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The European Carbon Border Adjustment Mechanism (CBAM): a theoretical and practical analysis of its efficiency.

Prof. Sofia Ranchordas

SUPERVISOR

Prof. Elena De Nictolis

CO-SUPERVISOR

631763

CANDIDATE

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TABLE OF CONTENTS

LIST OF ABBREVIATIONS

BTA	Border tax adjustment
CBAM	Carbon border adjustment mechanism
CBDR	Common but differentiated responsibilities
CN	Combined Nomenclature
CO_2	Carbon dioxide
CORSIA	Carbon Offsetting and Reduction Scheme for International Aviation
CSDDD	Corporate Sustainability Due Diligence Directive
DSB	Dispute Settlement Body
EC	European Communities
ECJ	European Court of Justice
EESC	European Economic and Social Committee
EU	European Union
EU ETS	European Union Emissions Trading System (or Scheme)
GATT	General Agreement on Tariffs and Trade
GDPR	General Data Protection Regulation
GHG	Greenhouse gas
LDC	Least developed countries
MFN	Most favoured nation
OECD	Organisation for Economic Cooperation and Development
SDT	Special and differential treatment
SEE	Specific embedded emissions
tCO_2e	Tonnes of carbon dioxide equivalent
TEC	Treaty establishing the European Community
TFEU	Treaty on the functioning of the European Union
UNCTAD	United Nations Conference on Trade and Development
UNFCCC	United Nations Framework Convention on Climate Change
WTO	World Trade Organization

INTRODUCTION

"*The case of space debris is an example where States, through the means of international law, failed to regulate an issue ex-ante, therefore indirectly contributed to the issue becoming a real problem, and also faltered in finding clear instructions ex-post*"[1]. This quote from the textbook *Outer Space in Society, Politics and Law*, written by Christian Brünner and Alexander Soucek in 2011, can be transposed to the case of greenhouse gases (GHG) emissions. Their unregulated increase led to the climate crisis the world is currently facing, and the mechanisms implemented at international, regional and national levels to reduce global emissions appear to lack efficiency. But on 10 May 2023, a regulation was adopted by the European Union (EU) to implement a mechanism which may be part of the solution: the Carbon Border Adjustment Mechanism (CBAM)[2].

In fact, in a communication dated 11 December 2019, the European Commission announced the European Green Deal[3]. As an environmental roadmap for the EU, it constitutes the framework within which the EU's climate policies must be developed in order to comply with the trajectory set out in the Paris Agreement. Its objective is more climatic than environmental: to make Europe the first carbon-neutral continent by 2050. This roadmap includes a large number of regulations and legislative packages as regards climate, environment, transport, industry, buildings and agriculture[4], including the "Fit for 55" package, unveiled on 14 July 2021[5]. This takes up the interim target of a 55% reduction in EU emissions by 2030 compared to 1990 levels, which is legally binding since the European Climate Law of 30 June 2021[6]. The "Fit for 55" package includes far-reaching changes to the famous carbon market, the EU Emissions Trading System (EU ETS). This thesis focuses on the CBAM, which is one of these measures. Without diving into the details of the analysis of the EU ETS and the CBAM here, a brief definition of these terms is required in order to lay the foundations for this research paper and make it easier to understand.

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[1] C. Brunner, A. Soucek (2011), "Outer Space in Society, Politics and Law", Springer Wien.
[2] Regulation (EU) 2023/956 of 10 May 2023 establishing a carbon border adjustment mechanism.
[3] Communication from the Commission: "The European Green Deal", COM/2019/640 final.
[4] Net-zero industry act, Critical raw materials act (CRMA), Right-to-repair directive (R2R), Regulation establishing eco-design requirements for sustainable products (ESPR), Corporate sustainability due diligence directive (CSDDD), Green claims directive, Farm to fork strategy, etc.
[5] Communication from the Commission: "'Fit for 55': delivering the EU's 2030 Climate Target on the way to climate neutrality", COM(2021) 550 final.
[6] Regulation (EU) 2021/1119 of 30 June 2021 establishing the framework for achieving climate neutrality and amending Regulations (EC) No 401/2009 and (EU) 2018/1999 ('European Climate Law')

The EU ETS is a mechanism adopted by Directive 2003/87/EC, setting up a "carbon market" within the EU. Although the market may seem to run counter to environmental protection[7], it is in fact an objective to reduce GHG emissions that drives this mechanism. Under this market, companies of certain high-emission sectors are obliged to surrender a number of allowances equivalent to their GHG emissions each year, on the understanding that one allowance is equivalent to one tonne of CO_2 (tCO_2e). Companies can trade these allowances on a market, i.e. buy them if they need them, or sell them if they have a surplus. We will take a closer look at the functioning and limitations of this complex mechanism later on.

The CBAM, on the other hand, is not a market mechanism, but imposes the same carbon pricing on European importers as the one imposed on European producers under the EU ETS. This is how it is supposed to complement the European carbon market. Under this mechanism, importers of certain raw materials that the European Commission has identified as being at risk of carbon leakage must surrender a number of CBAM certificates equivalent to the GHG emissions of the goods they import each year. Like an emission allowance on the carbon market, a CBAM certificate equals one tCO_2e, and its price is equivalent to that of an allowance. Thus, it aims at preventing the risk of carbon leakage by applying the same carbon price to domestic and imported goods.

This statement requires to define the concept of carbon leakage. Regulation 2023/956 (the CBAM regulation) states that "carbon leakage occurs if, for reasons of costs related to climate policies, businesses in certain industry sectors or subsectors transfer production to other countries or imports from those countries replace equivalent products that are less intensive in terms of greenhouse gas emissions"[8]. The risk of carbon leakage was initially prevented by two mechanisms: the transitional free allocation of EU ETS allowances and financial measures to compensate for indirect emission costs incurred from GHG emission costs passed on in electricity prices[9]. These mechanisms thereby regulate the distortion of competition between European and non-European companies. This thesis will essentially focus on the mechanism of free allocation, as the CBAM aims at phasing it out, by progressively replacing it in order to strengthen the carbon price signal and therefore the effectiveness of the EU ETS and the competitiveness of European companies.

[7] J.C Fritz (2014), « Protection de l'environnement et marché : coexistence ou guerre des mondes », in « Marché et environnement, le marché : menace ou remède ? », M.P. Crampoux Duffrène et J Sohnle (dir.), Bruxelles, Bruylant, p.19
[8] Regulation 2023/956, recital 9.
[9] Directive 2003/87/EC, articles 10a §6 and 10b, respectively.

But this mechanism, in force for one year only, has already been criticised. Some authors are concerned that CBAM may become another non-tariff barrier to trade and may not comply with the World Trade Organisation (WTO) rules, by discriminating between imports and domestic products in the EU[10]. Under international law, another claim is that CBAM may be bound to undercut the principles of "common but differentiated responsibilities" and "special and differential treatment" by applying the same carbon price to all imported goods, no matter their origin[11]. In a third place, some regret that free allowances would not be fully phased out until 2036, while "Fit for 55" aims at reducing EU's emissions of 55% by 2030[12]. Finally, the implementation of such measures and associated processes are time-consuming and complex. This is the main point of concern of the Legrand group, which is an importer of iron and steel. All these concerns undermine the effectiveness of this extra-territorial mechanism and call into question its ability to achieve its objectives.

I will then try to answer the following central research question:

How can CBAM fulfil its promise of efficiently complementing the EU ETS and undercutting carbon leakage?

This research question implies answering different sub-questions: why does the EU ETS need to be complemented with such a mechanism? What are the legal implications of the CBAM? What risks does it face? Which mechanisms and policies may impact its effectiveness? As it is a relatively new policy, what could be its potential future impact on global carbon markets and role in addressing climate change? How have big companies taken this regulation into account in order to comply with it? Do they even manage to comply with it? What processes have been put in place by such companies?

To answer the central research question and the sub-questions listed above, this thesis bases its analysis on the existing literature regarding the EU ETS and CBAM regulation. In order to conduct my research, I carried out desk-based research, including an in-depth study of

[10] R. Leal-Arcas et al. (2022), "A legal exploration of the European Union's Carbon Border Adjustment Mechanism", European Energy and Environmental Law Review, August 2022; R. Ismer et al (2020), "Border carbon adjustments and alternative measures for the EU ETS: an evaluation", DIW Berlin Discussion Paper no. 1855.

[11] I. Venzke, G. Vidigal (2022), "Are trade measures to tackle the climate crisis the end of differentiated responsibilities? The case of the EU Carbon Border Adjustment Mechanism (CBAM)", Amsterdam Law School Legal Studies Research Paper n° 2022-02; South African Government (2021), Joint Statement issued at the conclusion of the 30th BASIC Ministerial Meeting on Climate Change hosted by India on 8th April 2021.

[12] Chevrollier, G., Saint-Pé, D. (2022). « Rapport d'information fait au nom de la commission de l'aménagement du territoire et du développement durable sur la réforme du marché carbone européen dans le cadre du paquet 'Ajustement à l'objectif 55' ». French Senate, No. 576.

French, European and international articles, books, regulations and case law. As CBAM is a recently applicable mechanism, I also led my own research and built my own material to better understand its implementation in companies falling under its scope. I will then use both qualitative and quantitative methods to build the material I need to answer this question. As part of the implementation of the mechanism within the Legrand Group, I conducted an interview with the Transport & Customs representative of Bticino, the Group's Italian entity. A six-months experience in the Legrand Group has given me the opportunity of supervising the implementation of CBAM in the whole company. This experience has allowed me to collect consistent data on the imported quantities of CBAM goods on a quarterly basis. I then combined empirical and legal analysis to examine this topic from a broader perspective. The aim of this dissertation is to draw conclusions from the early stages of CBAM implementation, from both a theoretical and practical perspective. As I experienced CBAM implementation in situ, part of this work is a novelty which aims at leading further research on the efficiency of this mechanism in complementing the EU ETS.

Assessing the effectiveness of the CBAM implies assessing its ability to achieve its objectives. From a broader perspective, this study will consider the CBAM's effectiveness in reducing emissions by influencing the behaviour of European companies. Firstly, I will analyse the mechanism without which the CBAM would not exist: the EU ETS. This will involve tracing the context that led to its creation, detailing how it works and identifying the flaws that necessitated the adoption of a complementary mechanism (Part 1). This will lead me to explore CBAM in detail, initially from a theoretical point of view, in order to understand how it works and what are its legal implications, while identifying its limitations (Part 2). I will then conclude this work with a practical analysis of this mechanism by studying its implementation within the Legrand Group, which will enable me to assess its effectiveness (Part 3).

Preliminary Chapter: Literature review

In order to understand the framework in which the carbon market and the CBAM operate, a large number of academic articles had to be assimilated in order to become familiar with the concepts inherent to them. It is therefore important to situate this work within the general literature on sustainable development. One idea that emerges from Du Pisani's thinking is that the notion of sustainability is a compromise between the exponential and unreasonable growth of the nineteenth and first half of the twentieth centuries, and "*the zero-growth option*"[13]. Mensah states that the "*ultimate aim of sustainable development is to achieve a balance among environmental, economic and social sustainability*"[14]. It therefore appears that the EU ETS corresponds perfectly to the notion of sustainable development, as the market model is used to reduce GHG emissions. Moreover, the social aspect is also taken into account, since part of the revenue generated by the EU ETS is earmarked to finance the Social Climate Fund[15], created in 2023[16].

It should be noted that the urgency of reducing emissions at a global level has been highlighted particularly through the prism of planetary boundaries, theorised in 2009 by a team of researchers led by Rockström and Steffen[17]. Climate change is one of these nine limits, which they claim has already been transgressed. However, it is one of the two 'core' limits, because it "*has the potential on its own to drive the Earth system into a new state should they be substantially and persistently transgressed*"[18]. By dealing with mechanisms aimed at reducing GHG emissions at a global level, this thesis is fully in line with the work being done on sustainable development and related concepts.

From a more legal point of view, the doctrine relating to the main principles of environmental law also sheds light on the origin and basis of the EU ETS. A good understanding of the polluter pays principle is essential. Pigou theorised this principle in 1920[19], which consists of the internalisation of negative externalities, i.e. the payment of the cost of pollution

[13] J. A. Du Pisani (2006), "Sustainable development - historical roots of the concept", Environmental Sciences, p.94.
[14] J. Mensah (2019), 'Sustainable development: Meaning, history, principles, pillars, and implications for human action: Literature review", Cogent Social Sciences, p.15.
[15] Directive 2003/87/EC, art. 10a § 8b.
[16] Regulation 2023/955 of 10 May 2023.
[17] J. Rockström et al (2009), "Planetary Boundaries: Exploring the Safe Operating Space for Humanity", Ecology and Society, 14(2):32.
[18] W. Steffen et al (2015), "Planetary boundaries: Guiding human development on a changing planet", Science, 347 (6223): 1259855.
[19] A.C. Pigou (1920), "The Economics of Welfare", Macmillan

by the person that generates it. This mechanism was introduced into French law in 1964[20], and became one of the most important principles of international environmental law in 1992, when it was enshrined in principle 16 of the all-important Rio Declaration. Links have been established between the notion of sustainable development and the legal polluter pays principle. Mensah concludes for example, in his article on sustainable development, that "*all countries should (...), regarding pollution, enforce the polluter-pays-principle*"[21]. However, some academics are critical about the way it is applied in EU law, as it contains many exceptions[22] and is interpreted fairly strictly by the European Court of Justice (ECJ)[23].

The EU ETS has been analysed fairly well in the literature. The reference work on the subject (in French) is a 2017 PhD thesis by Jean-Charles Rotoullié on the use of market techniques in environmental law[24]. Using the EU ETS as an example, he paints a comprehensive picture of the legal implications of using the market to protect the environment. Some of the literature is highly critical towards the carbon market, particularly among economists, as the environment and the market appear to be contradictory[25]. Economists such as Stiglitz, Nordhaus, Summers or Stoft supported the introduction of a carbon tax instead of a carbon market[26]. In support to this claim, as law often codifies philosophical reflections, we can establish a link with the idea that using a market technique to protect climate may be seen as a utilitarian and instrumentalist conception of the environment. This theory, supported by classic authors such as Descartes or Kant, establishes the human being as "*master and possessor of nature*"[27]. By allowing companies to possess pollution rights, this mechanism can be seen as

[20] French Law no. 64-1245 of 16 December 1964 on the regime and distribution of water and the fight against its pollution.
[21] J. Mensah (2019), 'Sustainable development: Meaning, history, principles, pillars, and implications for human action: Literature review", Cogent Social Sciences, p.15.
[22] H. Smets (1997), "Les exceptions admises au principe pollueur-payeur", La Communauté européenne et l'environnement, Colloque d'Angers, CEDECE, p.365; European Court of Auditors (2021), "The Polluter Pays Principle: Inconsistent application across EU environmental policies and actions", Special Report 12/2021; P. Billet (2021), "Le pollué-payeur, ou l'irresponsabilité élargie des pollueurs", EEI, focus 50.
[23] ECJ, 4 March 2015, Ministero dell'Ambiente e della Tutela del Territorio e del Mare and Others v. Fipa Group srl and Others, C-534/13.
[24] J.-C. Rotoullié (2017), "L'utilisation de la technique de marché en droit de l'environnement : l'exemple du système européen d'échange des quotas d'émission de gaz à effet de serre", Bibliothèque de droit public, Tome 297.
[25] J.C Fritz (2014), « Protection de l'environnement et marché : coexistence ou guerre des mondes », in « Marché et environnement, le marché : menace ou remède ? », op. cit., p.19.
[26] J. Stiglitz (2006), "A new agenda for global warming", The Economists' Voice, 3(7), 2006; W. Nordhaus (2007), "To tax or not to tax: alternative approaches to slowing global warming", Review of Environmental Economics and Policy, 1(1), 2007, pp. 26-44; L. Summers (2007), "Practical steps to climate control", Financial Times; S. Stoft (2008), "Carbonomics, How to Fix the Climate and Charge It to OPEC", Diamond Press.
[27] R. Descartes (1637), « Discours de la méthode », Ian Maire.

anthropocentric. This stands against more recent theories such as ecocentrism[28], biocentrism[29], deep ecology[30] or ecological feminism[31]. According to Du Pisani, "*the whole debate around sustainable development made it clear that anthropocentric views were stronger than ecocentric views*"[32]. However, this thesis is not intended to analyse these mechanisms through environmental ethics, but through their efficiency in reaching their objectives. In any case, the literature studied agrees that the limits of the EU ETS have necessitated the introduction of an equalisation measure as regards third countries[33].

