
The Future Role of Customs

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Keywords: role of Customs, Identifying goods at the border, EU regulation, customs information

<https://doi.org/10.55596/001c.88415>

Customs agencies have some powerful tools at their disposal to supervise the international movement of goods. These tools are designed for a specific purpose: verification of ‘the nature’ of the goods at the time of border crossing. More particularly, these tools facilitate, on the one hand, the determination of the fundamentals to calculate, levy and collect the right amount of taxes and duties, and on the other, determine whether the goods are allowed to be brought into the country and if yes, to check if they are subject to any restrictions. The limited research on the effectiveness of these tools shows that they are not easily applicable for situations they were not designed for. New EU regulations and the border-related enforcement they entail, however, put increasing demands on the role of customs agencies. This raises questions if Customs, with its current set of approaches, is fit for the future.

In this paper, we look at three proposed regulatory developments in the EU (regulation on fluorinated gasses, the Carbon Border Adjustment Mechanism and the Regulation to Prohibit Products made with Forced Labour) to assess the role these envisage for Customs and the application of elements from the Customs enforcement toolbox. We find that the expected roles of Customs in our three cases are quite different, and that their reliance on the standard customs tools is rather minimal. Therefore, a thorough discussion is required regarding whether Customs should be involved in new enforcement activities that demand different, enhanced or new elements in the enforcement toolbox, or that maybe another authority, at another time and place in the supply chain, should become competent. In any case, for regulations that require enforcement based on information of the entire supply chain, customs agencies need to upgrade their competencies in their role as an enforcement agency at the border. These competencies revolve, at least, around cooperation with other competent authorities, as well as the integration of system-based and transaction-based supervision.

1. Introduction

Customs organisations in many countries are characterised by the combination of seemingly contradictory roles: levying taxes on trade, as well as enabling trade and international business through standardised procedures and simplifications. Over the years, a third responsibility has been added to these two: the protection of society against illegal trade, irresponsible business and dangerous products.

While the world, trade, and therefore Customs, has seen much change, the basic operating approach of Customs has remained largely the same: targeted interventions based on data collected through declarations. Resource limitations, as well as the need for more efficient enforcement have resulted in risk-based operations. The large volume of communication between Customs and trade has made customs agencies early adopters of digitisation in their work.

And the world keeps changing. The development of e-commerce and the concomitant explosion in the number of shipments with relatively low value has resulted in one of the greatest challenges for customs supervision. Now,

more than ever, our environment is considered under threat. The environmental impact of economic activities is more and more regulated and restricted. In addition, fair business practices are recognised and regulated, due to increasing societal pressure towards global trade. Furthermore, violent conflicts keep developing, and very few parts of the world are exempt. This results in new, and sometimes sudden, restrictions on trade that need to be enforced. In much of this regulation, border-crossing trade is constrained and as a result, Customs is one of the agencies tasked with additional responsibilities.

If the responsibilities for customs agencies are increasing, but customs supervision mechanisms are not updated to satisfy these new demands, the question arises: will customs agencies be able to play an effective role in the future regulation of international trade? Moreover, the question is whether Customs should be involved at all if the supervision requires the verification of information that cannot be determined from the goods or the declaration themselves. We've seen in the past, for example, that information on the source of a product cannot be identified from the product itself. Therefore, Customs has had to develop different enforcement instruments, such as certificates and cross-verification mechanisms between international authorities to carry out their tasks. This is also a central issue in the Wise Persons Group on the Reform of the EU Customs Union that started its work in 2021 (see European Commission [EC], 2022).

This paper aims to evaluate if the ways in which customs agencies execute their enforcement and facilitation roles are still fit for the future. We will do that in two stages. First, we will review the standard tools customs agencies have at their disposal and discuss how effective these mechanisms are. This part is based on a literature study. We will then look at some of the new regulation that is being developed primarily in Europe to see what new responsibilities are put on the shoulders of Customs in the EU member states and if they can carry them out. This part of our study is based on structured text analysis.

We will first define what we call the basic working principles of a customs agency and describe the way these agencies carry out their designated tasks. We will then review the effectiveness of these mechanisms. After that we will briefly discuss three regulatory developments that are putting new responsibilities on the shoulders of customs agencies, for the simple reason that they target border-crossing goods flows. We conclude with some preliminary recommendations.

2. Basic principles of Customs

This paper is directed at an audience that knows what customs organisations do. We will therefore not elaborate extensively on the workings of Customs. For a comprehensive introductory source on customs procedures at the border, see Grainger (2021). We will, however, briefly define the frame through which we see the contribution of Customs to global trade.

The essential role of Customs is to protect the territory under its jurisdiction, in the broadest sense of the word. It protects businesses' and citizens' safety, health, the economic position of businesses, safe food and the living environment. Levying duties and taxes at the border can also be seen in this context, as these contribute to a solid contribution to government finances.

