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Discussion paper

Article 6 credits in the EU ETS 1

Brief assessment of possible integration options

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Abstract: Article 6 credits in the EU ETS 1

Following the amendment of the European Climate Law, the European Union (EU) may use a limited volume of international credits under Article 6 of the Paris Agreement to meet its 2040 climate target. If the European Union decides to introduce a share of these credits into the EU Emissions Trading System 1 (EU ETS 1), a robust integration framework would be needed. This paper argues that indirect integration through an intermediary mechanism is preferable to direct integration approaches, in which regulated entities would source credits themselves. Indirect integration would allow greater flexibility and oversight in managing quality and quantity of credit supply, preserving market integrity, and aligning the use with long-term decarbonization objectives. The paper then briefly presents and assesses four options for indirect integration: (1) converting eligible credits into additional EU Allowances released through the Market Stability Reserve (MSR); (2) converting credits into EU Allowances sold through a separate, dedicated sale mechanism; (3) adding EU Allowances originating from credits to standard auctions; and (4) expanding the cap ex ante to accommodate planned credit use. For each option, the paper evaluates trade-offs between control over supply, consistency with decarbonization incentives, administrative complexity, and cost-saving potential. In addition, the paper identifies several cross-cutting safeguards, such as conditioning integration on price differentials or cost considerations, that could be applied to further mitigate common risks associated with credit integration. The results highlight important trade-offs across the different approaches. Specifically, options that offer more control over credit supply and consistency with decarbonization incentives tend to have higher financial burdens and lower cost-saving potential. Among the options assessed, the second option appears as a particularly promising approach. It offers a cap-neutral means of reducing compliance costs while maintaining flexibility in managing credit supply, although it poses institutional implementation challenges. By contrast, ex ante cap expansion appears less suitable due to several risks including credit dependency, immediate price suppression effects, and a limited ability to react to credit procurement shortfalls. The integration approaches developed in this paper provide a foundation for the design and evaluation of more detailed policy models in future research.

Kurzbeschreibung: Artikel-6-Zertifikate im EU-Emissionshandel

Im Zuge der Änderung des Europäischen Klimagesetzes kann die Europäische Union (EU) eine begrenzte Menge internationaler Gutschriften gemäß Artikel 6 des Übereinkommens von Paris nutzen, um ihr Klimaziel für 2040 zu erreichen. Sollte sich die Europäische Union dazu entscheiden, einen Anteil dieser Gutschriften in den EU-Emissionshandel 1 (EU ETS 1) zu integrieren, wäre ein robuster Integrationsrahmen erforderlich. Dieses Papier argumentiert, dass eine indirekte Integration über einen Intermediärsmechanismus direkten Integrationsansätzen, bei denen regulierte Unternehmen die Gutschriften selbst beschaffen würden, vorzuziehen ist. Eine indirekte Integration würde mehr Flexibilität und Kontrolle bei der Steuerung von Qualität und Menge des Gutschriftenangebots ermöglichen, die Marktintegrität wahren und die Nutzung mit langfristigen Dekarbonisierungszielen in Einklang bringen. Das Papier stellt anschließend kurz vier Optionen für eine indirekte Integration vor und bewertet diese. Die Optionen sind: (1) die Umwandlung geeigneter Gutschriften in zusätzliche EU-Zertifikate, die über die Marktstabilitätsreserve (MSR) freigegeben werden; (2) die Umwandlung von Gutschriften in EU-Zertifikate, die über einen separaten, eigens eingerichteten Verkaufsmechanismus veräußert werden; (3) die Aufnahme von aus Gutschriften stammenden EU-Zertifikatsmengen in reguläre Auktionen; und (4) eine ex ante Ausweitung der Caps, um die geplante Nutzung von Gutschriften zu berücksichtigen. Für jede Option bewertet das Papier Zielkonflikte zwischen der Kontrolle des Angebots, der Vereinbarkeit mit Dekarbonisierungsanreizen, dem administrativen Aufwand und dem Potenzial zur Kostensenkung. Darüber hinaus identifiziert das Papier mehrere übergreifende Schutzmaßnahmen, wie beispielsweise die Konditionierung der Integration an Preisdifferenzen oder Kostenüberlegungen, die angewendet werden könnten, um allgemeine Risiken im Zusammenhang mit der Integration von Gutschriften weiter zu reduzieren. Die Ergebnisse zeigen wichtige Zielkonflikte zwischen den verschiedenen Ansätzen auf. Insbesondere weisen jene Optionen, die mehr Kontrolle über das Gutschriftenangebot und eine größere Konsistenz mit Dekarbonisierungsanreizen bieten, tendenziell höhere finanzielle Belastungen und ein geringeres Kosteneinsparungspotenzial auf. Unter den bewerteten Optionen erweist sich die zweite Option als ein besonders vielversprechender Ansatz. Sie bietet eine obergrenzenneutrale Möglichkeit zur Senkung der Compliance-Kosten bei gleichzeitiger Flexibilität in der Steuerung des Zertifikateangebots, birgt jedoch institutionelle Herausforderungen bei der Umsetzung. Im Gegensatz dazu erscheint eine ex ante-Ausweitung des Caps weniger geeignet, da sie mehrere Risiken birgt, darunter eine Abhängigkeit von internationalen Gutschriften, unmittelbare preisdämpfende Effekte sowie eine begrenzte Fähigkeit, auf Ausfälle bei der Beschaffung von Gutschriften zu reagieren. Die in diesem Papier entwickelten Integrationsansätze bilden eine Grundlage für die Gestaltung und Bewertung detaillierterer Politikmodelle in zukünftiger Forschung.

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List of abbreviations

Abbreviation	Explanation
CDM	Clean Development Mechanism
CO_2	Carbon dioxide
EC	European Commission
ECL	European Climate Law
EU	European Union
EUA	European Union Allowance
ETS	Emissions Trading System
GHG	Greenhouse gas
ITMO	Internationally Transferred Mitigation Outcome
JI	Joint Implementation
LULUCF	Land use, land use change, and forestry
MSR	Market Stability Reserve
$MtCO_2e$	Million Tonnes of Carbon Dioxide Equivalent
NDC	Nationally Determined Contribution
OMGE	Overall Mitigation of Global Emissions
PACM	Paris Agreement Crediting Mechanism (established through Article 6.4)
SOP	Share of proceeds
UNFCCC	United Nations Framework Convention on Climate Change

Summary

Context and objective

The amended European Climate Law (ECL, 2026) permits the European Union (EU) to use international credits under Article 6 of the Paris Agreement to contribute to its 2040 climate target, with up to 5% of 1990 net emissions. However, while the ECL specifies that only high-quality credits may be used, it leaves open important questions regarding the total volume of credits, how these credits should be integrated into the EU climate framework, and who should be allowed to use them.

Existing studies generally caution against the use of international credits in the EU Emissions Trading System 1 (EU ETS 1), citing risks related to market oversupply, weakened domestic decarbonization incentives, uncertain credit quality, and reduced regulatory certainty. At the same time, a limited use of Article 6 credits could lower compliance costs and provide additional flexibility, although these benefits remain uncertain due to unpredictable credit supply and prices. The literature therefore points to the need for stringent safeguards and carefully designed integration mechanisms.

This paper first examines the uncertainties surrounding the potential volume of Article 6 credits available for integration into the EU ETS 1, as well as their allocation across sectors. It then develops the case for indirect integration through a centralized intermediary, which would procure and manage credits on behalf of the system, and contrasts this approach with direct integration, where regulated entities would purchase credits directly from providers for compliance purposes.

Building on this framework and assuming that some of these credits are channeled to the EU ETS 1 in the future, this report then investigates potential design options and compares them with respect to key criteria, including environmental integrity, market functioning, and domestic decarbonization ambition. Direct procurement and use by regulated entities for compliance purposes is not considered in detail, given the well-documented risks of market distortion and integrity failures associated with this approach.

Analysed policy options for integrating Article 6 credits in the EU ETS 1

- **Option 1 - Additional supply of EU allowances (EUAs) through the Market Stability Reserve (MSR):** This approach channels credits into the EU ETS 1 via the MSR to mediate the effect on prices and market functioning using an established mechanism.
- **Option 2 - Sale of EUAs through a separate mechanism**: This approach focuses on a specific subset of regulated entities to provide targeted cost reductions. This option does not increase the overall emissions cap – if designed appropriately - preserving alignment with domestic decarbonization objectives.
- **Option 3 - Additional supply of EUAs and sale through standard auctions:** This approach introduces credits into the system through the general auction process, lowering costs by increasing the supply.
- **Option 4 - Ex-ante cap expansion:** This approach provides certainty about the cap increase ahead of time. The procurement of international credits follows to substantiate the created EUAs.
- **Safeguards:** In addition to quality considerations, safeguards could be applied to further regulate the credit supply. Such provisions could calibrate quantities based on prices of high-

quality credits, total procurement costs, and mitigation options for regulated entities; either upfront or through retroactive cancellations.

