are using a common platform, whereas Germany, Poland and the UK have decided to use their own (European Commission 2013: 3).

The allowances that are auctioned are allocated to the member states as follows: 88 % are given to the countries based on their share of greenhouse gas emissions in the first phase of the EU ETS (European Commission n.d.: 31). The least wealthy states of the EU receive 10 % of the allowances in order to promote investment in environmental friendly technologies. Finally, 2 % are allocated as a 'Kyoto bonus' to Bulgaria, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania and Slovakia, as they had reduced their greenhouse gas emissions by at least 20 % in 2005 compared to their levels in their Kyoto Protocol base year or period (European Commission 2013: 3). The national governments decide where to spend the revenues of the auctions; but they should use at least half of them for climate change mitigation (European Commission n.d.: 35). The member states have to report to the Commission about their usage of the revenues (European Commission 2013: 3f.). Except for the power generation sector, where all allowances are auctioned, the shift from free allocation to auctioning is arranged more progressively. For the manufacturing industry 80 % of the allowances were distributed for free in 2013; however this will be reduced year by year to 30 % in 2020. In the aviation sector only 15 % of all allowances are auctioned in the time period until 2020 (European Commission 2013: 4).

The free allocation of allowances is organised by a benchmarking approach since the third trading period. This means that a benchmark is set at the average emission level of the 10 % best performing companies within a sector (European Commission n.d.: 40). The amount of free allowances for each installation is determined by multiplying the production quantity with the benchmark value for the particular product (European Commission 2016d). As a consequence, the companies that are very efficient receive almost all or all the allowances for free, whereas those that do not reach the benchmark have to either reduce emissions or buy further allowances (European Commission n.d.: 40). The benchmark for the aviation sector is calculated differently. It is determined by the quotient of the total annual amount of free allowances and the sum of tonne-kilometre data, which is a special unit for measuring aviation activity (European Commission n.d.: 90).

Furthermore, there is a different treatment of sectors and sub-sectors that are considered to face a significant risk of 'carbon leakage'. This describes the assumption that increased costs for pollution would lead to companies shifting their production to other countries with softer

emission restrictions. Thereby they would save money and would not have a competitive disadvantage (European Commission 2013: 4). This could have the effect that global greenhouse gas emissions rise (European Commission n.d.: 60). However, studies have not found evidence that this phenomenon has happened under the EU ETS (European Commission n.d.: 60).

The risks of carbon leakage are considered to be higher for energy-intensive industries. The threatened sectors and sub-sectors are assessed by specific criteria. If a sector meets those, it is put on the carbon leakage list. This list is compiled by the Commission with agreement of the member states, the Parliament and consultations with stakeholders (European Commission 2016d). The list is renewed every five years and so far one has been issued in 2009 and one in 2014. The first was valid for 2013 and 2014 and the second is valid from 2015 to 2019 (European Commission 2016d). The lists contain about 60 % of all industrial sectors covered by the EU ETS, being responsible for 95 % of industrial emissions (Bruyn *et al.* 2013: 5). Installations of sectors on this list receive all the allowances for free for the whole period from 2013 to 2020 if they reach the particular benchmark (European Commission 2013: 4).

Even before the third trading period started, the economic crisis had hit the EU and caused an economic downturn and thereby an automatic reduction of emissions. This and a high import of credits have led to an oversupply of allowances and consequently a lower price for them (European Commission 2013: 4). In 2013 more than 2.1 billion allowances were surplus (European Commission 2016c).

Therefore, the Commission postponed the auctioning of 900 million allowances from the years 2014, 2015 and 2016 to 2019 and 2020. This is called 'back-loading' (European Commission 2016c). As a long-term measure against market imbalances and surplus of allowances, the Commission proposed a market stability reserve, which should start operation in 2019 (European Commission 2016c). This is a rule-based mechanism, which provides a flexible supply of allowances for auctions (European Commission n.d.: 95). Furthermore, a revision for the fourth trading period from 2021 to 2030 is currently under negotiations. The Commission issued a legislative proposal for it in July 2015, which includes that the total amount of emission allowances should be reduced by 2.2 % every year. Moreover, the Commission suggested changing the current rules for sectors that are facing a risk of carbon leakage. Just about 50 sectors at 'highest risk' should receive free allowances (European Commission 2016f). Free allowances should be allocated to 'new and growing installations'. Furthermore, two new funds should be established in order to support the industry and the

power sector so that they can invest in modernisation and innovative technologies (European Commission 2016f).

All in all, it can be said that the EU ETS has not reached its aim as it has not set incentives for companies to reduce emissions and invest in green technologies because it is cheaper for them to instead buy further allowances. The reforms have also not brought significant improvements so far. Against this background the analysis of the crisis of the EU ETS is relevant. In the following chapter the theoretical foundation for the analysis is depicted. The HMPA is used for the analysis because it assumes that policies are a result of social struggles, which are shaped by historical conditions. Moreover, the HMPA provides a tool for analysing social struggles.

### **3. Historical-materialist policy analysis**

The HMPA is based on the state concept of Nicos Poulantzas (1978) and has been further developed mainly by Ulrich Brand (2013) and John Kannankulam and Fabian Georgi (2014). For that reason, this chapter will concentrate on these authors. The HMPA has been formulated as a criticism on existing policy-making and mainstream policy analysis because they are considered to be too positivistic and rationalistic (Brand 2013: 438). It is a method for analysing political and social struggles (Kannankulam and Georgi 2014: 63).

#### **3.1. Main assumptions**

Nicos Poulantzas considers the state as “the material condensations of (...) a relationship [of forces]” (Poulantzas 2000 [1978]: 128). This means that the state institutions cannot be analysed separately from society as they do not regulate the societal conflicts from outside or a neutral position, but are the material condensations of it (Kannankulam and Georgi 2014: 62). The state itself is seen as a social relation, which reproduces itself through everyday practice and acceptance by citizens (Brand 2013: 435). Therefore, the state has to regularly generate knowledge about the features of society that need the state’s intervention, about the demands of societal reproduction and about present and potentially arising problems of the society. The state acquires this knowledge through its own activities but also through lobbyists, think-tanks and the public (Brand 2013: 435). Knowledge and history are determining the institutionalised ‘selectivities’ of the state, like filters, mechanisms or priorities (Brand 2013: 435). These are reflected in institutional practices, laws or the political attitude of civil servants, which were internalised into the state as result of social struggles (Brand 2013: 432). The state is only able to handle societal conflicts because of its inherent structural selectivities (Kannankulam and Georgi 2014: 62). However, the state does not have

the ability to fully control and steer modern societies by policy programmes (Brand 2013: 430). Instead, according to Poulantzas the state is a ‘strategic field’ for competing power networks (Poulantzas 2000 [1978]: 136). In this field the reaching of a consensus between competing actors is simplified and exclusive instruments of the state are applied in order to shape power relations and compromises (Brand 2013: 432). The real ‘steering centre’ of modern capitalist societies are structural conditions like class, gender or the relationship of the society to nature, which are “the results of the social division of labour, the commodity-form of societal production, and the private appropriation of surplus value, including forms of subjectivation and the appropriation of nature” (Brand 2013: 431).

Based on these theoretical assumptions, the HMPA’s aim is to identify the ways in which societal conflicts are translated into policies in a context of selectivities and power-shaped relations (Brand 2013: 436). Policies are seen “as unstable compromises among social forces which are formulated through specific state apparatuses or even groups or alliances in particular apparatuses” (Brand 2013: 436). However, the state apparatuses are heterogeneous as structures and power relations are different in the single policy fields (Brand 2013: 436). The apparatuses differ regarding rules, knowledge and techniques (Brand 2013: 437). This causes a different consciousness of problems within bureaucracies and thus clienteles of specific opportunities to influence. Consequently, policies are not an outcome of rational bureaucratic action but of societal and political discourse (Brand 2013: 436). It can be argued that the different apparatuses exist because this creates policies which are consistent with the given power relations (Brand 2013: 437). However, the state needs an amount of unity for controlling and shaping social relations in order to prevent a destabilisation of social reproduction. Nevertheless, the state is also often part of the societal problem which it should solve (Brand 2013: 437).

### **3.2. Three steps of the analysis**

According to Kannankulam and Georgi, the HMPA operationalizes the analysis in the three steps: context, actor and process analysis (Kannankulam and Georgi 2014: 63).