Customs' role is triggered by goods crossing borders. In many cases, customs operations, such as inspection and levying taxes, also take place at the border, but this is not always required.¹ For an extensive discussion on a modern vision of customs operations, see Heijmann and Peters (2022).

Customs agencies around the world have developed mechanisms, or simplifications, to allow goods to cross borders without having to import goods and pay duties and taxes. This allows businesses to postpone payment of duties and taxes, as much as possible, to the time that best fits their commercial strategy. For this purpose, specific suspension arrangements are in place in many countries, that relate to transportation, storage and processing under customs supervision. These regimes come with registration requirements so that customs agencies can control the volume of goods that fall under the suspension, and for which payment of duties and taxes are postponed.²

Once the goods are close to being sold, they can be brought into free circulation by means of an import declaration. With this declaration, Customs receives all relevant information that is needed to compute the required duties and taxes, which primarily includes customs value, type of goods (via the Harmonized System of Classification of Goods – HS) and country of origin, and, in some specific cases, weight. Goods that are leaving a customs territory can be declared to Customs by means of an export declaration. This allows for the supervision on exports controls and other trade restricting measures.

The basic tools that Customs has at its disposal are:

- Customs can receive declarations, and evaluate the information in these declarations, based on characteristics such as type of good, value and weight, for risk assessment purposes,
- Based on these declarations, and other information, Customs performs risk-based targeting of enforcement interventions, considering resource limitations,
- Customs can allow goods to be brought into free circulation and collect duties and taxes, or
- Customs can (physically or administratively) supervise goods that are brought under a suspension regime, until they are removed from that suspension regime,

¹ In some countries border control and revenue services are separate organisations.

² An exception is the VAT and duty draw back system in the USA.

- Customs can issue licences to parties interested in using simplifications, or in performing customs related services on behalf of others,
- Customs can take measures to verify declarations on goods, by collecting more information on the goods, by technology to verify elements of the shipment, and by physically checking the goods.
- Customs has an intelligence function, that serves to assess the risk of criminal misuse of shipments and act accordingly to seize drugs, weapons, and so on.
- Customs has a number of formal instruments to pursue trading parties to pay the right amount of duties and punish unwanted behaviour through confiscation of the goods and levying penalties.

The basic level at which Customs is performing these tasks is the shipment. There are arrangements where Customs can suspend the individual collection of information at shipment level and replace this with either the periodic collection of shipment level data, or reliance on declarants' own records. In all cases, the basic information set that Customs collects consists of goods descriptions (including a formal classification according to the HS), the value of the goods, the origin of the goods (in specific cases certified by the country of origin) amended by transportation and packaging information (mode of transport, number of boxes, weight and so on), and identifying information of the relevant parties directly involved in the border-crossing shipment. We consider the elements in these two paragraphs to be the core components of the 'Customs Toolbox'.

There are two main challenges for the general application of the elements in this toolbox. The first of these is e-commerce. Here, the sheer volume of shipments and subsequently, declarations, are overwhelming many customs agencies. The rather low value of many of these individual shipments very quickly destroys any reasonable enforcement intervention at the level of individual shipments. Innovative approaches would involve stepping away from an enforcement approach that is based on individual shipment information and gathering risk information as well as duties and taxes based on aggregated data. How this data would need to be aggregated to make such an approach useful and justifiable and can also serve the detection of non-fiscal risks is a very current research problem.

The second challenge is the increasing focus on societal protection from regulators on environmentally damaging products, on fighting smuggling and counterfeiting, on the identification of decent working practices in supply chains and so on. In these cases, the protective role of Customs at the border forces customs agencies to collect individual shipment information, because these goods need to be stopped and seized at the border. For one, this practice creates barriers for the application of suspension regimes. In regulations where the Customs suspension regimes are explicitly acknowledged, the role of

Customs becomes more complicated, because it must be made clear that safety and security checks are performed before goods are entered into a suspension arrangement. This is not always the case. In other words, it does force Customs to act at the border, where the suspension regime was put in place to minimise interference with the goods at the border.

3. A brief note on the effectiveness of customs enforcement tools

In this paper, we will investigate research that was conducted on the effectiveness of some of the elements in the customs enforcement toolbox: risk-based targeting, issuing licences, the assessment of goods classification, the verification of value and origin, as well as the supervision of customs regimes. For the latter, we restrict our attention to transit only.

There is some literature on risk management in customs (for instance, Widdowson, 2020 and Iordache & Voiculet, 2007), but much of this literature deals with the importance of developing proper risk management approaches in customs organisations. There is virtually no literature on the effectiveness of risk-based approaches, except for Al-Shbail (2020), who related a dependent variable ‘Revenue Protection’ to a representation of a Customs Risk Management system, consisting of risk targeting, random selectivity, and intelligence. He finds a generally positive relationship, where random selectivity also has the benefit of identifying non-compliant traders.

