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The Polluter Pays Principle within the Framework of the European Union Emissions Trading System

Avrupa Birliği Emisyon Ticaret Sistemi Çerçevesinde Kirleten Öder İlkesi

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Abstract: 1970s, the realization that an uncontrolled development process in which consumption was prioritized and the natural link between the environment and economic development were ignored led to the search for an environment- and climate-sensitive development plan in the EU. The principle of polluter pays, which started with the process of the UN Framework Convention on Climate Change and later included in the basic legislation of the EU, started to be implemented in the fight against climate change. In this study, the polluter pays principle, which is implemented within the scope of EU climate change policies, is discussed. The polluter pays principle; It will be discussed within the scope of the EU's fight against climate change and its role in the internalization of negative externalities caused by carbon (CO_2) emissions will be discussed.

Keywords: Polluter Pay Principle, The European Union, Emission Trading, Climate Change

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Öz: 1970'li yıllarda tüketimin ön planda tutulduğu, çevre ile ekonomik kalkınma arasındaki doğal bağın göz ardı edildiği kontrolsüz bir kalkınma sürecinin farkına varılması, AB'de çevreye ve iklime duyarlı bir kalkınma planı arayışına yol açmıştır. BM İklim Değişikliği Çerçeve Sözleşmesi süreci ile başlayan ve daha sonra AB temel mevzuatına dahil edilen kirleten öder ilkesi, bu kapsamda uygulanmaya başlanmıştır. Bu çalışmada, AB iklim değişikliği politikaları kapsamında uygulanan kirleten öder ilkesi ele alınmaktadır. Kirleten öder ilkesi; AB'nin iklim değişikliği ile mücadelesi kapsamında ele alınacak ve karbon (CO_2) emisyonlarının neden olduğu negatif dışsallıkların içselleştirilmesindeki rolü tartışılacaktır**.**

Anahtar Kelimeler: Kirleten Öder İlkesi, Avrupa Birliği, Emisyon Ticareti, İklim Değişikliği

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1. Introduction

Especially after the Second World War, the acceleration of economic growth, the emergence of new technologies and the rapid consumption of energy and resources in parallel with the increase in population caused serious ecological problems. Although environmental problems have a rather old and complex history, the production and consumption patterns that spread rapidly throughout the world starting from the industrialized countries in the second half of the 20th century have further increased and complicated these problems. In order to combat these problems, it was necessary to experience a change in the production and consumption patterns. This change is not in a way to limit economic development and growth, but by emphasizing the limitation of nature, it has begun to be underlined that they cannot be used free of charge. In this context, the polluter pays principle has come to prominence that can work as a means of preventing environmental damage or as a means of creating obligation when pollution occurs.

The polluter pays principle aims to reduce environmental pollution and prevent free use and overexploitation of environmental resources, as an economic principle in which external costs arising in environmental issues can be internalized. The principle suggests an approach that requires government intervention to ensure that a single cost is not shifted to society, so that all costs are paid by the polluter. The government uses methods such as taxation and regulatory standards to do this. On the other hand, there is also the fact that the legal status of the principles is very controversial. Because there are factors such as the inability to measure the extent of environmental damage or the inability to make accurate determinations due to the fact that the results of environmental damage do not appear immediately. In this study, the principle of polluter pays is handled within the framework of the European Union Emission Trading System (ETS). This is because the European Union makes significant progress in the development of legislation on the environment and climate change, it also sets an important example in terms of the implementation of the polluter pays principle. In fact, the EU is more engaged in climate problems and in this sense, has started to develop policies at the Union level regarding the fight against climate change, ensures the application of the polluter pays principle in this area as well. In this context, it will be discussed whether the ETS created within the scope of EU climate change policies reflects the polluter pays principle, and if so, the role of the system in the internalization of negative externalities caused by emissions will be addressed.