#### **3.2.1. Context analysis**

First of all, the specific conflict will be reconstructed as a ‘specific historical situation’ (Kannankulam and Georgi 2014: 63). This is based on the assumption that a multifaceted set of historical conditions and processes has led to different and contrasting reactions of social and political actors (Kannankulam and Georgi 2014: 63). Therefore, the first step of the context analysis is to identify and describe the specific problem and to locate this problem in a

wider historical context. After that the important ‘historical and material conditions’ are shown that have led to the emergence of the specific problem (Kannankulam and Georgi 2014: 63). The aim of the context analysis is to demonstrate that ‘form-determined’ and ‘institutional pathways’ are pre-structuring the actions of the different actors and are determining their unequal starting points (Kannankulam and Georgi 2014: 63). For the context analysis deductive and inductive research methods are combined. The first one provides information about the theoretical understanding of the social forms and structures of political articulation and the second one provides insights about the social, economic and political process in the concrete case (Kannankulam and Georgi 2014: 63).

### **3.2.2. Actor analysis**

The aim of the actor analysis is to identify the “conflicting actors within and as part of (...) [the] historical situation” (Kannankulam and Georgi 2014: 63). This is based on the assumption that the actors and their capabilities, purposes and logics are “co-constituted or structured” by the historical background (Kannankulam and Georgi 2014: 63). The research of the important actors is carried out in three sub-steps:

First, the competing strategies within the conflict will be pointed out through primary research of publications, media articles and expert interviews (Kannankulam and Georgi 2014: 64). Thereby the guiding research questions are: who are the important actors, what have they done and said, which strategies have they used in the different sections of the conflict? Actors are understood in a broader sense as not only established political, social and economic actors, but also others like social movements (Kannankulam and Georgi 2014: 64). The emphasis lies on the strategies that the actors have applied in response to the historical situation. Those strategies can be read from their claims and support of specific political options. Thereby, their specific knowledge or culture plays an important role (Kannankulam and Georgi 2014: 64).

The second sub-step is the classification of the identified strategies and speakers into groups of ‘hegemony projects’ (Kannankulam and Georgi 2014: 64). It is assumed that actors, which are using similar strategies, are working along the same lines. It is important to differentiate between hegemonic projects and hegemony projects (Kannankulam and Georgi 2014: 64). Hegemonic projects have a central coordination and generalised interests. In contrast, hegemony projects are consisting of a variety of actors, which have similar strategies, but not necessarily the same motivation or capacities. This category is just an aggregation of similar tactics and strategies of social forces as a reaction to the historical context (Kannankulam and Georgi 2014: 64).

The third sub-step is the evaluation of the single positions of the identified projects in the context of all participating forces (Kannankulam and Georgi 2014: 65). Therefore, the groups are analysed with regard to four categories of ‘power resources’ (Kannankulam and Georgi 2014: 65). The first category covers organisational resources, like bureaucracies, networks, money or force, which can be easily mobilised (Kannankulam and Georgi 2014: 65). Secondly, systemic resources describe the possibility to make economic actions which have systematic consequences (Kannankulam and Georgi 2014: 65). According to Claus Offe, the ability of actors or organisations to face conflicts depend on their capability to collectively refuse services or credibly threaten to withhold system-relevant activities (Offe 1969: 169). The third category covers discursive, ideological and symbolic resources, which comprise the ability to reach acceptance in a greater part of the society (Kannankulam and Georgi 2014: 65). Fourthly, the groups are analysed according to their ‘institutional or strategic-structural selectivities’, which is based on the works of Poulantzas (Kannankulam and Georgi 2014: 65). This allows an investigation into whether the applied strategies, projects and claims are matching to the existing and historical shaped institutional settings, which are determining selectivities (Kannankulam and Georgi 2014: 65).

### **3.2.3. Process analysis**

The last step of the HMPA is the process analysis, where the dynamic process of the conflict is reconstructed. This means that the actions of the identified hegemony projects during the single stages and turning moments is analysed by considering the wider historical context. The aim of the process analysis is to combine the results of the context analysis with the results of the actor analysis. Thereby, the analysis covers the dynamic and contradictory nature of the social conflict (Kannankulam and Georgi 2014: 67).

## **4. Policy analysis of the revision of the EU ETS for its third phase**

Having outlined the theoretical aspects of the HMPA in the previous chapter, the approach is now applied to the EU ETS. Thusly, the analysis of the EU ETS is divided into the three steps context, actor and process analysis.

### **4.1. Context analysis**

The aim of the context analysis is to reconstruct the specific historical situation that has shaped the policy process of the EU ETS. For the analysis of the EU ETS revision, it is important to identify the conditions under which the EU ETS has been constructed and why it has been chosen as an instrument to tackle the issue of climate warming. For this reason, the

rise and dominance of neoliberalism and the international climate action under the UN are investigated.

#### **4.1.1. The rise and dominance of neoliberalism**

According to David Harvey, neoliberalism is a “theory of political economic practices” which assumes that the welfare of human beings can be best reached by individual entrepreneurial freedoms within a context of strong private property rights, free markets and free trade (Harvey 2005: 2). The state’s role is to set up institutions which create and secure this institutional framework and to ensure the orderly functioning of the markets. In fields where there are not yet markets, like in education or environmental pollution, the state should create them. However, the state should not intervene in already existing markets (Harvey 2005: 2). Neoliberalism uses the neoclassical economic theory as ‘scientific’ legitimation for the laissez-faire ideas (Bresser-Pereira 2010: 7). This macroeconomic theory is based on the concept of the ‘homo economicus’, which means that consumers as well as producers are acting rationally as they always aim to maximise their own benefits or profits (Rogall 2013: 74). Within the transactions all actors have the relevant information fully available in order to make the right decisions (Rogall 2013: 75). A further main assumption of the neoclassical economic theory is that humans are always acting in their best interest, which in total results in the best for the society (Rogall 2013: 75 f.). Government interventions are rejected by this theory as through prices, wages and rents markets automatically reach a balance. Thereby, it is assumed that all costs and benefits are included in the calculations of the market participants. This means that there are no external effects and also no overuse of goods or production factors. The central assumption is that an undisturbed market economy without governmental interventions will lead to welfare for the whole society (Rogall 2013: 79 f.). The neoclassical equilibrium theory assumes that the market is the most efficient way for allocating goods, as trading on markets leads to a pareto-optimum in the long term. This means that through prices a market balance is reached where demand is equal to supply and the allocation of resources is optimal (Rogall 2002: 49).

The neoliberal ideology has mainly been developed by the exiled Austrians Friedrich Hayek and Ludwig von Mises. They used the term ‘neoliberalism’ for the first time in a meeting in Paris in 1938 (Monbiot 2016). They opposed the social democracy, which had been introduced by Franklin Roosevelt’s New Deal in the 1930s (Monbiot 2016). Hayek warned in his book *The Road to Serfdom*, published in 1944, against the state control of means of production (Hayek 1944). Mises criticised in his book *Bureaucracy*, also published in 1945, bureaucracies as instruments of governments as not being economically rational and therefore

not efficient (Mises 1944). Both books reached a wide audience including some very rich and powerful people. For them, this model was a chance to get rid of regulations and taxes (Monbiot 2016). For this reason, when Hayek created the Mont Pelerin Society in 1947, it was mainly funded by millionaires and corporate leaders from the US (Monbiot 2016; Harvey 2005: 22). Those wealthy people refused any kind of state intervention and feared that an alliance with the Soviet Union could lead to unfavourable developments for them and minimize their power (Harvey 2005: 22). In the following time, think tanks were founded with the aim to enhance and spread the neoliberal ideology and were sponsored by these wealthy supporters. Those think tanks were the American Enterprise Institute, the Heritage Foundation and the Cato Institute which are located in Washington and the Institute of Economic Affairs, the Centre for Policy Studies and the Adam Smith Institute in London (Monbiot 2016; Harvey 2005: 22). Additionally, academic departments at the universities of Chicago and Virginia were financed by them (Monbiot 2016). Members of the Mont Pelerin Society were academic economists, historians and philosophers. Besides Hayek and Mises, the most prominent were Milton Friedman and Karl Popper (Harvey 2005: 20). They called themselves ‘liberals’ because personal freedom was the core of their ideology (Harvey 2005: 20). The prefix ‘neo’ indicated the connection to the neoclassical economics which had evolved in the second half of the nineteenth century and had replaced the classical economics of Adam Smith, David Ricardo and Karl Marx (Harvey 2005: 20). The neoliberal ideology contested state intervention theories, like Keynesian economics. John Maynard Keynes developed his theory as a consequence of the laissez-faire policies and the Great Depression (Harvey 2005: 20). Especially after the Second World War, the Keynesian theory was dominant and its economic instructions were applied in the US and Western Europe. This included that tax rates were high and new public services and safety nets were created (Monbiot 2016). As Keynesianism was so powerful in the after-war period, neoliberalism did not gain political attention in these years. This changed at the end of the 1960s, when the recession stopped the post war economic boom in most western countries and induced years of stagflation in the 1970s (Harvey 2005: 12). Most states faced fiscal crises, which proved that Keynesian policies had failed (Harvey 2005: 12). As reaction to the failure of Keynesian policies, neoliberalism became popular and entered the political mainstream (Monbiot 2016). This especially happened due to its growing importance in academics, with Milton Friedman teaching at the University of Chicago. Hayek got the Nobel Prize in economics in 1974 and Friedman in 1976 (Harvey 2005: 22). The fact that neoliberalism arose in the 1970s is connected to the development that neoclassical macroeconomics replaced Keynesian

macroeconomics and became 'mainstream' (Bresser-Pereira 2010: 7). Following, neoliberal ideas were adopted in political practices, especially in monetary policy. Under Jimmy Carter's administration, deregulation was used to counteract stagflation (Harvey 2005: 22). In the year 1979 neoliberalism became the economic mainstream in the US and in Britain (Harvey 2005: 22).