There is, again, some research on customs licences. West (2010) discusses best practices for customs broker licensing. Widdowson (2014) reviews licensing arrangements and accredited operator programs. There is also work on the Authorised Economic Operator, which can be seen as either a certification program or a licence (Houé & Murphy, 2018). Licensing mechanisms are generally associated with quality and competitive advantage.

Chan et al. (2015) discuss the usefulness of HS codes for the monitoring of wildlife trade. They conclude that this system is inadequate for this societal purpose. Similar studies look at fish (Cawthorn & Mariani, 2017), or timber (Datta et al., 2020), or expand their view to the entire spectrum of illegal trade (Andersson et al., 2021) with similar outcomes. In other words, if HS codes are used for a more societal purpose, than what they were designed for, they fall short.

The assessment of value for customs has received much less attention than the discussion on for instance, transfer prices in other areas of taxation research (see, for example, Schippers, 2018). The basic premise for customs value is that it is evaluated on a transactional basis. However, border-crossing flows are often part of larger value chains, where the border crossing is not always a natural logistics waypoint. This means that for such a flow, there may be a legally logical determination of product value, but this does not always predictably translate into a customs value at shipment level. This will result in a lot of unnecessary work to determine a customs value for a shipment at the time of border crossing.

Recently, the problems emerging in the enforcement of international e-commerce have renewed the attention for the possibilities to determine (customs) value of goods objectively. Delissen (2020) analysed e-commerce value data for 2019 from Dutch Customs and concluded that Customs has the possibility to assess customs values for e-commerce shipments if the sales price and gross weight are available. He developed artificial intelligence (AI) tools that reach a 91 per cent accuracy in predicting customs value. Actual sales price, as well as the right product weight, however, are not commonly collected by Customs.

Another crucial piece of information for the determination of the duties payable is the origin of the goods (for background, see Brenton & Imagawa, 2005). Verification of origin is commonly based on a so-called origin certificate. From an enforcement point of view, the origin certificate is always suspect, because it is issued by a foreign party (see also Valantiejus, 2016, on legal ambiguities related to origin certificates within the EU). In addition, Customs authorities usually do not have alternative means to determine the true origin. Villate-Moreno et al. (2021) report on a study where molecular analysis was applied to shark fins to verify the effectiveness of the application of CITES regulation in Germany. This approach is effective, but introduces a lot more chemical testing procedures, and may involve DNA sequencing for biological samples. For large volumes of shipments, this is not a workable solution.

In many parts of the world, Customs supports a mechanism for transportation under customs supervision: transit (for an overview, see Kunaka & Carruthers, 2014). This is a system where a shipment must be registered as 'transit' (with a special document or registration) and where at the destination, the transit registration must be cancelled again. Eventually Customs agencies will want to match start and end for all shipments under customs supervision, including the shipments that went across the border. While this may sound simple, it is not straightforward in many parts of the world. It requires agreement on procedures, mutual recognition of processes, and a certain swiftness of communication and above all, a manageable guarantee system. Groenendijk (2018) reminds us that the digitised system for transit in Europe (the New Computerised Transit System or NCTS) was largely driven by the substantial problems with fraud and crime under the then paper-based transit system. In addition, she also points out that digitisation has not removed differences in application of the system, regarding the inclusion of VAT (or not), requirements of HS codes, and the need for (physical) fiscal representation when presenting documents to some customs agencies.

All in all, the conclusion at this point is that the mechanisms Customs has at its disposal are largely adequate for application in the customs domain. Application is not always perfect, and harmonisation across customs organisations may leave a lot to be desired. But these mechanisms do offer substantial benefits in terms of the facilitation of trade, and therefore support the growth of regular global trade. The limited insight on alternative uses for these mechanisms shows that:

- for goods classification: societal applications do not look promising
- for value verification in e-commerce: requires information Customs does not collect
- for exact origin verification: requires cumbersome chemical analysis.

In the next section we look at some ongoing regulatory developments. We aim to discover how much is expected of Customs, and if this results in the requirement to develop new competences for Customs.

4. New responsibilities for customs

We selected three different regulatory developments in the European Union to analyse. These are the tightening of the Regulation on Fluorinated Gasses (F-gasses), the introduction of the Carbon Border Adjustment Mechanism (CBAM), and the Regulation on Prohibiting Products made with Forced Labour (PPFL). All these are proposed regulations.

We looked for references to customs-related actions in these three regulations through a thematic analysis based on coding. We based our thematic analysis on the structure of the customs toolbox that we have introduced above. We developed a deductive coding approach that is based on a ‘code book’. We then performed a word count and drew some inference from the different codes and code counts for the different regulations. For more background on thematic analysis, see King & Brooks (2018).

In our code book, we included as first level codes:

1. Customs
2. Competent authority
3. Compliance
4. Border.

These codes allowed us to interrogate the regulations on the role they see for Customs, or other supervisory authorities, and if these are not mentioned, if the regulations acknowledge that the rules need to be followed by companies or that the regulation might apply to border-crossing goods flows. These four first level codes thus represent different degrees of specificity in the regulation vis-a-vis the role of Customs.