Assessment and conclusion

Out of the four assessed integration options, no single one emerges as clearly superior; each approach has trade-offs and the choice will depend on the prioritisation of political objectives. Policy options that provide greater control over credit supply and maintain stronger decarbonization incentives generally offer less scope for cost savings and financial benefits. Despite this, the second policy option, that is, the introduction of EUAs through a separate mechanism, stands out as a promising candidate for further exploration, as it combines targeted compliance cost reductions with the potential to remain fully cap-neutral. However, its implementation may be more challenging than that of the other options, as it would require the establishment of additional institutional arrangements. Conversely, raising the cap ex-ante appears to be a less suitable approach, primarily because it risks locking in credit dependency, causing immediate price suppression effects, and severely limiting the intermediary's ability to react to procurement shortfalls.

The paper concludes that Article 6 credits must complement, not substitute, domestic mitigation efforts. Any integration into the EU ETS 1 should be governed by strict volume controls, robust quality criteria, ambitious cancellation and benefit sharing provisions. A cap-neutral implementation could enable genuine ambition raising, a core requirement of Article 6 cooperation.

Zusammenfassung

Kontext und Zielsetzung

Das geänderte Europäische Klimagesetz (ECL, 2026) erlaubt es der Europäischen Union (EU), internationale Gutschriften gemäß Artikel 6 des Übereinkommens von Paris zu nutzen, um zu ihrem Klimaziel für 2040 beizutragen – im Umfang von bis zu 5 % der Nettoemissionen von 1990. Während das ECL jedoch festlegt, dass nur hochwertige Gutschriften verwendet werden dürfen, lässt es wichtige Fragen offen, etwa zum Gesamtvolumen der Gutschriften, zur Art ihrer Integration in den klimapolitischen Rahmen der EU sowie dazu, wer sie nutzen darf.

Bestehende Studien warnen generell vor der Nutzung internationaler Gutschriften im Europäischen Emissionshandel 1 (EU ETS 1) und verweisen dabei auf Risiken im Zusammenhang mit einem Überangebot am Markt, geschwächten Anreizen für die heimische Dekarbonisierung, ungewisser Gutschriftenqualität und verringerter regulatorischer Sicherheit. Zugleich könnte eine begrenzte Nutzung von Artikel-6-Gutschriften die Compliance-Kosten senken und zusätzliche Flexibilität bieten, auch wenn diese Vorteile aufgrund eines unvorhersehbaren Angebots und unvorhersehbarer Preise für Gutschriften ungewiss bleiben. Die Literatur verweist daher auf die Notwendigkeit strenger Schutzvorkehrungen und sorgfältig gestalteter Integrationsmechanismen.

Dieses Papier untersucht zunächst die Unsicherheiten hinsichtlich des potenziellen Volumens an Artikel-6-Gutschriften, die für eine Integration in den EU ETS 1 zur Verfügung stehen, sowie ihrer Verteilung auf die Sektoren. Anschließend entwickelt es die Argumentation für eine indirekte Integration über eine zentralisierte Intermediärsstelle, die Gutschriften beschaffen und verwalten würde, und stellt diesen Ansatz der direkten Integration gegenüber, bei der Marktteilnehmende Gutschriften zu Compliance-Zwecken unmittelbar von Gutschriftenanbietern erwerben würden.

Aufbauend auf diesem Rahmen und unter der Annahme, dass künftig ein Teil dieser Gutschriften in den EU ETS 1 eingespeist wird, untersucht dieser Bericht sodann mögliche Gestaltungsoptionen und vergleicht sie anhand zentraler Kriterien, darunter Umweltintegrität, Marktfunktion und heimische Dekarbonisierungsambition. Die direkte Beschaffung und Nutzung durch regulierte Unternehmen zu Compliance-Zwecken wird nicht im Detail betrachtet, angesichts der gut dokumentierten Risiken von Marktverzerrungen und Integritätsmängeln, die mit diesem Ansatz verbunden sind.

Analysierte politische Optionen für die Integration von Artikel-6-Gutschriften in den EU ETS 1

- **Option 1 – Zusätzliches Angebot an Zertifikaten über die Marktstabilitätsreserve (MSR):** Bei diesem Ansatz werden Gutschriften über die MSR in den EU ETS 1 eingespeist, um die Auswirkungen auf Preise und Marktfunktion mithilfe eines etablierten Mechanismus abzufedern.
- **Option 2 – Verkauf von Zertifikaten über einen gesonderten Mechanismus:** Dieser Ansatz konzentriert sich auf eine bestimmte Untergruppe in den EU ETS 1 einbezogener Unternehmen, um gezielte Kostensenkungen zu ermöglichen. Diese Option erhöht die Gesamtemissionsobergrenze (Cap) bei entsprechender Ausgestaltung nicht und ist daher leicht mit Dekarbonisierungszielen in Einklang zu bringen.
- **Option 3 – Zusätzliches Angebot an Zertifikaten und Verkauf über Standardauktionen:** Bei diesem Ansatz werden Gutschriften über das allgemeine Auktionsverfahren in das System eingeführt, wodurch die Kosten durch eine Erhöhung des Angebots gesenkt werden.

- **Option 4 – Ex-ante-Ausweitung der Obergrenze:** Dieser Ansatz schafft im Voraus Sicherheit über die Anhebung der Obergrenze. Die Beschaffung internationaler Gutschriften erfolgt im Nachgang, um die geschaffenen Zertifikate zu decken.
- **Schutzvorkehrungen:** Über Qualitätsüberlegungen hinaus könnten zusätzliche Schutzvorkehrungen implementiert werden, um das Gutschriftenangebot weiter zu regulieren. Solche Bestimmungen könnten die Mengen auf Grundlage der Preise hochwertiger Gutschriften, der gesamten Beschaffungskosten und der Minderungsoptionen regulierter Unternehmen regulieren – entweder im Voraus oder durch nachträgliche Löschungen.

Bewertung und Schlussfolgerung

Von den vier bewerteten Integrationsoptionen erweist sich keine als eindeutig überlegen; jeder Ansatz bringt Zielkonflikte mit sich, und die Wahl wird von der Priorisierung politischer Ziele abhängen. Politische Optionen, die eine stärkere Kontrolle über das Gutschriftenangebot ermöglichen und stärkere Dekarbonisierungsanreize aufrechterhalten, bieten in der Regel weniger Spielraum für Kosteneinsparungen und finanzielle Vorteile. Dennoch sticht die zweite Politikoption, d. h. die Einführung von EU-Zertifikaten über einen separaten Mechanismus, als vielversprechender Kandidat für eine weitere Prüfung hervor, da sie gezielte Senkungen der Compliance-Kosten mit dem Potenzial verbindet, vollständig Cap-neutral zu bleiben. Ihre Umsetzung könnte jedoch anspruchsvoller sein als die der übrigen Optionen, da sie die Schaffung zusätzlicher institutioneller Strukturen erfordern würde. Im Gegensatz dazu erscheint die Ex-ante-Anhebung des Caps als ein weniger geeigneter Ansatz, vor allem, weil sie das Risiko birgt, eine Abhängigkeit von Gutschriften zu verfestigen, unmittelbare preissenkende Effekte zu verursachen und die Fähigkeit der Intermediärsstelle, auf Beschaffungsengpässe zu reagieren, stark einzuschränken.

Das Papier kommt zu dem Schluss, dass Artikel-6-Gutschriften die Anstrengungen zur Minderung der EU-weiten Emissionen nur ergänzen und nicht ersetzen dürfen. Jede Integration in den EU ETS 1 sollte durch strenge Mengenkontrollen, robuste Qualitätskriterien sowie ambitionierte Löschungs- und Benefit-Sharing-Bestimmungen geregelt werden. Eine Cap-neutrale Umsetzung könnte eine echte Ambitionssteigerung ermöglichen – eine Kernanforderung der Zusammenarbeit nach Artikel 6.

1 Introduction

The amended ECL foresees a volume of up to 5% of emissions (based on the 1990 baseline) from international credits available to the EU to meet its 2040 climate target. Article 4, paragraph 5 (a) of the ECL now states that the upcoming legislative proposals by the European Commission (EC) shall reflect that "*from 2036, an adequate contribution towards the 2040 climate target of high-quality international credits under Article 6 of the Paris Agreement of up to 5 % of 1990 Union net emissions, […], in a way that is both ambitious and cost-efficient, supporting the Union and third countries in achieving net greenhouse gas reduction trajectories compatible with the Paris Agreement objective[s].*" Moreover, "*a pilot period from 2031 to 2035 to initiate a high-quality and high-integrity international credit market may be considered*" and Article 11, paragraph 1 (i) provides *"flexibility for Member States to use high-quality international credits to fulfil up to 5 % of their post-2030 targets and efforts."* (EU 2026)

The ECL explicitly refers to **Article 6 of the Paris Agreement** for the use of international credits.[1] Article 6.2 provides an accounting framework that enables international transfers of mitigation outcomes (ITMO). Such bilateral trades between countries for use towards their NDCs leave central requirements at the discretion of the buyer and seller parties. The Paris Agreement Crediting Mechanism (PACM), established by Article 6.4 is a centralized instrument, operated under the auspices of the UNFCCC. It comes with more stringent requirements, including a mandatory minimum share of proceeds (SOP, equivalent to 5%) fed into the Adaptation Fund and a minimum cancellation of generated credits (OMGE, 2%) for an "overall mitigation" effect from the implemented activities. After authorization by the host country, these units could be transferred as ITMOs to buyers like the EU to meet their NDC commitments (UNFCCC 2026).

