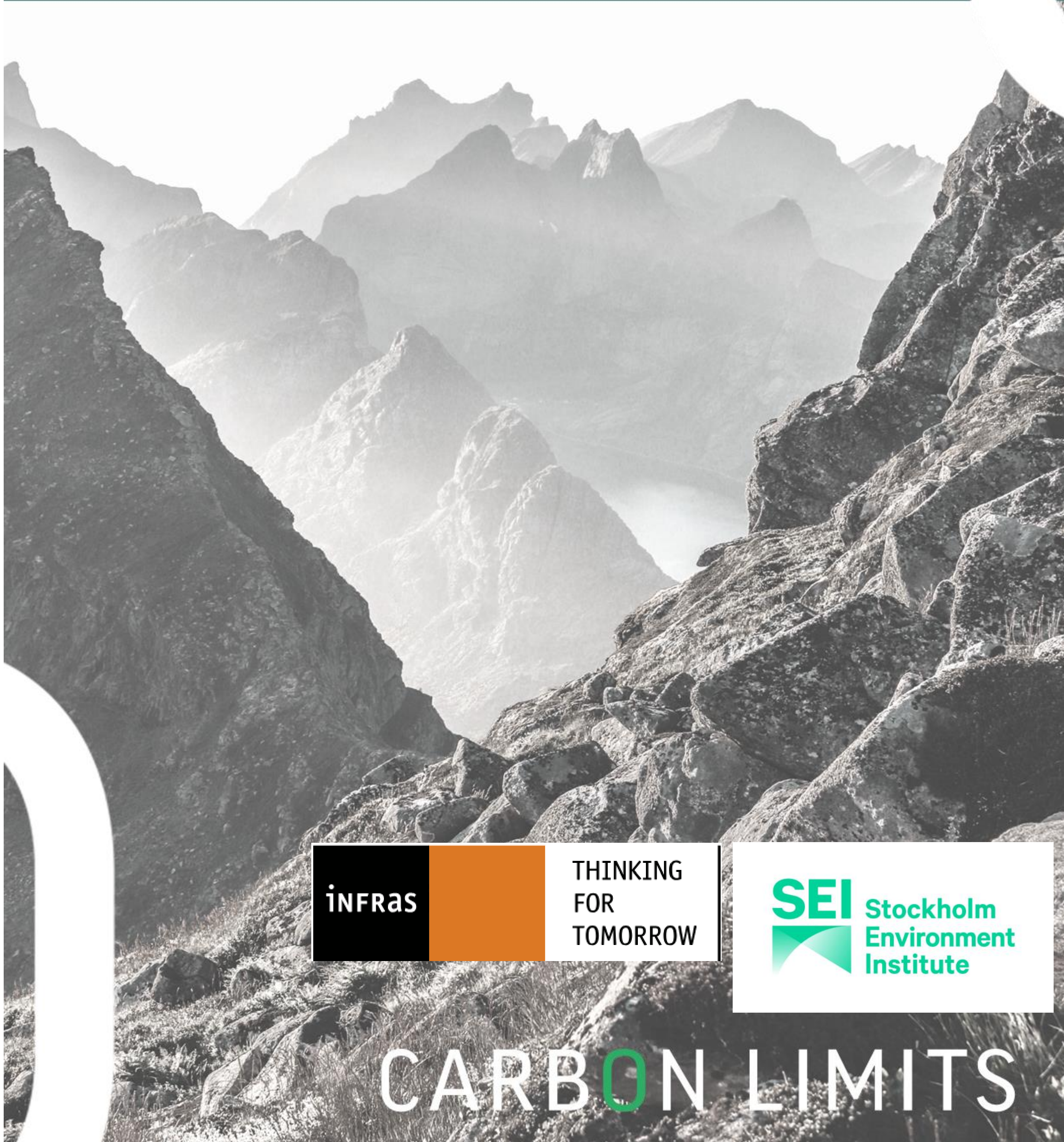
Host country strategies for identifying and managing overselling risks under Article 6

December 2023



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Host country strategies for identifying and managing overselling risks under Article 6

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Carbon Limits works with public authorities, private companies, finance institutions and non-governmental organizations to reduce greenhouse gas emissions from a range of sectors. Our team supports clients in the identification, development, and financing of projects that mitigate climate change and generate economic value, in addition to providing advice on the design and implementation of climate and energy policies and regulations.

Executive Summary

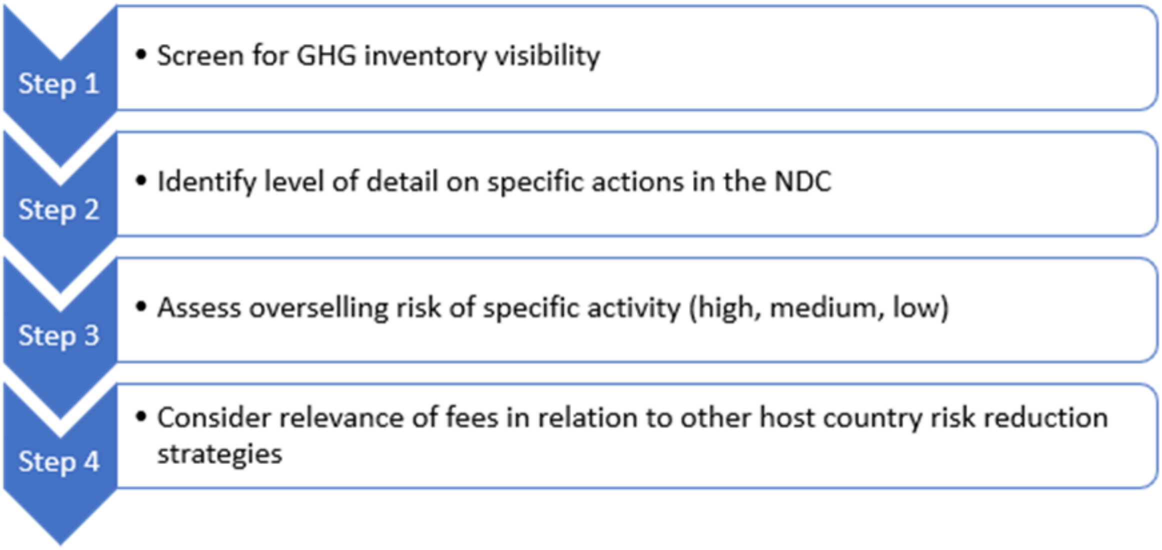
Article 6.2 of the Paris Agreement allows countries to voluntarily cooperate in the implementation of their NDCs through the international transfer of mitigation outcomes (i.e., emission reductions and removals). The objectives of Article 6 are to enable greater ambition in mitigation and adaptation actions and to promote sustainable development. To prevent the double counting of mitigation outcomes, whenever countries transfer mitigation outcomes, they must implement "corresponding adjustments" when reporting on NDC progress. For a host country, this is essentially adding back these transfers to its GHG inventory. This means that host countries must carefully consider whether mitigation activities should be used for achieving NDC goals or for Article 6 trading, because they cannot be used for both. Several papers in recent years have explained the "overselling risks" for host countries and the broad strategies to reduce these risks (Spalding-Fecher et al. 2020; Spalding-Fecher, Macias Diaz, and Guzman Barraza 2022; World Bank 2022; Kreibich and Brandemann 2021; Spalding-Fecher and Galt 2023).

As more countries begin to pilot Article 6 activities, develop Article 6 strategies, and formulate NDC implementation plans, one emerging lesson is that managing overselling risks depends on both the characteristics of the specific proposed cooperative mitigation activity and the details of the host country's NDC goals and reporting frameworks (e.g., the GHG inventory that supports tracking NDC progress). For example, for low-cost activities where the host country was planning to use the mitigation in their own goals, transferring these mitigation outcomes poses more risk than transfers based on higher cost activities that were not considered part of any NDC implementation strategy. Another common theme in some emerging policy frameworks is that host countries are considering whether to charge additional fees for Article 6 activities. This may include fees that cover the domestic administration costs of Article 6 transfer, as well as fees that attempt to capture some of the "opportunity costs" of transferring mitigation outcomes that cannot now be used for domestic NDC goals. Even the idea of an opportunity cost, however, depends on the specific characteristics of a mitigation activity in relation to the host country's NDC plans. The best option is for Article 6 cooperation to be based on mitigation activities for which there is no overselling risk for the host country, and often, parties involved will have the flexibility to choose from a range of activities to identify the most appropriate. However, in practice many emerging Article 6 activities build on existing programs, technologies, development financing or other cooperative frameworks that were not originally formulated with the impact on the host country's NDC goals in mind.