As second level codes, we introduced codes that represent elements in the Customs Toolbox: controls, licence, customs declaration, free circulation, value, weight, commodity code, origin, verify, inspection. In all these cases, there were alternative spellings or terms that captured the same concept, but they all focused on checking authenticity of the data in the declaration, its match with the goods itself and to detect whether other goods are at stake. We indicate this in our presentation of the results. Based on the context of these

codes in the texts we reviewed, we added a third layer of codes that reflect this context. From this three-layer coding approach, we drew conclusions on the conception of the role for Customs in the three regulatory texts.

Our analysis is based on the following official documents:

- For F-gasses: Proposal for a regulation of the European Parliament and of the Council on fluorinated gasses, COM (2002) 150 final
- For CBAM: Proposal for a regulation of the European Parliament and of the Council establishing a carbon border adjustment mechanism, COM (2021) 564 final
- For PPFL: Proposal for a regulation of the European Parliament and of the Council on prohibiting products made with forced labour on the Union market, COM (2022) 453 final.

These documents are all ‘Regulations’, which means they prescribe rules that the member states must implement directly. All these documents contain an explanatory memorandum. In our analysis we did not distinguish between this memorandum and the formal legal text since they are part of the same official European Union document. In our analysis we ignored the annexes to these regulations.

We first briefly discuss the three regulatory initiatives and then report the results of our coding approach.

4.1. Fluorinated gasses

The global warming potential of certain greenhouse gasses was recognised well before the Paris Climate accord gave great weight to carbon dioxide (CO₂). Fluorinated gasses, or F-gasses, for instance, have a greenhouse effect that is 25,000 times larger than CO₂.

The EC had therefore already developed regulations to control the use of these so-called F-gasses in manufacturing. Recently (April 2022) a legislative proposal was forwarded to the Council and the European Parliament to further control the inflow of F-gasses into the European common market. The purpose of the new proposals is to reduce the usage of these F-gasses in the EU by two-thirds by 2030.

The main mechanism in the regulation is a quota system with a step-by-step reduction of the ceilings towards 2030. The proposal describes the approach for assigning quota and that the exchange of quota is permitted between active importers. There will be a separate F-gas portal for quota allocation, licensing and reporting obligations. This portal will be connected with the European Single Window for Customs. Quota holders will receive a licence which needs to be presented to customs for every shipment. Seizures of goods can take place, for instance of non-refillable containers, and the regulation allows the prevention of re-exporting of unlawful products. Certain trades, involving parties in countries that are not part of the F-gasses treaty, are also banned.

4.2. CBAM

A major mechanism to reach global sustainability goals is the charging or taxation of CO₂ emissions. In Europe, this will be implemented in various ways, with the European Trading Scheme (ETS) for CO₂ as a main pillar³. This mechanism will introduce charging for CO₂ for products resulting from economic activities within the EU.

Given that the EU does not stand alone in the world, there is always a possibility to bring goods into the EU-ETS area from a country where no charge is levied on CO₂. CBAM aims to resolve this so-called carbon leakage problem.

The way to resolve the carbon leakage problem is to introduce a charging procedure at the outer border of the EU common market. This idea was introduced in July 2021, and on 15 March 2022, the European Council reached a general agreement on the CBAM regulation. This general agreement results in the introduction of rules, in first instance, for some specific industries: cement, iron and steel, aluminium, fertiliser, and electric energy products and organic basic chemicals.

The general approach of CBAM is as follows. CO₂ charging will be based on some assessment of the amount of CO₂ emissions related to the amount of goods. For these emissions, a CO₂-price will be applied. Parties importing goods under the CBAM regulation need to become a so-called CBAM declarant. Parties can also rely on a CBAM declarant that performs the declaration duties or provides the CBAM certification on their behalf. This can be verified by customs agencies at the border, or at the point of bringing goods in free circulation. There will be a so-called cap and trade system for CO₂ rights, which means that parties can exchange their CO₂-rights with other licensed parties. At the end of a year, CBAM licence holders will have to account for their shipments with sufficient CO₂-rights with an annual declaration.

4.3. PPFL

The ideas behind restricting access for products made with forced labour to the EU common market was initially part of the Directive on Corporate Sustainable Due Diligence. During the negotiations for this Directive, the focus on barring goods from entering the EU was dropped. The idea, however, did not disappear. First, the European Commission formulated its views on decent work in a Commission Communication (COM (2022) 66 final) and then issued a proposal for a Regulation. The Communication on Decent Work ties the EU position to the generic multilateral consensus on the sustainable development goals and the pillars of decent work as laid down in, for instance, the International Labour Organization (ILO) Forced Labour Convention (ILO, 1930).