While the EU ETS has been widely commented on, the CBAM has been much less so. Indeed, it is still a recent mechanism, and the literature has so far only attempted to imagine what it might look like and the consequences that might flow from it. Some authors, for example, have proposed different models of measures, including the inclusion of importers in the EU ETS[34]. Others, through a legal analysis, have attempted to estimate the legal risks incurred by such mechanisms[35]. Most of the literature studied in this report was published before the CBAM came into force. A few articles were published after its adoption, but they remain fairly general. An article published by two lawyers in March 2024 rightly underline the transformation of the polluter pays principle into an "importer pays principle" by the CBAM[36]. Only one study, published by the think tank Sandbag, analyses the effectiveness of CBAM, but it is still based on hypotheses[37]. This relatively sparse literature led me to construct my own analysis based on the legal texts studied and my experience of the practical implementation of the CBAM.

[28] A. Leopold (1949), "A Sand County Almanac", Oxford University Press.
[29] P. W. Taylor (1986), « Respect for Nature: A Theory of Environmental Ethics », Princeton University Press.
[30] A. Naess (1973), "The Shallow and the Deep Long Range Ecology Movement", University of Oslo.
[31] R. Carson (1962), "Silent Spring", Houghton Mifflin.
[32] J. A. Du Pisani (2006), "Sustainable development – historical roots of the concept", op.cit., 3:2, p.94.
[33] J.-C. Rotoullié (2017), "L'utilisation de la technique de marché en droit de l'environnement : l'exemple du système européen d'échange des quotas d'émission de gaz à effet de serre", op. cit., p.189-227.
[34] R. Ismer et al (2020), "Border carbon adjustments and alternative measures for the EU ETS: an evaluation", DIW Berlin Discussion Paper no. 1855.
[35] I. Venzke, G. Vidigal (2022), "Are trade measures to tackle the climate crisis the end of differentiated responsibilities? The case of the EU Carbon Border Adjustment Mechanism (CBAM)", Amsterdam Law School Legal Studies Research Paper n° 2022-02; R. Leal-Arcas et al. (2022), "A legal exploration of the European Union's Carbon Border Adjustment Mechanism", European Energy and Environmental Law Review, August 2022.
[36] M. Barges, G. Cognet (2024), "Taxe carbone aux frontières : l'importateur-payeur". La tribune.
[37] A. Assous et al. (2024), "A scrap game: impact of the EU Carbon Border Adjustment Mechanism", Sandbag.

PART I: THE EU ETS: AN EFFICIENT YET LIMITED MECHANISM

Before diving into CBAM's analysis, it is necessary to understand what the reasons of its existence are. This part, based on an analysis of the market use in environmental law, concerns the EU ETS, CBAM's "big brother". In fact, to reduce the European GHG emissions, the EU has implemented the EU ETS, an ambitious mechanism based on the polluter pays principle (Chapter 1). But this mechanism has faced several shortcomings and contestations, leading to the necessity of implementing a complementary mechanism (Chapter 2).

Chapter 1: The EU ETS: a market technique based on the polluter pays principle

In order to understand the complex functioning of the EU ETS (Section 2), it is of utmost importance to dive into the legal base and context which led to its existence (Section 1).

Section 1. The legal basis and appearance of emissions trading schemes

The EU ETS is based on the "polluter pays" principle, one of the most important principles in international environmental law (§ 1), on which have been built the base of emission trading schemes (§2).

§ 1. The polluter pays principle, legal base of the EU ETS

The EU ETS was developed on the basis of the polluter pays principle. Before being incorporated into law, this principle was formulated by economists. It means that environmental damage must be internalised by the producer in the cost of production. This is the internalisation of negative externalities, as theorised by Arthur Cecil Pigou in his 1920 book "The Economics of Welfare"[38]. The market does not know how to put a price on appropriate things, which is why a system had to be devised to remedy this shortcoming.

Its legal form can be found in the French Law of 16 December 1964 on Water[39]. On this basis, the French legislator instituted taxation by inventing the "polluter pays" principle. This law introduced a mechanism of prior administrative control of discharges into water, based on the "polluter pays" principle[40]. A charge is set by each river basin finance agency, applicable to all polluters in proportion to the degree of pollution.

In international law, this principle became widespread from the 1992 Rio Declaration. The Rio Declaration, adopted at the United Nations Conference on Environment and Development (commonly known as the "Rio Conference") held from 3 to 14 June 1992, is

[38] A.C. Pigou (1920), "The Economics of Welfare", Macmillan
[39] French Law no. 64-1245 of 16 December 1964 on the regime and distribution of water and the fight against its pollution
[40] E. Naim-Gesbert (2023), "Introduction: L'eau, ressource vitale fluidifiée par la loi du 3 janvier 1992", Revue Juridique de l'Environnement.

considered to be the "big bang" of international environmental law[41]. This declaration lists 27 principles that are now the main tenets of environmental law, and which have been adopted throughout the world. For example, the right to a healthy environment was enshrined in European law by the European Court of Human Rights (ECHR)[42] and in French law by the Charte de l'environnement[43]. In this declaration, we can find a principle whereby "*national authorities should endeavour to promote the internalization of environmental costs and the use of economic instruments, taking into account the approach that the polluter should, in principle, bear the cost of pollution, with due regard to the public interest and without distorting international trade and investment*" (Principle 16). Although this declaration is a soft law instrument that is not binding on the States Parties, it has established a common language for modernising and rationalising international environmental law.

In addition to this declaration, the principle has been put into practice through several mechanisms: firstly, through taxation, which is an instrument for supporting environmental public policies by putting a cost on pollution[44]; secondly, through liability law, with the increase in climate litigation around the world and the condemnation of companies or States for the ecological damage they have caused[45]; and thirdly, through the creation of pollution rights, which must be bought on a market in order to be able to pollute[46].

In the European Union law, the polluter pays principle was enshrined for the first time in the Treaty establishing the European Community (TEC), as amended by the Single European Act in 1986[47]. Article 130 R states that the "*Community policy on the environment shall aim at a high level of protection taking into account the diversity of situations in the various regions of the Community. It shall be based on the precautionary principle and on the principles that preventive action should be taken, that environmental damage should as a priority be rectified at source and that the polluter should pay*". It is explicitly implemented by the Water Framework Directive of 23 October 2000[48], which extends the system established by the French

[41] E. Naim-Gesbert (2024), « Droit général de l'environnement », LexisNexis
[42] ECHR, 9 December 1994, Lopez Ostra v. Spain, 16798/90
[43] Article 1 of the French "Charte de l'environnement", which has constitutional status.
[44] A.C. Pigou (1920), "The Economics of Welfare", op.cit.
[45] Such as the Urgenda case law (Netherlands), the Commune de Grande-Synthe case law (France) or the "Affaire du siècle" case law (France).
[46] J.-H. Dales (1968), "Pollution, property and prices. An essay in policy-making and economics", University of Toronto Press, pp.93-97.
[47] Single European Act, adopted on 28 February 1986 and entered into force on 1st July 1987
[48] Directive 2000/60/EC of 23 October 2000 establishing a framework for Community action in the field of water policy

law of 1964 to the 27 Member States, with minor modifications. Article 9 of the directive provides for the "recovery of the costs of water services", based on the polluter pays principle.

Today, the polluter pays principle is enshrined in primary law in Article 191(2) of the Treaty on the functioning of the European Union (TFEU) (incorporating the provisions of Article 130 R TEC). It is one of the founding principles of secondary European legislation. The European courts also consider it to be one of the EU's most important principles. For example, the ECJ has explicitly stated that "*the polluter pays principle reflects the principle of proportionality*"[49], one of the most fundamental principles of Community law. The Court went on to clarify its value and legal scope, contributing to its European definition[50].

§ 2. The Kyoto protocol, first appearance of emissions trading schemes

The 1992 Rio Conference also saw the signing of the United Nations Framework Convention on Climate Change (UNFCCC). The aim of this fundamental convention is to stabilise GHG concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system.

It was on the basis of the UNFCCC that a market-based emissions trading mechanism was formulated for the first time in the Kyoto Protocol of 11 December 1997. The development of the Kyoto Protocol was largely influenced by the principle of common but differentiated responsibilities, the beginnings of which can be found in the Stockholm Declaration of 16 June 1972. Principles 11 and 12 of the Declaration call for cooperation in favour of developing countries. But its current wording originates in Principle 7 of the Rio Declaration, proclaimed twenty years later: "*in view of the different contributions to global environmental degradation, States have common but differentiated responsibilities. The developed countries acknowledge the responsibility that they bear in the international pursuit of sustainable development in view of the pressures their societies place on the global environment and of the technologies and financial resources they command*".

This essential principle states that the preservation of the environment must be based on solidarity between rich and poor countries. It refers directly to the notion of sustainable

[49] ECJ, 29 April 1999, Standley, C-293/97, point 52.
[50] O. Peiffert (2012), « La contribution de la Cour de justice de l'Union européenne à la définition du principe du pollueur-payeur », RTD. eur. 2012, p. 53

development. Its meaning is generally understood in two ways. On one hand, this principle presupposes a differentiated contribution by States to environmental protection based on their respective financial capacity and their historical weight in the occurrence of environmental damage. On the other hand, the criterion for differentiating each country's contribution would no longer be economic but environmental. Thus, the extent of States' participation in environmental protection would depend essentially on the seriousness of the environmental damage caused[51]. Although the principle of common but differentiated responsibility is a soft law principle with no binding legal force, it can be considered a "*framework principle*"[52] of international environmental law. Despite this, it fosters international consensus thanks to the organisation of this "*global solidarity*"[53], and has sufficient legal weight to drive the development of future binding legal acts and influence public actions[54].

It is on this basis that the Kyoto Protocol sets each country a "personalised" target for reducing its greenhouse gas emissions. Article 10 of the Protocol sets out the common obligations to all Parties, "*taking into account their common but differentiated responsibilities and their specific national and regional development priorities, objectives and circumstances*".

Article 16 bis states that "*Parties (...) may participate in emissions trading for the purposes of fulfilling their commitments*". These intangible assets are known as Assigned Amount Units (AAUs). It was therefore the Kyoto Protocol that decided to organise the reduction of greenhouse gas emissions through a market system. The price of carbon is set by the market and not by the law, which differentiates this system from the tax system. The advantage of this market system is that it can regulate the quantities of emissions, which is not possible with a fiscal mechanism.

Due to both the difficulty of bringing the Kyoto Protocol into force (we had to wait until 2005) and the conflict between Global South and Global North, some economists supported the abolition of this market system in favour of a global carbon tax. Other authors severely criticized it, arguing "*that the Kyoto Protocol on climate change is a fundamentally*

[51] L. Rajamani (2008), "From Berlin to Bali and Beyond: Killing Kyoto Softly", International and Comparative Law Quarterly, vol. 54, n° 4, p.911

[52] L. Rajamani (2000), "The Principle of Common but Differentiated Responsibility and the Balance of Commitments under the Climate Regime", RECIEL, vol. 9, n° 2, p.124

[53] M. Delmas-Marty (2011), " Vers une communauté de valeurs ? Les forces imaginantes du droit (IV)", Seuil, p.324

[54] J.-C. Rotoullié (2017), "L'utilisation de la technique de marché en droit de l'environnement : l'exemple du système européen d'échange des quotas d'émission de gaz à effet de serre", Bibliothèque de droit public, Tome 297.

flawed agreement that set back solutions on climate change by two decades"[55]. This context justifies the meagre changes made to the Protocol at the Conferences of the Parties (COPs). It was not until the Paris Agreement of 12 December 2015 that the carbon market mechanism and the GHG reduction targets were finally strengthened. Its objective is to keep the increase in global average temperature well below 2°C above pre-industrial levels and to continue efforts to limit the increase in temperature to 1.5°C above pre-industrial levels.

Section 2. The EU ETS: a complex mechanism that is regularly reinforced

The always more ambitious climate objectives of the EU need the EU ETS to be constantly adapted (§2), contributing to its complex functioning (§1).

§ 1. The creation and complex functioning of the EU ETS

The European Union established an emissions trading system under Directive 2003/87/EC of 13 October 2003. Under the European system, it is not governments that can trade allowances, but companies with the highest GHG emissions. These intangibles can be traded on a market, the EU ETS. 12,000 European companies are concerned, accounting for half of the EU's GHG emissions. This directive therefore creates emission allowances, some of which are allocated free of charge to companies falling within its scope. They constitute an emissions limit, which can be interpreted as a production limit.

The EU ETS operates in periods, during which its scope gradually changes and the number of allowances placed on the market decreases. During the first period (2005-2007), for example, only the energy, ceramics, steel, cement, glass, iron and paper sectors were covered[56]. In 2008, the aviation sector was added, and in 2020 the aluminium and petrochemical sectors. The European Commission's aim was to include the highest-emitting sectors in the ETS. The number of allowances placed on the market is gradually decreasing: during the first phase (2005-2007), 2,300 million allowances were placed on the market each year, decreasing to 1,950 million during the third phase (2013-2020). Until phase 3, the number of allowances

[55] A. M. Rosen (2015), "The Wrong Solution at the Right Time: The Failure of the Kyoto Protocol on Climate Change", Politics & Policy, Volume 43, Issue 1, p.30.
[56] Directive 2003/87/EC, annexes I and III.

placed on the market each year was reduced by 1.74% per year. During phase 4, this linear reduction factor rises to 2.2% per year. For the ETS for buildings, road transport and other sectors (parallel market to the EU ETS), this reduction factor will rise to 5.18% from 2024 and 5.38% from 2028[57]. The aim of the EU ETS is to eventually reduce the number of allowances enough in order to achieve EU's climate neutrality, which will require the abolition of free allocation of allowances. The latter is planned to happen by 2030 for certain sectors[58], and by 2034 for installations subject to the CBAM[59].