The report introduces a framework for thinking about overselling risks for specific activities or activity types, in context of a given country's NDC, and then to explain how fees related to opportunity costs could fit into a broader set of strategies for reducing overselling risks. The framework also proposes how to prioritize different risk management strategies, and why fees may not, in many cases, be the most effective tool to address overselling risks. This is in the context of an ongoing dialogue among potential buyers and sellers about issues related to eligibility criteria, sharing of benefits and potential fees for Article 6 transactions, and also as part of developing Article 6 strategies and regulations.

This report provides a step-by-step process for assessing overselling risk and then identifying the most appropriate strategy to address that risk (Figure ES1). Because the risk depends on the specific mitigation activity, the process includes identifying how much information is available on the specific actions needed to meet the host country NDC. This result is an assessment of overselling risks of a specific activity in the context of the specific host country's NDC, and which can then determine whether the risk reduction strategies already implemented by the host country (if any) are sufficient to address these risks. If the risks are minimal, on the other hand, or if they have already been addressed in other ways, then there may not be a need for compensation or other additional risk reduction measures.

Figure ES1. Screening proposed Article 6 activities for overselling risks and strategies to address these risks



For host parties seeking to balance overselling risks with the desire to be an attractive destination for carbon finance, the government could consider the following overall approach:

- Create a "negative list" (i.e., no authorization of mitigation outcomes) for activities identified as posing a high risk for overselling.
- Creating a "positive list" (i.e., streamlined authorization process and no fees, sharing, or other risk management strategies) for activities identified as posing a low risk for overselling.
- For activities identified as having medium risk of overselling, prioritize using "NDC baselines" or "sharing mitigation outcomes" as risk mitigation strategies, that are likely to be the most effective and pose the lowest administrative burden on government.

Another important insight from this analysis is that charging fees to address overselling risks could be a challenging strategy to put into practice. In addition to the complexity of determining what an appropriate fee would be (e.g., based on an analysis of the "marginal cost of meeting the NDC", which very few countries have), this strategy requires the institutional, regulatory and technical infrastructure to collect these fees, identify alternative mitigation options outside the NDC plan, implement those mitigation options, and then generate verified mitigation outcomes quickly enough to replace transferred mitigation outcomes (i.e., in the same NDC period).

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Abbreviations

CDM	Clean Development Mechanism
GHG	Greenhouse Gases
HC	Host Country
ITMO	Internationally Transferred Mitigation Outcomes
MOs	Mitigation Outcomes
$mtCO_2$	Million tonnes of CO_2
NDC	Nationally Determined Contribution
SDG	Sustainable Development Goals
SEA	Swedish Energy Agency

1 Introduction

Article 6.2 of the Paris Agreement allows countries to voluntarily cooperate in the implementation of their NDCs through the international transfer of mitigation outcomes (i.e., emission reductions and removals). The objectives of Article 6 are to enable greater ambition in mitigation and adaptation actions and to promote sustainable development. To prevent the double counting of mitigation outcomes, whenever countries transfer mitigation outcomes, they must implement "corresponding adjustments" when reporting on NDC progress. For a host country, this is essentially adding back these transfers to its GHG inventory[1]. This means that host countries must carefully consider whether mitigation activities should be used for achieving domestic NDC goals or for Article 6 trading, because they cannot be used for both. Several papers in recent years have explained the "overselling risks" for host countries and the broad strategies to reduce these risks (Spalding-Fecher et al. 2020; Spalding-Fecher, Macias Diaz, and Guzman Barraza 2022; World Bank 2022; Kreibich and Brandemann 2021; Spalding-Fecher and Galt 2023).

As more countries begin to pilot Article 6 activities, develop Article 6 strategies, and formulate NDC implementation plans, one emerging lesson is that managing overselling risks depends on both the characteristics of the specific proposed cooperative mitigation activity and the details of the host country's NDC goals and reporting frameworks (e.g., the GHG inventory that supports tracking NDC progress). For example, for low-cost activities where the host country was planning to use the mitigation for their own goals, transferring these mitigation outcomes poses more risk than transfers based on higher cost activities that were not considered part of any NDC implementation strategy. Another common theme in some emerging policy frameworks is that host countries are considering whether or not to charge additional fees for Article 6 activities. This may include fees that cover the domestic administration costs of Article 6 transfer, and fees that attempt to capture some of the "opportunity costs" of transferring mitigation outcomes that cannot now be used for domestic NDC goals. Even the idea of an opportunity cost, however, depends on the specific characteristics of a mitigation activity in relation to the host country's NDC plans. Of course, the best option is for Article 6 cooperation to be based on mitigation activities for which there is no overselling risk for the host country, and often, parties involved will have the flexibility to choose from a range of activities to identify the most appropriate. However, in practice many emerging Article 6 activities build on existing programs, technologies, development financing or other cooperative frameworks that were not originally formulated with the impact on the host country's NDC goals in mind.

The purpose of this report is to introduce a framework for thinking about overselling risks for specific activities or activity types, in context of a given country's NDC, and then to explain how fees related to opportunity costs could fit into a broader set of strategies for reducing overselling risks. The framework also proposes how to prioritize different risk management strategies, and why fees may not, in many cases, be the most effective tool to address overselling risks. This is in the context of an ongoing dialogue among potential buyers and sellers about issues related to eligibility criteria, sharing of benefits and potential fees for Article 6 transactions, and also as part of developing Article 6 strategies and regulations. Of course, host countries may face a range of other pressures that affect NDC achievement, including economic growth, land use pressures, changes in international energy prices, trends in technology costs, and even conflict and migration. The purpose of this analysis, however, is to explain how to manage the NDC compliance risk that comes from authorizing *specific transactions*, not to assess the country's overall capacity to reach their climate and development goals. The latter is an important discussion, but outside the scope of this analysis.

This report can inform those dialogues and hopefully bring greater clarity to the rationale for different risk management strategies. The report does not address fees to cover administrative costs – or fees related to

[1] While the Article 6.2 guidance also allows for ITMOs in non-GHG metric, this analysis focuses on those in GHG metrics, in part because it is not clear whether there will by any buyers for non-GHG metric ITMOs in the short to medium term.

contribution to adaptation – both because these are likely to be much lower, and because they may vary according to the institutional capacity and access to international financing in different host countries.

Section 2 of this report introduces the concept of overselling risks and the different strategies available to address them. Section 3 presents an overview of the strategies that market players are implementing to address overselling risks. Section 4 outlines the process to identify the risks of specific activities in a specific host country, to inform a discussion about not only fees but also other strategies to reduce overselling risks. Section 5 provides examples of how different types of activities impact NDC costs. Finally, section 6 presents conclusions and recommendations.