³ See https://ec.europa.eu/clima/eu-action/eu-emissions-trading-system-eu-ets_en

The regulatory complexity of this Regulation lies in the fact that investigations into proof of Decent Work, as well as the enforcement of actual prohibitions, are the competence of the member states. A specific role is foreseen for customs authorities, who will be directed by member states' competent authorities to act at the border. However, pan-European legislation and enforcement coordination are deemed to be necessary to achieve the objectives of the Regulation.

The scope of the Regulation is that it applies to all products, and all stages of their supply chains. This puts a considerable burden on companies to conduct due diligence when they purchase products outside the EU. For small companies, the EC will put support measures and guidelines in place to level the playing field.

The Regulation works based on screening for Decent Work violations by competent authorities, and, upon identification of these violations, setting up an investigation to substantiate the suspicion. The companies should provide all relevant information on the activities, as well as their mitigating measures. Based on the findings, prohibitive actions may be taken to prevent the goods from entering the common market. For this, customs authorities are appointed in the Regulation.

The Regulation specifically discusses the usefulness of information supplied by companies to Customs. To solve this problem, companies will have to supply information to Customs that would allow them to identify specific goods flows subject to this Regulation. This mechanism needs to be further detailed in delegated acts. There is also mention of a review of the Union Customs Code to introduce informational requirements that would enable the enforcement of this Regulation.

It is left to customs agencies to determine how the Regulation is applied to goods under suspension regimes. In addition, goods that have been seized are not allowed to be re-exported.

5. Analysis

We performed a coding approach to objectively analyse the envisaged role of Customs in various regulatory documents from the European Union. We will not reproduce our complete coding table here. We will note some of the main differences and similarities. In all cases, various spellings of the codes were used, such as singular and plural, with different suffixes. For example, for 'verify', we also included counts for verifying, verification, and so on.

From [Table 1](#), we can observe that Customs is mentioned in all three Regulations. The reference in the regulations to the customs declaration process is very different, however, as can be seen from the second level codes related to declaration and declarant. The F-gasses regulation seems to rely to some extent on the regular customs declaration. In particular, responsible parties in the F-gas regulation are based on the importer, exporter and declarant named in the customs declaration. In the CBAM regulation, a *new*, annual, declaration process is introduced to account for the allocated emission rights, for which there will be a new declarant as well. A large part of the count

Table 1. First and second level codes 'Customs'; word counts

First level code	Second level code ^a	F-gasses	CBAM	PPFL
Customs		108	45	94
	Controls	6	3	2
	Procedure	6	3	4
	Customs Declaration	33	1	-
	CBAM declaration	.. ^b	40	-
	Identification of goods	-	-	41
	Declarant	4	127	-
	Import	17	146	16
	Free circulation	13	5	25
	Licence	2	-	-
	Quota	155	-	--
	Inspection	3	-	5
	Value	37	46	37
	Weight/tonnes	24	5	-
	Commodity code	1	6	-
	Origin	-	18	2
	Verify	6	3	6
	Certificate	34	93	2

^a Second level codes are not direct combinations with first level code unless otherwise stated; ^b -, zero word count

(127) refers to this authorised or CBAM declarant. In the Forced Labour Regulation, neither the customs declaration, nor a declarant, is mentioned. This Regulation introduces the process of 'identifying the goods' at the border, which is expected to be done by customs authorities upon instructions from the competent authority. How these goods will be identified is not specified, but this seems to be Customs' envisaged primary role at the border under this Regulation.

Another interesting observation is that all three Regulations refer to import and bringing goods into free circulation. The definitions of what this means exactly are different in all three documents. The F-gasses regulation states: 'import means ... the entry in the customs territory'; the CBAM Regulation states: 'importation means the release for free circulation'; the Forced Labour Regulation refers for an explanation of 'free circulation' to the Union Customs Code (European Union, 2013, art. 201). Apart from the specific, and somewhat peculiar wording used in the Regulations, the link between the applicability of these Regulations with free circulation of goods means that the time of border crossing is not always the place where interventions need to take place. All three regulations allow the possibility that undesirable goods spend some time under a suspension regime in a bonded warehouse.

The F-Gasses regulation is based on a quota and licensing system, which provide parties with an annual volume of F-gas allowances. CBAM also uses a mechanism based on an annual volume restriction but calls it a certification scheme: companies need to obtain emission allowances that are recorded in a CBAM certificate. The Forced Labour regulation has no such mechanism.

Table 2. First and second level codes ‘competent authority’; word counts

First level code	Second level code ^a	F-gasses	CBAM	PPFL
Competent authority		59	73	155
Authority		122	118	256
	Customs + ^b	33	14	55
	Suspension	1	-	8
	Substantiated concern	- ^c	-	7
	Disposal	8	-	10
	Portal	52	-	-
	Declarative system	-	3	-
	Information system for market surveillance	-	-	8
	Common risk management system	-	-	2
	Single window	-	-	9

^a Second level codes are not direct combinations with first level code unless otherwise stated; ^b +, the code is combined with the immediate previous first level code; ^c -, zero word count.