The EU ETS is a "cap and trade" market. Legislation defines the maximum annual number of allowances available, and a market is created for their purchase and sale. Allowances are obtained either through auctions (where installations must bid for them) or free of charge. Operators can also buy allowances on specialised markets or from each other. The companies must obtain as many emission allowances as they need to cover their carbon emissions. Operators need one allowance for each tonne of CO_2 equivalent (tCO_2e) emitted. In principle, these allowances are purchased by auction[60]. This is the most transparent and economically efficient way of allocating allowances, putting the polluter pays principle into practice, generating revenue, revealing the price of carbon and increasing liquidity on the market[61]. Auctioning is the best way to encourage economic operators to change their behaviour. Under Article 10(1) of Directive 2003/87, "*Member States shall auction all allowances that are not allocated free of charge (...) and that are not placed in the market stability reserve (...) or cancelled. From 2021 onwards (...), the share of allowances to be auctioned shall be 57 %*". We can see that the majority of allowances is allocated through this mechanism. However, the sectors most exposed to the risk of carbon leakage are benefiting from different measures so as not to hamper their competitiveness.

One of these measures is the free allocation of EU ETS allowances, which is a derogatory mechanism[62]. This free allocation is intended to be a transitional or even exceptional measure[63]. The quantity of free allowances allocated is determined using the benchmarking

[57] Consolidated Directive 2003/87/EC, art. 30c, §2.
[58] Consolidated Directive 2003/87/EC, art. 10b, §4.
[59] Consolidated Directive 2003/87/EC, art. 10a, §1a.
[60] Delegated Regulation (EU) 2023/2830 of 17 October 2023 supplementing Directive 2003/87/EC of the European Parliament and of the Council by laying down rules on the timing, administration and other aspects of auctioning of greenhouse gas emission allowances
[61] Ministère de la transition écologique et de la cohésion des territoires (2024), "Marchés du carbone - SEQE-UE".
[62] Commission Delegated Regulation (EU) 2019/331 of 19 December 2018 determining transitional Union-wide rules for harmonised free allocation of emission allowances pursuant to Article 10a of Directive 2003/87/EC
[63] European Court of Auditors, 15 September 2020, "The EU's Emissions Trading System: free allocation of allowances needed better targeting", Special Report 18/2020 , p.4.

method, which involves applying a reduction coefficient to the quantities of emissions normally produced by the installation or aircraft in question[64]. The allocation of free allowances by each Member State to the fixed installations (then divided into sub-installations) present on its territory is based on a complex method, described in particular in Directive 2009/29/EC[65], using benchmarks determined by Decision 2011/278/EU. Allocating free allowances is a measure designed to prevent European companies from losing competitiveness as a result of the establishment of the EU ETS[66]. But to a certain extent, it also aims to reduce the risk of carbon leakage. For sectors exposed to the risk of carbon leakage, installations have a number of free allowances equivalent to their emissions until at least 2030[67], and decreasing afterwards. It should be noted that this deadline is only moving backwards: Directive 2009/29/EC initially stipulated that this provision would only apply until 2020. Conversely, for sectors able to reflect a greater proportion of the cost of allowances in product prices, the total abolition of free allowances is scheduled for 2030[68].

Under this system, each operator must declare its annual emissions, which are then checked by a verifier[69]. The carbon market is accompanied by a system of penalties: the penalty for each undeclared tCO_2e is now €100 plus inflation[70], compared with €40 during phase 1[71]. This mechanism demonstrates the EU's ambition to encourage manufacturers to switch to production methods that emit less GHG.

Although these goods are only transferable to companies covered by the EU ETS, they can be purchased by any natural or legal person who is a national of an EU Member State or a State party to the Kyoto Protocol. There are several reasons why people other than companies subject to the EU ETS might wish to buy allowances. Firstly, as in any market, this would allow speculation on the price of carbon. Secondly, it could help to limit pollution: if an environmental protection association raises funds to buy emission allowances that it will not use, it is helping to reduce GHG emissions.

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[64] J.-C. Rotoullié (2017), "L'utilisation de la technique de marché en droit de l'environnement : l'exemple du système européen d'échange des quotas d'émission de gaz à effet de serre", op. cit, p.151.
[65] Directive 2009/29/EC of 23 April 2009 amending Directive 2003/87/EC so as to improve and extend the greenhouse gas emission allowance trading scheme of the Community
[66] ECJ, 17 October 2013, Iberdrola, SA and Others v. Administración del Estado and Others, C 566/11, C 567/11, C 580/11, C 591/11, C 620/11 and C 640/11.
[67] Directive 2003/87/EC, art. 10b § 1.
[68] Directive 2003/87/EC, art. 10b § 4.
[69] Consolidated Directive 2003/87/EC, art. 15.
[70] Consolidated Directive 2003/87/EC, art. 16, §3 and 4.
[71] Directive 2003/87/EC, art. 16, §4.

§ 2. A scheme regularly strengthened to comply with the more ambitious objectives of the EU's climate policy

Directives 2009/29/EC and 2018/410/EU[72], both amending Directive 2003/87/EC, continue the effort to reduce emissions from the sectors included in the EU ETS. A reduction in the number of free allowances allocated to companies has been recorded, although the 2018 directive takes a step backwards by deleting the objective of phasing out the allocation of free allowances in 2027, which had been set in paragraph 11 of Article 10a of Directive 2003/87[73]. The scope of the EU ETS has been extended. From now on, part of the chemical and aluminium industries are covered.

These goods and their movements are regulated on national markets. In France, periodic National Allocation Plans (NAPs) set the maximum quantities of allowances to be allocated over each period. These NAPs were drawn up on the basis of the commitments made by France at the Kyoto conference. However, Directive 2003/87/EC, as amended in 2018, strengthens the powers of the European Commission by giving it the authority to set emission caps. From now on, these caps are set in a harmonised way across the EU, and the NAPs are abolished. This highlights the important role of the European Commission in overseeing the EU ETS. Directive 2003/87 gives huge responsibilities to the Commission: for instance, Article 10(5) requires it to "*monitor the functioning of the European carbon market*", by submitting a report each year to the European Parliament and to the Council "*on the functioning of the carbon market (…), including the operation of the auctions, liquidity and the volumes traded, and summarising the information provided by the European Securities and Markets Authority (ESMA) (…) and the information provided by Member States on the financial measures referred to in Article 10a(6)*". When needed, it is its responsibility to adopt delegated acts.

In order to enable Member States to achieve the EU's increasingly ambitious climate objectives, a regulatory framework complementary to the EU ETS has been put in place since 2009. Decision 406/2009/EC of 23 April 2009 on the effort of Member States to reduce their emissions, amended by Regulation 2018/842 of 10 May 2018[74], distributes the GHG emissions reductions to be achieved by each Member State by assigning them specific targets. The 2009

[72] Directive (EU) 2018/410 of 14 March 2018 amending Directive 2003/87/EC to enhance cost-effective emission reductions and low-carbon investments, and Decision (EU) 2015/1814
[73] Directive EU 2018/410, art. 1 § 14, k)
[74] Regulation (EU) 2018/842 of 30 May 2018 on binding annual greenhouse gas emission reductions by Member States from 2021 to 2030 contributing to climate action to meet commitments under the Paris Agreement

decision explicitly requires Member States to "*implement additional policies and measures in an effort to further limit the greenhouse gas emissions from sources not covered under Directive 2003/87/EC*"[75]. This decision takes into account the growth reserves of certain Member States, so that reduction efforts are shared. This is an application of the principle of common but differentiated responsibility.

The regulation of 10 May 2018 adapts this decision to the commitments made as part of the Paris Agreement and allocates the annual emission reductions by Member State from 2021 to 2030. Member States are allowed to some flexibility in meeting these targets, but a system of monitoring by the European Commission has been introduced, and penalties are provided for Member States that fail to meet their obligations. In France, the 2015 Energy Transition Act created a new tool, the carbon budget. This operates on a multi-annual basis (2015-2018, 2019-2023, 2024-2028, 2029-2033, etc.) and defines the reduction in emissions to be achieved by each sector that is not concerned by the EU ETS. This carbon budget is of utmost importance, as it is on this basis that the French government has been subject of a major climate litigation. In 2019, four French environmental protection associations took legal action to hold the French government liable for climate inaction. In the decision Tribunal administratif de Paris, 3 February 2021, Associations Oxfam France, Notre Affaire à Tous, Fondation pour la nature et l'homme, Greenpeace France[76], the administrative judge identified a number of shortcomings from the French government with regard to its climate objectives. It is the failure to comply with the first carbon budget that is deemed to be at fault and likely to have caused an environmental damage, resulting in the constitution of a prejudice. The judge found that the effects of this excess of emissions had been such as to create an ecological damage, which the associations could claim. In a second decision handed down by the same court on 14 October 2021, the court specified the penalties attributable to the State. It ordered France to repair the damage by taking all necessary measures to offset the emissions exceeding the first carbon budget[77].

This capacity of the mechanism to adapt to changes in the climate context and the EU's objectives makes the EU ETS an exception among climate policies, carbon taxation being the only instrument that can on its own reduce emissions from a sector[78]. However, this mechanism

[75] Decision 406/2009/EC, recital 6.
[76] TA de Paris, 3 Feb. 2021, no. 1904967, 1904968, 1904972, 1904976
[77] TA Paris, 14 Oct. 2021, no. 1904967, 1904968, 1904972, 1904976
[78] Stechemesser et al (2024), "Climate policies that achieved major emission reductions: Global evidence from two decades", Science, p. 6.

also suffers from a lack of efficiency and has been the subject of fierce protests from third countries and concerned companies.

Chapter 2: The EU ETS' shortcomings and the necessity of implementing a complementary mechanism

As demonstrated by the failed attempt to include international aviation in the EU ETS (Section 1), this scheme suffers a lack of efficiency and has faced several contestations (Section 2).

Section 1. The directive including aviation in the scheme and the "Air Transport" case: an illustration of the EU ETS' shortcomings

To illustrate the shortcomings of the EU ETS and the legal challenges encountered by the EU's climate policy, it can be interesting to analyse the case ECJ, 21 dec. 2011, Air Transport Association of America and others v. Secretary of State for Energy and Climate Change.

By a 2008 directive, Directive 2003/87/EC has been amended to include aviation activities in the EU ETS[79]. This Directive has been transposed into member States domestic law, and notably in the United Kingdom. An air transport trade and services association in the United States and several airlines operating flights in the United States, Europe and the rest of the world then sought the annulment of the measures implementing the 2008 Directive in the United Kingdom, arguing that the directive was illegal under international law. In support of their claim, the applicants allege that the Directive is incompatible with the Kyoto Protocol and the Open Skies Agreement between the United States and the European Communities, because the directive applies the EU ETS to aviation activities. Moreover, in their view, it infringes several rules of international law because it applies the ETS to all international flights with either departure or arrival in the territory of the EU, and therefore to the parts of those flights which take place outside the EU. In order to answer these questions, the Court had to consider whether international treaty law could be invoked in support of the action, and whether the European Union was therefore competent to include aviation activities in the EU ETS. It also had to consider whether the inclusion of the parts of international flights that take place outside the airspace of the Member States was valid under international law.

[79] Directive 2008/101/EC of 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.

In a decision handed down by the Grand Chamber of the ECJ on 21 December 2011[80], the judges declared the Directive being valid under international law. They considered that the provisions of the Kyoto Protocol could not be invoked in support of the action because they were not unconditional and sufficiently precise (soft law). In addition, in their view, the EU was competent to include in the EU ETS international flights that depart from or arrive in an EU Member State but with a part taking place outside the EU airspace.

This judgement and what happened next illustrate the benefits and limits of the European contribution to environmental protection: even if the Court recognised the validity of the contested yet ambitious Directive (§ 1), international pressure led to the removal of international flights from it (§ 2).

§ 1. The quest for a high level of environmental protection, justification of the directive's validity

EU law and case law must be guided by an objective of high level of environmental protection[81]. This is illustrated by the contested Directive and the reasoning of the European judges. In order to assess the validity of Directive 2008/101, the Court first states in its decision that the "*European Union policy on the environment seeks to ensure a high level of protection in accordance with Article 191(2) TFEU*"[82]. The use of the concept of a high level of protection of the environment, which is also found in Article 3(3)(1) TEU, demonstrates the Court's desire to make use of the margin of appreciation that it confers. In fact, this legal standard, considered by some scholars to be the most important in European environmental law[83], is assessed based on manifest error. Its application is not recent, but it provides a framework for the interpretation by the European courts of several principles of European environmental law, such as the precautionary principle[84]. Indeed, the precautionary principle is based on scientific uncertainty, and the quest for a high level of environmental protection should make it possible for the judge to overcome this uncertainty in order to act proactively in favour of the environment.

[80] ECJ, 21 December 2011, Air transport Association of America and others v. Secretary of State for Energy and Climate Change, C-366/10.
[81] TFEU, art. 191(2).
[82] ECJ, 21 December 2011, Air transport Association of America and others v. Secretary of State for Energy and Climate Change, C-366/10, recital 128.
[83] E. Naim-Gesbert (2024), "Droit général de l'environnement : Introduction au droit de l'environnement", LexisNexis, p.57.
[84] ECJ, 14 February 1998, Gianni Bettati, C-180/95, recital 53.

This legal standard also leaves room for manoeuvre to the European legislature, and this is what the judge affirms in holding at the same point that "*the legislature of the Union may in principle choose to authorise the pursuit on its territory of a commercial activity (...) only on condition that the operators comply with the criteria defined by the Union*". Here, the judge is using it to legitimise the contested directive, precisely because it implements the Kyoto Protocol. This is the contribution of the judgment to be commented on: while the judge dismisses the applicability of this protocol, he does not dismiss its substance or intention.

In holding that the law may impose criteria for authorising the pursuit of a commercial activity within the territory of the EU, "*in particular where those objectives are in line with an international agreement to which the Union has subscribed, such as the Framework Convention and the Kyoto Protocol*", it does indeed use it as a basis. An act of soft law such as the Kyoto Protocol can therefore produce significant effects, even if it cannot be invoked in support of an action. This would justify compliance with the relevant European legislation by any economic player wishing to carry on a commercial activity on EU territory. It is this objective of high environmental protection that enables the European courts to validate provisions with extraterritorial scope[85].

As a result, the courts recognise the EU's competence to enact measures with a very broad scope, extending beyond its borders, which may seem remarkable. However, the need for the economic activity in question to be based in the territory of the European Union remains a condition for the validity of such measures. It might be worth considering extending this type of measure to maritime transport, for example, or even to international flights that neither depart from nor arrive in EU territory, but which only cross it. We can however underline that the EU has shown ingenuity by adopting the contested directive.

§ 2. A directive acting to improve climate justice, but weakened by foreign pressure

The directive challenged in this case has the merit of seeking to penalise greenhouse gas emissions caused by aviation, even during international flights that only depart from or arrive in the EU, and not just domestic flights. It therefore also takes into account emissions

[85] C. Voigt (2012), "Up in the Air: Aviation, the EU Emissions Trading Scheme and the Question of Jurisdiction", Cambridge Yearbook of European Legal Studies, Vol. 14, pp. 475-506.

from aircrafts outside the EU. This directive can be seen as an "*externalisation*" of the EU ETS[86].

Indeed, environmental law is as much a scientific law as a legal one, and could not develop without the contribution of biologists, geologists, archaeologists, or meteorologists. If the current context of global warming is materialised by "when the sea advances, Man retreats", this does not mean that the law should stop advancing. This is exactly what the 2008 directive is doing, which is to its credit because it has decided to strip off its blinkers, which until now have hidden the obvious fact that polluting phenomena have no borders.