2 Prioritizing strategies to address overselling risk

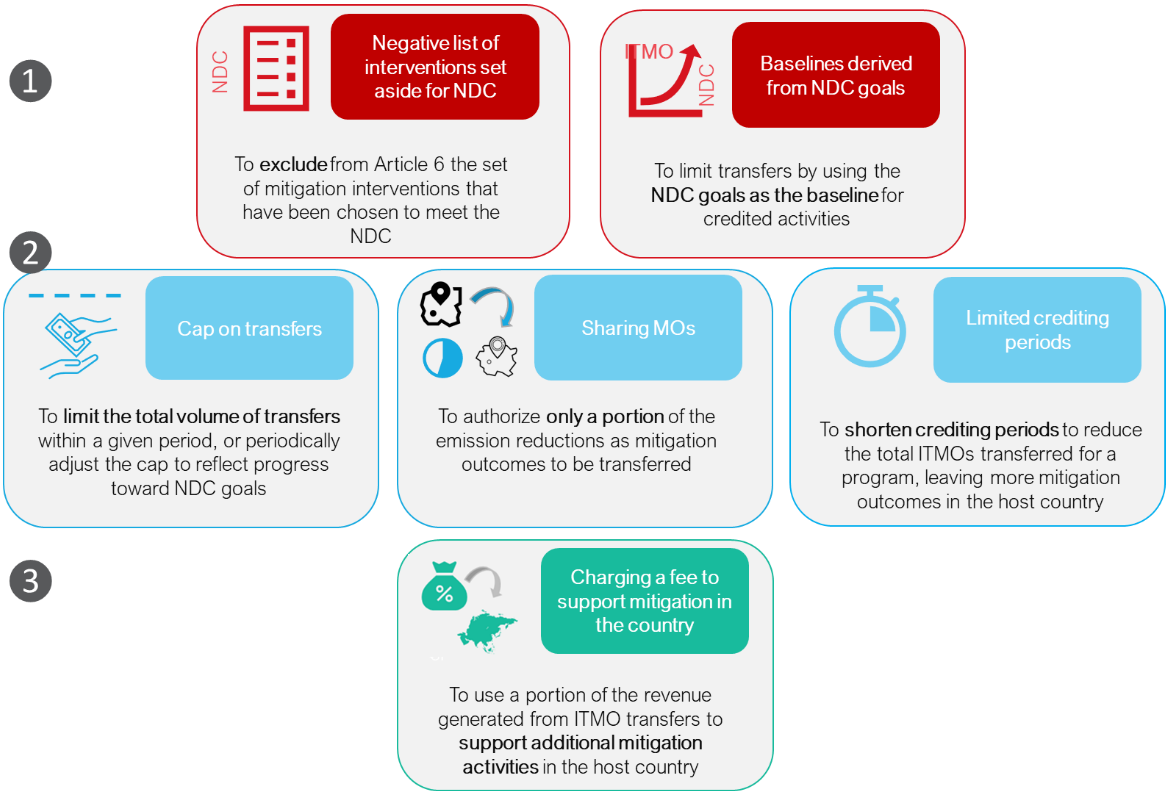
A major concern of prospective host countries under Article 6 is the risk that participation in cooperative approaches could compromise achieving their NDC, due to "overselling" mitigation outcomes. For example, if host countries transfer mitigation outcomes based on activities that were planned as part of their own unconditional NDC actions, this could make it more difficult to reach their NDC goal. The country's only option might be to invest in more expensive or complex mitigation actions to replace the ones transferred, which would entail additional cost. This cost is often referred to as the "opportunity cost" of transferring mitigation outcomes, that would otherwise have been used to meet the unconditional NDC goal.

Overselling of host countries is not in the interest of acquiring countries either because this could undermine global ambition (e.g., if the host country misses its NDC goal, and so overall emissions of host and acquiring countries are higher). Acquiring countries bear a reputational risk if Article 6 voluntary cooperation results in the host country failing to achieve its NDC. More broadly, all Parties to the Paris Agreement share the responsibility to meet the ambitious goals of the Agreement, and none should take actions that could jeopardize that collective goal.

Figure 1 presents several key strategies for managing the risk of overselling and facilitating the increased ambition of NDCs. The strategies are not mutually exclusive and, in fact, might be used in different combinations for different types of cooperative activities (e.g., one (or more) strategy in the energy sector and a different strategy in the forestry sector). Compared to earlier presentations of these strategies[2], the figure clarifies which ones could be the preferred option for most host countries, based on their simplicity, low administrative costs, and certainty of overselling risk reduction. The rationale for the order is explained after the brief overviews of the different strategies below the figure.

2 Spalding-Fecher, Randall, Anik Kohli, Juerg Fuessler, Derik Broekhoff, and Lambert Schneider. "Practical Strategies to Avoid Overselling." Stockholm, Sweden: Swedish Energy Agency, 2020. http://www.energimyndigheten.se/globalassets/webb-en/cooperation/practical-strategies-to-avoid-overselling---final-report.pdf.

Figure 1. Strategies for reducing the risks of overselling, in order of priority



Note: red = crediting restrictions; Blue = transfer restrictions; green = pricing options
Source: Adapted from Spalding-Fecher et al. (2020; 2021)

• **Negative list of activities set aside for the unconditional NDC**: Where a host country has identified a set of mitigation activities that are the best strategy for meeting its unconditional NDC, these mitigation activities might be placed on a "negative list" (i.e., they could not be used as part of Article 6 cooperation).

• **Baselines derived from NDC goals**: Mitigation outcomes are calculated by comparing mitigation activity emissions to a reference scenario or baseline. This strategy is to use the (unconditional) NDC goals themselves as the baseline for crediting. This is to ensure that only mitigation outcomes beyond those identified as necessary for the NDC goal would be eligible for transfers. An example could be that, if a host country's NDC pledge is to implement 2000 MW of new renewable power by 2030, then transferring mitigation outcomes for renewable capacity *beyond* this level (e.g., between 2000 MW and 3000 MW) would not create any risk for the country. Traditional baseline-setting approaches (e.g., for the CDM) did not consider the impact of new climate change mitigation policies, whereas now the policies that transferring countries are implementing – or plan to implement – to achieve their own NDC goals should be considered. The practicality of this strategy depends on how detailed the NDC is in specifying actions and targets, and whether the Article 6 mitigation activity covers the entire sector or sub-sector that has a NDC action pledge (e.g., if the country has a pledge for power sector emissions and the activity covers the entire power sector).

> Priority 1 strategies: The rationale for prioritizing the first two strategies is that they precisely and completely address potential overselling risk from a given mitigation activity. If a host country creates a negative list that includes all the actions it needs to reach its goal, then – by definition – activities outside of that list do not present an overselling risk. The same is true if clear NDC targets exists that can be used as baselines. While there would be some upfront analysis needed to create the list or baselines, it is a simple strategy to implement with minimal administrative burden on government.

• **Sharing mitigation outcomes**: A host country could choose to share the mitigation outcomes generated by a cooperative activity, by authorizing only a portion of the emission reductions for transfer. When an activity proponent requested authorization in this case, they would need to present an analysis of the full emissions reductions or removals that would be achieved by the cooperative mitigation activity. The host country authority would then authorize only some portion of these potential emission reductions or removals as ITMOs. The remainder of the mitigation outcomes could then be used by the host country to achieve its NDC or to enhance the ambition of its NDC. This approach could be flexible in that a country might change this share over time based on progress toward NDC goals. It could even take the form of a "buffer" share of mitigation outcomes that might eventually be released to the acquiring party once NDC compliance is clearer, such as what Ghana has proposed in their Article 6 rules.

• **Limited crediting periods**: Longer crediting periods (i.e., longer periods during which mitigation outcomes are generated and internationally transferred) could create higher risk for the host country to meet its future NDCs, given that the Paris Agreement requires countries to increase ambition and widen the scope of their NDCs over time. Having shorter crediting periods can limit the number of years during which a host country would transfer mitigation outcomes from a given cooperative activity and would allow the country to use any further (uncredited) mitigation outcomes for the achievement of its subsequent – and more ambitious – NDC.

• **Overall cap on authorizations**: Similar to limiting crediting periods or sharing mitigation outcomes, the country could set a cap (e.g., in mtCO2) on the quantity of mitigation outcomes that could be authorized for a given proposed mitigation activity, for the sector, or for the entire country. The amount for a given mitigation activity might be much less than the expected emission reductions that could be achieved. The cap would limit the country's exposure to transfers with greater certainty than sharing mitigation outcomes or limited crediting periods. As with sharing mitigation outcomes, this cap might be revised or even lifted over time based on NDC progress, with mitigation outcomes held in a "buffer" until the host country was confident in achieving its NDC goals.

> Priority 2 strategies: For all three of the transfer restriction strategies above, while they could certainly reduce the risk of overselling, they are relatively blunt instruments. Knowing the exact share of mitigation outcomes that a host country should keep, to ensure no overselling, would require detailed analysis of a wide range of scenarios for NDC implementation. Simply choosing a benchmark arbitrarily (e.g., 50/50 split) would be simple to administer, but would not necessarily be commensurate with the actual risk from a given activity. All that said, transfer restrictions may be a necessary fallback when the NDC is not detailed enough to create a negative list or set baselines from NDC goals, even though these restrictions may reduce investor interest in the activities.