In this year, Margaret Thatcher became prime minister of Britain. Influenced by Keith Joseph, who was strongly connected to the Institute of Economic Affairs, she introduced great neoliberal reforms of the economy in order to counteract stagflation (Harvey 2005: 22). This included the weakening of trade union power, the reduction of taxes especially for rich people, deregulation, privatisation, the cutting of social public services and the introduction of competition and outsourcing of them, supporting of enterprises and the inflow of foreign investment (Harvey 2005: 23; Monbiot 2016). Thatcher was of the opinion that social solidarity should be replaced by "individualism, private property, personal responsibility, and family values" (Harvey 2005: 23).

In the US, the victory of neoliberalism can be connected to October 1979, when Paul Volcker, the chairman of the US Federal Reserve Bank, broke with the established attachment of Keynesian fiscal and monetary policies which put the highest priority on full employment. Instead, he promoted policies to stop inflation in any case, even if this was unfavourable for employment. Subsequently, the real interest rate was set positive on the Federal Reserve's order. The nominal interest rate increased over night and reached 20 per cent in July 1981 (Harvey 2005: 23). The consequence was indeed the stop of inflation; however it also resulted in a deep recession with high unemployment rates (Harvey 2005: 25). This so called Volcker shock can be seen as circumstance that led to the consolidation of neoliberalism. Nevertheless, this was not an automatism, as some central banks as well as the IMF had supported anti-inflationary fiscal policies, whereby they did not contest strong trade unions and the welfare state (Harvey 2005: 24). However, the shift to neoliberalism did not only include monetary policy but also many other policy fields. This development got stronger when Ronald Reagan became president in 1980. Under the Reagan administration, further deregulation was introduced, taxes and budgets were cut and trade unions and professional power were weakened (Harvey 2005: 25). The consequences were a high level of unemployment, increased poverty and a decline of real wage levels (Harvey 2005: 25). Furthermore, almost everything had been deregulated, opening unhindered market possibilities for powerful corporations (Harvey 2005: 26). With the rise of neoliberalism, finance-led capitalism, a new and very unstable form of capitalism, also emerged (Bresser-

Pereira 2010: 7). This happened due to massive tax reductions for corporations and especially on investments, favouring capital outflows and the shifting of production abroad. Moreover, monopolies were built up. For the society as a whole, this had the effect that social inequality dramatically began to rise and the economic power was concentrated and consolidated in the hands of upper class citizens (Harvey 2005: 26).

Neoliberal ideas have been spread internationally by institutions like the IMF, the World Bank and the World Trade Organisation as well as by numerous treaties, like the Maastricht treaty (Lohmann *et al.* 2006: 54). The theory is justified by ‘efficiency’ as it assumes that the whole society will profit if everybody makes the most of everything that is available (Lohmann *et al.* 2006: 54). Trading systems are beneficial instruments of neoliberalism as they rearrange property rights and reduce “the power of national governments, labour units and local communities” (Lohmann *et al.* 2006: 54).

#### **4.1.2. International climate action under the UN**

The issue of reducing greenhouse gas emissions became popular on the political agenda in the 1990s (Spash 2010: 170). In particular, warnings from scientists led to an increased public pressure on governments to start taking action against global warming (Lohmann *et al.* 2006: 35, 45).

Three main alternatives were discussed during this time (Spash 2010: 172). The first idea was a pollution tax, which would force the polluter to pay for each unit of pollution (Spash 2010: 172). Secondly, direct regulation was considered by setting a legislated standard. Amounts of pollution below this specific level would be free of charge (Spash 2010: 172). Finally, the third alternative was emissions trading, which can be seen as a hybrid between taxation and direct regulation (Spash 2010: 173). In emissions trading systems a cap on pollution is fixed through the limited amount of allowances. A legislated standard fulfils the same function. However, the difference is that allowances can be traded between polluters. This means that they are not forced to stay below a given standard, but can buy additional allowances on the market to pollute more (Spash 2010: 173).

It can be noted that the three alternatives were all based on economic efficiency and concentrated on cost-effective approaches to reach an optimal amount of pollution (Spash 2010: 172). Besides, other standards, which are focusing on for example “health, precaution, fairness, equity, industrial competitiveness [and] rare species protection”, would also be conceivable (Spash 2010: 172).

The international climate policy was established with the adaption of the United Nations Framework Convention on Climate Change (UNFCCC), which is the foundation for

international climate cooperation (Oberthür and Pallemmaerts 2010: 28). It was ratified by 154 countries in 1992 and entered into force in 1994 (UNFCCC 2006: 19). The aim was a “stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system” (United Nations 1992: 4).

In preparation for the UNFCCC, the EU developed a common position for the forthcoming international negotiations. However, they could only agree on the targets, and not about the concrete measures to reach them (Oberthür and Pallemmaerts 2010: 29). Nevertheless, the EU promoted a binding agreement that all industrialised countries should restrict their carbon dioxide emissions to the levels of 1990 by 2000 (Oberthür and Pallemmaerts 2010: 29). However, this met strong resistance from other OECD countries, especially the US (Oberthür and Pallemmaerts 2010: 30).

There were disagreements among the EU member countries about the instrument to reach the emission target. In 1992, the Commission submitted a proposal for a carbon and energy tax to the Council (Oberthür and Pallemmaerts 2010: 31). The Commission stated in its proposal that “tax measures are an important component of an overall strategy based on a ‘no regrets’ policy, in view of their repercussions on economic performance and on the behaviour of different branches of the economy” (COM(92) 226 final: 2). As a tax is a financial measure, it requires unanimous adoption by the Economic and Financial Affairs Council (Spash 2010: 170). Subsequently, Greece, Ireland, Portugal and Spain requested additional structural funding before accepting the tax, France wanted to limit the tax to carbon and thereby exclude its nuclear industry and the UK refused any tax on the European level (Skjærseth and Wettestad 2008: 4f.). Consequently, the tax was never adopted (Oberthür and Pallemmaerts 2010: 31). The process was also influenced by strong protest from the fossil-fuel industry (Skjærseth and Wettestad 2008: 4). As a consequence of the refusal of the tax, the elaboration of an EU climate policy framework stagnated and the issue was delivered to the member states, who had to work out national emission reduction programmes (Oberthür and Pallemmaerts 2010: 31).

However, in the negotiations on the Kyoto Protocol, which had been adopted in 1997, the EU kept its leadership role and pushed for a binding commitment (Oberthür and Pallemmaerts 2010: 33). The EU tried to avert the US’ proposal of flexible mechanisms such as emissions trading (Skjærseth and Wettestad 2008: 5). However, the US’ ideas prevailed and emissions trading, CDM and JI became central elements of the Kyoto Protocol (Skjærseth and Wettestad 2008: 5). In 2001, the US withdrew from the Kyoto Protocol, but the approach of carbon

trading had already been established internationally (Lohmann *et al.* 2006: 50). After the retraction of the US, the EU aimed to save the Kyoto Protocol and gave up its opposition as the model of carbon trading was no longer linked to the US' pressure (Lohmann *et al.* 2006: 53; Wettestad 2014: 67). The EU introduced the EU ETS in 2005, which is connected to the Kyoto Protocol's emissions trading system through the CDM and JI.

In December 2007, the UN climate conference took place in Bali, where the participating states discussed about further actions after the expiration of the Kyoto Protocol in 2012. They agreed upon the Bali Action Plan, which included that the successor agreement for the Kyoto Protocol would be adopted at the UN climate conference in Copenhagen in 2009 (Skjærseth and Wettestad 2010a: 117). Against this background the Commission's proposal for a revision of the EU ETS for its third phase was influenced by the forthcoming conference in three ways (Skjærseth and Wettestad 2010a: 118). First, the EU aimed to use its leadership position to push an ambitious agreement forward (Oberthür and Pallemmaerts 2010: 45). To show the world its seriousness, the EU had set the target of reducing greenhouse gas emissions by 20 % until 2020 compared to 1990 levels with the option to increase this to 30 % if other countries would join in (Skjærseth and Wettestad 2010a: 117). Secondly, the Commission aimed to motivate other countries to cooperate by announcing to reduce external credits if an ambitious global deal could not be reached. However, if a global deal could be reached the EU would increase its target to 30 % and would allow half of the additional reduction efforts to be financed by external credits (Skjærseth and Wettestad 2010a: 118). Thirdly, regarding the potential risk of carbon leakage, the Commission postponed the decision about the threatened sectors to the time after the conference in Copenhagen (Skjærseth and Wettestad 2010a: 118). In January 2009, the EU issued its position paper for the climate conference in Copenhagen, which contained the main aim to restrict global warming "to less than 2°C above the pre-industrial level" (European Commission 2009). An important item was the effort to establish an OECD-wide carbon market by 2015 and to reform the CDM market (European Commission 2009).