2. Polluter Pays Principle

The polluter pays principle constitutes a principal underlying modern environmental policy, as a way to prevent pollution or to establish liability when pollution occurs (Bleeker, 2009; De Sadeleer, 2002; Turgut, 1995; Winter, 2004). As a result of economic activities, environmental resources are often overused and environmental damage occurs accordingly. Those who destroy the environment as a result of production and consumption activities could be caused serious externalities that is not reflected in the market price ((De Sadeleer, 2002: 21). This, in turn, leads to the result that, expressed as externality in economics, the damages incurred by economic agent as a result of his activities are borne by other persons who have contributed nothing to this loss, rather than by that person. At this point, the polluter pays principle emerges as an economic principle in which external costs can be internalized in order to distribute the liability and responsibility of damages arising in environmental issues to their real owners (Bleeker, 2009:29). The polluter pays principle, in this context, can be seen as a tool for cost allocation in which external costs, such as environmental costs, are internalized by the polluter and to eliminate losses in the social structure caused by environmental degradation (Sand, 2003; De Saadeleer, 2002; Güneş, 2011). External environmental costs generally arise when the real environmental costs are not reflected in the price of the goods as a result of economic activities. This situation, on the one hand, creates an

environmental cost on the society, on the other hand, people who cause these costs gain from the activities they cause pollution by using common values that belong to everyone for free (Güneş, 2011: 128). Since environmental resources are public goods, they should be used by considering the interests of the whole society. However, in cases where these externalities are ignored, it is a matter of unfair use of public goods and negative externalities resulting from this use on the society (Turgut, 1995: 615). Taken collectively, the pollution costs are taken into account when determining the price of the goods by ensuring that the polluter pays for the polluting activities in the internalization of the externalities that will cause environmental damages (Toprak, 2006: 155). In this context, the policy tools applied in the internalization of these externalities are generally in the form of taxation corresponding to the value of environmental damage or the prohibition or restriction of certain activities (Sand, 2003: 285). Considering that economic activities cannot be completely banned and restricted - which is not desire to go to such a route - taxes stand out as a means of correcting market failures reaching socially optimal production level (Hanson and Sandalow, 2006: 4).

For this reason, it is extremely useful and realistic to subject activities that harm the environment to a polluter pays principle (Aggeri, 1994; Ekins, 1999; Öner, 2014; Soares, 2011; Toprak: 2006; Turgut, 1995). Otherwise, excessive use of environmental resources will result in higher costs for the society and the state directly and indirectly. Therefore, within the framework of the polluter pays principle, such costs may be a result of limiting environmental damage by burdening those whose activities are harmful to the environment. Because, imposing polluter pays principle on activities harmful to the environment will prevent such activities by increasing the marginal cost of production, and preventing the resulting damage from being burdened on people who are not related to these activities in the society (Bleeker, 2009: 290). Moreover, people and companies that will have difficulties in competition in the face of costs created within the framework of polluter pays principle will encourage the incentive effect of new production, transportation, housing, energy use and consumption habits (Ekins, 1999: 41.). The fact that this last point also indicates is that in the competition that may arise between companies using clean technology and companies that do not use this technology, companies using clean technology will make their goods cheaper and have an effect that will reduce environmental pollution. (Toprak, 2006:157).

It can be argued that by making pollutants paid for pollution control and prevention (and thus internalizing environmental costs), pollutants are forced to monitor themselves, which will result in lower monitoring costs for the government (Farmer, 2007: 190). This use of the polluter pays principle requires a pre-determined permitted pollution level in legislation. By including this situation in the legislation, it is stated in a way what the polluter has to pay (De Sadeleer, 2002: 38). In this way, it may be possible to apply the principle of certainty of the rule of law by determining in advance which pollution or which consequences of the pollution and how much will be paid, how the payment will be. In this way, the cost of the measures determined by the state to combat pollution will be reflected in the cost of goods and services that are polluted during their consumption or production, in other words, externalities will be internalized. Firms will rationally use the limited environmental assets that pollute, which have to bear the social cost of the pollution (Turgut, 1995: 620). In other words, allocation efficiency of environmental resources in the market will be achieved through the cost-price relationship, and these will have an economical use like other means of production.