• **Charging a compensation fee to support in-country mitigation** (sometimes called "ITMO compensation", "corresponding adjustment compensation" or a "corresponding adjustment fee"): The host country charges the compensation fee to cover the cost of replacing the transferred mitigation outcomes with new domestic mitigation actions. The fee is on top of any price for the ITMO paid to the owner of the mitigation activity.[3] The fee would be collected by the government at the time of the ITMO transfer, essentially to capture (at least part of) the replacement cost of transferring the ITMOs and applying corresponding adjustments. If the government were the activity proponent (e.g., for a policy-based crediting programme or a sectoral crediting programme), then the transaction might be structured with one payment to cover (i) the abatement cost of the activity underlying the ITMO transfer, and (ii) the additional compensation fee. Together, these two elements would sum up to the cost of the "marginal" mitigation action in the NDC plan – the next cost-effective activity beyond the current unconditional NDC implementation plan, that could be used to replace

[3] This is distinct from any nominal fee a host country government might charge to cover the administrative costs of the national institutions and procedures for Article 6 activities.

the transferred mitigation outcomes. Where the activity proponent was private, the buyer would pay one price to the activity proponent to cover the abatement cost of the activity[4] and another, entirely separate, price to the government, to cover the difference between the abatement cost of the activity and the marginal cost of meeting the NDC.

> Priority 3 strategies: The two major challenges with using fees to address overselling risks are (i) determining what an appropriate fee would be, and (ii) ensuring that this money can quickly and effectively fund a replacement mitigation action. To determine the level of the fee, the host country needs to understand the marginal cost of meeting their NDC – as well as the economic abatement costs of the specific mitigation intervention – and this could be a major analytical undertaking, if the country does not have a comprehensive marginal abatement cost curve to support the NDC implementation plan. An even greater challenge could be channelling this money to effective mitigation in time to support the NDC5. Even if the fee were charged when the ITMOs were authorized, the host country must then start to identify additional higher cost mitigation options and begin to develop and implement those. So, the replacement actions might only be implemented several years or more after the original Article 6 activity was implemented, and this would require significant administrative costs for the host country as well. For these reasons, the fee strategy may be more burdensome on government and less effective in managing risk than the other strategies.

3 Current practice – what are market players doing to address overselling risks

As part of this analysis, the authors interviewed officials from multiple countries to understand how they are approaching questions related to the risk of overselling in prospective Article 6 transactions, and specifically whether "compensation fees," as defined above, are being entertained. This section summarizes the viewpoints of prospective acquiring countries and host countries. In general, both sets of countries have been sensitive to potential overselling risks and are exploring mutually beneficial arrangements that – as much as possible – avoid the need for compensation fees. Interviews revealed, however, that continued efforts are needed to better understand and classify potential risk.

Acquiring Country Perspectives

Among the acquiring countries interviewed (i.e., countries entertaining opportunities to acquire ITMOs), there was a general preference to pursue strategies that avoid the need for compensation fees. One interviewee noted that the premise of compensation seems to be to *allow* overselling, and then seek to make up for it, whereas avoiding overselling altogether would be preferable. Another noted that "compensation" could have a negative connotation (e.g., implying an otherwise unfair arrangement), when the emphasis of Article 6 should be on positive cooperation and raising ambition. This interviewee emphasized the need to take a holistic approach to cooperation under the broader terms agreed for Article 6, including, for example, requirements for baseline setting, NDC alignment, sharing of mitigation outcomes (Article 6.4, para. 33), and other criteria that should avoid the need for compensation. Most interviewees expressed an interest in pursuing high-value cooperative approaches – e.g., focusing on

[4] Of course this assumes that there is no international carbon market price that is a benchmark for ITMO pricing, which is the case in the current market.

[5] In addition, in many countries the fiscal and financial regulations do not allow government to collect a levy or tax and "earmark" it for a specific purpose (e.g., additional mitigation activities), so the fees could simply go into the overall government budget without supporting more mitigation.

"ready to go" mitigation options that nevertheless face significant political or technical barriers – not "easy to obtain" ITMOs, for which they might then pay a compensation fee.

Along these lines, acquiring countries emphasized the importance of allowing host countries to identify where Article 6 carbon finance would be welcome, and where overselling risk is lowest. As one interviewee noted, the host country must feel that the total benefits of cooperation exceed potential risks and cost. The question of compensation, therefore, should be flipped around: under what circumstances would the host country feel comfortable providing an authorization for transfer?

One option here would be to identify a "green list" of activities important for a host country's long-term mitigation strategies and future NDC achievement. However, interviewees also noted the importance of flexibility. For example, a mitigation action might have been foreseen as part of a host country's NDC plan, but new developments (economic circumstances, etc.) could persuade the country, if it prefers to include the mitigation in a transfer agreement. One party emphasized there is no "one size fits all" approach. Multiple parties identified capacity building with host countries as the first step in any cooperative arrangement.

Where overselling risk nevertheless arises, acquiring countries expressed a preference for alternative methods to address overselling risk, including through sharing of mitigation outcomes (and adhering to other requirements under Article 6.4, para. 33 – which already include sharing, NDC-linked baseline, and limited crediting periods). Several noted that setting a true compensation price (as opposed, for example, to an administrative fee) could be difficult, e.g., due to price fluctuations and difficulties in determining a shadow price. Factors to consider here include:

- Many host countries did not have marginal abatement cost analyses at hand when determining their NDC pledges.
- Given uncertainties, one risk is that early movers may effectively set the "market price" for compensation fees, which may not be appropriate to circumstances in all countries.
- Developing a marginal costs analysis would typically require further engagement and capacity building (which is needed in general, e.g., for more/better inventories, institutional infrastructure, etc.)
- But through such engagement, host countries could also work to further refine their strategies for Article 6 cooperation and identify mitigation actions that would not pose overselling risk or a need for compensation. This would typically be easier than identifying a compensation price and may align better with acquiring country objectives.

All acquiring countries interviewed indicated they would not rule out compensation fees, but emphasized the need to consider it in conjunction with multiple options, larger cooperative strategies, and to determine appropriate fees individually with each host country. They noted that "compensation" can also be provided through a whole package of sustainable development benefits, technology transfer, adaptation finance, etc., achieved through cooperation, in addition to any explicit fee or levy. One condition for a fee would be to have a clear indication of how it would be used to further capacity development and raise ambition.

Finally, some parties noted that the Paris Agreement and Article 6 rulebook identify parameters for cooperation, under which fees for ITMO compensation were not anticipated (unlike share of proceeds or OMGE). This could raise questions around the legal basis for paying compensation fees. Moreover, if compensation fees are needed, providing this would require transparency and trust. To ensure this, some would prefer an internationally governed fund (which would address legal basis concerns as well). This could take the form of a "Multilateral Guarantee Organization", or similar body tasked with collectively managing overselling risk. However, interviewees emphasized the need for cooperation aligned with the spirit and letter of Article 6.

One final note is that perspectives and preferred approaches may differ for private actors and (especially) voluntary market actors, who may have more interest in cost-effective mitigation (not necessarily higher cost or "high value" options). For the voluntary market, there are open questions about the need for authorization, but two-part pricing was identified as a potential solution where voluntary actors and/or third-party standards are involved – e.g., if a host country were to green-light potential authorization for all credits issued by a voluntary program.

Host Country Perspectives

Interviewed host countries differed in their level of preparation for Article 6 cooperation. Two out of three respondents are still developing relevant strategies, along with necessary institutional capacity and infrastructure. Fees or levies are being considered, but not necessarily for compensation in the strict sense of covering opportunity cost. Rather, considered uses include covering administrative costs, supporting capacity to engage in Article 6 more generally, and funding efforts that could help raise ambition.

On example here is Ghana. In Ghana, ITMOs will only be authorized for mitigation that falls outside the unconditional NDC and within Ghana's list of activities / sectors approved for potential Article 6 transfers (including activities that are part of Ghana's conditional NDC pledge). In strict terms, there is therefore no need to compensate for the opportunity cost of transfers in these areas. However, Ghana is charging an authorization fee linked to the minimum estimated abatement cost for achieving its *unconditional* NDC. 70% of proceeds from this fee will go to support mitigation needed to achieve Ghana's unconditional NDC. In effect, this helps to ensure NDC achievement and enables greater future ambition. Of the proceeds that remain, 20% will support small-scale project development, and 10% is reserved to cover reporting, authorization, and administration related to ITMOs.

Like Ghana, all host countries interviewed are considering (or have developed) some form of "green list" approach, identifying sectors or mitigation actions where carbon finance would be welcomed and ITMOs could be authorized, while leaving some sectors and actions "off limits" for ITMOs. Typically, the approach is to reserve, for unconditional NDC achievement, mitigation opportunities that are lower cost and/or face fewer barriers. Since these would be "off limits" to transfers, the strict need for compensation would be avoided.