Apart from referring to Article 6, the ECL also states that criteria for high-quality credits shall be regulated by Union law. This reflects lessons learned from negative experiences made with the Clean Development Mechanism (CDM) and Joint Implementation (JI) under the Kyoto Protocol (Oeko-Institut 2016; SEI 2015) and, more recently, with integrity problems in the voluntary carbon market (Probst et al. 2024; Romm et al. 2025) and around the import of some Upstream Emission Reduction (UER) certificates (UBA 2024; Bloomberg 2026).[2] While critical for a comprehensive assessment of environmental integrity, **this paper does not discuss quality criteria of international credits.** The EU could build on the rules specified under the PACM and go beyond to define additional safeguards and integrity provisions.[3]

The ECL does not specify by whom and how the international credits may be used. Recent analyses of integrating Article 6 of the Paris Agreement into the EU's climate targets have proliferated during and after the negotiations of the ECL amendment. The Oeko-Institut (2025a) and NewClimate Institute (2026) both stress that Article 6 is an ambition-raising instrument rather than a flexibility mechanism (to be used only beyond a 90% target) and warn that it may prove more expensive than domestic action once host-country, Adaptation Fund and overall-mitigation shares are accounted for. The German Environment Agency advises against relying on international carbon credits to meet the 2040 climate target, citing a range of associated risks (Fournier et al., 2026). In light of the ECL amendment, however, it recommends establishing

[1] In this paper, the terms 'Article 6 credits', 'international credits' and 'Internationally Transferred Mitigation Outcomes (ITMOs)' are used interchangeably, although specific legal distinctions may apply in practice.

[2] Environmental integrity remains a central topic at the carbon market negotiations at COP30 in Belém and in the work of the Supervisory Body of the Article 6.4 Paris Agreement Crediting Mechanism (PACM) in 2025, with the goal to avoid the repetition of past mistakes (Schneider 2025).

[3] Discussions of credit quality and broader environmental integrity in international carbon markets can be found here: Schneider & La Hoz Theuer (2018).

stringent safeguards to limit the overall use of such credits, in accordance with the precautionary principle.

A second strand of the literature examines integration of international credits into the EU ETS 1 specifically. The European University Institute (2026a, 2026b) argues that the impact hinges on who may procure and use credits, how they are allocated and when, advocating restricted access, centralised procurement governance and a centralised purchasing body acting as a buffer. Several analyses advise against (direct) use of credits for EU ETS 1 compliance, drawing on the oversupply, low prices and quality problems of past uses of international credits (Oeko-Institut 2025a; NewClimate Institute 2026, Fournier et al., 2026). Carbon Market Watch (2026) is most categorical, calling for "an absolute no to offsets" and warning that reintroducing international credits would undermine domestic decarbonization. This concern is reinforced by work on supply dynamics: the Oeko-Institut (2026) shows that proposed reforms already risk renewed structural oversupply, such that any additional credit inflow could erode scarcity and jeopardise the 2040 target. Notably, the EC's own explanatory memorandum stated that "*international credits should not play a role for compliance in the EU carbon market*" (EC 2025), and several Member States (Germany, France, the Netherlands) opposed direct compliance use citing price stability, market-signal clarity and domestic innovation as reasons (Oeko-Institut 2025a; EPRS 2026; Dutch Government 2025). Comparatively little attention, however, has been paid to concrete designs for an indirect integration of credits into the EU ETS 1.

This literature reveals critical aspects that should be considered when deciding on the integration of Article 6 credits into the EU ETS 1:

- Integrating international credits could *delay* and/or *substitute domestic abatement within the EU with mitigation outcomes*[4] *generated abroad*. This is particularly important because it could hinder the EU's green transition and, consequently, place even greater pressure on the sectors once the credits are no longer available. Furthermore, even in the short term, international credits are not a reliable substitute for domestic decarbonization, due to the risks associated with the former (Fournier et al., 2026).
- A limited inflow of Article 6 credits into the EU ETS 1 may *lower compliance costs* for companies (indirectly through a higher quantity or directly through reduced EUA prices). However, available funding for decarbonization measures in EU ETS 1 sectors may decrease as a result. As mitigation activities in the EU ETS 1 go down and the demand for certificates goes up, this could eliminate any monetary savings.
- The *price and availability of high-quality international credits is highly uncertain*, which poses a significant challenge for any integration aiming to achieve relative cost-savings. While this could be partially addressed through intensive bilateral engagement with potential host countries, predictability around the supply is likely to remain limited.
- As operators manage their decarbonization journey, they depend on *regulatory certainty around carbon costs*. If individual purchases by regulated entities (with individual arbitrage) were to become the basis for the use of Article 6 credits, this may unnecessarily and severely undermine the clarity of the market signal from the EU ETS 1.
- The stability and functioning of the EU ETS 1 depend on a high degree of *market transparency* and on the regulator's ability to meet its mandate to preserve *system-wide*

[4] Terminology from the Article 6 rulebook (Decision 2/CMA.3) which may constitute both emission reductions and removals.

integrity. Increased uncertainty from the integration of Article 6 credits may negatively affect these conditions.

- International credits and the projects from which they originate are highly diverse and come with *significant complexities and risks* (e.g. non-permanence, lack of additionality, human rights abuses, environmental harm) (Probst et al. 2024; Human Rights Watch 2024). While an Article 6 credit will generally also be expressed in carbon dioxide equivalents (CO_2e), it differs from an EUA in significant ways.[5] Domestic mitigation may drive lasting and structural change and using Article 6 credits instead (rather than in addition) should be avoided, though it can complement efforts in exceptional cases as a safety net.

The goal of this paper is to identify and discuss to what extent possible (indirect) integration approaches to include Article 6 credits in the EU ETS 1 could address the above-mentioned challenges and uncertainties and discuss the advantages and disadvantages of each. Given the negative experiences and theoretical superiority of an intermediary approach (see chapter 3), this paper does not assess direct integration options, in which regulated entities would source Article 6 credits for compliance purposes. We only consider a subset of criteria for analysing and comparing the different integration approaches and do so in a stylized manner. In particular, the analysis is limited to the period until 2040 and does not account for the effects of phasing out the use of eligible credits afterwards.

Importantly, this paper also assumes that Article 6 credits will be integrated in the EU ETS 1. However, it is important to note that such integration is neither an obvious policy decision nor necessarily the preferred one. Alternative approaches may merit equal or greater consideration depending on the policy objectives and evaluation criteria applied. International credits could, for example, function as a (cross-sectoral or sector-specific) safety pool to be used according to predefined criteria (Fournier et al. 2026). For example, purchased credits could be reserved for the targeted use in the land use and forestry sector (LULUCF) for compensation in the event of unforeseen natural disturbances (see ECL, Article 3). Such an approach could provide additional flexibility while limiting reliance on international credits for routine compliance. Discussing these alternatives in detail is beyond the scope of this paper.

This paper is structured as follows: the analysis starts with a discussion of possible Article 6 credit inflow volumes, taking the ECL amendment as a starting point while outlining options and uncertainties (chapter 2). It then looks at the general rationale for a centralized procurement facility (chapter 3) before laying out and briefly evaluating different options for indirect integration of credits into the EU ETS 1 in chapter 4. The concluding sections contain a discussion of the financing needs and the results in a wider context (chapter 5) before providing recommendations for Article 6 integration and future research (chapter 6).

[5] An ITMO generally represents an emission reduction or carbon dioxide removal compared to a baseline, whereas an EUA is a certificate for emitting one tonne of CO_2e. In addition to fairness considerations around burden shifting (see e.g. Böhringer et al. 2021), there are important implications for permanence and monitoring requirements. It should therefore not be treated as fully equivalent.

2 Potential Article 6 credit quantities for the EU ETS 1

The amended ECL allows a limited use of Article 6 credits in attaining the EU's 2040 climate target. The legal text, quoted in section 1 above, is clear regarding a) a ceiling ("up to 5% of 1990 Union net emissions") and b) the relevant period ("from 2036" in relation to the 2040 target). However, the text does not specify the temporal and sectoral distribution of Article 6 credit volumes. In this chapter, we briefly discuss how the permissible volume could be distributed year-by-year across 2036–2040 and which role the 5% ceiling exactly plays (section 2.1), and how any volume could be allocated across sectors and the policy instruments that cover those sectors (section 2.2).