In [Table 2](#), we report the coding results for the second first level code ‘competent authority’. We have also included some of the main mechanisms or tools that are discussed in the three Regulations for Competent Authorities.

From [Table 2](#), we can observe that all three Regulations introduce a mechanism where a competent authority needs to cooperate with a customs authority. The regulations all attribute responsibilities to these competent authorities: for F-gasses, companies need to provide trading records to the competent authority; in the F-gas Portal, competent authorities may request or approve authorisations for the use of certain gasses. In the CBAM regulation, competent authorities, among others, oversee the sale of CBAM certificates. In the Forced Labour Regulation, the competent authorities follow a risk-based approach, request information from companies, can start investigations, and formulate a substantiated concern and decide to prohibit goods.

How the competent authority and the customs authority then exchange information and operate in tandem is most concrete in the Forced Labour Regulation: the European Union Information system for market surveillance shall be used, and this will be linked with ‘the relevant customs risk management environment’ (PPFL art 22). In addition, a Union Network Against Forced Labour Products will be established (PPFL art 24) to support the coordination and cooperation between the member states and the EC.

As a third first level code, we identified ‘border’. We report the word counts in [Table 3](#).

At first sight, the code ‘border’ does not provide much insight. It is mentioned in CBAM relatively more often because this Regulation has the word ‘border’ in its title. What is relevant, however, is the mention of the term ‘third country’. This indicates that in all three Regulations, but especially in CBAM and PPFL, economic activities outside the Union territory fall under the scope of the regulation. This also results in the high counts of investigation and verification activities under PPFL, which may also have to be undertaken

Table 3. First and second level codes 'Border'; word counts

First level code	Second level code ^a	F-gasses	CBAM	PPFL
Border		2	29	6
	Carbon + ^b	- ^d	16	-
	Cross-+	1	1	3
	+ Controls	1	3	-
Third country		8	30	18
Stop/confiscate/seize/not allow/		3	1	12
Investigate/verify		-	(3) ^c	73
Suspension/simplification		-	1	-

^a Second level codes are not direct combinations with first level code unless otherwise stated; ^b +, the code is combined with the immediate previous first level code;

^c Counts in brackets mean these are not necessarily related to the first level code; ^d -, zero word count.

Table 4. First and second level codes 'compliance'; word counts

First level code	Second level code ^a	F-gasses	CBAM	PPFL
Compliance		47	8	13
	This regulation	19	3	2
	Montreal Protocol	17	-	-
	+ costs ^b	- ^c	3	2
Costs		41	21	19

^a Second level codes are not direct combinations with first level code unless otherwise stated; ^b +, means that the code is combined with the immediate previous first level code; ^c -, zero word count.

in these third countries. PPFL thus has an article (art 26) that refers specifically to international cooperation. In the F-gasses regulation, this term is not mentioned, and in CBAM only once, in the introductory text.

This need for international cooperation raises interesting questions: since customs organisations already have established mechanisms for international enforcement assistance and cooperation, would it make sense that these are used to enforce PPFL? If so, would this then mean that Customs will become, in some instances, the new 'competent authority' under this Regulation? Or perhaps, a new mechanism of international cooperation will be established. In that case, is there any role left for Customs under this Regulation?

As the fourth first level code, we selected 'compliance'. The results are presented in [Table 4](#).

From [Table 4](#), we see that the discussion on 'compliance' in the three regulations is broad: it refers to obligations of the EU to be compliant to international agreed protocols, such as the Montreal Protocol for Greenhouse gasses, to the general EU-level regulations, such as REACH, or to regulation at EU Member State level. There are also discussions in the Regulations in implementation costs, and compliance costs for businesses.

In conclusion, we observe that these three Regulations recognise a role for Customs, due to the border crossing nature of the goods flows that need to be controlled. All of them rely on a mechanism where Customs needs to work together with another competent authority, who obtains specific responsibilities under the Regulation. The role that Customs needs to play

under all three regulations is still unclear. We can elaborate further on this: we have argued that the enforcement toolbox of customs was designed for a specific purpose. This purpose includes the identification of goods at the border but based on very specific information (obtained from the customs declaration).

The regulations introduce two uncertainties: they do not acknowledge the need to link the information position of Customs with the requirements laid down for Customs under the regulation, and they stretch the regulatory competence of the European Union along international supply chains outside and inside the EU territory, which creates a lot more places where enforcement may need to be carried out. Specifically, the requirement to ‘identify goods’ for which the right to be brought into free circulation has been suspended by the competent authority under the PPFL regulation needs to be clarified with a workable information scenario before Customs can be expected to carry out this role.