In fact, to plead the violation of international and customary law by the European Union seem both coherent and incongruous. Coherent because, given the legal delimitation of States, it may seem difficult to penalise a State for the entirety of a flight which only took off or landed on the territory of an EU Member State. Incongruous because if the Court had rejected this mechanism on the grounds that it was contrary to international law and the sovereignty of States, this would have been infinitely simplistic. It is in this sense that the judges state in point 129 that the fact that "*certain matters contributing to the pollution of the air, sea or land territory of the Member States originate in an event which occurs partly outside that territory is not such as to call into question [...] the full applicability of European Union law in that territory*". We can therefore safely state that this directive illustrates the quest for climate justice at a European level.

But this quest has been jeopardised by international pressure[87]. From September 2011, twenty-six States (including Russia, China, India, and the US) signed the New Delhi Declaration. This Declaration stated that "*the inclusion of non-EU states into the scheme was inconsistent with applicable international law and the states would present their opposition in a working paper to the ICAO Council for consideration*". In November 2011, the ICAO Council joined them. Moreover, the Moscow Declaration of February 2012 (signed by 33 States) listed possible retaliatory actions unless the EU decided to cease implementation of the scheme to aircraft of non-EEA States. This Moscow Declaration was a direct response to the Court decision. But States in their individual capacity also initiated retaliatory actions (China, Russia,

[86] I. Espa (2012), "Climate Action and unilateral trade measures: the latest initiatives of the European Union", Revue internationale de droit économique, Vol.26 (3), p.295-320.
[87] T. Ahmad (2015), "Evaluating the effectiveness of the European Union emissions trading system to reduce emissions from international civil aviation", McGill International Journal of Sustainable Development Law and Policy, Vol. 11, Issue 1, S. 119 ff.

India, or even US), and the EU finally encountered resistance from European airlines and corporations as well (Lufthansa, Airbus)[88]. As a result, the EU restricted the scope of the scheme to the EEA airspace[89]. Because of international pressure and lobbying, the parts relating to international flights have finally been removed from the directive. It means that even if the judges declared the directive as valid, they didn't have the last word. Economic interests once again won against environmental ones. Environmental law aims to conciliate different interests (environmental, economic or even social), and this case has shown us how difficult it can be.

As a compensation, we can underline the implementation of a global carbon market including aviation in 2016, and particularly the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA). However, this system suffers from a lack of efficiency and has been severely criticised.

The Air Transport Association case illustrates the limits of the European climate action which, despite its ambition and ingenuity, sometimes comes up against the resistance of other States. Yet this is not the only time the EU has tried to include extraterritorial measures in its legislation. One example is the recent CSDDD[90], which applies to third-country companies that generate a turnover above a certain threshold on the EU territory[91]. But we could also mention the CBAM, which I will discuss in more detail in the next parts.

Section 2. A controversial system with numerous limitations

The contestation made against the directive including aviation in the scheme have also been made against the EU ETS itself, which suffers several shortcomings (§1). The major disadvantage faced by the EU ETS is the risk of carbon leakage, which has justified the creation of a border adjustment (§2).

[88] W. Nichols (2012), "Airbus blames EU carbon trading row for falling Chinese orders", The Guardian
[89] Decision (EU) 377/2013 of 24 April 2013 derogating temporarily from Directive 2003/87/EC.
[90] Directive (EU) 2024/1760 of 13 June 2024 on corporate sustainability due diligence (CSDDD).
[91] CSDDD, art. 2 § 2.

§ 1. A mechanism that suffers from several shortcomings, justifying the contestation of its validity

In addition to the cases brought to court against the directives that modified the EU ETS, the system itself was also immediately challenged by major industrial groups. Arcelor Mittal, for example, considered that the system was contrary to the principle of equality before public charges, because only a few sectors fell within the scope of the directive. In a decision ECJ, 16 December 2008, Société Arcelor Atlantique et Lorraine, the European judge stated that "*a difference in treatment is justified if it is based on an objective and reasonable criterion, that is, if the difference relates to a legally permitted aim pursued by the legislation in question, and it is proportionate to the aim pursued by the treatment*"[92]. In this case, the ECJ therefore recognised the discriminatory nature of the EU ETS but upheld the legality of Directive 2003/87/EC, as it is a complex system "*whose implementation and functioning could have been disturbed by the involvement of too great a number of participants*"[93]. The aim of the directive was in fact to select enough sectors to achieve the critical mass of participants needed to set up the system.

These challenges illustrate the many limitations of the scheme. One of these limitations is that, in theory, there were two options for the companies concerned: change their production methods and resell the unused allowances, or buy the missing allowances to cover all their emissions. As the first option was often too costly, the second unfortunately prevailed. Free allowances have not encouraged companies to reduce the quantities they produce and/or the way they produce them. Indeed, one of the major problems with the polluter pays principle is that its strength is also its weakness. Because of its flexibility, there is often a reversal of logic in its application. The principle was designed through a mechanism of reparation: those who pollute are obliged to pay the costs of their pollution. Unfortunately, in the case of GHG emission allowances, the principle is often transformed into "whoever pays can pollute". The logic is reversed, and there is then not enough limits to GHG emissions, unless the price of allowances becomes high enough to dissuade companies from polluting. Economic operators who, like the CAC 40 groups, have enough money to buy additional emission allowances buy

[92] ECJ, 16 December 2008, Société Arcelor Atlantique et Lorraine and Others v. Premier ministre, Ministre de l'Écologie et du Développement durable and Ministre de l'Économie, des Finances et de l'Industrie, C-127/07, recital 47.
[93] Idem, recital 60.

them, enabling them to pollute more than the target set to them by the Member State to which they belong.

We can therefore ask ourselves at what point this system would become truly effective. In reality, as long as the cost of emissions does not exceed the cost of changing production processes and associated procedures, the system will remain relatively ineffective. These changes imply a complete overhaul of the supply chain, or even of the companies' business model, and it will be necessary to wait for a carbon price high enough to be considered punitive by companies, which will then begin their slow transformation. For the time being, this system is only seen as an additional regulatory requirement, with, at most, a risk of non-compliance (and therefore of financial penalties). In this respect, a report by the European Court of Auditors of 5 July 2021 paints a bleak picture of the polluter pays principle: in the main, it is European taxpayers who pay, not the companies that emit[94].

A second issue arising from the EU ETS is the possibility for companies to trade allowances on the market even though they have been allocated free of charge. In a decision of 8 September 2011, Commission v. Kingdom of the Netherlands, the ECJ accepted that the provision of free emission rights by a Member State constituted State aid[95]. Such measure, if taken at national level, is prohibited under EU law "*in so far as it affects trade between Member States*" and "*distorts or threatens to distort competition by favouring certain undertakings or the production of certain goods*"[96]. In the case of the EU ETS, as a Community mechanism, these provisions do not apply, but it should be emphasised that free allocations *in fine* constitute significant aid for the companies benefiting from them. A report by the European Court of Auditors of September 2020 also notes that "*for both phase 3 and 4 of the EU ETS, they continue to represent more than 40 % of the total number of available allowances*"[97]. It demonstrates that the free allocation of ETS allowances is not as exceptional as it is presented in the Directive. But the Court also notes that the allocation of allowances free of charge is not targeted, and makes recommendations to the Commission aimed at improving targeting and resolving technical problems when revising the method used to allocate free allowances[98]. According to the same report, the free allocation of allowances to the electricity sector simply did not

[94] European Court of Auditors, 5 july 2021, "The Polluter Pays Principle: Inconsistent application across EU environmental policies and actions", Special Report 12/2021 , pp. 19-41, 63-68.
[95] ECJ, 8 September 2011, Commission v Kingdom of the Netherlands, C-279/08 P , recital 78.
[96] TFEU, art. 107 § 1 (ex-art. 87 TEC)
[97] European Court of Auditors, 15 September 2020, "The EU's Emissions Trading System: free allocation of allowances needed better targeting", Special Report 18/2020, pp. 39-40.
[98] Idem.

encourage decarbonisation during phase 3. This shows that free allocations undermine the effectiveness of the EU ETS.

In fact, too many free allowances have been distributed, and the tCO_2e has never been sufficiently expensive to be dissuasive. Companies have continued to emit as much as before, without any real ecological transition. In France, the first NAP distributed more free allowances than there were actual emissions, so that no company had to buy additional allowances, and the market collapsed. The Member States, particularly when the EU ETS was created, were afraid of putting their companies at such a competitive disadvantage. The same applies to penalties: in France, despite a certain ambition, the amount of the penalty per excess tCO_2e (40 euros per allowance not surrendered between 2005 and 2007, and 100 euros from 2008[99]) does not dissuade companies subject to the EU ETS from implementing a real transition or even effective compliance.

The issue of free allowances has been raised in particular by several economists, who would prefer the establishment of a European carbon tax to the EU ETS' allowance system[100]. They criticise the carbon market for its lack of efficiency, and share the view that free allowances represent a subsidy for pollution[101]. They also criticise speculation by some producers, who resell their unused allowances several years later, when prices have risen. The carbon market, an environmental protection measure, then falls into the trap of the "classic" market: some take advantage of it to maximise their profits and divert it from its initial objective. In more general terms, this brings us back to the criticism that can be made against the EU's choice to protect the environment through the market, which bears witness to its ultra-liberal approach. This limitation is illustrated in particular by the so-called "carbon tax fraud" (which is in reality a VAT fraud on CO_2 allowances). This fraud, which exploited the loopholes in the control of the EU ETS and its lack of external regulation, enabled companies to buy allowances in Member States that applied little or no VAT, and then resell them in Member States that did. The VAT was then recovered by the company. Between 2008 and 2009, this

[99] Art. L.229-18 of the French Environment Code, in the version in force from 17 April 2004 to 23 October 2010. Today, article L.229-18 has become article L.229-10 of the same code, and still provides for a penalty of €100 per quota not surrendered, with the subtle difference that the amount "increases in line with changes in the European Union's harmonised consumer price index since 1 January 2013".

[100] For example, J. Stiglitz (2006), "A new agenda for global warming", The Economists' Voice, 3(7), 2006; W. Nordhaus (2007), "To tax or not to tax: alternative approaches to slowing global warming", Review of Environmental Economics and Policy, 1(1), 2007, pp. 26-44; L. Summers (2007), "Practical steps to climate control", Financial Times; S. Stoft (2008), "Carbonomics, How to Fix the Climate and Charge It to OPEC", Diamond Press.

[101] P. Kahn, H. Mariton, M. Pascal (2022), "Les outils de régulation économique du carbone".

fraud is estimated to have resulted in the embezzlement of around €5 billion within the EU, making it one of the largest ever identified by the tax authorities[102].

§ 2. The risk of carbon leakage, the major risk faced by the EU ETS

Finally, the major risk faced by the EU ETS is the risk of "carbon leakage". Carbon leakage occurs when the introduction of a measure to reduce emissions in one country or group of countries leads to an increase in emissions in another country or group of countries. This is because any country is free to reduce its emissions by any means (international agreements generally only impose objectives to the parties). In doing so, however, the country run the risk of shifting market share from domestic sources (capped or "cleaner") to imports (uncapped and "dirtier"). This could even lead some domestic companies to relocate to countries that do not respect the rules of the game. Not only would this cost jobs and taxpayers' money in the legislating country, but it could also increase carbon emissions in other countries: instead of reducing domestic emissions, it would lead to an increase in emissions in countries where there are no carbon restrictions[103]. An OECD report published in 2024 states that carbon pricing is therefore likely to generate shift in GHG emissions towards countries with less ambitious climate policies, resulting in a global carbon leakage rate of 13%: for 100 tCO_2e, of emissions reduced by carbon pricing, emissions in the rest of the world increase by an average of 13 tCO_2e, undermining the effectiveness of the EU ETS[104]. However, the EU is well aware of this risk[105], and has therefore introduced various measures to combat it[106].

One point that is definitely missing from Directive 2003/87 and all the directives that have amended it is the creation of an equalisation measure for third countries[107]. The free allocation of allowances is an intra-European equalisation measure[108], but in so far as GHG emissions are not paid for everywhere in the world, it is essential to create such a mechanism

[102] French Court of Auditors (2012), "La fraude à la TVA sur les quotas de carbone".
[103] J. Pauwelyn (2012), "Carbon Leakage Measures and Border Tax Adjustments Under WTO Law".
[104] Teusch, J., et al (2024), "Carbon prices, emissions and international trade in sectors at risk of carbon leakage: Evidence from 140 countries", OECD Economics Department Working Papers, No. 1813.
[105] Commission Delegated Decision (EU) 2019/708 of 15 February 2019 supplementing Directive 2003/87/EC of the European Parliament and of the Council concerning the determination of sectors and subsectors deemed at risk of carbon leakage for the period 2021 to 2030.
[106] Free allocations and CBAM.
[107] J.-C. Rotoullié (2017), "L'utilisation de la technique de marché en droit de l'environnement : l'exemple du système européen d'échange des quotas d'émission de gaz à effet de serre", op. cit. pp. 189-226.
[108] Idem, pp. 149-170.

to prevent EU companies from losing competitiveness (distortion of competition) or relocating outside the EU (carbon leakage). The purpose of setting up such a mechanism would therefore be to effectively combat carbon leakage and replace the transitional mechanism of free allocations. The criticisms and limitations mentioned above justify the need to introduce such a measure. Several forms have been proposed (climate contribution, border adjustment, inclusion of imports in the EU ETS)[109]. In 2009, France was already proposing that importers should take part in the EU ETS, in compliance with WTO rules[110]. In the end, however, the European Commission opted for a CBAM, created by Regulation (EU) 2023/956 of the European Parliament and of the Council of 10 May 2023 establishing a carbon border adjustment mechanism and applicable from 1st October 2023.

[109] R. Ismer et al (2020), "Border carbon adjustments and alternative measures for the EU ETS: an evaluation", DIW Berlin Discussion Paper no. 1855.
[110] Chevrollier, G., Saint-Pé, D. (2022). « Rapport d'information fait au nom de la commission de l'aménagement du territoire et du développement durable sur la réforme du marché carbone européen dans le cadre du paquet 'Ajustement à l'objectif 55' ». French Senate, no. 576, p.48.

PART II: THE CBAM: A MECHANISM AIMED AT COMPLEMENTING THE EU ETS BUT SUBJECT TO SEVERAL RISKS AND WEAKNESSES

As the EU ETS's "little brother", the CBAM is still young in the European legal landscape. Yet, it can be analysed through a theoretical point of view, by discussing its objectives and functioning and diving into its legal implications and faced risks. In fact, by progressively applying the polluter pays principle to importers, with the main objective of complementing the EU ETS (Chapter 1), its legal implications make it face risks of inefficiency and invalidity under international law (Chapter 2).

Chapter 1: The CBAM, a mechanism with ambitious objectives needing a slow implementation

The CBAM has been designed to be progressively implemented, as it is a complex mechanism needing importers to adapt to it (Section 2), illustrating its ambitious objectives (Section 1).

Section 1: As part of the European Green Deal, a mechanism with ambitious objectives

In order to analyse the CBAM, it is necessary to dive into the context which led to it (§ 1) and its ambitious objectives (§ 2).