2.1 Quantifying the ceiling of "up to 5%" for Article 6 credits

The legal ceiling "up to 5%" is expressed as a share of 1990 net emissions (4,726 $MtCO_2e$[6]), which translates into a maximum total of 236 $MtCO_2e$. The authors of this study regard the text concerning the 5% as ambiguous. On the one hand, the use of credits up to an absolute level of 5% over the period 2036–2040 corresponds to an absolute quantity, which could be interpreted as a budget that must be distributed over time. On the other hand, the amended ECL refers to "corresponding to a domestic reduction of net greenhouse gas emissions by 85% compared to 1990 levels by 2040". However, this is not a budget, but a target for a specific year. If the permitted share in the year 2040 is 5% and, at the same time, credits may be used from 2036 onwards, the total may exceed 236 $MtCO_2e$. To illustrate this, we interpret three scenarios that capture a plausible range of the distribution of credits from 2036 to 2040[7]:

1. **EU Scenario A (ramp up):** from 1% in 2036 to 5% in 2040, i.e. 2036 = 1%, 2037 = 2%, 2038 = 3%, 2039 = 4%, 2040 = 5%.
2. **EU Scenario B (cumulative):** total of 5% distributed equally across five years.
3. **EU Scenario C (upper bound):** 5% for each year from 2036 to 2040.

Table 1 shows that the main uncertainty is not the 5% ceiling itself, but the time profile implied by the legal wording. In a narrow reading (Scenario B), the result is a total of 236 $MtCO_2e$. In contrast, allowing the use of 5% of 1990 emissions annually from 2036 (Scenario C), the implied total "budget" over the five years is 1,182 $MtCO_2e$. A middle reading of a linear increase (starting at 1%) toward the ceiling produces a cumulative volume of around 709 $MtCO_2e$.

Table 1: Three scenarios for maximum permissible Article 6 quantities ($MtCO_2e$)

Scenario	2036	2037	2038	2039	2040	∑ 2036–2040 (% of 1990 emissions)
EU Scenario A (ramp up)	47	95	142	189	236	**709** (15%)
EU Scenario B (cumulative)	47	47	47	47	47	**236** (5%)
EU Scenario C (upper bound)	236	236	236	236	236	**1,182** (25%)

[6] According to the 2023 EU GHG inventory submitted to the UNFCCC (Total net greenhouse gas emission trends and projections in Europe | Indicators | European Environment Agency (EEA)). Based on a target reduction of 90% compared to the same baseline (1990), in 2040, the 5% for international credits would correspond to 50% of the net emissions.

[7] The analysis only considers potential quantities. It does not assess credit quality or potential eligibility conditionalities for the credits. The focus is on the 2036–2040 timescale only and does not address the optional pilot period (2031–2035) or any post-2040 phase-out pathway. It also does not cover operational market constraints that could matter in practice.

Besides the determination of the total permissible amount, the exact rules will also play a role for total quantities. If, e.g., in the "upper bound" scenario the annual use of Article 6 credits in early years is below the allowed 5% of 1990, it will depend on the rules for the use of these credits whether the unused permissible amount in a given year can be used in a later year, possibly exceeding the 5% in that year. The precise rules matter not only in the context of determining the total permissible amount but also as a market signal.

Before going on, note that the amended ECL also mentions the option that Member States may use Article 6 credits for up to 5% of their post-2030 targets/efforts. This Member State flexibility may be limited to non-ETS sectors under Article 11(g) and can be interpreted either as part of the same 5% cap under Article 1 with no additional volume created or as additional volume that comes on top of what is defined under Article 1.

2.2 Allocating Article 6 credits among different sectors

Having determined the maximum Article 6 credit volumes that could be used annually between 2036 and 2040 (see Table 1 above), the question arises as to how these would be distributed among economic sectors, a matter on which the European Commission plans to make a proposal towards the fourth quarter of 2026 (EC 2026a).

There are several ways to distribute Article 6 credits across sectors under different instruments. Importantly, accepted Article 6 credits could be allocated among sectors or instruments either *a priori* or *ex-post*. An *a priori* allocation would entail reserving a specific maximum number of credits potentially available for use by each sector, subject to rules yet to be defined. In contrast, an *ex-post* allocation would base the distribution on sectoral developments. For instance, if high mitigation costs were the allocation criterion, credits could be distributed based on sectoral mitigation costs at the end of the year. A comparison between the two approaches falls outside the scope of this paper.

One a priori approach would be to allocate Article 6 credits according to current or projected future emissions. An alternative approach would use the current EU policy framework and architecture as the basis for the distribution decision. As both EU ETS 1 and EU ETS 2 are cap-based systems, projecting their cap forward to 2040 provides an indication of the level of mitigation ambition foreseen for those sectors. The gap between those instrument-wide emission levels and the EU-wide minus 90% mitigation target could then serve as a proxy for the emissions expected to remain in non-ETS sectors. For example, the 5% could be split three ways: between EU ETS 1, EU ETS 2 and sectors not covered by these instruments, with the share varying based on concrete policy decisions.

Within an architecture-based approach, however, two contrasting conclusions are possible. On one hand, high-ambition sectors could be seen as candidates for flexibility mechanisms as an account for the higher mitigation effort. On the other hand, flexibilities could be directed toward sectors with lower ambition, on the grounds that these likely represent areas where decarbonization is expected to be more difficult by 2040 and may therefore require more flexibilities from Article 6 credits. Following this logic, a sector such as agriculture (which constitutes large part of non-ETS sector emissions) could receive a higher share of Article 6 credits, reflecting the challenges inherent in their decarbonization.

The decision on how to distribute the total volume of Article 6 credits across sectors remains a political choice. It should be informed by a range of considerations, including the needs of hard-to-abate sectors and the case for temporal or structural flexibility in decarbonization pathways

across different parts of the economy.[8] While this question is important, it is not the focus of this paper. The remainder of this paper instead examines the ways in which Article 6 credits could be integrated into the EU ETS 1, independent of the absolute quantities to be included.

[8] Hard-to-abate sectors and emissions have not yet been defined in the ECL.

3 Centralized governance of Article 6 credits

In this chapter, we briefly outline why an intermediary represents a better approach to integrating international credits into the EU ETS 1 in case the regulator chooses to allocate a certain percentage of Article 6 credits to the covered sectors (see chapter 2). More specifically, we argue that an intermediary is preferable to a direct integration (leaving the total credit volumes at the discretion of individual entities) or a hybrid model with some supply and demand controls (e.g. through imposing individual quota on operators).[9] Potential downsides from a centralized intermediary (e.g. delays in decision-making or high system costs) need to be carefully managed.

The following section discusses core functions that the intermediary should fulfil across the central components of sourcing, market-volume control, and funding management. Throughout, the objectives of high environmental integrity, social equity, and economic efficiency of the instrument will be considered.

Effective management of high-quality Article 6 credit sourcing

First, a centralized procurement body can **help establish a structured and robust demand signal for *high-quality* Article 6 credits**. By aggregating demand and entering procurement contracts proactively, the intermediary can create price and volume visibility at scale and over the required timeframe that individual market actors – especially in a nascent Article 6 market – cannot generate on their own. Such a discovery function can help understand and counter the risk of slow and limited uptake of suitable Article 6 activities.[10] This benefit becomes clear when the setting is compared to the EU's experience from fragmented, decentralized and direct procurement by individual operators under the JI and CDM. Without clear demand for high-quality credits, this resulted in a focus on cost-minimization with limited attention paid to long-term impacts and quality concerns (Oeko-Institut 2016; Schneider & Kollmuss 2015).

Second, a centralized body can **support the definition and application of specific *quality criteria***, which the ECL explicitly refers to in Article 5(a). This could include, for example, requirements on eligible technologies' transformative potential or partner countries' climate ambition to enhance environmental integrity and co-benefits. The sourcing also needs to be **aligned with strong social and environmental safeguards**, such as provisions to uphold indigenous rights or significantly increased shares for cancelling credits to ensure global mitigation effects. The ECL encourages the consideration of further conditions "complementing the criteria laid down under Article 6(4) of the Paris Agreement". Both for the definition and operationalisation, valuable information can be obtained through direct engagement with host countries. An intermediary on the EU level is well-positioned to facilitate this learning, building on existing structures and initiatives.[11]

Third, **cooperative approaches under Article 6.2 present opportunities for bilateral collaboration and should be embedded in the EU's wider climate diplomacy efforts.** The Article 6 framework entails significant complexities and is closely tied to the NDC process as

[9] The International Carbon Action Partnership provides a conceptual differentiation of these three governance models for integration of removals. The hybrid approach ("Model C: Connected with restrictions") mostly allows quantitative oversight over credit volumes but has limited options to dynamically adjust the other levers outlined in this section (ICAP 2021).

[10] It does so at least indirectly by providing a demand signal. The Environmental Defense Fund outlines the time and coordination requirements for the EU to facilitate a supply of high-quality credits (EDF 2026).