However, the results of the Copenhagen conference were poor. Although the long-term goal of limiting global warming to 2°C was included in the Copenhagen Accord, the states could not agree on a binding commitment on how to reach this (UNFCCC 2014a). Moreover, the development of a global carbon market could also not be brought forward (Skjærseth and Wettestad 2010a: 118).

## **4.2. Actor analysis**

For the actor analysis I consider three groups of actors to be important. These are first of all, the institutionalised political actors on the EU level, namely the European Commission, the European Council, the European Parliament and the Council of the EU. Secondly, the group of economic actors, consisting of the power generating sector and the energy-intensive industries, is important as they are directly affected and restricted by the EU ETS. Consequently, they have the major interest to negotiate the best possible outcome with regard to their economic interests. The aviation sector is not included in the analysis as its integration into the EU ETS was negotiated separately to the revision. Thirdly, the environmental non-governmental organisations (NGOs) form the last important group of actors. They are representing climate and environmental interests.

Moreover, I identified four major points of conflict in the negotiations about the revision of the EU ETS Directive. These are the conversion from national allocation plans to an EU-wide harmonised cap, the shift from free allocation of allowances to an auctioning system, the restriction of imports of credits from the CDM and the JI and the earmarking of auction revenues for climate change mitigation projects.

In this chapter, I will compare the positions and claims of the actors with the final Directive with regard to the four identified points of conflict, in order to show where they were successful in enforcing their interests. Afterwards, with regard to the HMPA, I will classify the actors into hegemony projects and evaluate their positions.

### **4.2.1. Political actors on the EU level**

I will first compare the revised EU ETS Directive with the initial proposal of the Commission. The most important alteration of the Directive 2009/29/EC was that an EU-wide cap of emissions has been set, which substituted the national allocation plans. The cap will be decreased by a linear reduction factor of 1.74 % to an overall reduction of 21 % in 2020 compared to the emission levels in 2005 (Directive 2009/29/EC: Article 9). The second major change was that the allocation of free allowances has been replaced by an auctioning system (Directive 2009/29/EC: Article 10). This regulation was fully applied to the power generating sector (Directive 2009/29/EC: Article 10a(3)). However, the Directive contained the “option for transitional free allocation for the modernisation of electricity generation” (Directive 2009/29/EC: Article 10c). Eight member states, namely Bulgaria, Cyprus, the Czech Republic, Estonia, Hungary, Lithuania, Poland and Romania applied for this exception and were approved by the Commission (European Commission n.d.: 36). However, this rule was

not part of the Commission's proposal. Moreover, there were also exceptional rules for energy-intensive industries that face a risk of 'carbon leakage', that were also proposed by the Commission (Directive 2009/29/EC: Article 10a). Furthermore, the Commission suggested that no new credits from the CDM or JI should be allowed until an ambitious global agreement could be reached and the EU's reduction target has been increased to 30 % (European Commission 2008b: 10). However, the final Directive contained that for the third phase all already existing industries are allowed to use credits up to a maximum of 11 % of their allocation of the second phase. New industries, which were not covered by the EU ETS in the second period, are allowed to use credits up to a limit of 4.5 % of their verified emissions in the third period; aviation up to 1.5 % (Directive 2009/29/EC: Article 11a). Regarding the revenues of the auctions the Commission proposed that "at least 20 % of the proceeds from the auctioning of allowances should be used to reduce greenhouse gas emissions, to adapt to the impacts of climate change" (European Commission 2008b: 15). However, the final Directive comprised just a non-binding recommendation that "at least 50 % of the revenues generated from the auctioning of allowances (...) should be used" for climate change mitigation (Directive 2009/29/EC: Article 10 (3)).

Secondly, I will outline the positions of the member states, which were represented by the Council and the European Council in the policy process.

The EU ETS has been constructed as a decentralised instrument that left the decisions in the hands of the member states. They determined the emissions caps by their national allocation plans and distributed allowances for free. The member states refused a centralisation of the system in the beginning. However, the experiences of the first phase have shown the ineffectiveness of this practice, which resulted in changed attitudes of the member states. All member states discerned the need for harmonisation and centralisation and agreed upon an EU-wide cap on emissions (Skjærseth and Wettestad 2010b: 79). There was a broad consensus among the member states about a more harmonised method and an EU-wide cap in order to reach the 20 % target (Skjærseth and Wettestad 2010a: 109).

Nevertheless, this uniformity was not the case for the idea of an auctioning system. Although problems of free allocation were recognised, there was a division between the Eastern and Central European member states which opposed it and the Western European member states that supported auctioning as the general allocation system (Skjærseth and Wettestad 2010b: 80). The member states of Central and Eastern Europe put more emphasis on energy security and domestic fossil fuel sources (Geden and Fischer 2014: 11). Poland was the 'speaker' of this group of countries. They aimed to protect their coal power stations because they feared

that charges for allowances would reduce the growth of their economies (Skjærseth and Wettestad 2010a: 10). Finally, they were successful in enforcing exceptional rules from the auctioning system for their power plants. In the negotiations about the treatment of energy-intensive industries, Germany could be identified as major protector. Germany strongly argued for free allowances for all industries that are facing a risk of carbon leakage as long as an international agreement about fees for emissions does not exist. Finally, the Directive contained exceptions for a lot of industries under the argumentation of ‘carbon leakage’ (Skjærseth and Wettestad 2010a).

Moreover, the majority of the member states were against import restrictions on credits. Speakers against restrictions were mainly Spain and the Netherlands (Skjærseth and Wettestad 2010a). Their demands were successful.

The member states collectively refused the Commission’s plan to earmark the auction revenues (Skjærseth and Wettestad 2010a: 109). Finally, they were successful and only non-binding recommendations were included in the Directive.

Thirdly, the Parliament generally supported the Commission’s proposal for a reform of the EU ETS. One important person in the policy process was the rapporteur of the Environmental Committee Avril Doyle, who prepared several compromise amendments (European Parliament 2008). Nevertheless, the members of the Environmental Committee were divided (Wettestad 2014: 69). However, in its meeting on the 7<sup>th</sup> October 2008 the Environmental Committee voted for Doyle’s proposal with 44 to 20 votes and one abstention (Euractiv 2008). This means that they supported the Commission’s main proposals, namely the centralised cap-setting, the auctioning system and the restriction of external credits. However, the Committee had demanded that all revenues gained by the auctions should be earmarked for specific climate measures (Skjærseth and Wettestad 2010a: 113). This claim of the Environmental Committee had not been successful since the final Directive only contained a legally non-binding recommendation.

#### **4.2.2. Economic actors**

The power producing sector is an important economic actor as more than half of the emissions that are covered by the EU ETS are generated by it (Skjærseth and Wettestad 2010a: 111). The interests of the companies in this sector are represented by Eurelectric, the union of the electricity industry, on the European level. In July 2007, they issued a joint position paper about the revision of the EU ETS (Eurelectric 2007). They generally supported the cap and trade approach of the EU ETS. A reason for that may be that they profit from it. Due to the expansion of wind energy, they can save allowances and sell them on the market (Skjærseth

and Wettestad 2010a: 112). Therefore, in the negotiations about the reform of the EU ETS, Eurelectric supported an EU wide cap on emissions as well as harmonised regulations of allocation as this would be necessary to guarantee competitive equality for all companies (Eurelectric 2007: 6). However, there were disagreements among the energy producers regarding a shift to an auctioning system (Eurelectric 2007: 16).