In general, prospective host countries are seeking to develop comprehensive strategies and invest in capacity building to do so, rather than begin authorizing transfers right away. Even where strategies are more fully developed, however, some countries are taking steps to hedge against overselling risks. Ghana, for example, has also implemented a "buffer" system, where 1% of Mos are withheld from transfer. This constitutes a form of ITMO sharing, but with the option to release ITMOs (or retire them for the purpose of overall mitigation), if it is clear overselling would be avoided. Indonesia is implementing a similar buffering mechanism.[6]

One interviewee noted that even in "green listed" sectors, host countries could still see an opportunity cost in allowing ITMOs if, for example, this might adversely affect their ability to make up for unconditional NDC underachievement or would have implications for future ambition. This could be an issue, for example, where a country's NDC specifies, for the same sector, both unconditional and conditional targets corresponding with different levels of abatement.

Although the host countries interviewed did not explicitly identify issues related to voluntary carbon markets, it should be noted that multiple host countries have started to consider restrictions on voluntary credit issuances, and some have proposed fees or levies on voluntary market transactions.[7] In some cases, these fees may be applied even where authorizations for corresponding adjustments are not sought

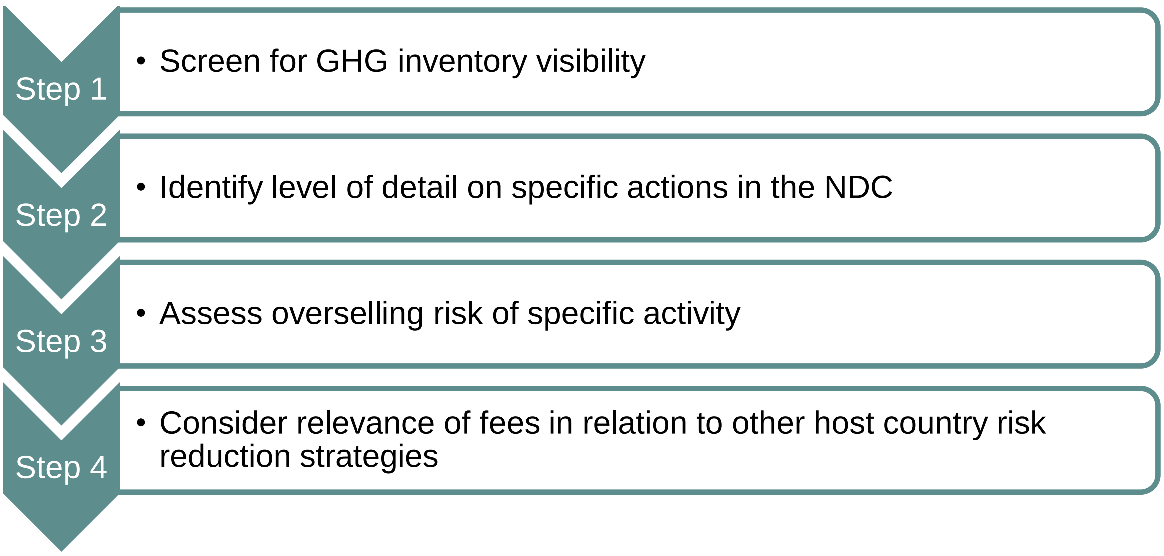
[6] https://www.nature.org/content/dam/tnc/nature/en/documents/TNC_To_Trade_or_Not_to_Trade_150523.pdf
[7] See, for example: https://www.bloomberg.com/news/articles/2023-06-06/global-carbon-market-countries-start-to-set-new-rules-for-credits-offsets#xj4y7vzkg

by the buyers, suggesting a general concern among (at least some) host countries around the opportunity costs of allowing unregulated carbon credit transactions. The approaches being undertaken by host countries interviewed for this report, however, suggest that country-led strategies for international cooperation, which may include risk-hedging measures like MO sharing and "buffers," can avoid the need for explicit compensation in the form of two-part pricing strategies.

4 Screening for risk and choosing the best strategy

This chapter presents an analytical framework to decide whether, in addition to payments made to an activity proponent to cover the mitigation costs, the buyer and seller of ITMOs might need to agree on a fee to the host country government to "compensate" for the overselling risk created by a transfer. Because the risk depends on the specific mitigation activity, the framework also assesses how much information is available on the specific actions needed to meet the host country NDC. The purpose of this process is to assess the overselling risks of a specific activity in the context of the specific host country's NDC, and then to determine whether the risk reduction strategies already implemented by the host country (if any) are sufficient to address these risks. If the risks are minimal, on the other hand, or if they have already been addressed in other ways, then there might not be a need for compensation or other additional risk reduction measures. Figure 2 presents the overall process, while the paragraphs below explain each step.

Figure 2. Screening proposed Article 6 activities for overselling risks and strategies to address these risks



4.1 Step 1. Screen for GHG inventory visibility: is the proposed activity not visible in the GHG inventory used in NDC reporting or is it outside the scope of the host country's NDC?

For activities that are not visible in the NDC GHG inventory (e.g., improved cookstove projects that reduce deforestation, but this is not captured in the forestry GHG inventory), or are outside the scope of the NDC, the overselling risk is very high (Figure 3). This is because the corresponding adjustment to the host country for the transfer (i.e., adding back these emissions reductions to the NDC GHG inventory) is not matched by any visible reduction in the GHG inventory, due to the mitigation activity, or because the emission reductions occur in a sector, gas or source that is outside the scope of the NDC[8]. Therefore, the corresponding adjustment will essentially increase the host country's unconditional NDC target, because more mitigation is required for its "emissions balance" to meet the original NDC goal. The host country would therefore have to look to the additional mitigation options beyond its current plan to reach the unconditional NDC – which usually is more expensive or complex than the actions included in the plan – and implement this action to replace the mitigation outcomes transferred.

Figure 3. Step 1 - Screen for GHG inventory visibility

Condition	Risk
Activity reduces emissions outside the scope of the NDC (i.e., sector, gases, sources, and sinks, etc.)	Very High
Activity reduces emissions, but these reductions are not visible in the NDC GHG inventory	Very High
Activity reduces emissions from gases and sectors covered by NDC and these reductions are visible in the NDC inventory	Continue to Step 2

Because of the very high overselling risk associated with these activities, many host countries may choose not to authorize ITMOs from such activities. If they did choose to authorize and wanted to require some form of compensation for the resulting risk, then the fee paid to government would have to be large enough to cover the full cost of the additional mitigation needed to still meet the NDC (i.e., mitigation options not included in the current NDC actions or plans). As discussed in the previous section, this assumes that government would be able to identify, fund and implement these mitigation actions in time to still reach the NDC targets.

For proposed mitigation activities that are visible in the NDC GHG inventory, and are inside the scope of the NDC, the screening process would then continue to Step 2.

4.2 Step 2. Identify level of detail on specific actions in NDC:

The underlying question for these activities is: how likely is it that the activity overlaps with actions the host country needs to reach its unconditional NDC goal? The challenge with answering this question is that not all countries have NDCs, or NDC implementation plans, that specify the actions needed to reach the NDC goal, and, even when there is some form of plan, the level of detail presented publicly may be limited. Separating NDCs into four categories makes it easier to answer the question of potential overlap:

a) NDC lists specific conditional and unconditional actions.
b) NDC lists mitigation actions but does not specify whether they are for the unconditional or conditional NDC.
c) NDC does not list specific mitigation actions but has unconditional and conditional mitigation goals.
d) NDC does not specify whether the goals are conditional or not – *OR* – NDC only has either conditional or unconditional goals (i.e., not both).

The screening process for each NDC type is somewhat different, but all of them lead to an assessment of low, medium, or high overselling risk.

[8] This means that the GHG inventory methods have enough resolution to capture the effect of the mitigation activity – so we can be confident that the inventory is lower than it would have been if the activity had not been implemented. This does not necessarily mean there is an absolute reduction in inventory emissions in any given year.

4.3 Step 3. Assess overselling risk of a specific mitigation activity

The assessment process depends on the category of NDC, as explained in the following figures. For a given activity and country, only one of the assessments would apply, based on the category of NDC. In all cases, this part of the risk assessment framework only applies to activities that are inside the scope of the NDC, and whose emission reductions or removals are visible in the GHG inventory covering the NDC goals (see Step 1).

a) NDC lists specific conditional and unconditional actions

The assessment of risk is easiest where a country has identified the actions preferred to meet its unconditional and conditional NDC goals. The only caveat is that some actions might be used for both goals, but at different levels of implementation. Figure 4 shows the risk associated with different types of mitigation activities in this type of host country.