[11] See, for example, the Task Force on international carbon pricing and market diplomacy or the EC funded Integrated Assessment for Article 6 project (European Commission | DG CLIMA | Taskforce year in review)

existing guidance on applying Article 6 shows (PCG 2025, Johnstone et al. 2025). While there are notable initiatives by Member States (e.g. Sweden), the governance role as it relates to central policy instruments and Union-wide targets appears to be best-placed at the EU rather than national level to ensure concerted alignment with the UNFCCC processes. The centralized intermediary that assumes the sourcing function can also **inform the strategic prioritization of bilateral partnerships and institutionalize their ongoing management.** This can enhance EU's broader climate diplomacy, development cooperation, and technology transfer. Aligning Article 6 procurement with EU foreign and development policy objectives is an important task for ensuring coherence across the international climate policy agenda. The EU has an international responsibility and own interest to drive decarbonization efforts globally.

Oversight of credit inflow and use

First, the most critical governance function of a centralized procurement is its **ability to control the total volume, usage conditions, and timing of Article 6 credits that flow into the EU ETS 1**. A well-defined approach to target-setting and calibration of the integration of international credits requires dynamic and responsive management. Strict volume caps for Article 6 credits, phased by period and potentially differentiated by sector or installation type, are essential levers to reassure investors, covered entities, and the broader public that the EU's domestic emission reduction trajectory remains intact and credible.

Second, the ECL emphasises ***ambition*** **regarding the use of international credits.** At the system level, this means that cost savings should not deter domestic mitigation efforts or lead to long-term emissions lock-ins. A principled governance of the integration of "highest quality of international credits" into the EU ETS 1 could help mitigate these risks. By preventing a race-to-the-bottom on credit quality and price, an intermediary could also help reduce negative effects on the carbon price signal in the EU ETS 1 and avoid arbitrarily shifting decarbonization burdens and investments abroad. It could also contribute to enhancing the ambition of international climate change efforts, for example, through additional cancellations of credits (OMGE) or operationalising "*high ambition for the share of proceeds for adaptation and the sharing of mitigation benefits*" (EU 2026).

Third, the centralized approach to procurement of Article 6 credits could also **help at the level of individual regulated entities** in the EU ETS 1. Foremost, it keeps individual operators focused on their transition and decarbonization agenda. Companies would neither be incentivized to consider arbitrage costs from sourcing of credits nor would they be involved in the procurement process. As this all is centrally governed, there is **enhanced transparency and planning security** on market prices and decarbonization costs inside the EU ETS 1. Any integration of credits can risk deterring mitigation. However, companies delaying decarbonization investments, specifically due to higher uncertainty around market conditions, can be reduced compared to a direct integration approach.

Fourth, the institutional form of the centralized intermediary **allows for a balanced approach to moderating diverging interests**. The concrete design of the institutional setting and its functions strongly influences the operationalisation. Different arrangements to control the volumes that enter the EU markets are possible. It is important, however, that once established the institution remains relatively independent to avoid political uncertainty. Our discussion in chapter 4 presents various design options which strongly shape predictability and ultimately control over any additional volumes from Article 6 integration.

Management of financial flows

First, a centralized intermediary can enter early-stage procurement contracts that **provide revenue certainty for project developers**. This forward commitment function is particularly important for addressing the financing gap that constrains high-quality Article 6 project development, especially in countries with high investment costs and in sectors with substantial pre-financing requirements. Unlike voluntary carbon market buyers or individual ETS operators, a public or quasi-public procurement body can **take on financial and delivery risk that private actors may be reluctant to absorb**. This is a critical requirement for mobilizing a pipeline of high-quality projects and the uptake of activities with genuine additionality.

Second, an intermediary could **actively manage the procurement costs of Article 6 credits**. It could, for example, ensure cost-efficiency in the procurement, including by tracking and anticipating spreads between procurement costs and the price at which credits are entering the market for compliance use. Moreover, the intermediary would be well-positioned to manage currency and delivery risks and should aim to limit administrative costs.

Third, an intermediary could play a critical role in **identifying and implementing suitable financing arrangements for credit procurement.** Depending on the integration model (see chapter 4), the intermediary could use revenues from credit sales to finance further credit purchases or leverage alternative funding sources to support upfront procurement.

Fourth, if the cost of sourcing high-quality international credits is lower than prices achieved at marketization in the EU ETS 1, the integration will deliver **financial returns**. Depending on the specific institutional and financial design chosen, these **proceeds could be recycled into climate finance, used to subsidize the procurement of higher-cost but higher-quality credits, or returned to Member States or EU budgets**. The financial mechanics are briefly discussed in chapter 5.

Overall, an Article 6 integration into the EU ETS 1 via an intermediary allows more regulatory control and mitigates risks to the continued functioning of the EU ETS 1 and its role in achieving ambitious domestic mitigation. An intermediary can enhance transparency, achieve cost savings and safeguard environmental integrity. However, a successful implementation depends on the precise arrangements of how Article 6 credits are integrated. Different options for such an integration are analysed in the next chapter.

4 Intermediary approaches to integrating international credits in the EU ETS 1

Building on the case for centralized procurement presented in chapter 3, our analysis turns to the concrete institutional design options for integrating Article 6 credits into the EU ETS 1. Each option is assessed against five criteria:

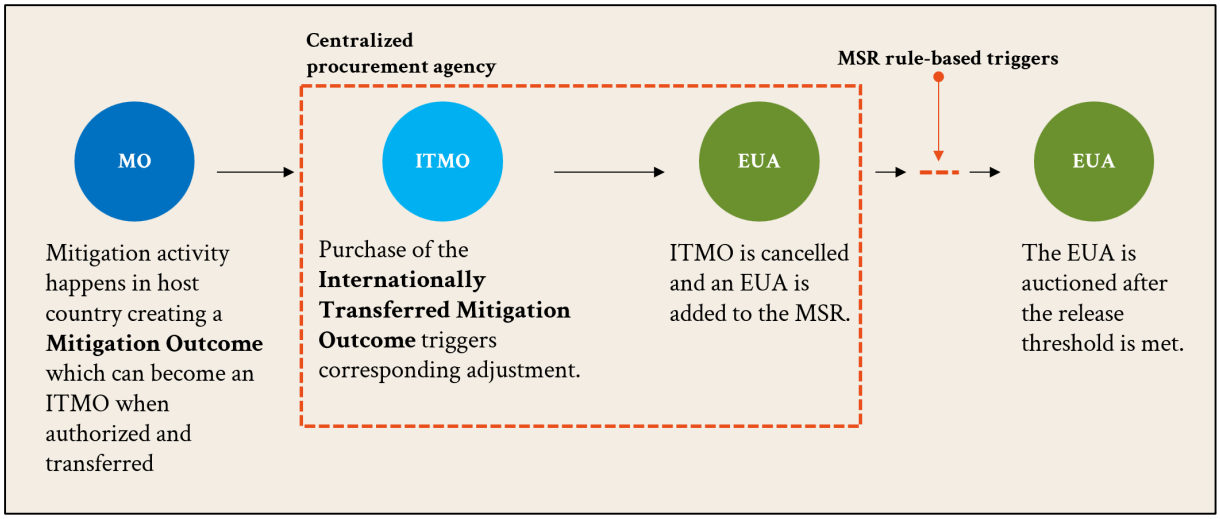
- **Alignment with decarbonization goals:** the extent to which a given design maintains incentives for domestic emissions reductions, remaining compatible with EU and international climate targets.
- **Preserved EU ETS 1 functioning:** ability to reduce negative impacts on EUA prices, liquidity, and market integrity.
- **Credit supply oversight:** the capacity under each design option to regulate and smoothen the inflow of credits into the market.
- **Potential cost reduction for regulated entities:** the extent to which the option may lead to reduced compliance costs for (some) regulated entities.
- **Financing favourability:** low or no pre-financing requirements and preserved revenue availability under each arrangement.

4.1 Designs for Article 6 credit integration

4.1.1 Option 1: Additional supply of EUAs through the Market Stability Reserve

Under this option, each international credit purchased by the centralized procurement agency for use in the EU ETS 1 is converted into one EUA, which is then deposited directly into the MSR. These EUAs are not released immediately into the market; instead, they follow the MSR's existing release logic and only become available for auction when the total number of EUAs in circulation falls below the lower threshold triggering releases. This option thus uses international credits to support the MSR's objective to smoothen liquidity and volatility in the EU ETS 1 market. In the upcoming EU ETS 1 review, the design of the MSR might be adjusted, including the possibility of dynamic releases or price triggers and changes to invalidation rules. These adjustments may affect the precise impacts from this option.

Figure 1: Option 1 – Additional supply of EUAs through the Market Stability Reserve



Source: own illustration, The Climate Desk

Alignment with decarbonization goals

A possible price suppression effect from integrating Article 6 credits via the MSR is softened through the reserve's indirect and conditional release into the market. However, this option leads to an overall increase of the cap, thereby reducing the decarbonization ambition required from regulated entities. At the same time, additional mitigation abroad may occur from credit purchases of high quality and with stringent requirements for benefit sharing and cancellations; this applies to all four options. Finally, specific to Option 1, if some form of invalidation of EUAs from the MSR continues, there is a chance for international credits serving as a buffer, which may ultimately be cancelled rather than entering the market.[12]

Preserved EU ETS 1 functioning

The new EUAs deposited into the MSR following an Article 6 credit purchase will effectively increase the total allowed emissions under the EU ETS 1. Substantial quantities could suppress EUA prices and lead to lower decarbonization efforts within the EU. However, those additional credits will only enter the market once the MSR starts to release EUAs, and following its rules, which include an upper-bound limit of certificates to be released every year. The inflow of certificates will thus be distributed over a longer period, limiting the risk of suppressing EUA prices prematurely or undermining the decarbonization signal of the carbon price.