Furthermore, they emphasised the importance of unrestricted access to the credits from the CDM and JI “as they are fundamental to achieving the EU’s emission reduction goals and engaging developing countries in a global emissions reduction process” (Eurelectric 2007: 7). Contrary to the power producing sector, the energy-intensive industries are not represented by one organisation, but submitted a common position paper through the Key Stakeholders Alliance for ETS Review as well as individual ones (Skjærseth and Wettestad 2010a: 112; European Commission 2016e). In general, they were rather averse to an EU ETS reform. In their joint position paper they requested policy makers remove distortions of the free market and create ‘regulatory stability’ (Alliance of Energy Intensive Industries *et al.* 2007: 1). They refused an auctioning system of allowances as this would harm the competitiveness of the EU industry on global markets (Alliance of Energy Intensive Industries *et al.* 2007: 1). Instead, they proposed “sectoral approaches and performance-based allocation based on actual production” for example through benchmarks, a baseline or a credit system (Alliance of Energy Intensive Industries *et al.* 2007: 1f.). The performance-based allocation should be applied for “large emitting, homogeneous processes [whereas] other more dispersed activities may remain with an allocation based upon grandfathering based on historical emissions” as this would create a level playing field (Alliance of Energy Intensive Industries *et al.* 2007: 2). BusinessEurope even lobbied for a total free allocation of allowances until a global emissions trading system, which includes all main emitting countries, has been created. They argued that European companies would otherwise be disadvantaged on the global market (BusinessEurope 2007: 6). They further claimed to be ‘careful’ about performance-based allocation as this might be a good option for some sectors whereas it would be ‘inappropriate’ for others (BusinessEurope 2007: 8).

Moreover, the energy-intensive industries also promoted unlimited import of credits (Alliance of Energy Intensive Industries *et al.* 2007: 2).

Regarding an EU-wide cap, the energy-intensive industries were split. Most of them were receptive to the idea and some companies advocated for more harmonisation as this would generate higher competitive equality (Skjærseth and Wettestad 2010a: 112).

Finally, the energy-intensive industries were successful in ensuring that a large part of the allowances are allocated to them for free for the whole trading period under the argumentation of ‘carbon leakage’. Moreover, a benchmark system is used for allocating free allowances.

#### **4.2.3. Environmental actors**

In the beginning of the discussions about emissions trading in the 1990s, most of the environmental NGOs rejected this method for tackling climate warming, because they doubted its effectiveness and had moral worries (Skjærseth and Wettestad 2010a: 111). Nevertheless, by 2000 most of them had changed their attitudes towards the belief that a well-designed cap and trade model will lead to environmental improvements (Skjærseth and Wettestad 2010a: 111). In their position paper for the EU ETS revision they even described the EU ETS as a “tremendously important achievement for European Climate Change policy” (CAN *et al.* 2007: 5).

In the negotiations about the reform of the EU ETS, the major environmental NGOs, namely the Climate Action Network Europe (CAN), the World Wide Fund for Nature (WWF), Friends of the Earth (FoE) and Greenpeace supported the proposal of the Commission. They issued a joint position paper in 2007, which stated that the revision of the EU ETS must increase its “environmental and economical effectiveness” (CAN *et al.* 2007: 4). They supported an EU-wide cap, but requested a reduction target of at least 30 % compared to 1990 levels. Moreover, they also advocated an auctioning system of allowances and emphasised that the revenues of the auctions should be earmarked for funding climate change policies. Additionally, they also supported the Commission’s proposal for restricting credits from the CDM and JI to enter the EU ETS (CAN *et al.* 2007: 4).

#### **4.2.4. Classification into hegemony projects**

The different positions can be categorised into hegemony projects as outlined in chapter 3.2.2. I identified three hegemony projects.

First, the Commission, the Parliament and the environmental NGOs can be classified as one hegemony project as they supported major changes of the EU ETS in favour of more environmental improvements.

Secondly, the Eastern and Central European member states, with Poland as speaker of this group, can be considered as a hegemony project together with the energy producing industries, as they strongly supported their interests.

Thirdly, Germany and the energy-intensive industries can be characterised as a third hegemony project as Germany supported the interests of the energy-intensive industries in the policy process.

According to the theoretical assumptions of the HMPA, the available power resources of the hegemony projects are important in order to evaluate their single positions in the context of all participating forces.

Regarding the organisational resources, which include bureaucracies, networks, money and force and can easily be mobilised, the institutionalised political and the economic actors can be considered to have more of those resources than the environmental actors. However, there are differences between the member states, as the 'old' Western and Northern European states are richer and more institutionalised contrary to the 'new' Eastern and Central European states.

Secondly, the economic actors can be considered as the ones that have the most systemic resources as they provide necessary services for the society and therefore have the possibility to make economic actions which have system-relevant consequences.

Thirdly, there are the discursive, ideological and symbolic resources, which describe the ability to reach acceptance in a greater part of the society. In this regard, the environmental NGOs could have the most resource, as they represent universal values and interests of a better environment, which are advantageous for all human beings. However, reality has shown that neoliberalism is the hegemonic ideology with its assumption that economic freedom has to be the top priority across all kinds of policies. The manifestation of it has been outlined in chapter 4.1.1. Against this background it is not the environmental NGOs that can be considered to have the most discursive, ideological and symbolic resources but rather the economic actors and their political allies.

Fourthly, concerning the institutional or strategic selectivities, all actors have adapted their claims and strategies to the existing institutional settings. All of them supported the EU ETS as a market-based instrument, conforming to the neoliberal theory. They did not aim to radically change the system. Even the environmental NGOs emphasised the need for maximising not only the environmental but also the economic effectiveness of the EU ETS (CAN et al. 2007: 2).

Consequently, the first identified hegemony project, consisting of Commission, Parliament and environmental NGOs, had organisational resources.

The second identified hegemony project composed of Eastern and Central European member states and the energy producing industries had systemic as well as discursive, ideological and symbolic resources.

Thirdly, the hegemony project, comprising Germany and the energy-intensive industries, had organisational as well as systematic resources and discursive, ideological and symbolic resources.

All in all, the main claims of the Commission have survived in the policy process, but with lots of exceptions, which had been enforced by the two other hegemony projects. Their success can be explained by their available power resources.

### **4.3. Process analysis**

The aim of the process analysis is to reconstruct the dynamic process of the conflict by analysing the acting of the players during phases and turning points of the conflict. Therefore, the characteristics of the policy process of the EU ETS revision are depicted. Additionally, the effects of the economic and financial crisis on the EU ETS revision are analysed.

#### **4.3.1. Policy process of the EU ETS revision**

The EU ETS reform was part of the EU climate and energy package, which set the ‘20-20-20’ headline targets in 2007 and became law in 2009. The targets consist of a 20 % reduction of greenhouse gas emissions compared to 1990 levels, a 20 % share of renewable energy sources and a 20 % increase of energy efficiency until 2020 (European Commission 2016a). The package is important as the targets also are the headline targets for the Europe 2020 strategy for smart, sustainable and inclusive growth. The EU ETS is the key tool for reaching the emission reduction target (European Commission 2016a).

Two driving forces regarding the context of the strategy have been important. First of all, there had been an increased public perception of the threats caused by climate change, mainly due to the publication of the fourth assessment report of the Intergovernmental Panel on Climate Change (IPCC) in 2007 and the Stern review engaged by the British government (IPCC 2007; Stern 2007; Geden and Fischer 2014: 10). This led to the establishment of the climate topic in the EU mainstream debate (Geden and Fischer 2014: 10). In 2007, the political atmosphere was shaped by the idea that energy and climate could become the topics for further European integration, which had high public support (Geden and Fischer 2014: 22).

Secondly, in 2004, Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Slovakia and Slovenia and in 2007 Bulgaria and Romania joined the EU. The new

member states of Central and Eastern Europe had concerns about oil and gas security, as prices on the international energy market increased and there were unfavourable political developments in regions with main reserves, especially in Russia and the Middle East (Geden and Fischer 2014: 10; Oberthür and Pallemmaerts 2010: 46). This had the effect that the support for EU climate and energy policy further increased for the reason that this could strengthen the EU's global role (Oberthür and Pallemmaerts 2010: 46). With an integrated EU energy and climate policy a compromise between those states with priority on security of energy-supply and those with priority on sustainability should have been reached (Geden and Fischer 2014: 10).

The policy process for the revision of the EU ETS started with the European Council setting the 20-20-20 targets in March 2007 and considering the EU ETS as chief instrument for reaching the target of emission reduction. Therefore, the Council requested the Commission "to review Directive 2003/87/EC in good time and bring forward proposals which create the right incentives for forward-looking, low-carbon investment decisions" (Council 2007: 6). The climate and energy package consists of four main parts: a revision of the EU ETS Directive from 2003, an effort-sharing Decision among the member states regarding greenhouse gas emissions of sectors which are not covered by the EU ETS, a renewable energy Directive and a Directive on carbon capture and storage (Oberthür and Pallemmaerts 2010: 47). Besides these, three other legislative measures relating to the package had been adopted. This was first the Directive 2008/101/EC which incorporates aviation into the EU ETS. Secondly, the Fuel Quality Directive (Directive 2009/30/EC) and thirdly the Regulation (EC) No 443/2009 for emission standards of cars (Oberthür and Pallemmaerts 2010: 51).