Figure 4. Assessing overselling risk where the NDC lists specific unconditional and conditional actions

Condition	Risk
Activity is mentioned *only* as an unconditional action, and NDC does not specify level of implementation of this action	High
Activity is mentioned *only* as an unconditional action, but NDC specifies a level of implementation of this action (e.g., MW or power or ha of land) that could be exceeded by the activity	Medium*
Activity is mentioned *only* as an unconditional action, NDC specifies a level of implementation of this action and activity will NOT exceed this level	High
Activity is mentioned as *both* an unconditional and conditional action (e.g., at different degrees of implementation)	Medium
Activity is not mentioned in either list OR is only mentioned as a conditional action	Low

Notes: *using the NDC implementation goal as the baseline for this cooperative activity would address this risk, assuming the mitigation activity was broad enough in scope to match that goal.

b) NDC lists mitigation actions but does not specify whether they are for the unconditional or conditional NDC.

For countries that have unconditional and conditional goals and a list of actions *but have not specified which actions are linked to each of those goals*, there is more uncertainty about overselling risk. The key distinction would just be whether an activity was included in the NDC action list or not (Figure 5).

Figure 5. Assessing overselling risk where the NDC lists mitigation actions, but does not specify whether they are for the unconditional or conditional goals

Condition	Risk
Activity is mentioned in list of actions	Medium
Activity is not mentioned in list of actions	Low

c) NDC does not list specific mitigation actions but does have unconditional and conditional mitigation goals

The other scenarios make it even more difficult to establish whether a proposed mitigation activity overlaps with the actions needed to reach NDC goals. If no list of actions is presented, and the country has both conditional and unconditional goals, it is difficult to say whether a specific proposed activity might overlap with the country's NDC plans, so essentially all actions could potentially pose some overselling risk (top half of Figure 6). The exception would be when countries have *only* conditional goals because, in essence, these countries have not made a binding commitment to mitigation. Even if they do oversell mitigation outcomes, they could simply argue that the conditions for reaching the NDC were not met. Ironically, the risk of overselling in that case is effectively low, only because there is no clear commitment.

Figure 6. Assessing the risk of overselling where the NDC does not list specific mitigation actions but does have unconditional and conditional mitigation goals

Condition	Risk
Host country has both unconditional and conditional goals	Medium
Host country does not specify whether goals are unconditional or conditional (i.e., so goal can be interpreted as unconditional)	Medium
Host country has only unconditional goal	Medium
Host country has only a conditional goal	Low

d) NDC does not specify whether the goals are conditional or not – OR - NDC only has either conditional or unconditional goals (i.e., not both).

A final combination of scenarios would be where the NDC lists specific actions, but the NDC itself does not have both a conditional and unconditional goal or does not specify conditionality. In this case, if the host country does not specify conditionality, then the goal could be interpreted as unconditional. This would mean that any activity on the NDC list essentially presents a high overselling risk. But, if the host country has only conditional goals, then, following from the logic above, none of the activities present a major risk because the host country has not made any binding commitments.

Figure 7. Assessing the risk of overselling where the NDC does not specify whether the goals are conditional or not – OR – the NDC only has either conditional or unconditional goals (i.e., not both).

Condition	Risk
Activity is in the list and NDC has only unconditional goal OR NDC does not specify conditionality of goals (i.e., so goal can be interpreted as unconditional)[9]	High
Activity is not in the list or NDC has only conditional goals	Low

4.4 Step 4. Consider relevance of a compensation fee in relation to existing host country risk reduction strategies

Finally, based on the overselling risk assessment of a specific mitigation activity in a given host country, the host country and buyer (or acquiring country) can have a dialogue on whether and how to address any risks.

For mitigation activities with **low risk** of overselling, none of the strategies are strictly necessary. In other words, even if the host country authorizes the transfers without charging a compensation fee, keeping a share of the emission reductions, or adjusting the baseline, the transfer does not present a risk for NDC achievement. While the focus of this discussion is on assessing specific mitigation activities requesting authorization, the host country could also proactively identify low risk activity types to create a "positive list"

[9] The assumption here is that if the NDC specifies a goal and does not specify any conditions, then the goal is unconditional. This is not meant to be a political statement about NDC types but simply a practical approach to addressing this type of NDC.

of mitigation activities. These activities would have a streamlined process for authorization with no fees, sharing or other risk management strategies.

For mitigation activities with **high (or very high) risk** of overselling, the host country may choose not to authorize these transfers at all. This might be the "negative list" strategy described earlier, where the host country proactively identifies the activity types that clearly present high or very high risk and excludes those from Article 6 cooperation. Alternatively, for **high risk** activities, this risk might be identified on an ad-hoc basis for a specific activity requesting authorization. In principle, this risk could be compensated through a fee that represents the difference between the cost of the specific mitigation activity and the marginal cost of achieving the NDC (see chapter 5). However, as discussed earlier, in practice this could be very difficult to implement for many host countries, because of the complexity of quantifying marginal costs, and the complexity of managing the funding, and directing it toward the rapid implementation of more expensive and complex mitigation actions.

This then leaves **medium risk** activities, which are likely to make up the bulk of early Article 6 activities. For these activities, the host country may already have in place one or more strategies for managing risk. Alternatively, the host country and buyer may decide on approaches that fit the circumstances of a specific proposed mitigation activity. Returning to the priorities outlined in chapter 2:

- The first choice would be to incorporate the NDC goals into the crediting baseline.[10] This could fully address the risks, so that no fees or other strategies would be needed.
- In the second tier of strategies, the host country would choose to require sharing of mitigation outcomes, limit the crediting period, or cap the transfers from a specific activity. While it is more difficult to judge whether one of these interventions would fully address the risks involved, the fact that this category is medium risk already (i.e., the activities *may* overlap to some extent with NDC actions but also may not) means that it is unlikely to require fees.
- If no other risk reduction strategies were implemented, however, then the host country and buyer might choose to negotiate a fee to be paid to the government, to cover the potential opportunity costs of the transfer. This negotiation should bear in mind, however, that medium risk activities may not need to be fully replaced with other mitigation – this is the definition of medium risk in this framework, while high risk activities are those that definitely need to be replaced (see summary in Figure 8).

Figure 8 Relevance of fees for ITMO transfers from medium risk activities in the context of other strategies

Risk reduction strategy implemented by host country	Implications for fees for ITMO transfers
Baselines derived from NDC goals	No additional fees required to address overselling risks
Sharing mitigation outcomes	Unlikely to require additional fees to address overselling risks
Limits crediting periods	
Cap on authorization	
No strategy implemented	Fee could be needed to address replacement costs, but at lower level than for high risk activities

[10] The negative list strategy would be appropriate for high and very high risk activities, but not for medium risk activities.

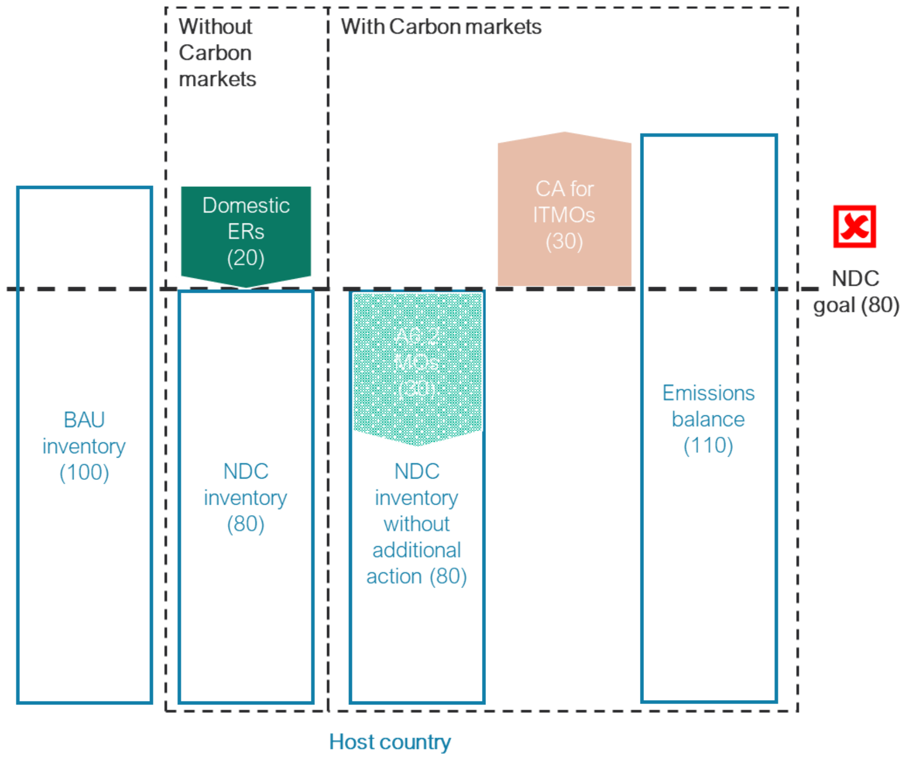
5 Illustrative examples of overselling risks and risk reduction strategies

This section illustrates how some of the risk types identified earlier affect the costs of NDC compliance. This links the current analysis to earlier discussions on how countries can use marginal abatement cost curves (MACCs) to select their priority NDC actions, and how Article 6 transfers could affect such action plans and their costs.