Our analysis reveals that the standard toolbox of customs, including the main information elements in the customs declaration, do not play a large role in these Regulations, except for some data elements in the F-gasses regulation. The regulations introduce new information requirements for businesses (licences, certificates, obligations to provide information on their supply chain upon request), which do not tie into the customary customs declaration. This opens a discussion about the way these new information flows need to be managed, and how this new information could be used for risk assessment. And finally, it raises the question if Customs is the party that should be expected to carry out these enforcement tasks.

6. Recommendations

Customs agencies have some powerful tools at their disposal to manage the information on the movement of goods across borders. These tools are designed to interact with the goods flow at the time of border crossing. Some of the previous research on these tools shows that they are not easily applied to situations they were not designed for.

We have reviewed three pieces of regulation in the EU where border crossing is a trigger point for enforcement. These three cases differ substantially in their reliance on Customs to perform the supervision. The F-gasses regulation puts a lot of weight on customs agencies. The CBAM regulation takes its main structure from the operations of Customs, but attributes only limited responsibilities to Customs. Finally, the Corporate Sustainable Due Diligence regulation does not mention any standard customs mechanisms at all even though the regulation is about the responsible border-crossing flow of goods.

All three cases reveal both the power of the role of Customs (as a border enforcement agency) and its weakness. The latter refers to the fact that all three regulatory developments require not only supervision at the border, but also supervision at the product level or of business behaviour. For this, usually other competent authorities will have to be identified, that then either must cooperate with Customs, or develop their own enforcement activities to carry

out the obligations under the new regulation. This need to share information, and possibly share enforcement responsibilities (one agency identifies infringement, and the other then traces the goods and imposes penalties) creates substantial challenges in developing effective supervision mechanisms.

We observe, however, that this type of combined responsibilities on border-crossing activities and product of business-related behaviour is probably here to stay. All the responsible business and environmental regulation seems to go in this direction. This means, at the very least, that customs agencies must further develop their competencies to cooperate with other agencies (this is echoed in the Wise Persons Group report (EC, 2022)). In some cases, customs agencies might invest in product specific knowledge to bring that into their enforcement operations. Finally, customs agencies might consider developing new tools, as extensions of their current tools, such as company audits or high-volume chemical analysis in laboratories to verify origin, to extend their contribution to new regulation. This would contribute to the execution by Customs of systems-based supervision.

We would also like to draw attention to the fact that in much of the new legislation, it seems to be taken for granted that some supervision will have to take place at the border. The question, however, is, whether the border is the best place to safeguard a certain law. While Customs has tools available to authenticate data in a declaration against the actual goods, and to detect non-declared goods, additional information on supply chain operations that cannot be verified through the physical goods, cannot be controlled by Customs at the border. Other agencies, either within or outside the customs territory may need to be involved, which reduces the remaining enforcement contribution of customs at the border. There might be alternatives to these types of enforcement problems that are potentially more effective ways to achieve the legislations' goals and create less hindrance for global logistics.

Our final comment on the role of Customs as a transaction-based supervision agency is the following. The Wise Persons Group in the EU has as one of its points of analysis that the transaction-based approach needs to be replaced by a systems-based approach. We take issue with the word 'replaced'. We suggest that a complementary use of the transaction- and system-based approaches (for the same flows of goods) should be considered. Only then can the EU really achieve the goals it sets out in regulation such as the Prohibition of Products made with Forced Labour, where business practices can be improved based on system-based supervision, while some pressure can be exerted through the transaction-based approach. The key is in the combination of the two. Government in general should strive to achieve an optimal model of supervision, where the needs for physical interventions in the supply chain are reduced to an absolute minimum, and where post-clearance options are maximised as much as possible. An effective policy should strike an effective balance between these two enforcement options.