Credit supply oversight

The additional volume of EUAs created under this option depends on the actual number of ITMOs purchased by the centralized procurement agency. If fewer credits are purchased, fewer EUAs will be created accordingly, making the estimated totals (see chapter 2) a ceiling rather than a guaranteed supply. The financial endowment and the strength of the mandate given to the centralized agency will influence the market confidence about whether those quantities will eventually become available. In this option, however, any additional EUAs entering the market are not only steered by the intermediary but also subject to the governing rules of the MSR.

Potential cost reduction for regulated entities

Under this option, cost reduction for regulated entities does not arise from a direct supply injection but from an intertemporal price effect: the MSR releases EUAs for a longer time at

[12] The European Commission has proposed to cease the invalidation of allowances from the MSR (EC 2026b). However, this is still subject to negotiation and approval. Additionally, there could be differentiated treatment of EUAs backed by international credits.

constant annual release volumes. The annual release rate is bounded by the existing MSR rules. Cost relief is therefore spread over time rather than delivered upfront, and its size in any given year is limited. For regulated entities, the extended MSR release period keeps EUA prices lower than they would otherwise have been in a tightening market, with additional benefits when the MSR will be revised to more promptly respond to short term liquidity shortages.

It must be noted that this option does not strengthen the mitigation ambition unless the EUAs backed by Article 6 credits in the MSR are also subject to an invalidation rule.

Financing favourability

This option carries significant pre-financing requirements. The centralized agency must purchase ITMOs upfront, while the auction revenues from those EUAs will only materialize once the MSR starts releasing these volumes over time. This creates a structural funding gap that needs to be bridged. Such a funding need might create a trade-off with other potential uses of available revenues and a differentiation between regular and Article 6 backed EUAs would need to be defined.

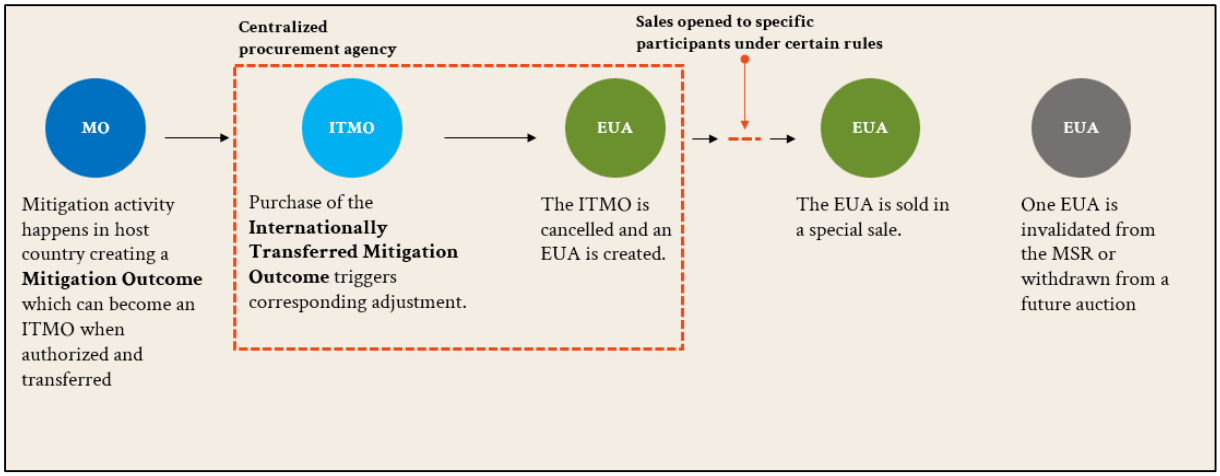
4.1.2 Option 2: Sale of EUAs through a separate mechanism

Under this option, Article 6 credits are converted into EUAs and released to the market through a dedicated mechanism, operating under its own rules, separate from both standard auctions and the MSR. Each ITMO cancelled by the centralized procurement agency gives rise to one EUA, which is then offered through a special sale.

One concrete design being discussed (ERCST 2025) could work as follows: the EUAs created from cancelled ITMOs are sold at a minimum price set at a fixed share of the prevailing EUA price in the relevant period, for example 70%.[13] Access to these special sales would be restricted to a defined subset of regulated entities, each subject to a maximum purchase limit expressed as a percentage of their verified emissions in the preceding compliance period, for example 5%. The entities eligible to participate could be based on considerations of what constitutes “residual emissions”. To preserve cap integrity, each EUA sold through this separate process would be offset by either cancelling one EUA held in the MSR or deducting it from an upcoming auctioning round.

[13] The proposal from the ERCST discussion paper suggests auctioning the new EUAs with a price floor which may decrease the cost savings potential but increase the revenues available to the regulator.

Figure 2: Option 2 – Sale of EUAs through a separate mechanism



Source: own illustration, The Climate Desk

Alignment with decarbonization goals

This option has the advantage of being potentially cap-neutral, therefore allowing to meet the current decarbonization goals but with targeted cost reductions. Furthermore, by restricting the sale of the EUAs created from international credits to sectors with residual emissions, the option can be designed to serve a targeted industrial policy function instead of general cost-reduction or liquidity management. The price floor combined with cap-neutrality (i.e. keeping the overall number of EUAs the same) preserves the decarbonization incentive and has the potential to help close climate ambition and implementation gaps on a global level.

Preserved EU ETS 1 functioning

The combination of a price floor and individual purchase limits is the key design feature protecting the integrity of standard EUA auctions. By ensuring that special sale EUAs cannot be acquired below a set share of the market price, the mechanism prevents (cheap) international credits from undermining the prevailing carbon price signal.

Credit supply oversight

An advance calendar for the special sales can be established, indicating the volume of EUAs to be made available in each period, based on the maximum Article 6 flexibility allocated to the EU ETS 1 for that year (see chapter 2). If the centralized agency is unable to procure the full maximum volume, an adjustment mechanism would be necessary to define which entities can purchase how many units. This could be proportional (e.g. each eligible entity can purchase up to 3% of their verified emissions instead of 5%) or following a ranked approach prioritising certain sectors. Conversely, when procured volumes exceed actual demand in any year, EUAs from credits can be banked to smoothen supply in subsequent years and avoid unnecessary market corrections. This option maintains the total number of available EUAs inside the cap, regardless of the intermediary's success to procure credits.

Potential cost reduction for regulated entities

This option is the most direct mechanism for reducing compliance costs for a selected set of regulated entities. If ITMOs are procured below the prevailing EUA price, special-sale EUAs offer installations a genuine discount on a portion of their compliance obligation, leveraging precisely the comparative advantage in abatement costs that underpins the economic logic of Article 6. Following the cancellation of EUAs from the MSR or future auctions, mitigation costs for other entities are unchanged and a waterbed effect is avoided.

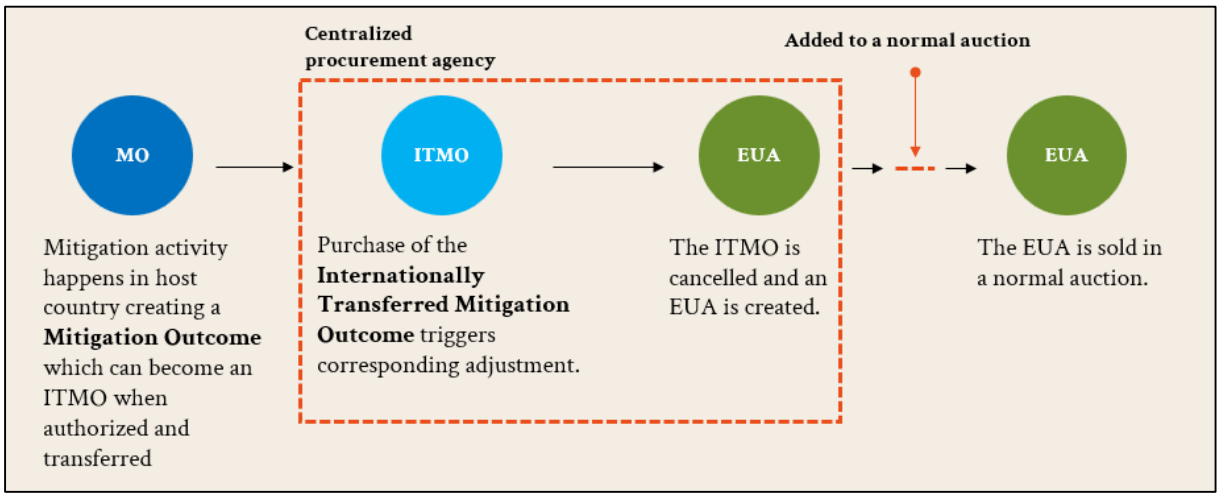
Financing favourability

This option requires only initial seed financing. The revenues from the first special sale can directly finance subsequent procurement rounds. Depending on the spread between ITMO prices and the special sale price floor, the mechanism may generate more revenues than what is needed to sustain procurement. While potentially foregoing some revenue from cancelled EUAs, any structural rent from the difference between procurement costs and special sale revenues is captured by the regulator.[14] This funding is then available for reinvestment to enhance overall climate ambition constituting a central principle of Article 6.