5.1 Activities whose impact is not visible in the NDC inventory

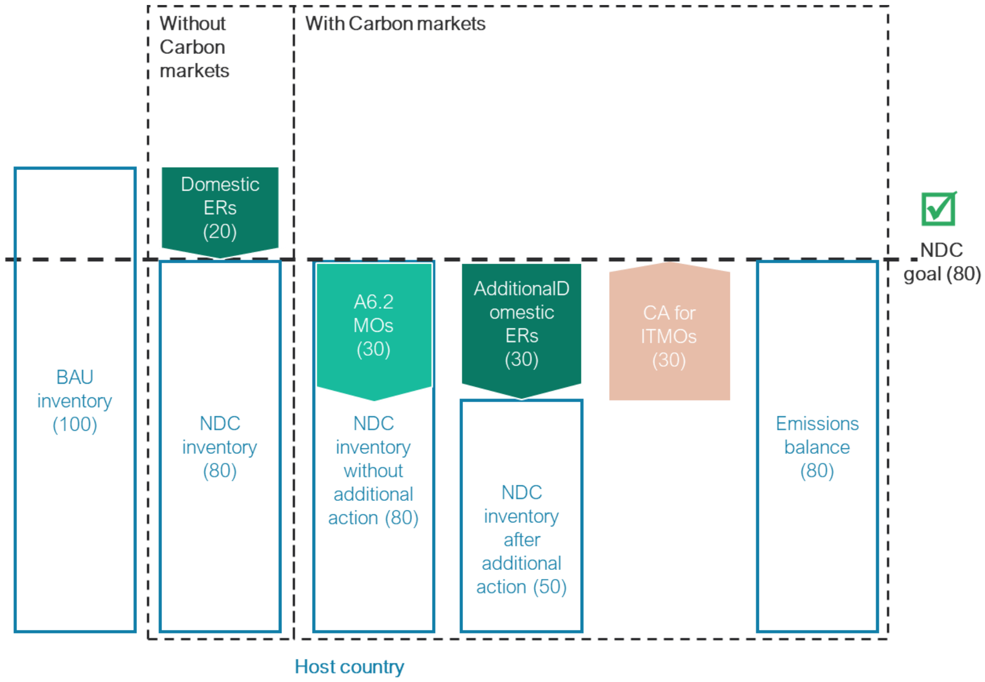
As discussed earlier, the impact of mitigation activities may not be visible in a country's NDC GHG inventory for two reasons: (i) the mitigation activity is outside the scope of the NDC pledge (e.g., sectors, gases, sources/sinks), or (ii) the NDC GHG inventory is not disaggregated or detailed enough to capture the impact of the activity. In either case, the impact of these "invisible" activities is not reflected in the host country's NDC inventory. However, the corresponding adjustment still increases the host country's emissions balance (in accounting terms) by the number of ITMOs sold. This may result in the host country failing to meet its NDC goal unless the host country takes additional action (see Figure 9).

Figure 9. ITMO transfer for "invisible" activities – If the host country does not take additional action



To still meet the NDC goal, the host country would thus need to invest in new actions (see Figure 10).

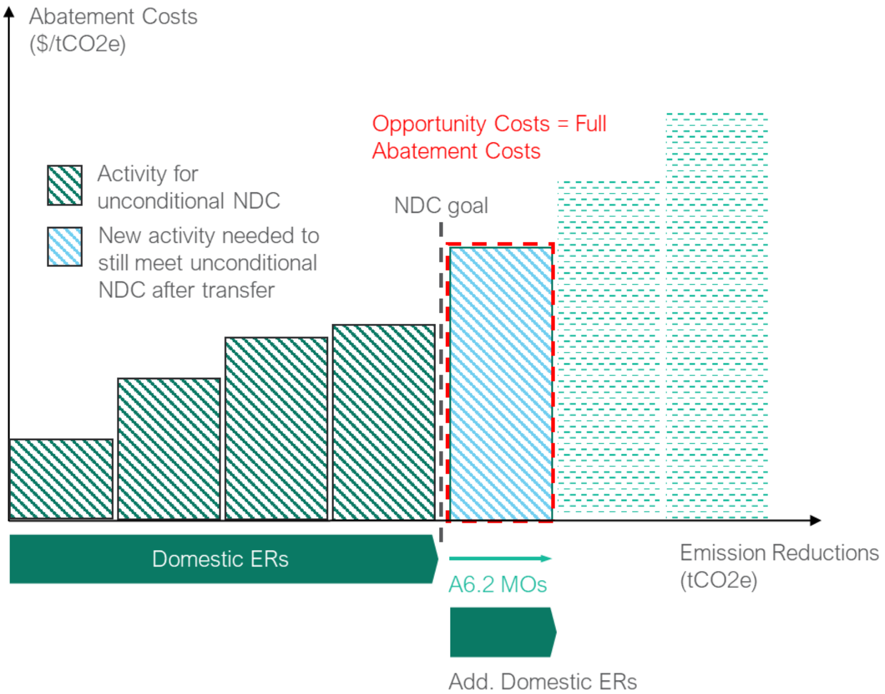
Figure 10. ITMO transfer for "invisible" activities – If the host country invests in new actions



If the parties to a transaction were considering using some form of fee to address this very high overselling risk, the acquiring country would have to pay a fee that allows the host country to invest in this new action. This would have to fully replace the impact of the A6.2 activity with other mitigation activities outside the set of actions that support the original unconditional NDC goal (see Figure 11). In this case, the opportunity cost to the host country of transferring the ITMOs is the full abatement cost of the new mitigation activities.

As discussed in Chapter 4, Step 4, instead of charging a fee, the host country may choose not to allow these transfers at all (e.g., by placing invisible activities on a negative list).

Figure 11. Opportunity costs for "invisible" activities



5.2 Activities whose impact is visible in the NDC GHG inventory

For activities that are inside the scope of the NDC and are captured in the measurement of the NDC GHG inventory, Steps 2 and 3 of the screening process in Chapter 4 show that the risk of overselling for visible activities depends on the specifics of the project and the NDC. In the following figures, we illustrate the low risk and high-risk case.

Low risk

If the activity is clearly not part of the list of activities needed to reach the unconditional NDC, no fee or other strategies are needed to ensure that the host country still meets this goal. This is because the A6.2 activity does not relate to emissions reductions required for the unconditional NDC (see Figure 12) and the opportunity cost is thus zero (see Figure 13). The same is true in cases where the baseline for the Article 6.2 activity is derived from NDC goals.