The policy process of the revision of the EU ETS started with the proposal of the Commission in January 2008 (European Commission 2008b). The proposal was based on a comprehensive impact assessment, which the Commission had initiated in 2005 (European Commission 2008a; Skjærseth and Wettestad 2010b: 70). The Commission engaged McKinsey & Company and Ecofys to conduct a web-survey, which lasted from June to September 2005 and was open for all key stakeholders who wanted to participate (DG Environment 2006: 4). Furthermore, the Commission introduced the second European Climate Change Programme in October 2005, which consisted of several working groups of stakeholders, representatives from the Commission's different departments, the member states, industry and environmental groups as well as scientists (European Commission 2016b). One working group developed suggestions for the new EU ETS Directive. The group met four times in 2007 discussing "the scope of the directive" in March, "robust compliance and enforcement" in April, "further

harmonisation and increased predictability” in May and “linking with emissions trading schemes of third countries” in June (Skjærseth and Wettestad 2010b: 71f.). Moreover, 50 position papers from stakeholders were submitted during summer 2007 (European Commission 2016e).

Finally, the Commission issued its legislative proposal for a revised EU ETS Directive on the 23<sup>rd</sup> January 2008. Afterwards, discussions in the Parliament and the Council started. In summer, they had made up their specific positions and in autumn, the negotiations between the institutions took place (Skjærseth and Wettestad 2010b: 73). The revision of the EU ETS Directive should have been adopted through the co-decision legislative procedure (Skjærseth and Wettestad 2010a: 116). However, in the middle of October, the French presidency announced that the European Council will decide about the reform of the EU ETS along with the other elements of the climate and energy package in its meeting in December 2008 (Skjærseth and Wettestad 2010b: 74). It is very uncommon that the European Council is included in the legislative procedure. The aim of the French presidency was to speed up the process in order to reach an agreement before the end of the UNFCCC conference in Poznan (December 2008) so that the EU could keep its leadership role for the climate summit in Copenhagen in December 2009, where the successor agreement of the Kyoto Protocol should have been adopted (Oberthür and Pallemmaerts 2010: 47).

As a consequence of the accelerated process, the Commission’s legislative proposal did not have to pass all stages of the co-decision legislative procedure (Skjærseth and Wettestad 2010a: 102). Instead, there were trilogue negotiations between representatives from the Commission, the Parliament and the Council in November 2008, where the main discrepancies were clarified (Skjærseth and Wettestad 2010a: 102). As the meeting of the European Council (11-12<sup>th</sup> December 2008) about the proposal took place even before the first reading in the Parliament, the Parliament only had the option to either accept or refuse the European Council’s revision (Skjærseth and Wettestad 2010a: 116; Oberthür and Pallemmaerts 2010: 47). Finally, the Parliament adopted the climate and energy package, including the EU ETS revision, in its first reading on the 17<sup>th</sup> December 2008 (Skjærseth and Wettestad 2010a: 101; Oberthür and Pallemmaerts 2010: 47). The aim of the French presidency was reached. However, the sped up policy process had the effect that the Commission’s proposal for the EU ETS revision had been diluted as many exceptional rules were made in the final Directive (Oberthür and Pallemmaerts 2010: 47). This can also be ascribed to the fact that four Directives were negotiated in parallel under the climate and energy package. It can be assumed that this has facilitated the negotiations, but also maybe reduced policy outcomes

as concessions in one issue had been compensated with concessions in another issue. However, a profound analysis of the potential effects of this is not covered by this paper. The research concentrated exclusively on the revision of the EU ETS Directive, whereby positions of the actors on related issues, like carbon capture and storage, were not included.

However, the Copenhagen summit's results were poor and a global agreement could not be reached. This had the effect that the motivation to make further efforts for climate policy was reduced. The political atmosphere was shaped by disillusionment as no considerable progress was made (Geden and Fischer 2014: 22).

#### **4.3.2. The economic and financial crisis**

The economic and financial crisis hit the EU in autumn 2008 when the negotiations about the EU ETS revision entered the last stage and a decision was imminent. However, the main policy process even took place before the crisis. The dimensions of the crisis and its impact on the EU ETS got clearer after the Directive had already been adopted. Therefore, rather than the crisis influencing the policy making process, instead it was the realisation and success of the Directive that were affected.

The economic downturn caused by the crisis led to an automatic decline of emissions that resulted in an oversupply of emission allowances and a decrease in their prices. At the end of 2009, steel production declined by 30 %, cement production by 20 % and electricity production by 5.4 % (Henbest 2015). The overall economic decline of 4.4 % caused a reduction in emissions of 13 % (Henbest 2015). As a consequence, the prices for emission allowances fell dramatically from EUR 28.34 per tonne in June 2008 to EUR 3.16 in April 2013 (Henbest 2015). This development was intensified by an import of 1 billion tonnes of credits from the CDM and JI between 2008 and 2014 (Henbest 2015). The consequence of the import and the economic downturn was an oversupply of 2.2 billion tonnes of allowances by the end of 2014, which represents 112 % of the emissions that the EU ETS contains each year (Henbest 2015).

Furthermore, the crisis had major impacts on the member states and policy making in the EU. First of all, financial and economic issues became the highest priority on the political agenda, whereas issues in other policy fields, like the problems with the EU ETS, were delayed (Geden and Fischer 2014: 22). Secondly, the crisis has intensified the disparities between the climate policy supporting member states in Northern and Western Europe and the climate policy stragglers in Central and Eastern Europe (Geden and Fischer 2014: 22). Additionally, the Southern member states, which had supported the European climate policy before the crisis, changed their position as they concentrated more on economic revival (Geden and

Fischer 2014: 12). Along with the Eastern and Central European member states, they aimed to slow down the process of ecological transformation (Geden and Fischer 2014: 12). Moreover, the crisis had also shown that the revised EU ETS, as well as other parts of the energy and climate package, were not working as supposed. Thereby, the trust in scientific theories and forecasts was lost and it became difficult to influence and change attitudes of member states by scientific studies (Geden and Fischer 2014: 22).

It can be argued that neoliberal economic policies caused the global financial crisis (Bresser-Pereira 2010: 3). Neoliberal elements have been integrated into the EU by the free trade agreements of the Single European Act, the competition policy, the anti-inflation priority and the restriction of fiscal policy in the Maastricht Treaty and the Stability and Growth Pact (Stockhammer 2014: 4). The consequence is that the nation states have been more and more weakened. The European fiscal rules have limited their capacities to intervene when facing a crisis as the lender of last resort facility is no longer available (Stockhammer 2014: 6). Furthermore, neoliberalism has led to the evolvement of debt-driven and export-driven growth, which are both unstable models (Stockhammer 2014: 7). For this reason, it can be argued that the crisis is also a crisis of neoliberalism (Stockhammer 2014: 7). It has shown that the EU policy regime is dysfunctional as it has exacerbated the economic crisis (Stockhammer 2014: 6). However, the financial crisis, rather than turning the EU away from neoliberalism, in fact strengthened further fiscal restrictions and forced countries to austerity (Stockhammer 2014: 14).

For counteracting the unintended developments of the EU ETS, rather than reacting with rejection of this market-based instrument, the EU instead tried to better adapt it to the requirements of the free market. In response to the oversupply of allowances caused by the economic crisis the EU introduced a back-loading of allowances and intends to implement a market stability reserve, as outlined in chapter 2.2.

#### **4.4. Evaluation**

Through the context analysis, the historical situation that led to the implementation and the revision of the EU ETS was reconstructed. When the climate topic arose under pressure from the public and reached the political agenda in the 1990s, policy making was shaped by neoliberalism in the US and in Europe. Against this background only measures to tackle climate change were discussed that conformed to neoliberalism and focused on economic efficiency. The rise and dominance of neoliberalism can be ascribed to the support of very wealthy people, especially in the US, who enabled the spread of this theory through think-tanks and academic institutions. Their motivation was to prevent a limitation of their power

through welfare state elements. As Keynesian policies failed at the end of the 1960s, there was the window of opportunity for neoliberalism to enter the political mainstream. It consolidated in political practice especially in the US under Reagan and in Britain under Thatcher. Since then it became hegemonic in many policy fields in the western countries. This development is connected to the fact that neoclassical macroeconomics replaced Keynesian macroeconomics in the 1970s. Neoliberal policies are based on neoclassical macroeconomic theory. However, it can be argued that the neoclassical economic theory is inappropriate and unfavourable for environmental protection and sustainability because the reality has shown that not all costs and benefits are included correctly in the price mechanism of the market. Natural living conditions are destroyed and natural resources not protected (Rogall 2013: 82). Nevertheless, the US was able to introduce and enforce neoliberalism in the negotiations about climate action under the UN. As a consequence, emissions trading became a central element of the Kyoto Protocol. The EU's initial position against flexible mechanisms such as emissions trading changed and the EU introduced the EU ETS in order to meet the Kyoto targets.