4.1.3 Option 3: Additional supply of EUAs and sale through standard auctions

Under this option, the centralized procurement agency purchases and cancels ITMOs with each cancelled credit giving rise to one additional EUA. These EUAs are then released into the market through the standard EU ETS 1 auction platform, following a pre-defined and publicly announced schedule. Unlike Option 2, no price discount is applied and no entity-specific purchase limits imposed. The additional EUAs enter the auction platform together with regularly scheduled EUAs and are accessible to all compliance entities, effectively increasing the cap.

Figure 3: Option 3 – Additional supply of EUAs and sale through standard auctions



Source: own illustration, The Climate Desk

Alignment with decarbonization goals

Like Option 1, this design formally increases the total number of EUAs in circulation and thus expands the total quantity of emissions allowed under the EU ETS 1. Unlike Option 1, however, the additional EUAs reach the market directly and in line with the auctioning calendar through auctions rather than being buffered by the MSR. This makes the cap expansion more immediate: the weakening of the scarcity signal for domestic emissions is proportional to the increase in auctioning volume.

Preserved EU ETS 1 functioning

This option creates an immediate EUA price suppression effect, since the additional EUAs are auctioned together with regular EUAs and not buffered in time. The downward pressure on EUA prices is a function of the volume of EUAs introduced. A lower future carbon price, consequence of the higher supply, weakens the business case for long-term investments in clean technology

[14] As opposed to the experience with JI and CDMs where the rent due to the spread between EUAs and international credits price was effectively captured by compliance actors.

and processes. While the auction calendar provides some transparency that is absent in Option 1, it is more susceptible to uncertainties about the total number of credits the intermediary is ultimately able to procure.

Credit supply oversight

As for the other options, the volume of additional EUAs is bound by the maximum international credits quota for EU ETS 1 use. The auction schedule can be designed to distribute the additional supply over the relevant period, avoiding front-loading that could destabilize the market. If procurement from the centralized agency falls short of the planned volume in a given year, the auction quantities will have to be adjusted downward. Alternatively, the auctions schedule could be kept in which case the regulator will bear the risk of procurement potentially resulting in overall emissions under the EU ETS 1 increasing further and procurement costs to rise (also see Option 4).

Potential cost reduction for regulated entities

This option – like Option 1 and in contrast to Option 2 - delivers cost relief to all regulated entities through higher volumes and thereby lower auctioning prices. All regulated entities benefit proportionally (based on their emissions) from the introduction of international credits.

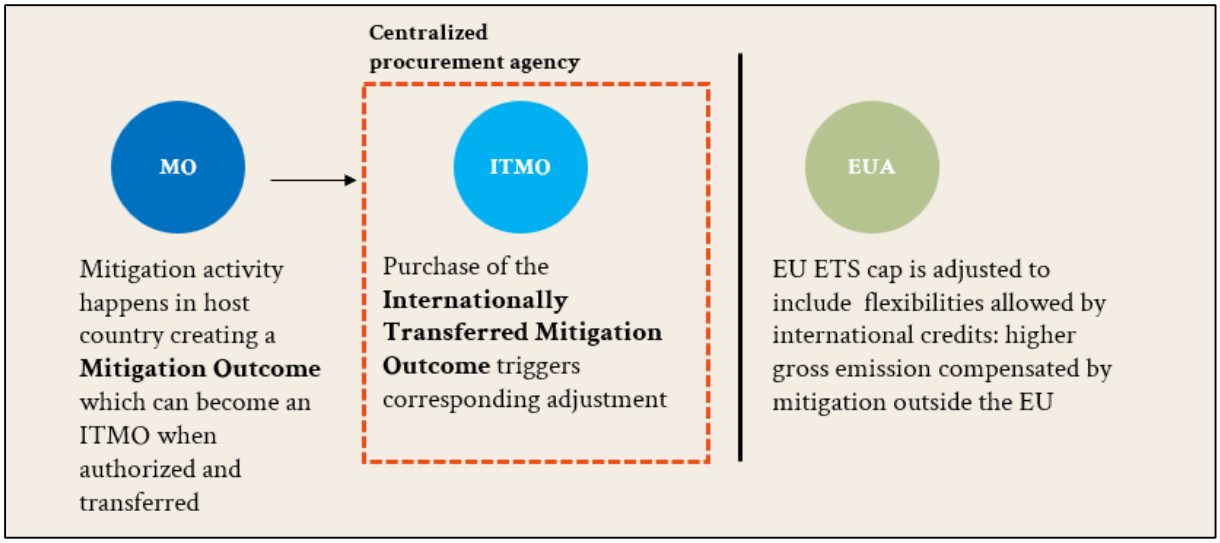
Financing favourability

Similar to Option 2, the design is favourable in terms of financing: the additional EUAs are auctioned at market price, here without any discount applied. If ITMOs are procured at prices below the EUA auction clearing price, the spread between procurement cost and auction revenue generates a structural surplus that can finance following procurement rounds or be directed toward other climate objectives. Like for the other options, there could be a reduction in overall revenues; in this case this depends on the size of the price suppression effect.

4.1.4 Option 4: Ex-ante cap expansion

Under this option, the EU ETS 1 cap trajectory is formally revised upward to reflect the volume of international flexibility allocated to the EU ETS 1. Rather than creating additional EUAs after ITMOs are procured and cancelled, the cap adjustment is made ex-ante, assuming that the centralized procurement agency will be able to purchase the full volume of credits allocated for this purpose. Like with Option 3, the additional EUAs are auctioned according to the standard schedule, without any dedicated mechanism to separate them from the regular auction supply.

Figure 4: Option 4 – Ex-ante cap expansion



Source: own illustration, The Climate Desk

Alignment with decarbonization goals

In practice, the effects on decarbonization incentives are similar to Option 3 and proportional to the volumes allowed for inclusion in the EU ETS 1. As for all other options, part of domestic decarbonization investment is redirected towards international mitigation. Additionally, the structural dependency on international credits fostered by this option may increase the political pressure to keep such "flexibility" after 2040 and may lock in a problematic reliance on offsets. A credible long-term decarbonization trajectory requires that EU ETS 1 participants internalize the expectation of a progressively tighter cap. A direct and unconditional cap expansion weakens that signal fundamentally. This concern is echoed by the European Scientific Advisory Board on Climate Change warning against credit access that is perceived as a long-term rather than transitional feature of the system (ESABCC 2025). Additionally, if the intermediary is not able to procure the necessary high-quality credits, emissions under the EU ETS 1 increase further.

Preserved EU ETS 1 functioning

Similar to Option 3, this option creates an immediate price suppression effect. This is strengthened by the fact that additional EUAs will become available independently from the actual procurement of ITMOs. While this option preserves predictability regarding the total number of EUAs available, the carbon price signal and consequently the system integrity are strongly affected by the cap expansion.

Credit supply oversight

Because the cap is set ex-ante based on the assumption of full procurement, any shortfall in actual ITMO purchases creates a gap and a net increase in emissions. While the total number of EUAs can be defined upfront, the inability to react to uncertainties in price and availability of high-quality credits leads to a lack of control regarding the overall (net) emissions within the system.

Potential cost reduction for regulated entities

Similar to Option 3, all regulated entities benefit from the downward effect on market prices from the outset as soon as the revised cap enters into force. There is no targeted reduction of compliance costs but rather a discount proportional to entities' emission levels.

Financing favourability

As the cap is expanded, a share of it will be auctioned at the prevailing market price, generating auction revenues independently from the procurement activities. Provided the auction schedule is sequenced appropriately, the revenues from auctioning of the additional EUAs can be used directly to fund ITMO purchases, eliminating the need for bridge financing or advance budget allocations. There is no timing mismatch between expenditure and revenue, and no illiquid reserve position to manage. However, there is the risk that if international credits of sufficient quality are only available at very high costs (i.e. procurement costs exceeding the revenues from the share of the expanded cap that is auctioned), this would need to be absorbed by the regulator.