2.1. Ambiguities of the Polluter Pays Principle

Although the principle of polluter pays provides an easy explanation that a certain degree of pollution is acceptable or reasonable and in this case it should be tolerated, there are difficulties in practice due to the ambiguity of the concepts (Sadeeler,2002; Farmer, 2007; Sands, 2003; Toprak, 2006). At first sight, a definition that can be made as "making the polluter pay the cost of the pollution it creates" or "the polluter bears the cost of the pollution" is correct, based on the clear meaning of the principle, but what a set threshold value should be and when should be taken into account in determining an acceptable

pollution level it cannot be fully explained (Turgut, 1995: 619). To the question of when the pollution occurs, it can be said that the pollution will occur when a set threshold is exceeded. Therefore, any environmental damage caused when a polluter does not exceed a threshold will not be subject to liability or charges based on the polluter pays principle. In this context, this interpretation prevents the internalization of pollution within the framework of the standards determined to create environmental protection. However, since even the smallest damage to the environment creates negative externalities on the society, determining such thresholds will play a decreasing role in the implementation of the polluter pays principle (Sezer ve Dökmen, 2018: 168).

Another ambiguity of the polluter pays principle is the question of which externalities, to what extent and how to internalize (Sands, 2003; Farmer, 2007). As a result of economic activities, a pollution occurs when damage occurs in the environment. In this place the question of whether the resulting economic and social costs are fully reflected on the polluter, rather than the pollution threshold or level, comes to the fore (Bleeker, 2009: 291). Accordingly, the relationship between the polluter and the damage is not the entire social cost, but only when it comes to preventing pollution and bearing the costs. In other words, not all the consequences of pollution, but only the costs created above the specified level are reflected on the pollutant. (Aggeri, 1999; Speck, 2007). This will raise the problem of internalization of the emerging externality, not wholly but partially. Because, in the case where the polluter pays principle is applied in this way, the compensation dimension of the environmental damage is outside the scope of the principle. However, the main question is the impact of this activity on the environment. In this context, pollution should be evaluated in terms of its effect rather than its cause. In this case the situation of completely internalizing the externalities arises. Inasmuch as the polluter not only bears the costs of the prevention and removal of the pollution, but is also responsible for the environmental damage caused by the pollution (De Sadeleer, 2002: 40). In other words, the polluter has to bear the costs of both preventing and eliminating the pollution and compensating the damages caused by the pollution. However, in this regard, the problem of full internalization of externalities continues, as the responsibility of preventing and combating pollution and bearing the costs of pollution control in practice in general.

On the other hand, one of the problems and ambiguities encountered in applying the polluter pays principle is the liability of the polluter or the costs associated with the prevention principle in situations with potential to pollute (Aggeri, 1999; Speck, 2007; De Sadeleer, 2002; Turgut, 1995; Bleeker, 2009). In this context, if the polluter pays principle is applied only in cases where pollution occurs, the costs of pollution prevention and control measures determined by public authorities to ensure that the environment is in an acceptable state will be ignored (Farmer, 2007: 191). However, the measures determined by public authorities to combat pollution have some costs (Turgut, 1995: 628), and in cases where the pollution during consumption or production is not reflected in the cost of goods and services, negative externalities resulting from these costs will not be internalized. The polluter must have responsibility both before and after the pollution occurs. Within the scope of the polluter pays principle, it is generally prioritized that the pollutant takes the necessary measures to stop, remove and reduce the pollution and bear the cost of this in the process after the pollution takes place (De Sadeleer, 2002: 217). Yet, there is a responsibility of taking the necessary measures to prevent the pollution in the process before the pollution and within this framework, the controls and audits of the public authority are in question, and this also has a cost. It is here that these costs, even if no environmental damage or an acceptable pollution level threshold is exceeded, should be paid from those who perform these activities. In this way, it will be possible to internalize these externalities (Farmer, 2007: 44).

The answer to the question of who is the polluter can be answered as the person causing the pollution. Whereas, this answer implies that it does not pay enough attention to the complexity of the pollutant situation in wastes management cases, is where the question of whether the pollutant is a producer or a consumer cannot be determined precisely (De Sadeleer, 2002; Sands, 2003; Turgut, 1995; Bleeker, 2009)

The person causing the pollution can be the manufacturer of the product, or the consumer as well as others. Even when deciding, it can be difficult to determine which actors in a particular category are to be held accountable. Indeed, industrialists are perceived as the primary pollution source of production activities in the first place. However, consumers also have a role in decisions regarding these activities through the supply-demand relationship. Afterwards, the use of these products and turning them into waste reinforces their role as a polluter by making them a part of pollution. At this point, the distribution of obligations and responsibilities within the framework of the polluter pays principle to the real owners emerges as a big problem (Turgut, 1995: 612). In cases where this is determined completely and accurately and the obligations and responsibility of the emerging externalities are not assumed, again the whole society comes out with a loss. In this respect, the fact that the legislation clearly covers the question of who the polluter is, without any reason for comment, will ensure that externalities are internalized within the framework of the polluter pays principle. Otherwise, the ambiguities that arise will again result in the cost of pollution to be attributed to the whole public (Çelikkaya, 2011: 99).