Against this background, the conflicting actors were identified by the actor analysis. The negotiations about the revision of the EU ETS were dominated by four major points of conflict, namely the EU-wide cap, the auctioning system of allowances, the restriction of credits from the CDM and JI and the earmarking of auction revenues for climate change mitigation. After the analysis of the positions of the political, the economic and the environmental actors, three hegemony projects were identified. This was first, the Commission, the Parliament and the environmental NGOs, which supported an EU-wide cap, an auctioning system of allowances, the restriction of credits and an earmarking of revenues. The second identified hegemony project consisted of the Eastern and Central European member states and the power producing industries, which opposed restrictions for this sector. Thirdly, Germany and the energy-intensive industries could have been characterised as a hegemony project as they refused auctioning for energy-intensive industries and a restriction of credits. The first group was able to enforce its main ideas, namely that an EU-wide cap was introduced and auctioning became the basic principle of allocation. However, the other two groups were successful in enforcing exceptional rules for energy-intensive industries as well as for power plants in Eastern and Central European countries. Their success can be attributed to their access to organisational, systemic, discursive, ideological and symbolic resources. Interestingly, all actors adapted their strategies and claims to the institutional selectivities as

none of them doubted the effectiveness of the fundamental design of the EU ETS and did not aim to abolish and replace it with another instrument.

The policy process of the EU ETS revision was shaped by the then forthcoming UN climate conference in Copenhagen and the oil and gas concerns of the new EU member states of Eastern and Central Europe. As a consequence, the EU ETS Directive became part of a newly implemented climate and energy package. Four other directives were also part of this package and were negotiated in parallel. Moreover, the then forthcoming climate summit in Copenhagen caused a sped up policy process. This meant that the Commission's proposal did not have to pass all stages of the co-decision legislative procedure. Furthermore, the European Council participated in the process, something that is very uncommon. On the one hand, this had the positive effect that the revision was highly supported by the heads of the member states. However, on the other hand, the Commission's proposal was in a way watered down and the Parliament's opportunities to influence the policy making process were weakened.

The economic and financial crisis considerably changed the attitudes of the actors. During the time of the negotiations about the climate and energy package, the support for climate policy was very high, something that significantly changed with the crisis. Economic issues became the highest priority on the political agenda and other political issues were delayed. This was also the case for the EU ETS, whose ineffectiveness became clear. The economic crisis had led to an automatic reduction of emissions and thereby an oversupply of allowances and a decline in their prices. Moreover, the crisis resulted in a greater split between the member states of Northern and Western Europe and the member states of Central, Eastern and Southern Europe. Furthermore, the crisis created a feeling of disappointment around environmental politics as the ineffectiveness of the revised EU ETS became visible. Although the economic and financial crisis in the EU can be considered as being caused by neoliberal policies, this did not lead to a turning away. The EU tried to counteract the crisis with further neoliberal instruments. This was also the case when dealing with the problems of the EU ETS, as further neoliberal measures will be added to it.

## **5. Conclusion**

The policy analysis of the revision of the EU ETS for its third phase has shown that the historical condition significantly shaped the claims and behaviour of the actors. The EU ETS has been established in a neoliberal context. Neoliberalism was consolidated in important institutions like the UN and the EU itself. Consequently, the EU ETS was constructed as a neoliberal instrument based on neoclassical assumptions. This caused institutionalised

selectivities that hindered other options for tackling climate change, which do not conform to the neoliberal theory, from entering the policy process. Against this background, the actors adapted themselves to those selectivities and concentrated on further adjusting the EU ETS to the requirements of the free market. Moreover, the economic and financial crisis did not lead to a turning away from neoliberalism but to a further strengthening. The crisis has shown that economic interests are the top priority in the EU. This can be also ascribed to the overall framing of neoliberalism.

Against this background, on the basis of the results of the analysis, an answer to the research question ‘Why is the EU Emissions Trading System in crisis and cannot be revised in an effective way?’ can be formulated. The EU ETS is in crisis because it has been constructed as a neoliberal instrument based on neoclassical economics. The neoclassical economic theory is too far away from reality as markets are never perfect. Markets do not include environmental protection in a sufficient way. Therefore, the neoclassical theory is especially inappropriate for dealing with pollution. A neoliberal instrument, like the EU ETS, is not suitable for tackling climate change, as the past eleven years since it has been in effect have shown. However, climate warming is such a severe issue that it cannot be put off until some future date. I argue that the EU ETS can never be completely adapted to the requirements of the free market as the market will never function perfectly. For this reason, the revisions of the EU ETS will also not result in satisfying policy outcomes and will not lead to a success of the system as long as its design remains. Consequently, the EU ETS should be abolished and replaced by another instrument for tackling climate change that is not based on neoclassical assumptions. However, because of the selectivities shaped by historical conditions and the current strengths of neoliberalism, it is rather unlikely that the heads of the EU member states will agree upon a profound change in EU climate policy.

## References

- Alliance of Energy Intensive Industries, CEFIC and IFIEC (2007) *Contribution paper for the EU ETS review*.
- Brand, U. (2013) 'State, context and correspondence. Contours of a historical-materialist policy analysis', *Österreichische Zeitschrift für Politikwissenschaft (ÖZP)* 42(4): 425–442.
- Bresser-Pereira, L.C. (2010) 'The 2008 financial crisis and neoclassical economics', *Brazilian Journal of political Economy* 30(1): 3–26.
- Bruyn, S.d., Nelissen, D. and Koopman, M. (2013) *Carbon leakage and the future of the EU ETS market. Impact of recent developments in the EU ETS on the list of sectors deemed to be exposed to carbon leakage*: CE Delft.
- BusinessEurope (2007) *European Climate Change Programme (ECCP) stakeholder group. BusinessEurope views on the issues highlighted by the Commission for the review of the EU Emission Trading Scheme (ETS)*. Brussels: The Confederation of European Business a.i.s.b.l.
- CAN, WWF, FoE and Greenpeace (2007) *ECCP EU ETS Review Process: Written Comments*. Brussels: CAN/WWF/FoE/Greenpeace.
- COM(92) 226 final (1992) *Proposal for a Council Directive introducing a tax on carbon dioxide emissions and energy*. Brussels.
- Cook, J., Oreskes, N., Doran, P.T., Anderegg, W.R.L., Verheggen, B., Maibach, E.W., Carlton, J.S., Lewandowsky, S., Skuce, A.G., Green, S.A., Nuccitelli, D., Jacobs, P., Richardson, M., Winkler, B., Painting, R. and Rice, K. (2016) 'Consensus on consensus: a synthesis of consensus estimates on human-caused global warming', *Environmental Research Letters* 11(4).
- Council (2007) *EU objectives for the further development of the international climate regime beyond 2012 - Council conclusions*. Brussels: Council of the European Union.
- DG Environment (2006) *Review of EU Emissions Trading Scheme. Survey Results*: McKinsey & Company; Ecofys.
- Directive 2003/87/EC of the European Parliament and of the Council on 13 October 2003 establishing a scheme for greenhouse gas emission allowance trading within the Community and amending Council Directive 96/61/EC.
- Directive 2004/101/EC of the European Parliament and of the Council on 27 October 2004 amending Directive 2003/87/EC establishing a scheme for greenhouse gas emission allowance trading within the Community, in respect of the Kyoto Protocol's project mechanisms.

Directive 2008/101/EC of the European Parliament and of the Council on 19 November 2008 amending Directive 2003/87/EC so as to include aviation activities in the scheme for greenhouse gas emission allowance trading within the Community.

Directive 2009/29/EC of the European Parliament and of the Council on 23 April 2009 amending Directive 2003/87/EC so as to improve and extend the greenhouse gas emission allowance trading scheme of the Community.

Directive 2009/30/EC of the European Parliament and of the Council on 23 April 2009 amending Directive 98/70/EC as regards the specification of petrol, diesel and gas-oil and introducing a mechanism to monitor and reduce greenhouse gas emissions and amending Council Directive 1999/32/EC as regards the specification of fuel used by inland waterway vessels and repealing Directive 93/12/EEC.

Euractiv (2008) EU Climate Plans Get the Nod from MEPs, available at <http://www.euractiv.com/section/development-policy/news/eu-climate-plans-get-the-nod-from-meps/>, accessed 27 June 2016.

Eurelectric (2007) *Position Paper: Review of the EU Emissions Trading Directive (2003/87/EC) and the Linking Directive (2004/101/EC)*. Brussels: Union of the Electricity Industry.

European Commission (n.d.) EU ETS Handbook, available at [http://ec.europa.eu/clima/publications/docs/ets\\_handbook\\_en.pdf](http://ec.europa.eu/clima/publications/docs/ets_handbook_en.pdf), accessed 27 June 2016.