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References

- Al-Shbail, T. (2020). The impact of risk management on revenue protection: an empirical evidence from Jordan customs. *Transforming Government: People, Process and Policy*, 14(3), 453–474. <https://doi.org/10.1108/tg-02-2020-0025>
- Andersson, A. A., Tilley, H. B., Lau, W., Dudgeon, D., Bonebrake, T. C., & Dingle, C. (2021). CITES and beyond: Illuminating 20 years of global, legal wildlife trade. *Global Ecology and Conservation*, 26, e01455. <https://doi.org/10.1016/j.gecco.2021.e01455>
- Brenton, P., & Imagawa, H. (2005). Rules of origin, trade and Customs. In L. de Wulf & J. B. Sokol (Eds.), *Customs modernization handbook* (p. 183214). The World Bank. <https://documents1.worldbank.org/curated/en/850061468779087644/pdf/31477.pdf>
- Cawthorn, D. M., & Mariani, S. (2017). Global trade statistics lack granularity to inform traceability and management of diverse and high-value fishes. *Scientific Reports*, 7(1), 111. <https://doi.org/10.1038/s41598-017-12301-x>
- Chan, H.-K., Zhang, H., Yang, F., & Fischer, G. (2015). Conservation. Improve customs systems to monitor global wildlife trade. *Science*, 348(6232), 291–292. <https://doi.org/10.1126/science.aaa3141>
- Datta, D., Islam, M. R., Self, N., Meadows, A., Simeone, J., Outhwaite, W., Hin Keong, C., Smith, A., Walker, L., & Ramakrishnan, N. (2020). Detecting suspicious timber trades. *Proceedings of the AAAI Conference on Artificial Intelligence*, 34(08), 13248–13254. <https://doi.org/10.1609/aaai.v34i08.7032>
- Delissen, N. (2020). *Predicting customs value for fulfilment shipments in e-commerce using regression machine learning algorithms* [Master thesis, Technical University Eindhoven]. TUE thesis repository. <https://research.tue.nl/en/studentTheses/predicting-customs-value-for-fulfilment-shipments-in-e-commerce-u>
- European Commission. (2022). *Putting more Union in the European Customs. Ten proposals to make the EU Customs Union fit for a geopolitical Europe*. Report by the Wise Persons Group on the Reform of the EU Customs Union. [https://taxation-customs.ec.europa.eu/system/files/2022-03/TAX20-002-Future%20customs-REPORT_BIS_v5%20\(WEB\).pdf](https://taxation-customs.ec.europa.eu/system/files/2022-03/TAX20-002-Future%20customs-REPORT_BIS_v5%20(WEB).pdf)
- European Union. (2013). *Union Customs Code. Regulation (EU) No 952/2013*. <https://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2013:269:0001:0101:EN:PDF>
- Grainger, A. (2021). *Cross-border logistics operations: effective trade facilitation and border management*. Kogan Page Publishers.
- Groenendijk, J. (2018). Customs transit procedures: insights from an operator. *WCO News*, 85. <https://mag.wcoomd.org/magazine/wco-news-85/customs-transit-procedures-insights-operator/>
- Heijmann, F. H. A., & Peters, J. (2022). *Customs; inside anywhere, insights everywhere*. Trichis Publications.
- Houé, T., & Murphy, E. (2018). The AEO status as a source of competitive advantage. *European Business Review*, 30(5), 591–606. <https://doi.org/10.1108/eb-06-2017-0127>
- International Labor Organization. (1930). *Forced Labour Convention (No. 29)*. https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_ILO_CODE:C029
- Iordache, E., & Voiculet, A. V. (2007). Customs risk management in the European Union. *The Romanian Economic Journal*, 25, 5572. <https://www.econbiz.de/Record/customs-risk-management-in-the-european-union-iordache-emilia/10005405071>
- King, N., & Brooks, J. (2018). Thematic Analysis in Organisational Research. *The SAGE Handbook of Qualitative Business and Management Research Methods: Methods and Challenges*, 2, 219–236. <https://doi.org/10.4135/9781526430236.n14>

- Kunaka, C., & Carruthers, R. (2014). *Trade and transport corridor management toolkit*. The World Bank. <https://doi.org/10.1596/978-1-4648-0143-3>
- Schippers, M. L. (2018). A series of sales: determining the customs value under the union customs code. *Global Trade and Customs Journal*, 13(2), 36–48. <https://doi.org/10.54648/gtcj2018007>
- Valantiejus, G. (2016). Application of rules on burden of proving the customs origin of imported goods in international trade problematic aspects in Lithuania [Conference presentation]. *Whither Our Economies: 3rd International Scientific Conference: Conference Proceedings [Elektroninis Išteklius]/Mykolas Romeris University*.
- Villate-Moreno, M., Pollerspöck, J., Kremer-Obrock, F., & Straube, N. (2021). Molecular analyses of confiscated shark fins reveal shortcomings of CITES implementations in Germany. *Conservation Science and Practice*, 3(6), 398. <https://doi.org/10.1111/csp2.398>
- West, C. (2010). Best practices model for licensing customs brokers. *World Customs Journal*, 4(1), 6568. [https://worldcustomsjournal.org/Archives/Volume%204%2C%20Number%201%20\(Mar%20202010\)/09%20West.pdf](https://worldcustomsjournal.org/Archives/Volume%204%2C%20Number%201%20(Mar%20202010)/09%20West.pdf)
- Widdowson, D. (2014, May 28–30). Review of customs licensing arrangements and accredited operator programs [Conference presentation]. *Australian Federation of International Forwarders National Conference, Melbourne, Australia*.
- Widdowson, D. (2020). Managing customs risk and compliance: an integrated approach. *World Customs Journal*, 14(2), 63–80. [https://worldcustomsjournal.org/Archives/Volume%2014%2C%20Number%202%20\(Oct%202020\)/1902%2001%20WCJ%20v14n2%20Widdowson.pdf?_t=160](https://worldcustomsjournal.org/Archives/Volume%2014%2C%20Number%202%20(Oct%202020)/1902%2001%20WCJ%20v14n2%20Widdowson.pdf?_t=160)