§ 1. A mechanism finally included in the "Fit for 55" package of legislation

The CBAM, established by EU regulation 2023/956, is one of the measures from the EU's "Fit for 55" package, the main objective of which is to reduce the EU's GHG emissions by 55% compared with 1990 levels by 2030[111]. This objective has become a legal obligation thanks to the European climate law[112]. The "Fit for 55" legislative package consists of several regulations and directives. On 25 April 2023, for example, the Council of the European Union voted in favour of 5 legislative acts[113]: a revision of Directive 2003/87 as regards the EU ETS[114], an amendment to the MRV Regulation in the maritime transport sector[115], a revision of the Directive on the EU ETS in the aviation sector[116], a Regulation establishing a Social Climate

[111] Communication from the Commission: "'Fit for 55': delivering the EU's 2030 climate target on the way to climate neutrality", COM(2021) 550 final.
[112] Regulation (EU) 2021/1119 of 30 June 2021 establishing the framework for achieving climate neutrality and amending Regulations (EC) No 401/2009 and (EU) 2018/1999 ("European Climate Law"), art. 4
[113] Council of the EU, 25 April 2023, "'Fit for 55': Council adopts key pieces of legislation delivering on 2030 climate targets", press release.
[114] EU Directive 2023/959.
[115] Regulation EU 2023/957.
[116] EU Directive 2023/958.

Fund[117] and the Regulation establishing the CBAM[118]. It should be noted that all these measures enhance the climate ambitions of the EU ETS, by amending or supplementing it.

The "Fit for 55" package of measures is part of the European Green Deal, proposed by the European Commission on 11 December 2019[119]. The Commission's mission is to transform the European economy and put it on a more sustainable path. With one of the most ambitious objectives: to achieve climate neutrality for the EU by 2050. The Green Deal focuses primarily on climate protection, with the aim of making the EU the first carbon-neutral continent by 2050. The EU also has a more general ambition to protect the environment (of which I would point out that the climate is only one aspect) and to make a just social transition. This is reflected in the European Commission's commitment to a more resilient economy and society[120], demonstrating its desire to anchor this project in a sustainable development dimension. The Green Deal includes several measures and legislative, including the Farm to fork package, the Fit for 55 package or the Nature Restoration Law.

It should be noted here that the European Green Deal was adopted on the basis of the Paris Agreement, itself adopted on the basis of the UNFCCC. The CBAM is therefore a mechanism based on a cascade of foundations, perfectly illustrating the link between the soft law of international environmental law and the hard law of European environmental law, as well as the influence of the former on the latter.

As we saw earlier, however, the introduction of CBAM in its current form was not always obvious. Indeed, several mechanisms have been considered in the literature. I will mention three models here: the inclusion of imports in the EU ETS, the adoption of a climate contribution combined with a move towards a dynamic free allowance allocation as part of the EU ETS, or the introduction of a carbon tax[121]. The European Commission itself considered 2 alternatives to the implementation of import certificates in the impact assessment accompanying the proposal for a regulation: an import carbon tax reflecting the price of carbon in the EU combined with a default carbon intensity of the products, and an excise duty on

[117] Regulation EU 2023/955.
[118] Regulation EU 2023/956.
[119] Communication from the Commission: "The European Green Deal", COM/2019/640 final.
[120] Idem, p.2.
[121] R. Ismer et al. (2020), "Border carbon adjustments and alternative measures for the EU ETS: an evaluation", op. cit.

specific carbon-intensive materials, whether imported or consumed within the Union[122]. However, as we will see in the next chapter, several legal obstacles stood in the way of the implementation of such mechanisms, obstacles which therefore justified the choice of a border adjustment mechanism, although stakeholders expressed their preference for an import carbon tax[123].

§ 2. A mechanism pursuing ambitious objectives but with a complex scope

The objectives of the CBAM are clear: the first paragraph of Article 1 of Regulation 2023/956 states that its purpose is to "*address greenhouse gas emissions embedded in the goods*" falling within its scope "*on their importation into the customs territory of the Union in order to prevent the risk of carbon leakage*". This objective echoes the main shortcoming of the EU ETS, which fails to address carbon leakage effectively. The preamble to the regulation points out that carbon leakage occurs if, "*for reasons of costs related to climate policies, businesses in certain industry sectors or subsectors transfer production to other countries or imports from those countries replace equivalent products that are less intensive in terms of greenhouse gas emissions*"[124].

The second paragraph of Article 1 is explicit about the link between the EU ETS and the CBAM: this mechanism "*complements the system for greenhouse gas emission allowance trading within the Union established under Directive 2003/87/EC (the 'EU ETS') by applying an equivalent set of rules to imports*" of certain goods into the customs territory of the EU. These provisions implicitly refer to the form of the equalisation measure as regards third countries chosen by the EU. Importers are not included in the EU ETS, but similar obligations are now imposed on them. Similarly, the CBAM does not constitute an import tax, although it may looks like one.

Finally, the third paragraph mentions a crucial point: CBAM "*is set to replace the mechanisms established under Directive 2003/87/EC to prevent the risk of carbon leakage*",

[122] Commission staff working document: Impact assessment report accompanying the Proposal for a regulation of the European Parliament and of the Council establishing a carbon border adjustment mechanism, SWD/2021/643 final.
[123] Commission staff working document: Executive summary of the impact assessment report accompanying the Proposal for a regulation establishing a carbon border adjustment mechanism, SWD(2021) 644 final.
[124] Regulation 2023/956, recital 9.

and in particular "*the extent to which EU ETS allowances are allocated free of charge*". This is an essential element. Article 1 of Regulation 2023/956 thus states that the requirements laid down by the CBAM are intended to replace the mechanism of free allocations, so bitterly criticised by the European Court of Auditors as well as by academic authors. Since these two measures pursue the same objective, the EU considers CBAM to be a sustainable alternative to free allocations, which is transitory by nature. Beyond that, CBAM is even "*designed to function in parallel with the EU's emissions trading system (EU ETS) as well as to mirror and complement its functioning on imported goods*"[125].

Quite simply, CBAM aims to ensure that the EU's efforts to reduce GHG emissions are not offset by an increase in emissions outside its borders as a result of relocating the production to countries with less ambitious climate policies[126].

But as I have already pointed out, only several raw materials and semi-finished products fall within the scope of the CBAM. The exact and complex list of goods covered by this mechanism is set out in Annex I of Regulation 2023/956. They are listed by Combined Nomenclature (CN) code. It applies both to the goods themselves and to the processed products from those goods resulting from the inward processing procedure referred to in regulation 952/2013[127]. Moreover, it does not apply to the imported goods whose intrinsic value, per consignment, is negligible, as defined in regulation 1186/2009. This regulation establishes that a good shall be considered to have a negligible value when it does not exceed 150 euros per consignment[128]. Finally, CBAM does not apply to the goods imported from the following third countries and territories: Iceland, Lichtenstein, Norway, Switzerland, Büsingen, Heligoland, Livigno, Ceuta, Melilla, due to economic agreements between these territories and the EU. Without already diving into the legal analysis of this mechanism, we can already note that the CBAM does not cover the same sectors as the EU ETS. Furthermore, it applies to emissions from goods, whereas the EU ETS applies to emissions from installations. This makes it a complex scope, difficult to understand and implement.

[125] Council of the EU (2024), "Fit for 55"
[126] Christel Cournil, Sabine Lavorel (2024), "Chronique annuelle de droit climatique", RJE, 2024/2 (Vol. 49), (pp.381-397).
[127] Regulation 952/2013 of 9 October 2013 laying down the Union Customs Code, art. 256.
[128] Regulation 1186/2009 of 16 November 2009 setting up a Community system of reliefs from customs duty, art. 23.

Section 2. A progressive effectiveness and coordination with the EU ETS

The CBAM is divided into two periods, illustrating its complexity (§ 1). But its coordination with the EU ETS will also be progressive (§ 2).

§ 1. A progressive timeline of implementation

The EU intends to implement such a mechanism gradually. CBAM is therefore divided into two main phases: a transitional period and a definitive period. The aim of the transitional period, running from 1st October 2023 to 31 December 2025, is to familiarise the concerned importers with the mechanism and enable them to put in place the appropriate processes. This is a crucial stage, given the amount of information that will be requested from suppliers. The obligations on importers during this transitional period are governed by an implementing regulation dated 17 August 2023[129]. During this period, importers are required to make quarterly declarations. On a European portal created for this purpose, they must declare the quantities of goods falling within the scope of the CBAM they imported during the previous quarter, expressed in tonnes. They must also include in their CBAM report the actual total embedded emissions, the total indirect emissions and the carbon price due in a country of origin for the embedded emissions in the imported goods.[130]. These requirements imply a dialogue between importers and suppliers, and between the EU and third countries. In addition to the direct impact on European importers, third countries also have an interest in having their carbon taxation mechanisms recognised by the EU, in order to maintain the competitiveness of their installations. This is the case, for example, with South Korea, whose "*major bilateral trade request to the EU is to acknowledge Korea' ETS carbon pricing for the EU's Carbon Border Adjustment Measures*"[131]. The challenge for the EU is to convince third countries of the environmental, rather than protectionist, aspect of CBAM, using it as a diplomatic tool[132] to promote GHG emission reductions at a global level.

[129] Implementing Regulation (EU) 2023/1773 of 17 August 2023 laying down the rules for the application of Regulation (EU) 2023/956 of the European Parliament and of the Council as regards reporting obligations for the purposes of the carbon border adjustment mechanism during the transitional period.
[130] Regulation (EU) 2023/956, art. 35 § 2.
[131] Soojung Cho, "Trade and Sustainability - Climate Change in Korea's Trade Policy" (removed from SSRN)
[132] G. Chevrollier, D. Saint-Pé (2022), op. cit. pp. 70-73.

The first declaration had to be submitted by 31 January 2024, for imports during the last quarter of 2023. To make it easier for importers to implement this mechanism, the Commission authorized amending their first two declarations until July 2024[133], creating kind of transitional sub-period. Importers could also use default values, made available by the European Commission[134], to calculate GHG emissions from imported products. However, this derogation was only valid for the first three declarations, relating to the last quarter of 2023 and the first two quarters of 2024. For the fourth declaration, which importers must complete by the end of November 2024, the actual values communicated by their suppliers must be used. To this end, the Commission has published a communication guide for third-country suppliers in Excel format, setting out the various elements required by the importers in order to make their CBAM reports[135]. This file contains several sheets: general information, production processes and purchased precursors; installation's emission at source stream and emission source level; installation-level GHG emissions and energy consumption; production level and attributed emissions for specific embedded emissions (SEE) calculation; and purchased precursors for SEE calculation. Guides for importers and third-country installations have also been published by the Commission to facilitate exchanges between these various actors[136] [137].

Implementing Regulation 2023/1773 on the transitional period provides for penalties in the event of failure to comply with the requirements it lays down[138]. In France, the penalties provided for in this regulation are codified by article 17 of law 2024-364 of 22 April 2024, which created art. L. 229-73 of the French Environment Code. It provides that the administrative authority may give formal notice to an importer that has failed to meet its obligations under Regulation 2023/1773 to rectify the situation. In the event of failure to comply with the formal notice within the time limit set, the administrative authority shall impose a fine of a minimum of €10 and a maximum of €50 per tonne of undeclared emissions. The same article also provides that this amount may be doubled, without exceeding €100 per tonne of undeclared emissions, in the event of a repeat offence.

[133] Implementing regulation (EU) 2023/1773, art. 9 §2.
[134] European Commission, 22 December 2023, "Default values for the transitional period of the CBAM between 1 October 2023 and 31 December 2025".
[135] European Commission, 23 October 2023, "CBAM communication template for installations".
[136] European Commission, 17 August 2023, "Guidance document on CBAM implementation for importers of goods into the EU".
[137] European Commission, 17 August 2023, "Guidance document on CBAM implementation for installation operators outside the EU".
[138] Implementing regulation (EU) 2023/1773, art. 16.

It should be noted that the introduction of transitional periods is quite common in EU law. This was the case, for example, during the introduction of the euro[139] or in relation to the risk of shortages of medical devices[140]. The common feature of EU acts which are subject to progressive implementation is their complexity and the need for the concerned actors to adapt to it. In general, it is also a question of not impacting too abruptly the competitiveness of European companies.

The quarterly reporting mechanism will be abolished when the definitive CBAM period comes into force on 1er January 2026. During this definitive period, importers will have to declare the emissions related to the goods they have imported into the EU on an annual basis and surrender the corresponding number of CBAM certificates. The price of a certificate will be indexed to the average weekly auction price of EU ETS allowances, demonstrating the close link between these two systems. One certificate, as an emissions allowance, will be equivalent to one tCO_2e. Finally, as mentioned above, if importers can prove that a carbon price has already been paid for the production of the imported goods in the third country, the corresponding amount can be deducted from the price of the CBAM certificate. To ensure the veracity of the emissions declared by importers, verification by an accredited verifier is mandatory[141]. The various annexes to Regulation 2023/956 detail the complex methods for calculating embedded emissions by operators of installations in third countries, and the methods for verifying them.

The penalties applicable to importers who fail to surrender the correct number of CBAM certificates during the final period are the same as those laid down for failure to comply with the requirements of Directive 2003/87[142]. The amount of these penalties is equivalent to €100 per undeclared tonne[143] (EU ETS) or non-returned certificate (CBAM). Without dwelling here on the analysis of these penalties, we can note that they are still quite low.

§ 2. A progressive coordination with the EU ETS

The CBAM is linked to various European regulations, also aimed at reducing the risk of carbon leakage. However, it remains intrinsically linked to the European carbon market, as

[139] Regulation (EC) 974/98
[140] Regulation (EU) 2023/607
[141] CBAM regulation, art.8 §1.
[142] CBAM regulation, art. 26 §1.
[143] Directive 2003/87/EC, art. 16 §3.

it complements it[144]. It can be seen as a parallel to the EU ETS, or even as a "*mirror*" mechanism[145], as it imposes the same obligations on importers as on producers, i.e. equivalent carbon pricing.

Regulation 2024/873 adapts the rules applicable to the free allocation of emission allowances after the entry into force of the CBAM. Recital 7 of this regulation states that "*Directive 2003/87/EC provides that no free allocation shall be given in relation to the production of products covered by the Carbon Border Adjustment Mechanism (...), with a gradual phase-out of free allocation during a transitional period*". Article 10a of Directive 2003/87/EC, as amended by Directive 2023/959, determined the CBAM factor applicable to free allocations, with a view to phasing them out. This article thus sets out the coordination between the CBAM and the EU ETS. This article stipulates that during the first years of application of the CBAM, "*the production of goods listed in Annex I to that Regulation shall benefit from free allocation in reduced amounts. A factor reducing the free allocation for the production of those goods shall be applied (CBAM factor). The CBAM factor shall be equal to 100 % for the period between the entry into force of that Regulation and the end of 2025 and, subject to the application of provisions referred to in Article 36(2), point (b), of that Regulation, shall be equal to 97,5 % in 2026, 95 % in 2027, 90 % in 2028, 77,5 % in 2029, 51,5 % in 2030, 39 % in 2031, 26,5 % in 2032 and 14 % in 2033. From 2034, no CBAM factor shall apply*". We may note, though I will provide a more detailed critique in the next chapter, that the mechanism of free allocations, although intended to be replaced by the CBAM, will in fact coexist with it at least until 2034 (we are not immune to a change in the deadlines).

[144] CBAM regulation, art. 1 §2.
[145] M. Barges, G. Cognet (2024), "Taxe carbone aux frontières : l'importateur-payeur". La tribune.

Chapter 2: An ingenious yet criticised mechanism, facing several legal risks

The CBAM seems to be an extra-territorial mechanism, with several legal implications (Section 1), but facing risks of inefficiency and invalidity as regards international law (Section 2).