European Commission (2008a) *Impact Assessment. Document Accompanying the Package of Implementation Measures for the EU's Objectives on Climate Change and Renewable Energy for 2020*. Brussels: Commission staff working document.

European Commission (2008b) *Proposal for a Directive of the European Parliament and of the Council Amending Directive 2003/87/EC So as to Improve and Extend the Greenhouse Gas Emission Allowance Trading System of the Community*: COM(2008) 16 final.

European Commission (2009) Questions and Answers on the Communication Towards a comprehensive climate change agreement in Copenhagen, available at [http://europa.eu/rapid/press-release\\_MEMO-09-34\\_en.htm?locale=en](http://europa.eu/rapid/press-release_MEMO-09-34_en.htm?locale=en), accessed 14 July 2016.

European Commission (2013) The EU Emissions Trading System (EU ETS), available at [http://ec.europa.eu/clima/publications/docs/factsheet\\_ets\\_en.pdf](http://ec.europa.eu/clima/publications/docs/factsheet_ets_en.pdf), accessed 16 July 2016.

European Commission (2016a) Climate Action. 2020 climate & energy package, available at [http://ec.europa.eu/clima/policies/strategies/2020/index\\_en.htm](http://ec.europa.eu/clima/policies/strategies/2020/index_en.htm), accessed 25 June 2016.

- European Commission (2016b) Climate Action. European Climate Change Programme, available at [http://ec.europa.eu/clima/policies/eccp/index\\_en.htm](http://ec.europa.eu/clima/policies/eccp/index_en.htm), accessed 26 June 2016.
- European Commission (2016c) Climate Action. Structural reform of the EU ETS, available at [http://ec.europa.eu/clima/policies/ets/reform/index\\_en.htm](http://ec.europa.eu/clima/policies/ets/reform/index_en.htm), accessed 2 July 2016.
- European Commission (2016d) Climate Action. Carbon Leakage, available at [http://ec.europa.eu/clima/policies/ets/allowances/leakage/index\\_en.htm](http://ec.europa.eu/clima/policies/ets/allowances/leakage/index_en.htm), accessed 5 July 2016.
- European Commission (2016e) Climate Action. 1st meeting of the ECCP working group on emissions trading on the review of the EU ETS, available at [http://ec.europa.eu/clima/events/articles/0065\\_en.htm](http://ec.europa.eu/clima/events/articles/0065_en.htm), accessed 27 June 2016.
- European Commission (2016f) Revision for phase 4 (2021-2030), available at [http://ec.europa.eu/clima/policies/ets/revision/index\\_en.htm](http://ec.europa.eu/clima/policies/ets/revision/index_en.htm), accessed 20 June 2016.
- European Parliament (2008) *Compromise Amendments 1-25 on the proposal for a directive of the European Parliament and of the Council amending Directive 2003/87/EC so as to improve and extend greenhouse gas emission allowance trading system of the Community. Draft report Avril Doyle: 2008/0013 (COD)*.
- Geden, O. and Fischer, S. (2014) 'Moving Targets. Negotiations on the EU's Energy and Climate Policy Objectives for the Post-2020 Period and Implications for the German Energy Transition', *SWP Research Paper*(1).
- Global Carbon Project (2015) Global Carbon Atlas, available at <http://www.globalcarbonatlas.org/?q=en/emissions>, accessed 5 July 2016.
- Harvey, D. (2005) *A brief history of Neoliberalism*. Oxford: Oxford University Press.
- Hayek, F.A. (1944) *The Road to Serfdom. Text and Documents—The Definitive Edition*: The University of Chicago Press.
- Henbest, S. (2015) Fix the EU Emissions Trading System, And Carbon Markets Can Be Serious Business, available at <http://www.renewableenergyworld.com/articles/2015/03/fix-the-eu-emissions-trading-system-and-carbon-markets-can-be-serious-business.html>, accessed 30 June 2016.
- IPCC (2007) *Climate Change 2007. Synthesis Report. Contribution of Working Groups I, II and III to the fourth Assessment Report of the Intergovernmental Panel on Climate Change*. Geneva: IPCC.
- IPCC (2014) Climate Change 2014 Synthesis Report. Summary for Policymakers, available at [http://www.ipcc.ch/pdf/assessment-report/ar5/syr/AR5\\_SYR\\_FINAL\\_SPM.pdf](http://www.ipcc.ch/pdf/assessment-report/ar5/syr/AR5_SYR_FINAL_SPM.pdf), accessed 16 July 2016.

- Kannankulam, J. and Georgi, F. (2014) 'Varieties of capitalism or varieties of relationships of forces? Outlines of a historical materialist policy analysis', *Capital & Class* 38(1): 59–71.
- Lohmann, L., Hällström, N., Nordberg, O. and Österbergh, R. (2006) 'Carbon Trading. a critical conversation on climate change, privatisation and power', *development dialogue*(48).
- Mises, L.v. (1944) *Bureaucracy*. USA: Yale University Press.
- Monbiot, G. (2016) Neoliberalism – the ideology at the root of all our problems, available at <https://www.theguardian.com/books/2016/apr/15/neoliberalism-ideology-problem-george-monbiot>, accessed 21 October 2016.
- Oberthür, S. and Pallemarts, M. (eds.) (2010) *The New Climate Policies of the European Union. Internal Legislation and Climate Diplomacy*. Brussels: VUBPRESS Brussels University Press.
- Offe, C. (1969) 'Politische Herrschaft und Klassenstrukturen', in G. Kress and D. Senghaas (eds.) *Politikwissenschaft. Eine Einführung in ihre Probleme*, Frankfurt am Main: Fischer, pp. 155–189.
- Poulantzas, N. (2000 [1978]) *State, Power, Socialism*. London: Verso.
- Regulation (EC) No 443/2009 of the European Parliament and of the Council of 23 April 2009 setting emission performance standards for new passenger cars as part of the Community's integrated approach to reduce CO<sub>2</sub> emissions from light-duty vehicles.
- Rogall, H. (2002) *Neue Umweltökonomie - Ökologische Ökonomie. Ökonomische und ethische Grundlagen der Nachhaltigkeit, Instrumente zu ihrer Durchsetzung*. Opladen: Leske & Budrich.
- Rogall, H. (2013) *Volkswirtschaftslehre für Sozialwissenschaftler. Einführung in eine zukunftsfähige Wirtschaftslehre*. Wiesbaden: Springer VS.
- Skjærseth, J.B. and Wettestad, J. (2008) *EU Emissions Trading: Initiation, Decision-making and Implementation*. Burlington, Hampshire: Ashgate Publishing.
- Skjærseth, J.B. and Wettestad, J. (2010a) 'Fixing the EU Emissions Trading System? Understanding the Post-2012 Changes', *Global Environmental Politics* 10(4): 101–123.
- Skjærseth, J.B. and Wettestad, J. (2010b) 'The EU Emissions Trading System Revised (Directive 2009/29/EC)', in S. Oberthür and M. Pallemarts (eds.) *The New Climate Policies of the European Union. Internal Legislation and Climate Diplomacy*, Brussels: VUBPRESS Brussels University Press, pp. 65–92.
- Spash, C.L. (2010) 'The Brave New World of Carbon Trading', *New Political Economy* 15(2): 169–195.

- Stern, N. (2007) *The Economics of Climate Change. The Stern Review*. Cambridge: Cambridge University Press.
- Stockhammer, E. (2014) 'The Euro Crisis and contradictions of Neoliberalism in Europe', *Post Keynesian Economics Study Group*(Working Paper 1401).
- UNFCCC (2006) *Handbook*. Bonn: Climate Change Secretariat.
- UNFCCC (2014a) Copenhagen Climate Change Conference - December 2009, available at [http://unfccc.int/meetings/copenhagen\\_dec\\_2009/meeting/6295.php](http://unfccc.int/meetings/copenhagen_dec_2009/meeting/6295.php), accessed 14 July 2016.
- UNFCCC (2014b) Kyoto Protocol, available at [http://unfccc.int/kyoto\\_protocol/items/2830.php](http://unfccc.int/kyoto_protocol/items/2830.php), accessed 11 July 2016.
- United Nations (1992) *United Nations Framework Convention on Climate Change*: United Nations.
- Wettestad, J. (2014) 'Rescuing EU Emissions Trading: Mission Impossible?', *Global Environmental Politics* 14(2): 64–81.

Imprint

Editors:

Sigrid Betzelt

Trevor Evans

Eckhard Hein

Hansjörg Herr

Birgit Mahnkopf

Christina Teipen

Achim Truger

Markus Wissen

ISSN 1869-6406

Printed by

HWR Berlin

Berlin February 2017