3. The Polluter Pay Principle in EU

The European Union, which initially progressed only through economic integration, has given priority to environmental issues over the last four decades (Güneş, 2011; Cardwell, 2006; De Sadeleer, 2002; Uğur and Doğan, 2015; Baker, 2006; Uğur et.al, 2015). In the early phases of its development, the original Treaty establishing the European Economic Community (EEC) did not provide a specific legal basis with respect to the protection of the environment. However, the increase in economic activity and the growth of the global population at an unprecedented rate and consequently further damage to the environment and human health contributed to placing environmental concerns firmly on the EU political agenda (Bleeker, 2009: 289). Thus, the EU started to shaping the view concerning the objectives, principles, priorities and lines of actions to prevent chronic pollution and protect the environment. Building upon these initial developments, the European legislators have often taken recourse to principles as good as the principle of prevention, the polluter pays principle and the principle of rectification at source when regulating new areas of law (Güneş, 2011: 119).

In order to try to deal with reducing the pollution and waste streams along the production chain of a product, "the polluter pays principle gradually mandated that it be recognized as one of the pillars of the EU's environmental policy"." (De Sadeleer, 2002: 406). It states that the person or persons should be held liable for the cost of dealing with reducing, peventing or eliminating the pollution. This basic explanation of the principle was first recognised in the first community environment action programme (EAP) in 1973, often identified as the starting point of common EU environmental policy. With this programme, "the principle was included as an 'inspirational basis' for important secondary EC legislation" (Bleeker, 2009: 291). The procedures for applying the principle provided important catalysts for a more explicit EU role in shaping the direction of environmental legislation and policy at this stage. Nonetheless, it was not until the Single European Act in 1987 that the principle successively invoked to address a legal basis for environmental legislation at the European level (Baker, 2006: 136).

The principle is today listed in article 191(2) of the Treaty of the Functioning of the European Union (TFEU) –previously in article 174(2) of the EC Treaty- in which the enviromental legislation and action in the Union shall be based on the polluter pays principle alongside the other environmental action principle of precaution, prevention and rectification of damage at source (Bleeker, 2009: 291). This is to say that the polluter pay principle forms the general objectives of the Union in matters of the environment, which in turn means that it will now affect all areas of the EU's environmental legislation, not only where the secondary legislation explicitly states. This has produced results in two respects. Firstly, since the polluter pays principle has been codified in the founding treaties, the EU institutions have to comply with this principle (Kingston, 2020: 3). In other words, the EU institutions is obliged to take into account the polluter pays principle when making decision, adopting and interpreting

legislation. Despite the recognition of the principle under Article 191(2) TFEU, it is also necessary to underline that Article 191(3) still allows the EU institutions to take into different environmental circumstances in the Member States. In addition, the Union should take into account the economic and social conditions in the Member States when formulating policy in the field of environment. As it can be understood from the wording of Article 191(3), it can be assumed that applying the principle can provide flexibility in accordance with the conditions in the article but not completely ignore it (De Sadeleer, 2002: 30). Secondly, member states also have to abide by the principle. In fact, this principle does not only impose a political principle, but also a legally binding principle, which obliges member states to enforce the principle when acting in the environmental field (Kingston, 2020; Bleeker, 2009; De Saadeler, 2002; Cardwell, 2006). However, the fact that the principles of European Union environmental policy and law are included in the general and abstract arrangements in TFEU, as a rule, lacks the ability to be directly applicable in the Member States. Therefore, this principle can only be directly effected in member states in areas that has been harmonized by secondary EU law or by the decisions of the judicial bodies of the union (Gunes, 2011: 121).