4.2 Cross-cutting safeguards

The four options introduced in the previous subchapter differ significantly across the five assessment criteria. Before providing an overview in the next subchapter, this section briefly outlines safeguards that could be implemented across the different options (except Option 4) to mitigate some of the common risks identified.[15]

The following provisions could contribute to safeguarding a beneficial integration of international credits:

- Credit integration based on **price difference**: When the price of available Article 6 credits meeting stringent quality criteria exceeds a certain percentage (e.g. 70%) of the price of EUAs, the intermediary could cease credit purchases. This helps avoid an implementation without any cost savings or financial losses for the regulator. Weakening quality criteria is not an appropriate response to high prices as this would interfere with other principles and is likely to reduce mitigation ambition.
- Credit integration based on **total procurement costs** compared to EU ETS 1 revenues: Similarly to the previous safeguard, when the overall costs from procuring international credits are higher than a certain percentage of total EU ETS 1 revenues additional purchases could be halted.
- Credit integration based on entities' **compliance costs**: Besides reducing the credit supply based on costs, an intermediary could also decide to limit the allocation to a certain subset of entities regulated by the EU ETS 1. For example, the eligibility to buy EUAs from Article 6 credits could be restricted to installations whose carbon costs exceed a certain share of their total sales. This is a basic implementation of the targeted approach already introduced by Option 2. This may improve a more efficient allocation of cost savings to particularly exposed sectors but could also introduce perverse incentives to delay decarbonization.
- Additional **cancellation of credit-backed EUAs**: The intermediary could retain the option to invalidate EUAs if the market turns out to be oversupplied. This could be implemented by letting the EUAs based on Article 6 credits be affected by the MSR invalidation rule or by designing a specific ad hoc rule. This could help reduce negative impacts on the alignment with decarbonization goals for Options 1 and 3. However, there may be negative financial impacts as the expected revenues would not materialize.

[15] These safeguards generally do not apply to Option 4 as its ex-ante increase of the cap does not afford the regulator the opportunity to decide whether or not to procure international credits.

The overall purpose of these safeguards is to further limit the total number of international credits when their use may undermine the objectives of the integration. The outlined provisions can mitigate negative impacts on the financing favourability and cost saving potential. However, for the options with ex-post cap-adjustments (Options 1 and 3), a short-term reduction of available credits may increase uncertainty and interfere with robust market functioning. Overall, introducing such safeguards could support an implementation that contributes to a precautionary approach using Article 6 credits as a safety net rather than a flexibility mechanism.

4.3 Overview of advantages and disadvantages of integration options

The table below summarises the expected impacts across the five assessment criteria comparing the four different options. The results are classified on a 4-point scale from high (positive) to low (negative). Option 1 (MSR Route) and 2 (Special Sales) perform better in the areas signalling limited interference with the market system and a high level of control over the inflow of credits. Both are generally more aligned with decarbonization objectives, though only Option 1 avoids an increase of the cap and may increase global ambition. Option 3 (Standard Auctions) and especially Option 4 (Cap Expansion) are not expected to achieve good results across these three criteria but can reduce compliance costs without expensive financing arrangements. The latter does not apply to Option 1 which reduces prices very slowly at high upfront costs. Option 2, however, provides targeted cost reductions with quick refinancing at the system level.

Table 2: Comparison of the analysed policy options across the five assessment criteria

Criterion	Option 1: MSR Route	Option 2: Special Sales	Option 3: Standard Auctions	Option 4: Cap Expansion
Alignment with decarbonization goals	**Medium - High** Allowed emissions increase but buffered by MSR rules, no direct price suppression	**High** Cap-neutral design; targeted to sectors with residual emissions	**Medium - Low** Allowed emissions increase, weakens domestic abatement signal	**Low** Unconditional cap expansion risks locking in credit dependency and emissions overshoot
Preserved EU ETS 1 functioning	**High** Credits only reach market when liquidity is needed	**High** Price floor and volume limits protect auction integrity	**Medium - Low** Direct price suppression proportional to volume injected	**Low** Direct price suppression and no conditionality on actual procurement
Credit supply oversight	**High** MSR rules cap and govern inflow	**High** Targeted by sector; possible proportional adjustment	**Medium - Low** Predictable but procurement shortfalls require adjustments	**Low** Increase is set ex-ante; very limited ability to react to procurement shortfalls
Potential for cost reduction	**Low** Indirect, spread over time via longer MSR releases	**High** Direct discount for eligible entities, targeted and immediate	**Medium - High** Indirect but broad, through lower auction clearing prices (limited by procurement)	**High** Indirect but broad, through lower auction clearing prices (independent from procurement)
Financing favourability	**Low** Large upfront cost, delayed revenue recovery	**Medium - High** Self-financing after seed capital; direct (though slightly reduced) revenue recovery	**Medium - High** Self-financing after seed capital; full market price recovered at auction	**High** Revenues generated upfront; no seed financing needed; risk of high credit prices

5 Discussion

Any integration of international credits into the EU ETS 1 is a complex endeavour with many relevant dimensions that should be carefully considered before making a decision. While this paper focused on analysing and comparing several potential options to use an intermediary to purchase and allocate Article 6 credits, important considerations were intentionally set out-of-scope for the purposes of this review but deserve closer examination. One of these issues is whether to integrate international credits into the EU ETS 1; while we assume this in the paper to be able to analyse different integration options, such a decision must be analysed comprehensively taking all sectors into account over the long term.

Another important issue concerns the potential financial impacts from a centralised purchase of international credits, which depends on many variables. For the transactions to generate net financial benefits for the centralized intermediary requires that, even with stringent safeguards as well as high quality and benefit sharing requirements, Article 6 credits are available at a lower cost than domestic mitigation options for regulated entities between 2036 and 2040. The size of the monetary benefit is contingent on the difference between the proceeds from the sale or auction of Article 6 backed EUAs and the overall expenses to finance the (upfront) purchase of credits.

These costs are influenced by the overall credit volume, the share of proceeds for the Adaptation Fund (SOP), cancellation for global mitigation (OMGE), mitigation outcomes retained by the host country and the price paid per transferred credit.[16] Additional fixed and variable costs incur from the operation of the intermediary function. This may include the management of the funds and bilateral partnerships to purchase credits, securing against reversal risks and project defaults (e.g. through financial buffers or continuous monitoring), or direct support in building the project pipeline (e.g. capacity building or upfront finance). On the revenue side, the main impacts from an Article 6 integration originate from changes to the number and price of EUAs sold. These effects are usually working in opposite directions (decreased cap leading to higher price per EUA, and vice versa) and therefore highly uncertain.

Any decision on a particular design for Article 6 integration into the EU ETS 1 should take trade-offs into account, some of which we showed in this paper. Importantly, there is an opportunity cost of purchasing international credits that may divert funding available for transformational decarbonization investments inside the EU. At the same time, when used towards its own targets, this funding cannot be counted towards the EU's international climate finance responsibilities. Additionally, other important caveats concern the environmental integrity of international carbon credits. Among other risks, there is potential for perverse incentives in countries hosting the projects, undermining global climate ambition (Schneider & La Hoz Theuer 2018). Another trade-off exists between the quality (i.e. environmental and social integrity) and cost reduction potential (i.e. mitigation costs including safeguards) of Article 6 credits. These trade-offs can be mitigated through careful policy design and sustained engagement with partner countries but require continued attention from policymakers.

[16] These parameters are essential for environmental and social integrity considerations and should go significantly beyond the mandatory minimum shares to meet the quality requirements set out in the ECL; for example, 10%, 10%, and 30% for SOP, OMGE, and benefit sharing, respectively (see Schneider et al., 2025).

6 Conclusions

This paper has presented and contrasted four policy design options for indirectly integrating international credits from Article 6 into the EU ETS 1 with respect to five main criteria: alignment with decarbonization goals, preserved EU ETS 1 functioning, credit supply oversight, potential for cost reduction, and financing favourability. Furthermore, it has identified several cross-cutting safeguards that could further help reduce integration risks.

Based on the criteria laid out in this paper, no option scores highest across all dimensions. In particular, options that score highest in financial favourability and potential cost reduction are less able to manage decarbonization incentives. The inverse is also true: higher control over supply flows and more stringent alignment with decarbonization incentives tend to reduce the financial and cost-saving potential of the option. Nonetheless, Option 2 emerges from this analysis as a worthwhile candidate for further investigation, as it allows for targeted cost reduction while being the only option that is potentially fully cap-neutral. However, this option may also be more complex to implement, as it is likely to require the establishment of additional institutional arrangements, a criterion that has not been the focus of this paper. Conversely, raising the cap ex-ante appears to be a less suitable approach, primarily because it risks locking in credit dependency, causing immediate price suppression effects, and severely limiting the intermediary's ability to react to procurement shortfalls.

The analysis in this paper indicates that, when carefully designed, a cost saving potential could materialise while upholding the internationally agreed principles of common but differentiated responsibility and the need for Article 6 to increase global climate ambition. However, this is highly dependent on the precise implementation and caution should be taken for any approach to integrate Article 6 credits into the EU climate architecture in general and the EU ETS 1 in particular.

Future work could focus on assessing detailed provisions to implement the various options, assessing and comparing their potential effects, including through quantitative models. Additionally, more research and deliberation should go into the specific quality criteria and strategies to engage with host country partners to ensure environmental and social integrity for any supplied credits.

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