Figure 12. ITMO transfer if action is visible and not part of the unconditional NDC

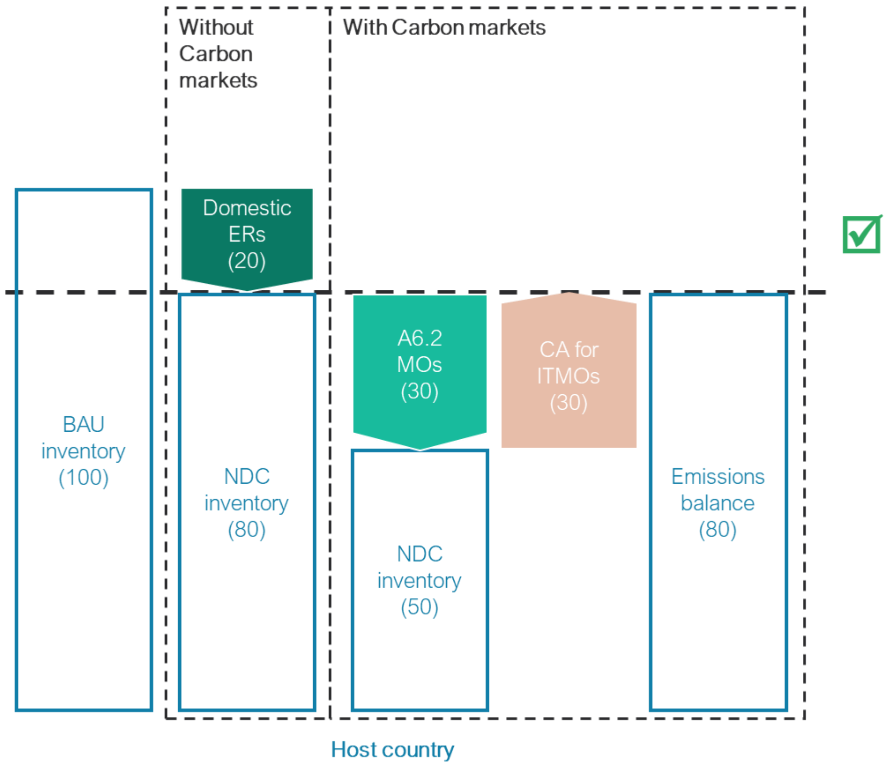
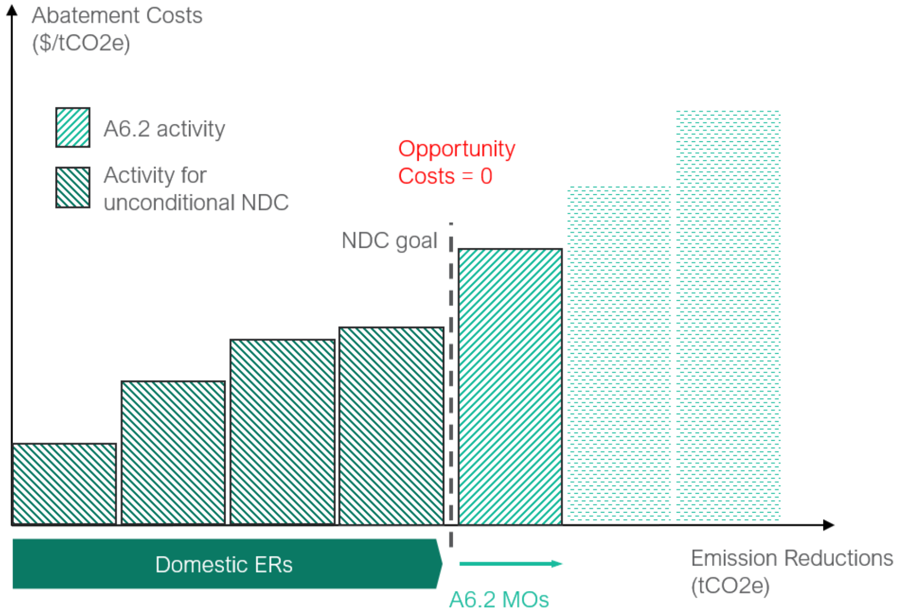


Figure 13. No opportunity costs for visible actions that are not part of unconditional NDC actions

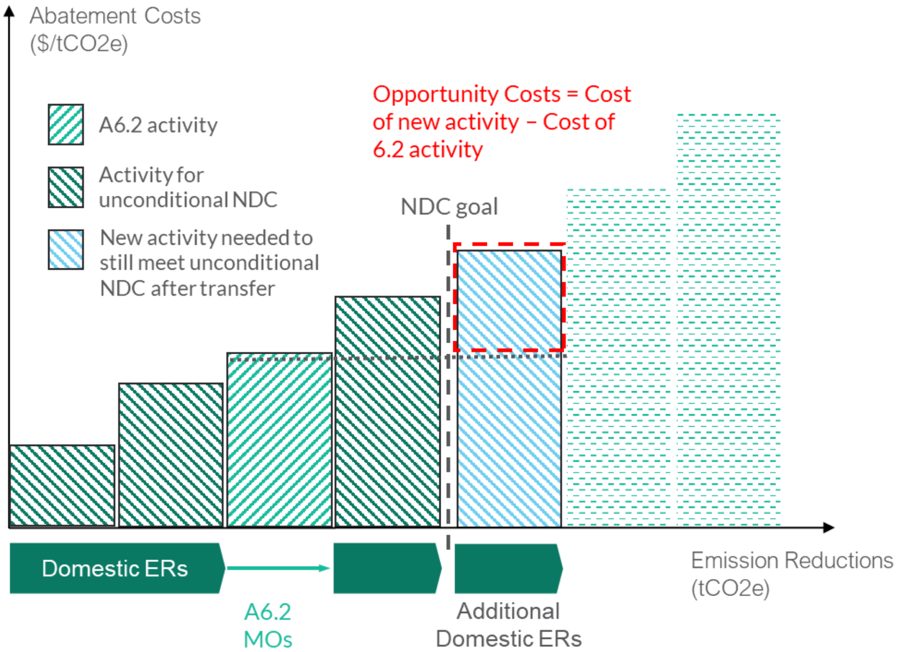


High risk activities

An A6.2 activity is high risk if it is clearly part of the unconditional NDC. In this case, the corresponding adjustment requires the host country to implement a replacement activity, that was not part of the original NDC action plan. However, compared to the case of an invisible activity, the opportunity costs are lower, as they are only the cost difference between the replacement activity and the A6.2 activity (see Figure 14). This is because the host country had already committed to ensuring the funding for the unconditional NDC activities, so only the additional costs need to be compensated.

For the high-risk case, host countries would be safest using other strategies (e.g., a negative list; see Chapter 4, Step 4) rather than resorting to fees to compensate for this risk.

Figure 14. Opportunity costs for "visible" actions that were part of the unconditional NDC actions



Medium risk

For medium risk activities, it will not be clear the degree to which the activity overlaps with the actions needed for the unconditional NDC. A range of strategies may be used here, as explained in section 4.4. In the case where the country considers using a fee, the level would be lower in the high risk case.

6 Conclusions and recommendations

Much of the early discussion on managing risks of Article 6 engagement has focused on overall (i.e., economy wide) strategies. For example, several countries have released Article 6 policy documents that require fees or sharing of mitigation outcomes, at the same level across all activities. The analysis in this report explains the need for a more nuanced approach, because the risks of overselling depend on the specific activities involved, and how the country has articulated its NDC goals. For example, if a potential Article 6 activity is completely outside of the actions the country is considering, in order to reach their unconditional NDC goal, then using this activity for ITMO transfers does not create any NDC compliance risk, and so does not require any compensation or other strategy to address overselling risks. On the other hand, if the potential Article 6 activity is at the core of the host country's unconditional NDC implementation plan (or not even visible in the NDC inventory), then clearly – due to corresponding adjustment – they will need to replace these mitigation outcomes – potentially at higher cost. In this case, some type of risk management is needed, which may include not authorizing any of the mitigation outcomes for transfer. Many proposed activities will fall somewhere in between these two risk profiles, and so, the host country may choose to apply one or more risk management strategies.

Another important insight from this analysis is that charging fees to address overselling risks could be a challenging strategy to put into practice. In addition to the complexity of determining what an appropriate fee would be (e.g., based on an analysis of the "marginal cost of meeting the NDC", which very few countries have), this strategy requires the institutional, regulatory and technical infrastructure to collect these fees, identify alternative mitigation options outside the NDC plan, implement those mitigation options, and then generate verified mitigation outcomes quickly enough to replace transferred mitigation outcomes (i.e., in the same NDC period).

For host parties seeking to balance overselling risks with the desire to be an attractive destination for carbon finance, they could consider the following overall approach:

- Create a "negative list" (i.e., no authorization of mitigation outcomes) for activities identified as posing a high risk for overselling.
- Creating a "positive list" (i.e., streamlined authorization process and no fees, sharing, or other risk management strategies) for activities identified as posing low risk for overselling.
- For activities identified as having medium risk of overselling, prioritize using "NDC baselines" or "sharing mitigation outcomes" as risk mitigation strategies, that are likely to be the most effective and pose the lowest administrative burden on government.

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