On the other hand, it is still unclear to what extent this provision can be directly related to the reduction of pollution. Whilst legally binding and source of primary EU law, Article 191(2) is generally worded (Kingston, 2020: 4) and does not seen to ground a self standing, distinct right of environmental protection. The main reason for this is the fact that the clause raises a set of unanswered questions that make it less legally sensitive. Indeed, a closer look at the wording of the article reveals that it does not account for who is polluter, what is pollution and how much and to what extent the polluter needs to pay (Bleeker, 2009: 293). Therefore, EU policy makers need to produce more precise rules in secondary legislation in order that the principle becomes legally enforceable. As a matter of fact, a significant number of legislative arrangements such as waste management directives adopted at the union level have provided help for clarified scope and status of polluter pay principle at Article 191(2) and to guide the institutions implementing them (Güneş, 2011: 110).

Without a doubt, the promotion of the polluter pay principle into primary legislation and secondary legislation has been constitutional innovation, specifically making it legally binding under the TFEU (Kingston, 2020: Bleeker, 2009; De Sadeleer, 2002; Güneş, 2011). In spite of this, there are still many problems as a full implementation at the EU level. As previously mentioned, while the principle is still identified general principles of Union law and this would not seem to enough explanation to the complexity of status and scope of the principle. Accordingly in term of applying the principle, both law-makers and the Court are now supported by various secondary legislations which enable as a shield in order to strengthen the Article 191(2). Among these legislations, there are a number of directives dealing with the treatment of waste which responds a number of unanswered questions. The waste management directive, which is one of them, is a substantion directive that explains the polluter pays principle in terms of responding to ambiguous questions such as who is polluter, what is pollution and how much and to what extent the pollutant needs to be paid (Sadeleer, 2012: 407). In that regard, the general problems regarding the principle will be addressed in the framework of the waste management framework, in this way it will be demonstrated how it consolidates the legitimacy and the legality of European legislation and regulatory measures in terms of polluter pay principle.

4. Is the Polluter Pays Principle a Potential Tool for Reducing Carbon Emissions in the European Union?

Within the framework of the Sustainable Development principles, which started to take shape as a result of the 1972 Stockholm and 1987 Brundtland Report by the international community, it is seen that the EU is more engaged in environmental and climate problems and in this sense, it has adopted ambitious legislation across multiple policy areas at the Union level regarding the fight against climate change

(Baker, 2006: 136). As a matter of fact, the European Union's handling of the climate issue officially started in 1989. In 1990, the Council of Europe Union took the step of establishing the legal framework for combating climate change by calling for the adaptation of goals and strategies to limit greenhouse gas emissions as soon as possible (Nils, 2009: 11). This development paved the way for reaching a political consensus on fixing CO2 emissions within the Community at 1990 level by 2000, at the joint Council of Ministers of Environment and Energy held in October of the same year. Accordingly, it is envisaged to prepare a strategy that includes a series of measures to be complemented by economic and financial incentives to stabilize CO2 emissions within the scope of the Union's fight against climate change (Sikora, 2021; Delbeke, 2006; Nils, 2009).

The EU's holistic approach to the f global warming and climate change problems has been fully possible with the Fifth and Sixth Environmental Action Programme (Cardwell, 2006: 91). Before these programs, that is, in the process that continued until the 1990s, it was seen that the EU adopted the "regulatory environment" policy approach (Golup, 1998). The underlying reason for this was based on the assumption that reliance on free market solutions would misappropriate natural resources and produce insufficient incentives to prevent environmental degradation. However, with these programs, it is seen that the EU has adopted an approach that accepts the benefit of market mechanisms to internalize external environmental costs instead of command and control regulation for environmental problems (Official Journal of the European Communities, 1993: 17). Indeed, not taking into account all the external costs on the environment or not measuring them accurately has been one of the biggest shortcomings of economic policy in the past. Therefore, the Commission underlined the principle that the polluter pays in a sense, emphasizing the need to internalize the longer-term environmental costs incurred over the whole lifetime in the context of market solutions (Güneş, 2011: 128-129). The Commission also underlined that it is extremely important to set the price of environmental assets in order to achieve sustainable development, although environmental damage is sometimes quite difficult to measure. Accordingly, the Commission added that the use of economic and financial instruments should form an increasingly important part of creating market-based incentives for an environmentally friendly economic approach (Official Journal of the European Communities, 1993: 17).