Section 1: A "hybrid" and extraterritorial mechanism extending the polluter pays principle to the importers

Both legal implications (§ 1) and legal nature (§ 2) of the CBAM make it a unique mechanism.

§ 1. A mechanism extending the polluter pays principle to the "importer pays" principle

Motivated by the objective of sustainable development and the polluter pays principle, the EU ETS imposes a financial constraint on Member States. The result is a reduction in the competitiveness of economic operators concerned by this market. This is where the difficulty lies in the introduction of such a system by the European Union. How can stringent environmental regulations be imposed while maintaining the competitiveness of the economic operators? As we have seen, several mechanisms have been put in place by the EU to meet this challenge, playing with the limits of its competences, and facing international reprimands.

The first mechanism put in place by the EU concerns the aviation sector and has been introduced by Directive 2008/101/EC on the inclusion of aviation activities in the EU ETS, which has already been extensively commented in the previous section. Like CBAM, its objective was both environmental and economic: the directive was motivated by a desire to reduce distortions of competition between European and foreign aircraft operators. CBAM aims to reduce distortions of competition between European and foreign producers. It is in 2009 that the European legislator puts forward the hypothesis that "*an effective carbon equalisation system could be introduced with a view to putting installations from the Community which are at significant risk of carbon leakage and those from third countries on a comparable footing. Such a system could apply requirements to importers that would be no less favourable than*

those applicable to installations within the Community, for example by requiring the surrender of allowances"[146]. There are two points to be noted here. Firstly, as I have already pointed out, the CBAM is an extension of the carbon market, with the aim of complementing it and improving its efficiency. Secondly, the EU seems to be extending the polluter-pays principle to an importer-pays principle.

The CBAM is a legal *tour de force* by the EU. It extends the application of the polluter pays principle to importers, transforming it into the "*importer pays*" principle in order to reach producers from third countries, unable to impose its law outside its borders[147]. The EU had already attempted this trick by trying to include flights taking off from or landing on EU territory in the carbon market, via the famous 2008 directive. But it is not the only time that the EU has imposed obligations on importers. Under Regulation 2023/1542 concerning batteries and waste batteries, importers of batteries into the EU are treated in the same way as producers, as they are the marketers of the batteries in the EU[148].

The introduction of the CBAM is therefore a major step in the expansion of the EU's legal influence in climate matters, in the same way as the GDPR was for data protection. The EU hopes that other countries will follow this path, either by creating regional or national carbon markets, or by developing existing ones. Indeed, the CBAM encourages non-EU countries to achieve the same level of carbon pricing as within the EU or to introduce a comparable border adjustment mechanism, as announced by the UK last December[149].

European manufacturers are currently protected from the risk of carbon leakage by obtaining free allowances. The application of the polluter-pays principle is therefore very attenuated, if not suspended, within the EU ETS. It will only find its full expression with the disappearance of free allowances, which will gradually accompany the development of the CBAM. The two systems are designed to mirror each other, and the balance (and legal strength) of the whole edifice will depend on their perfect symmetry[150]. In fact, CBAM serves as a back-up to the carbon market, a pillar without which the latter cannot be effective. However, we have seen that these two mechanisms are far from symmetrical, particularly in terms of scope. The ETS targets emissions from installations, while the CBAM targets emissions from products[151].

[146] Directive 2009/29/EC, recital 25.
[147] M. Barges, G. Cognet (2024), "Taxe carbone aux frontières : l'importateur-payeur". *La tribune*
[148] Regulation (EU) 2023/1542, art. 3 §47.
[149] UK government (2023), "Factsheet: UK Carbon Border Adjustment Mechanism", Consultation outcome.
[150] M. Barges, G. Cognet, op. cit.
[151] Idem

Moreover, CBAM does not cover the same sectors as the EU ETS, and may favour sectors that are not subject to it (although the choice of sectors falling within the scope of CBAM was made on the basis of the risk of carbon leakage).

The CBAM thus introduces a variation in the application of the polluter-pays principle which in itself raises new legal issues. It places on the importer (or its representative) the responsibility for going up the value chain to collect all the information needed to make the reports, whether this relates to the validity of the methodology used by producers to determine their emission values or to any carbon pricing schemes from which they may have benefited[152]. The importer's responsibility may therefore be engaged in the event of incomplete or erroneous information from a supplier, since EU law cannot provide for sanctions against the latter, despite the fact that the emission values given by the supplier must first be verified by an accredited verifier[153].

§ 2. An extraterritorial mechanism with a hybrid legal nature

Nevertheless, the exact legal nature of the CBAM is still being debated. The French Senate considers it to be a hybrid public policy tool, somewhere between a tax mechanism and a customs duty[154]. Indeed, the CBAM could be likened to a border tax adjustment (BTA), the definition of which was established by the OECD in 1968[155], and retained by the GATT since 1970[156]. According to this definition, BTAs cover "*as any fiscal measures which put into effect, in whole or in part, the destination principle (i.e. which enable exported products to be relieved of some or all of the tax charged in the exporting country in respect of similar domestic products sold to consumers on the home market and which enable imported products sold to consumers to be charged with some or all of the tax charged in the importing country in respect of similar domestic products)*". As the CBAM is the counterpart to the EU ETS, the latter should be recognised as a fiscal tool. However, it is a market mechanism, not a direct or indirect levy applied to a product[157].

[152] Idem
[153] Regulation (EU) 2023/956, art. 8 and 10.
[154] G. Chevrollier, D. Saint-Pé (2022), op. cit, p.48.
[155] OECD (1968), « Report on Tax Adjustments Applied to Exports and Imports in OECD Member Countries », Paris, p. 16.
[156] GATT (1970), "Report by the working party on border tax adjustments", L/3464, p. 2.
[157] G. Chevrollier, D. Saint-Pé (2022), op. cit, p.48.

At first sight, the CBAM also has characteristics comparable to customs duties, since it aims to impose a duty on imported products. But the French Senate report immediately refutes this comparison, stating that while customs duty is conditional on the origin of imported products and is triggered by the physical entry of a product into the country, neither of these criteria really applies to CBAM. In fact, unlike customs duties, the CBAM cannot exist independently of internal tax measures, since its purpose is to ensure equivalent treatment between imported products and European products. We can conclude that the CBAM demonstrates once again the EU's ingenuity in climate policy, creating unidentified legal objects in order to slip through the international net. However, it should be remembered that the EU is not immune from litigation brought by third countries or companies from third countries, a risk that I will develop in the next section.

Finally, it should be noted that Article 10 of this regulation imposes obligations on third-country installations that have applied to the Commission for registration[158], demonstrating the extraterritorial aspect of this measure. This aspect can also be seen in the first article, where the EU explicitly states that one of the objectives of the CBAM is to create "*incentives for the reduction of emissions by operators in third countries*". The EU wants the CBAM to have an indirect impact on companies located outside its territory. A link can be done with directive 2008/101, which also had an extraterritorial aspect. As international pressure led to its removal, it may have been dangerous for the EU to express that clearly its aim of impacting non-EU operators. But as I will discuss in the next section, this risk is not the only one faced by the CBAM.

Section 2. A recent mechanism already facing risks of inefficiency and incompatibility with international law

Despite its ambitious objectives of environmental protection, the CBAM suffers a possible lack of efficiency (§ 1) and a risk of invalidity under international trade law (§ 2).

[158] Article 10 §5 states, for example, that the registered operator is required to determine its embedded emissions in accordance with the calculation methods established by the Regulation, and to have them verified in accordance with the Regulation as well.

§ 1. A mechanism of uncertain effectiveness and criticised form

First of all, it should be remembered that in law, effectiveness is not equal to efficiency. The effectiveness of the mechanism is indisputable, as the CBAM is the result of a European regulation. It is therefore harmonised within the EU and directly applicable in the legal systems of the Member States. However, its effectiveness could be called into question. In its opinion on the proposal for a "*ReFuelEU aviation*" regulation[159] (since adopted), the European Economic and Social Committee (EESC) expressed fears about the effectiveness of measures designed to reduce the risk of carbon leakage[160].

A first risk of inefficiency weighing on the CBAM results from the fact that it will not be fully effective until 2034. Its gradual implementation will therefore limit the impact of the CBAM at a time when environmental crises (climate change, collapse of biodiversity, etc.) are having increasingly negative effects on a global scale. In its opinion on the "Fit for 55" package, the French Senate even seemed surprised that the full effectiveness of CBAM should come so late, as it is part of this package, whose objective is to reduce EU emissions of 55% by 2030. To this end, they proposed to bring the date forward to 2030[161], but this proposal was not retained in the final version of the CBAM regulation.

Another source of the mechanism's ineffectiveness could also arise from the fact that its financial minimal impact for certain importers (it is the case of the Legrand Group, which I will discuss again in Part III) will not be a deterrent or even an incentive. On the one hand, several importers will not be encouraged to change suppliers, nor will they be encouraged to buy from European companies. Moreover, the penalty during the definitive period (€100 per undeclared tonne) is barely higher than the price of one tCO_2e on the EU ETS. As a result, it cannot be considered a punitive penalty, but only a "corrective" one. Remember that the carbon price traded on the EU ETS has already exceeded €100 in 2023! But we should bear in mind, however, that if the carbon price on the EU ETS rises considerably, the amount of applicable penalties for non-compliance with the requirements of the EU ETS and the CBAM will probably be modified.

[159] Regulation 2023/2405 of 18 October 2023 on ensuring a level playing field for sustainable air transport (ReFuelEU Aviation).
[160] Opinion of the EESC of 20/10/2021 on ReFuelEU Aviation, TEN/744.
[161] G. Chevrollier, D. Saint-Pé (2022), op. cit, p.68-69.

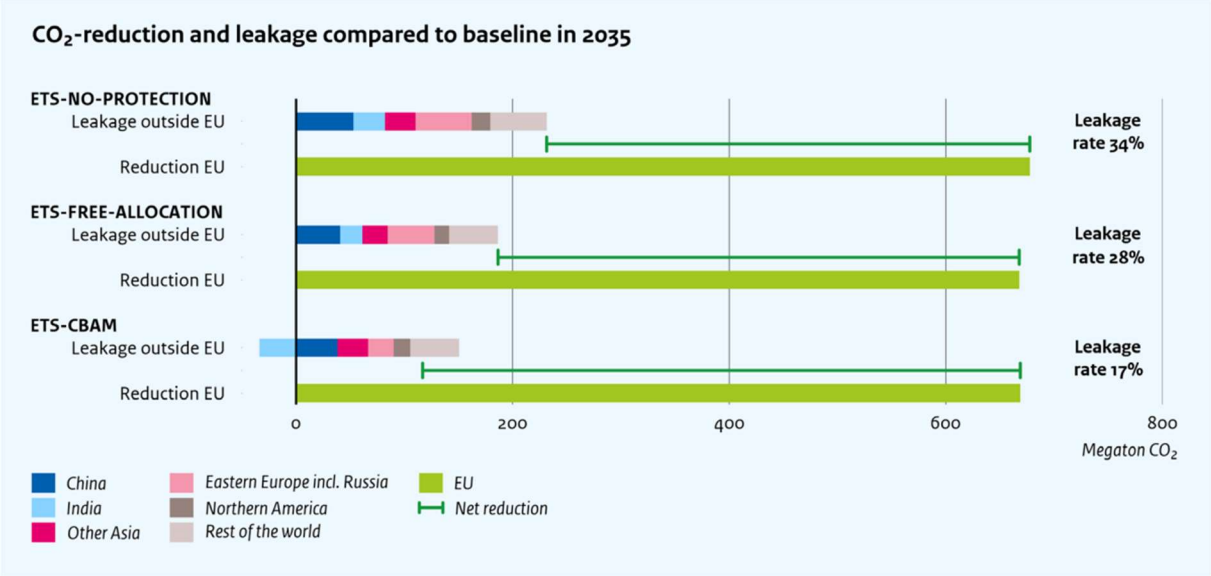
Moreover, while the EU claims to be a pioneer in the field of climate, and more generally, environmental protection, it also remains a *sui generis* organisation that is profoundly liberal. The European Commission itself seems focused on the economic aspect of the Green Deal, and therefore on the regulations adopted on its basis, claiming that it will "*transform the EU into a modern, resource-efficient and competitive economy*"[162]. In this way, it does not seem to aim to protect the environment *per se* (i.e. for its intrinsic value) and adopts an anthropocentric vision of environmental protection, which is regrettable. In particular, some authors have criticised the palliative aspect of equalisation measures towards third countries, which does not resolve the fundamental problem and are rooted in a way of thinking the economy that seems impossible to challenge[163]. This may echo the criticism often levelled at the use of market techniques to protect the environment, as the market is characterised by its individualism, short-term vision and competitive logic, whereas environmental protection must be achieved collectively, over the long term, and via a global approach[164].

More specifically, a report by the think-tank Sandbag[165] casts doubt on the effectiveness of the CBAM, based on various hypotheses. Among the various scenarios explored is the assumption that European producers will suffer an increase in production costs with the abolition of free allowances, which they will pass on to consumers. On the other hand, importers should be less affected for several reasons: in its current form, the CBAM does not cover all the sectors that are subject to the EU ETS, nor does it affect finished products. By excluding finished goods from its scope, we can fear that carbon leakage will be transferred to them, causing a deterioration in the competitiveness of companies in the downstream sector[166]. In addition, Sandbag foresees that exporters from third countries could concentrate their low-carbon products in the EU and redirect the others to less demanding markets. As a result, importers of these products will be only marginally affected by the CBAM, but they will have to match European prices, thereby creating added value. In the case of Chinese goods, for example, analysts have calculated that importers could make a net profit of €32 million. On the other hand, in a scenario where import flows remain similar to those of the current period after

[162] European Commission. The European Green Deal: Striving to be the first climate-neutral continent
[163] R. Kempf (2009), "L'organisation mondiale du commerce face au changement climatique", Pedone, p. 135.
[164] J.-C. Fritz (2014), "Protection de l'environnement et marché: coexistence ou guerre des mondes", Marché et environnement, p. 19.
[165] A. Assous et al. (2024), "A scrap game: impact of the EU Carbon Border Adjustment Mechanism", Sandbag.
[166] H. Alfandari (2024), "Rapport d'information déposé par la Commission des affaires européennes sur l'évolution du marché des crédits carbone au niveau européen", French National Assembly, No 2160, pp. 37-38.

2026, importers of Chinese products could record a loss of €245 million. This would be due to CBAM costs, which would far exceed revenues.

According to a study published by the Netherlands Bureau for Economic Policy Analysis and the Netherlands Environmental Assessment Agency in 2024, the CBAM would make it possible to reduce carbon leakage by an additional third compared to free allowances by 2035, from 28% to 17%[167].



But it would not be fully reduced, due to the fact that the CBAM does not currently apply to indirect emissions for all CBAM sectors, nor to all sectors at risk of carbon leakage[168].

Lastly, Article 10a of Directive 2003/87/EC requires the Commission to draw up a report by the end of 2024 on the risk of carbon leakage for goods falling within CBAM's scope that are manufactured in the EU, intended for export to third countries and not subject to the EU ETS nor a carbon pricing system. If a risk of carbon leakage is detected, the Commission will have to present a legislative proposal to address this risk "*in a manner that is compliant with the rules of the World Trade Organization, including Article XX of the General Agreement on Tariffs and Trade 1994*". There are several lessons to be drawn from this last paragraph. On the one hand, the EU is planning to develop a measure to combat carbon leakage from goods included in the CBAM but not included in the EU ETS, and which, unlike the CBAM, would not be imported into the EU but exported from the EU. This highlights the breaking point between the two mechanisms, in that they do not have the same scope. As a result, it is

[167] S. Olijslagers et al. (2024), "European carbon import tax effective against leakage", CPB and PBL, p. 10.
[168] W. L'Heudé (2024), LinkedIn post published on 3 September 2024.

impossible for the CBAM to effectively complement the EU ETS, and it can no longer be seen as mirroring it. On the other hand, the EU confirms that any measure involving third countries must be taken in compliance with WTO rules, proof that it has taken into account the risks that non-compliance with these rules could entail.