Having said that, since the European Union believes that the problems of global warming and climate change can be solved with an international cooperation, it has started to take part in international cooperation processes in this regard (Uğur, 2019: 92). By setting an emission target within itself with the CO2 emission target that it has determined in the Environment and Energy Council, the EU has embarked upon taking part in international efforts earlier and with a stronger position. In fact, in the United Nations Framework Convention on Climate Change, which is one of the outputs of the United Nations Conference on Environment and Development in 1992, it has demonstrated its sensitivity to combat climate change as an effective actor, reducing greenhouse gas emissions by 8% below 1990 levels in the 2008-2012 period (Ghaleigh, 2009: 4).

Pursuant to the Kyoto Protocol, the European Union established a system called the Emissions Trading System (ETS) with the Directive 2003/87/EC, which envisages emission trading in order to reduce carbon dioxide emissions within itself (Ghaleigh, 2013: 45). This directive was revised in 2009 and amended by the directive 2009/29/EC. With the said directive, it was concluded that the ETS represents the best way to achieve the objectives based on the polluter pays principle, which is the basis of the EU's environment and climate change policies (Kingston, 2020; Nils, 2009; Khan, 2015). Because, this system, which is based on the purchase and sale of the right to pollution, provides the users of environmental resources to pay a price as a financial tool, and provides both the control of some toxic gases and the formation of processes that will prevent the disruption of economic processes. In this context, the Emissions Trading System is also important in that it represents a pragmatic compromise between a political acceptance and economic efficiency. As a matter of fact, while applying the polluter pays principle within the scope of combating climate change, the EU aimed to control and gradually reduce emissions by prioritizing market methods,

although it also has interventionist methods (Delbeke, 2006: 10-11).

The Emissions Trading System, which has been put into practice on a market-based basis at the European Union level, is standed on determining the maximum amount of carbon dioxide emissions that each member country will cause in that year within its borders (Nils, 2009: 26). In this structure, which is defined as the national allocation system, the emission rights granted by the countries with the approval of the EU Commission are divided among the relevant companies within the country. If a company in a member state emits less carbon dioxide within a year than its assigned quota, it can either use the excess amount later or sell it to other companies that exceed its recognized emissions quota. Companies that exceed the emission right granted to them either purchase this emission right from other companies that fall below the emission right granted to them, or they agree to be subject to penalties equal to the amount they exceed (Heindl and Löschel, 2012: 2). In this context, the aim of this system is to determine a certain pollution level and to bear a price for the part it pollutes by using market-based methods, in accordance with the polluter pays principle if it is acceptable and above the determined limits. On the other hand, it also aims to reduce this pollution to the lowest level possible by encouraging companies to use energy and technology that cause less pollution (Güneş, 2011: 129). Because the quotas determined in this system do not always remain the same, they are lowered over the years, in a sense, causing higher prices to be imposed on companies with high emissions. Therefore, it becomes necessary for these companies to undergo more environmentally friendly transformations in order to get rid of the cost-increasing effect by obtaining higher rights due to the decrease in the quota each year (Ghaleigh, 2009:31-32).

Of course, the EU-ETS directive created within the scope of combating climate change requires greenhouse gas emission allowances to include a monitoring plan that includes detailed, complete and transparent documents (Directive 2009/29, 2009). Although the trading system has been created with a market-based approach, the audit plan is very important in terms of keeping the greenhouse gases under control and reducing the system by functioning (Young, 2009: 1402-1404). Because in the absence of such a plan, it will not be possible to distribute allowances and subsequently control them. In this context, it has been decided to distribute allowances, approve emission offsets, monitor and report emissions appropriately by a regulatory authority in accordance with the emissions covered by the carbon trade control, the Commission's directive on the supervision and reporting of greenhouse gases (Ghaleigh, 2013: 66).