§ 2. A mechanism that may be incompatible with international law

In addition to the risk of inefficiency, CBAM faces legal risks, particularly on the international stage. There is a risk that it will be challenged under the rules of international trade law on the one hand, and the main principles of international law on the other.

The EU is subject to WTO law, and therefore to the General Agreement on Tariffs and Trade (GATT). As such, the CBAM, as a measure seeking to equalise a market technique, is subject to the principles of most-favoured-nation (MFN) and national treatment laid down by the GATT[169]. The first principle prohibits all external discrimination, so that a member country cannot grant a commercial advantage to a product imported from country A without granting it to "similar" products from country B. The second prohibits regulatory and fiscal discrimination between imports and domestic products, in anticipation of temptations to protect national production. A border tax adjustment is therefore incompatible with WTO law[170]. But the CBAM, which is not a tax, creates a division between States with high climate ambitions and States with low ones, by placing a different level of tax and tariff for like goods[171]. By doing so, it violates the MFN principle.

While CBAM therefore appears in principle to be contrary to Article III of the GATT, Article XX provides that "*subject to the requirement that such measures are not applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail, or a disguised restriction on international trade, nothing in this Agreement shall be construed to prevent the adoption or enforcement by any contracting party of measures: (...) (b) necessary to protect human, animal or plant life or health; (...) (g) relating to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption*".

[169] GATT, art. I and III.
[170] J.-C. Rotoullié (2017), op. cit. p. 199.
[171] R. Leal-Arcas et al (2022), "A legal exploration of the European Union's Carbon Border Adjustment Mechanism", European Energy and Environmental Law Review, August 2022, p. 230.

This article provides for several exceptions, including an environmental one: if the disputed measure pursues an environmental objective, it may be recognised as compatible with the requirements of WTO law. However, under Article XX g), the measure must be applied in conjunction with restrictions on national production or consumption. While the CBAM was envisaged as a "mirror" of the EU ETS by placing the same obligations on producers and importers, the free allocation of allowances complicates the situation. It lifts the measures imposed by the EU ETS, so that producers no longer have the same obligations as importers. In its 2022 report, the French Senate took the view that the combination of free allowances and the CBAM could run the risk of being incompatible with WTO rules regarding the principle of equity, as it gives an advantage to European companies[172]. Given the duration of the juxtaposition of these two mechanisms (at least from 2026 to 2034!), this is a legitimate concern. Let's see whether the annual reduction of allowances available under the EU ETS will be considered, in the event of a dispute being brought before the Dispute Settlement Body (DSB), as a restriction on national production or consumption that could justify the CBAM. It should be noted, however, that CBAM has been well thought out: it is in order not to constitute "*a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail, or a disguised restriction on international trade*"[173] that the carbon price paid in the country of origin will be taken into account in the calculation of CBAM certificates. Similarly, it is for this reason that carbon pricing under CBAM is indexed to that of the EU ETS.

In the event of a dispute, the DSB will therefore have to compare the CBAM with the constraints imposed by WTO law, and rule on the scope of the environmental exception that may justify the incompatibility of an equalisation measure[174]. And while academic authors agree that this is neither a tax mechanism nor a purely customs mechanism[175], they do point out that it is not immune from being brought before the WTO or before free trade agreements, in so far as it rises tensions with third countries[176]. It is for this reason that the CBAM should not be referred to as a "border carbon tax", because even if it is tempting to confuse the two, the legal consequences are too important. It should also be noted that maintaining the system of free allowances has been preferred on several occasions to the setting up of CBAM, which at

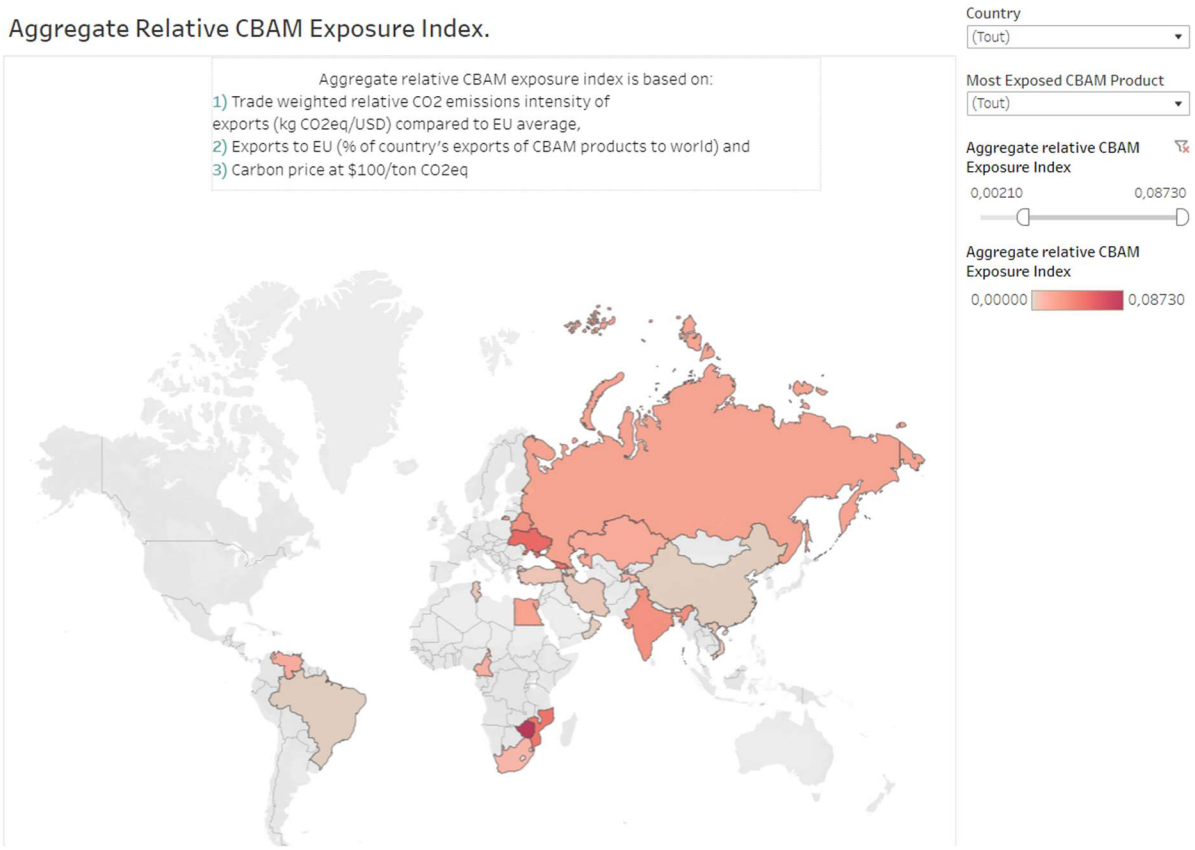
[172] G. Chevrollier, D. Saint-Pé (2022), op. cit. p.65-68.
[173] GATT, art. XX, introductory chapeau
[174] J.-C. Rotoullié (2017), op. cit. p. 193.
[175] M. Prieur (2023), "Droit de l'environnement", Lefebvre Dalloz, p. 1008.
[176] Idem, p. 1009.

the time was considered to be fragile in view of the legal bases of the WTO[177]. This explains why the CBAM was adopted 20 years after the creation of the EU ETS, and testifies to the EU's consideration of the requirements of WTO law, which is also reflected in the preamble to Regulation 2023/956 : "*the combined and transitional application of EU ETS allowances allocated free of charge and of the CBAM should in no case result in more favourable treatment for Union goods compared to goods imported into the customs territory of the Union*"[178].

However, it should also be pointed out that the CBAM runs the risk of being incompatible with the main principles of international law, in particular those of "common but differentiated responsibilities" (CBDR) and "special and differential treatment" (SDT). If the CBDR principle is core to international climate law, the SDT provisions express a similar idea in international trade law. In fact, the single and origin-neutral carbon price as well as bureaucratic requirements imposed on all importers undercut the CBDR and SDT principles[179]. Indeed, only few of the Regulation's provisions seem to take into account differentiated responsibilities, apart from the fact that Article 30 requires the Commission to assess "*the impact of this Regulation on goods listed in Annex I imported from developing countries with special interest to the least developed countries as identified by the United Nations (LDCs) and on the effects of the technical assistance given*"[180] before the end of the transitional period. It is indeed strange, as Directive 2009/29 stated that the introduction of an effective carbon equalisation system "*would need to be in conformity with the principles of the UNFCCC, in particular the principle of common but differentiated responsibilities and respective capabilities, taking into account the particular situation of least developed countries (LDCs)*"[181]. With the CBAM, all importers will have to pay the same carbon price, regardless of their country of origin. We might even consider that the CBAM goes completely against the principle of differentiated responsibilities, as it allows importers to deduct from the price of the certificates they will have to surrender the carbon price actually paid in the country of origin. However, it goes without saying that only the most developed countries possess carbon pricing systems similar to the European one. A map published by the World Bank in June 2023[182]

[177] G. Chevrollier, D. Saint-Pé (2022), op. cit, p.48.
[178] Regulation (EU) 2023/956, recital 12.
[179] I. Venzke, G. Vidigal (2022), "Are trade measures to tackle the climate crisis the end of differentiated responsibilities? The case of the EU Carbon Border Adjustment Mechanism (CBAM)", Amsterdam Law School Legal Studies Research Paper n° 2022-02.
[180] Regulation (EU) 2023/956, art. 30 §2 f).
[181] Directive 2009/09/EC, recital 25. We can note as well that this recital requires such a mechanism to be in "conformity with the international obligations of the Community, including the obligations under the WTO agreement", which has been much more taken into account.
[182] World Bank (2023), "Relative CBAM Exposure Index".

shows that the most exposed countries to CBAM are several African and Latin American countries, India, Russia, China or Ukraine:



We can underline that Brazil, India, China and South Africa (BASIC countries) have issued a Joint Statement condemning CBAM, including for its disregard for the CBDR principle[183]. With a broader base, the United Nations Conference on Trade and Development (UNCTAD) has similarly urged that CBAM must be adjusted to take CBDR into account[184], which has not been the case.

In any case, a litigation against CBAM would undermine the EU's climate policy and its diplomatic efforts as a leader in international environmental negotiations. Such an action would be extremely damaging, and a regression in environmental protection would be feared.

[183] South African Government (2021), Joint Statement issued at the conclusion of the 30th BASIC Ministerial Meeting on Climate Change hosted by India on 8th April 2021.
[184] UNCTAD (2021), A European Union Carbon Border Adjustment Mechanism: Implications for developing countries, p.9.

PART III: A FIRST OVERSIGHT OF CBAM'S IMPLEMENTATION IN A CAC 40 GROUP

After having analysed the CBAM from a theoretical point a view, it is interesting to analyse its concrete implementation in a big company. As a CAC 40 Group, Legrand had 38 000 employees around the world and a turnover of 8,4 billion euros in 2023[185]. As a global specialist in electrical and digital building infrastructures, it is a European importer of iron and steel, which make it a good example of the companies falling under the scope of the CBAM. By realizing a six-month internship is its CSR Group team, I supervised CBAM's implementation and experienced it from "inside". As a result of this practical experience, it seems that this mechanism is complex to implement (Section 2) and will have a low financial impact on the company (Section 1).

[185] Legrand Group (2023). Key figures 2023

Chapter 1: Implemented processes and financial impact

In the Legrand Group, the CBAM has been implemented by including all the value chain in the process (Section 1), allowing the Group to collect data from all its European entities and estimate the (low) financial impact of the mechanism (Section 2).

Section 1. An implemented process including all actors of the value chain

During my 6 months experience in the Legrand Group's CSR team, I supervised CBAM's implementation and ensured the Group's compliance with the requirements of the transitional period. I was thus able to get familiar with the practical application of this mechanism within companies.

Initially, it was decided at Group level that it was up to each entity to make its own CBAM reports. The regulation imposes obligations on entities present in the EU customs territory. It is therefore the responsibility of each of these entities to make its own quarterly declarations, regardless of the Business Unit to which it belongs. The Legrand Group has around twenty entities in Europe.

I therefore had to contact the supply chain managers at European and local level to gather available data (CN codes falling within the scope of the CBAM, associated imported quantities). I also had to contact the various Chief Financial Officers (CFOs) to pass on the information to the relevant people.

It was relatively easy to identify the concerned CN codes within each entity and to gather the quantities imported per quarter. Even though this mechanism raised several questions among the various actors in the Group (purchasing, supply chain and customs, in particular), the first three declarations were finally submitted without too many difficulties. Although some entities slightly missed the deadlines, the fact that they could use the default values provided by the Commission made it much easier to familiarise with this declaration mechanism. Given the complexity of the mechanism, the French government also extended the deadline for the first declaration by one month.

Some entities, such as Bticino (an Italian entity), have taken the initiative of having their CBAM declarations made by a law firm in order to meet the declaration deadlines. In this

case, the law firm acted as an indirect customs representative, one of the three people able to make the declarations[186].

During this initial implementation phase, it should be emphasised that each entity present on the EU customs territory had to check whether it fell within the scope of the CBAM Regulation. The points to be checked were the various criteria set out in Article 2 of Regulation 2023/956: the value of the goods imported (which must be greater than €150 per consignment), the country of import (some non-EU countries, such as Norway, are not subject to CBAM, due to trade agreements), and the CN codes imported. Several entities in the Netherlands, for example, did not fall within the scope of CBAM.

The implementation of the CBAM and the filing of declarations have therefore been assigned to each entity, with the Group CSR team acting only as a supervisor, exercising only a role of legal clarification and awareness-raising.

Section 2. A mechanism with low financial impact on the Group

This section presents the various data collected, the entities concerned and the estimated financial cost at Group level over the period Q4 2023 and Q1 2024.

After verification, 11 of the group's entities present in the customs territory of the EU fell within the scope of CBAM during this period. However, for each European entity importing goods from third countries, it is necessary to check quarterly whether it is covered by the CBAM or not. Of the 11 entities identified, 4 did not fall within the scope of the CBAM for at least one of the two quarters analysed in this section. The list of entities concerned is as follows:

Emos spol. s. r. o. (Czech Republic)

Legrand Estonia OR

Legrand Finland

Legrand France

Legrand SNC (France)

[186] Implementing regulation (EU) 2023/1773, art. 2.

AH Meyer (Germany)

Legrand GmbH (Germany)

Bticino (Italy)

Legrand Nederland BV

Legrand AV Netherlands BV

Legrand Spain

It is interesting to note that the suppliers of the entities importing goods into the EU are often entities of the Legrand Group themselves (like Legrand UK for example).

Due to the particular organisation of the Legrand Group, based on numerous acquisitions, the CBAM referents occupied different positions depending on the entity, reflecting the involvement of all the Group's teams in its compliance with regulation 2023/956. But it also shown the difficult coordination of a Group of this size. For example, the CBAM referents were the CFO for Emos, the Security/Environment manager for Legrand Estonia and Legrand Finland, and the Transport & Custom representative for Bticino. Many actors had to be made aware of this new mechanism, and many processes had to be put in place locally.

In order to calculate the financial impact that CBAM will have on the Group in its defintive period, it was necessary to collect data from the various entities that had made their CBAM declaration. The data required was the name of the entity, the quarter concerned, the CN codes concerned, the quantities imported by CN code and their CO_2 equivalent based on the default values provided by the Commission. The aim of this initiative was to assess the cost of the certificates that the group would have to purchase to cover its imports. To do this, I decided to choose a carbon price equivalent to €70 per tonne. The choice of this value is the result of recent changes in the carbon price on the EU ETS, which exceeded €100 per tonne in March 2023, but then fell back to around €60[187].

The data collected is summarised in the table below. It should be noted, however, that the data for the two French entities, Legrand France and Legrand SNC, have not been included in this table, as they were not available at the time of writing this essay. However, it has been

[187] Ministère de la transition écologique et de la cohésion des territoires (2024), "Marché du carbone - SEQE-UE" (France)

confirmed to me that the French entities do not import large quantities of goods. The results are therefore not substantially modified.

	NC code family	Description	Quantity (in tons)	Estimated certificate price (in euros)
Q4 2023	7306	Other tubes, pipes and hollow profiles (for example, open seam or welded, riveted or similarly closed), of iron or steel	0,04	6
	7308	Structures (excluding prefabricated buildings of heading 9406) and parts of structures (for example, bridges and bridge-sections, lock- gates, towers, lattice masts, roofs, roofing frameworks, doors and windows and their frames and thresholds for doors, shutters, balustrades, pillars and columns), of iron or steel; plates, rods, angles, shapes, sections, tubes and the like, prepared for use in structures, of iron or steel	89	31326
	7318	Screws, bolts, nuts, coach screws, screw hooks, rivets, cotters, cotter pins, washers (including spring washers) and similar articles, of iron or steel	1	169
	7326	Other articles of iron or steel (grinding balls, ladders and steps, pallets, etc.)	47	7692
	7609	Aluminium tube or pipe fittings (for example, couplings, elbows, sleeves)	1	848
	Total		138	40041

	NC code family	Description	Quantity (in tons)	Estimated certificate price (in euros)
Q1 2024	7220	Flat-rolled products stainless steel, of a width of less than 600 mm	1	307
	7226	Flat-rolled products of other alloy steel, of a width of less than 600 mm	0,08	14
	7308	Structures (excluding prefabricated buildings of heading 9406) and parts of structures (for example, bridges and bridge-sections, lock- gates, towers, lattice masts, roofs, roofing frameworks, doors and windows and their frames and thresholds for doors, shutters, balustrades, pillars and columns), of iron or steel; plates, rods, angles, shapes, sections, tubes and the like, prepared for use in structures, of iron or steel	43	15173
	7318	Screws, bolts, nuts, coach screws, screw hooks, rivets, cotters, cotter pins, washers (including spring washers) and similar articles, of iron or steel	5	714
	7326	Other articles of iron or steel (grinding balls, ladders and steps, pallets, etc.)	142	23292
	7604	Profiles of aluminium alloys	0,05	43
	7609	Aluminium tube or pipe fittings (for example, couplings, elbows, sleeves)	0,05	38
	Total		191	39581

This table shows that the impact of CBAM on the Legrand Group would have been around €40,000 per quarter analysed. Although the group falls within the scope of the CBAM, it is far from being the largest importer in the EU. At least, it does not import many goods falling within the scope of the regulation. In the last quarter of 2023, the European entities of the Group imported only 138 tonnes of goods subject to CBAM, compared with 191 tonnes in the first quarter of 2024. To give an idea, the cost of CBAM would therefore be equivalent to around €0.24 per kilo on average over these two quarters.

We can therefore see that the financial impact, although Legrand is not a major "CBAM importer", remains relatively low for a group with an €8.4 billion turnover in 2023[188]. It should be noted that this calculation remains an estimate, and that the carbon price could turn out to be higher than the value deliberately chosen here.

Nevertheless, this result illustrates one of the shortcomings of CBAM: the cost of the Group's compliance with the CBAM regulation is not a sufficient deterrent to encourage it to relocate its production within the EU. Nor will this minimal impact encourage the Group to reduce its imports, or to choose more virtuous suppliers with lower emissions. As most of its suppliers are its own entities, the Group will not replace them for such a low impact, nor impose them to reduce their emissions (this cost would be higher than CBAM's cost). The entry into force of the CBAM had nevertheless been defined as a priority by the Legrand Group's CSR team, and the management committee was concerned about the impact of this mechanism on its business. Nonetheless, compliance for a group like Legrand remains complex, and the processes to be put in place face many obstacles.

[188] Legrand Group (2023), "Universal Registration Document", p.8

Chapter 2: Difficulties of implementation faced by the Group and proposed solutions

In a practical point of view, the CBAM has led to several difficulties of implementation (Section 1), against which some solutions have been proposed in the Group (Section 2).

Section 1. A complex mechanism implying several difficulties of implementation

Difficulties arose when the Group set up the mechanism. The first difficulty was knowing who was responsible for its application. In fact, CBAM requires several entities within the same group to be independent, as declarations must be made by each installation. This was a point of discussion, as some entities would have liked the Group to deal with this issue, but in the end it was agreed that it was up to each entity to make its own declarations. This can be constraining, as some entities have the same suppliers (Legrand UK, for example).

The second difficulty laid in understanding the scope of the CBAM. Some entities import very little, or do not import goods covered by the mechanism. Others do not import covered goods from countries considered as third parties. It was therefore necessary to clarify the scope of CBAM so that each entity present in the customs territory of the Union could determine whether or not it fell within it.

Implementing CBAM has also proved complex, as some entities import goods themselves and have other goods imported by importers (Bolloré Logistics, for example). As these importers are then the marketers of the concerned goods within the EU, it is their responsibility to make the CBAM declaration for these goods. A distinction must therefore be made depending on the importer, which posed an additional difficulty for Legrand France in particular.

But the biggest difficulty encountered by Legrand's entities concerns the collection of data on the actual GHG emissions of imported goods. The CBAM requires a dialogue to be set up with all the suppliers of the various entities. This means determining which suppliers to contact and setting up processes to ensure the reliability of the data collected. Under the CBAM, importers remain responsible for the data they declare. This means that importers could be held liable for incorrect data provided by third-country suppliers. These requirements therefore

imply regular audits of these suppliers, at an additional cost to the importer. Article 8 of Regulation 2023/956 stipulates that "*the authorised CBAM declarant shall ensure that the total embedded emissions declared in the CBAM declaration (...) are verified by an (accredited) verifier (...)*". However, the question remains: what should be done if the supplier fails to report actual emissions, or reports incorrect values? No penalties can be planned by the EU for third countries suppliers. The only risk the latter would be taking is to damage its credibility and competitiveness, with importers possibly turning away. However, in the case of a Group like Legrand, whose non-European suppliers are mainly its own subsidiaries, it is highly likely that the European entities will continue to obtain their supplies from them. Finally, with a view to encouraging dialogue between importers and suppliers, the European Commission has published a communication template[189], but it has been considered - rightly - to be extremely complex and time-consuming by the Group's various entities, which have repeatedly expressed the fear that it will not have the desired effect, leading to an increase in the complexity and incomprehension of the mechanism by operators of third-country installations. Importers will therefore be at risk of non-compliance throughout the definitive period of the CBAM, even though they will not be responsible for such non-compliance. This risk needs to be assessed and managed by the Group to avoid the financial penalties provided for in the Regulation[190].

The complexity of CBAM is reflected in the need for a transitional period to help importers implement the mechanism. Indeed, its implementation requires a reorganisation of the entire supply chain and the setting up of specific processes, while ensuring a certain degree of uniformity and harmonisation in a heterogeneous Group.

These implementation complexities were illustrated by the differences in compliance with the regulatory deadlines by the entities concerned by the first CBAM report. Bticino's Transport & Customs representative told me during an interview that he had managed to make the first declaration on time (before 31 January 2024) because he had started to deal proactively with the subject from September 2023, devoting several hours a week to it. He was able to collect the necessary data and have the declaration submitted by a law firm. On the other hand, Legrand France exceeded the deadlines initially set and had to ask the Pôle d'Action Economique[191] Picardie for the quantities cleared through customs in Q4 2023. In addition,

[189] European Commission, 23 October 2023, "CBAM communication template for installations".
[190] Sanctions cited above, transcribed into French law by “DDADUE” Law No. 2024-364.
[191] Department of French regional customs directorates, whose role is to liaise with international trade operators in order to inform and advise them on customs procedures.

there were malfunctions in the CBAM portals in several Member States, which led to delays in reports beyond the control of the concerned entities.

Section 2. The solutions proposed by the Group to overcome these difficulties

Because CBAM imposes the independence of several entities within the same Group, this mechanism poses a major constraint: some entities have the same suppliers (in particular Legrand UK in the case of the Legrand Group). These suppliers will therefore receive several requests as regards the embedded emissions of their goods, even though these requests will come from entities belonging to the same Group. To counter this, a solution has been proposed within the Group. It was proposed to create an internal database, filled in by the Group's various suppliers, which would contain the embedded emissions of goods imported by European entities. The various importers would then be able to find all the necessary information in this database without having to make several requests for the same goods. As there are many inter-company flows, the idea would be to centralise the data requested from suppliers in order to facilitate the dialogue with the entities.

In order to implement this solution, it is also necessary to centralise downstream data. First and foremost, each entity importing CBAM goods must communicate to Group Purchasing, by EORI number[192], goods under CBAM regulation associated with NC codes and countries of origin, quantities, weight and suppliers name information. This data will enable them to make a global request to suppliers, to assess the workload required, and to be efficient (make campaigns and not individual requests, integrate the data into IS tools). This process must be implemented before the deadline for submitting the CBAM report for Q3 2024 (31 October 2024), for which the use of default values is in principle no longer permitted.

Importers are therefore currently in a transition phase, in order to put in place a simple and centralised data collection process that allows each entity to make its own report on the basis of the data collected. This is the case for the Legrand Group, but these ideas must surely have emerged among all importers subject to CBAM. On the basis of this idea, the possibility could be explored of creating a regularly updated database common to all European importers

[192] According to Article 3 § 20 of EU Regulation 2023/956, the Economic Operators Registration and Identification number (EORI number) means the number assigned by the customs authority when the registration for customs purposes has been carried out in accordance with Article 9 of Regulation EU 952/2013.

covered by this mechanism. Importers could then continue to make their reports (quarterly during the transitional period and annually during the definitive period), while being able to choose from among the registered suppliers those with the lowest embedded emissions. Suppliers' data would be regularly updated, and importers would not have to make new requests for information if their supplier(s) changed. Article 14 of EU Regulation 2023/956 stipulates that information concerning embedded emissions, as provided by the operator of installation in a third country that has applied to be registered in the CBAM register, is confidential. However, this register could serve as a basis for the idea outlined here. It would therefore be appropriate to make the embedded emissions of each registered supplier available to reporting declarants of European importers. In that case, the CBAM would likely be simpler, and therefore more efficient.

CONCLUSION

In order to overcome the EU ETS' shortcomings, the CBAM has been implemented so that Europeans importers are subject to the same carbon price as European producers and aircraft operators. This mechanism, aimed at replacing the free allocation of allowances, allowed the EU to implement an equalisation measure towards third countries. By doing so, it promotes the competitiveness of European companies and contribute to reducing GHG emissions. The CBAM is indeed a mechanism with ambitious objectives and a complex legal framework. It must be said that it was the subject of intense reflection before its adoption, both on the choice of its form and its scope, testifying to the EU's sincere desire to put in place a mechanism that lives up to expectations. But still entering into force, it is already giving rise to fears and criticism, both in theory and in practice. In order to make it an effective mechanism that genuinely protects the environment, several solutions were put forward in this essay.

On the one hand, an increase in the cost of CBAM to the companies concerned could be imagined so that it becomes a real incentive. As the price of CBAM certificates is linked to the price of EU ETS allowances, it would be easily adjustable by the EU. The current annual reduction in the number of allowances on the EU ETS could be reviewed by the Commission, which could then propose a faster decrease. The price of an emission allowance increases when the supply of allowances on the market decreases. The risk of such an increase of the carbon price would be to hamper the competitiveness of companies that are subject to the EU ETS and CBAM. It should be emphasised here that there is still some way to go before European companies are genuinely disadvantaged, and that a paradigm shift is necessary in any case. This change will not come from companies, and only the EU and the Member States have the power to act to instil such a dynamic.

Another proposed solution is to end the free allocation of allowances more quickly. Superimposing this mechanism on the CBAM could be detrimental and could entail significant legal risks for the latter. As proposed by the French Senate, the end of free allocations could be brought forward to 2030, strengthening the effectiveness of the CBAM and protecting it from litigation by third countries. The Commission could amend Regulation 2023/956 by another regulation, which would modify the reduction in the CBAM factor initially planned, in order to achieve a factor equal to 0 by 2030.

The third solution that was considered is to extend the scope of CBAM to all sectors covered by the EU ETS. The European institutions' choice seems to be based on an analysis of the sectors most exposed to carbon leakage, and it is not up to me to question this choice. Besides, as the Commission has planned to gradually extend the scope of the CBAM[193], which will hopefully reflect the activities covered by the EU ETS[194]. Without this, it seems to me that CBAM will not "mirror" the EU ETS and will never be fully effective. We can only wait and see how the Commission will develop the CBAM in a near future.

Finally, from a practical point of view, the establishment of a centralised database freely accessible by EU importers could also be considered by the European Commission. The purpose of this database would be to facilitate the production of CBAM reports and dialogue with third-country suppliers, but it could also alleviate importers' reluctance towards this mechanism, which is still seen as complex and time-consuming.

We should bear in mind that the proposed solutions (with the exception of the last one) will in all cases come up against the lobbying of certain companies, which see the EU's climate policy more as a cut-off point than as a means of implementing a genuine ecological transition that will create opportunities. That being said, the "*effectiveness of the EU's climate action necessarily depends on the robustness of the carbon price mechanism to legal and political challenges*"[195]. The EU will have to overcome such a challenge if it wants the EU ETS and the CBAM to be and remain complementary and effective mechanisms, and to consolidate its position as world climate leader.

I hope that this Master thesis will contribute to the academic debate on the relevance of this mechanism. It will now be up to scholars to let the CBAM mature in order to analyse its real effects. This means waiting for the definitive period to come into force, or even for the end of the juxtaposition between the CBAM and the free allocation of EU ETS allowances. Their analyses will have to cover the implementation and monitoring of the mechanism in the companies, the reliability of the data used to produce the CBAM reports, as well as the evolution of litigation relating to non-compliance with its requirements. More generally, it will be necessary to study the link between CBAM and the decrease of GHG emissions in the EU and worldwide, by establishing a possible correlation between the two. Indeed, the true aim of any

[193] Regulation (EU) 2023/956, recital 13.
[194] Regulation (EU) 2023/956, recital 29.
[195] R. Ismer et al (2020), "Border carbon adjustments and alternative measures for the EU ETS: an evaluation", op. cit.

climate policy is to reduce GHG emissions on a global scale. Hopefully, the CBAM will contribute to this objective.

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