Accordingly, for each trade phase at EU level, the Commission sets emission reduction percentages before the trade periods begin (Kingston, 2020; Delbeke,2006; Ghaleigh, 2009; Heindl and Löschel, 2012). From the moment the Directive entered into force, an allocation process consisting of three periods in general has worked. In the first period (2005-2007) and the second period (2008-2012), almost all allowances were freely distributed to ensure the competitiveness of their economies, and national authorities were responsible for setting national distribution caps. In the third period (2013-2020), allowances were auctioned based on a single community-wide cap to meet ambitious emission reduction targets and generate revenue for abatement measures (Ghaleigh, 2009: 8). The auction method, which has recently been put into practice at the EU level, means that enterprises will obtain the emission quotas they need at an increasing cost. In this respect, the auction method emerges as a good practice of the polluter pays principle in the fight against climate change (O'Connor, 2010: 56). On the other hand, the imposition of a quota and the internalization of pollution over it is one of the problematic areas of the polluter pays principle. Because, although companies actually reveal pollution as soon as they start to emit greenhouse gas in the context of their activities, the fact that they are subject to trade after the determined threshold is passed creates a situation where the internalization of negative externalities is not fully achieved (Nils, 2009; Meadows, 2006). Again, this situation, as mentioned before, the fact that the pollution prevention and control costs determined by the public authorities cannot be reflected to the cost of the goods and services of the pollution arising from emissions up to the threshold determined,

and the negative externalities that arise as a result of these costs will also play a role in preventing the internalization of these costs. Therefore, while the EU ETS provides for the internalization of externalities for amounts above the determined emissions by setting certain quotas within the framework of the polluter pays principle, the difficulties of the polluter pays principle are encountered at the point of internalizing the externalities created by the emissions below the acceptable pollution level threshold.

Since 2005, the EU Emissions Trading System has been the cornerstone of its strategy at EU level to reduce emissions cost-effectively as part of tackling climate change. The polluter pays principle significantly contributes to the EU's 2020 emission reduction target. Within the framework of the EU's 2030 climate change policy, created in 2014, the EU leaders have agreed on the target of reducing their emissions by at least 40% by 2030. In order to achieve this target, the market-based emissions trading system provides the EU with a structure that will play an important role. As a matter of fact, as mentioned before, while trying to limit greenhouse gas emissions, especially the use of market-based instruments without limiting economic activities, but providing cost-effectiveness to companies in reducing greenhouse gas emissions, strengthens the EU's hand in the fight against climate change.

5. Conclusion

In the period after the second world war, the EU, like many other countries, considered increasing the production capacity as the main objective by giving importance to issues such as accelerating economic development, reducing unemployment and keeping inflation under control. As a natural consequence of this, the European Economic Community (later the EU) established by the 1957 Treaty of Rome did not directly address environmental issues. However, the realization that an uncontrolled development process in the 1970s, in which consumption was prioritized, disrupted the ecological balances, and more importantly, the natural link between the environment and economic development was ignored, as in the international community, it has brought with it the search for an environment and climate sensitive development plan in the EU. In this context, it is seen that it creates an environmental protection legislation by adding many environmental principles to its legal legislation in the process. One of these principles, the polluter pays principle, has been included in various local, national and EU legal documents in the last thirty or more years, with a scope of application ranging from general (all pollution) to specific. As a matter of fact, in the second paragraph of Article 191 of the Treaty on the Functioning of the European Union (TFEU), the Union policy in the field of environment is based on the principle that the polluter pays within the framework of a high level of protection objectives, making this principle binding for all member states.

The pricing of carbon emissions, which started with the process of the United Nations Framework Convention on Climate Change and later started to be included in the basic legislation of the EU, has also launched to ensure the implementation of the polluter pays principle in the fight against climate change. Thus, activities that cause environmental damage by emitting carbon are internalized within the framework of the principles of the market economy, and the financial cost of environmental pollution is made to be paid. It is important for companies that cause environmental damage through carbon emissions to make them pay for the damage they cause, to prevent unfair competition across the Union on the one hand, and to protect the environment more effectively on the other. Besides issues such as the cost problem of this struggle and the long-term nature and uncertainty of climate change make the economic and political calculation of how to address the issue very difficult. First of all, even if an accurate estimation of the full cost is given, -which is not always possible to calculate the environmental situation-, it is clear that these calculations can lead to different interpretations and disputes among the member states. As a matter of fact, it is seen that most of the cases before the Community Courts within the framework of the EU ETS Directive are legal objections and disputes against the Commission decisions regarding the national allocation plans of the member states. Again, due to the long atmospheric residence time of greenhouse gas emissions, there is a large variation in the timing of costs

and benefits. Today's emissions will only have a significant impact in this century and beyond, and this poses a major dilemma for today's politicians. In this framework, although the uncertainty regarding the polluter pays principle continues, the EU ETS seems to play an important role as an effort to deepen and expand its emission reduction commitments by minimizing these costs and uncertainties.

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