



Maximising the Mitigation Impact of the Article 6.4 Mechanism

Workshop of the Project “Development of Options and Design Options for the New International Market Mechanism under Art. 6 of the Paris Agreement”

On behalf of the Federal German Environment Agency (Umweltbundesamt)

30 October 2018, 9:30 to 17:00

Berlin, Hotel Aquino, Hannoversche Straße 5b

1. Background and Objectives of the Expert Workshop

Article 6 of the Paris Agreement mandates a paradigm shift for market-based mechanisms. Instead of a zero-sum game, cooperation is supposed to result in more mitigation than would have been achieved without the use of Article 6.

The German Environment Agency currently sponsors a research project on how to maximise the impact of the Article 6.4 mechanism, which is being implemented by the Wuppertal Institute, INFRAS, and Fraunhofer ISI. The workshop served to discuss findings from this research project as well as potential ways forward.

2. Summary

Definitions of ambition raising and overall mitigation.

- The two concepts should be clearly **delineated**.
- The concept of **raising ambition encompasses Parties' targets and actions**: Use of Article 6 is to lead to a 'dynamic' improvement of Parties' mid-term mitigation targets (NDCs) and their long-term low greenhouse gas emission development strategies. At the same time, ambition raising may also relate to an immediate climate change mitigation impact.
- The concept of **overall mitigation** applies to the net climate benefit of Art. 6.4 activities **resulting from the mechanism's design** as such, irrespective of whether or not Parties increase their ambition when using the mechanism.

Options to achieve overall mitigation

- **Cancellation, discounting, shortened crediting periods, and stringent baselines** are options to achieve overall mitigation with the Art. 6.4 mechanism.
- For all options, the **potential** for overall mitigation **depends on political ambition**.
- **Cancellation and discounting** at issuance, transfer or use without differentiation **are the most straightforward options** to be implemented and applied.
- **Transparency** of the options largely **depends on the implementing entity** and is expected to be **higher with administration at UN level** than with administration at host or buyer country level.
- **Stringent baselines** may be used to **incentivise particularly innovative technologies**, but implementation of this option is **methodologically most challenging**.
- With the goal of keeping it simple, workshop participants favoured cancellation or discounting without differentiation as options to achieve overall mitigation.

Options to achieve ambition raising

- Article 6 creates perverse incentives to keep ambition weak. Several strategies can be used to **eliminate these perverse incentives**:
 - Strengthening **reporting, transparency and comparability** by setting adequate rules under the UNFCCC;
 - Reconciling the **design of the Art. 6.4 mechanism** with ambition raising of host countries' NDC targets, e.g. by limiting crediting periods, requiring ambitious baselines, or by defining strict eligibility criteria for participation;
 - **Supporting the host country** to raise ambition through the Article 6.4 mechanism, e.g. by capacity building and facilitating investments; and
 - **Fostering the acquiring country** to raise ambition through the Article 6.4 mechanism.
- As agreeing on stringent safeguards such as strict eligibility criteria for participation in the mechanism will probably be politically difficult, **all strategies should be pursued**.

The potential contribution from the voluntary market

- There are **three potential roles** for the voluntary market as an investor under the new framework conditions of the Paris Agreement:
 - **Buyer of carbon neutrality credits**, the current market model;
 - **Supporter of NDC implementation**;
 - **Driver of ambition**.
- Roles 1 and 2 are **differentiated in terms of accounting**, in role 1 the mitigation outcome accrues to the investor while in role 2 it accrues to the host country. There was a controversial discussion on whether role 3 is also clearly differentiated, or could be combined with one of the other roles.
- Participants also pointed out that these roles **should also be assessed in qualitative terms**, not only in terms of accounting. All activities under Article 6 are supposed to contribute to ambition raising; ambition raising should therefore be seen as a universal requirement, not as one option. Participants also pointed out that there are strong reputational risks if the NDC that is being supported is weak or the activity that is being implemented is not ambitious.

Prospects of using benchmarks for baselines

- Stringent global benchmarks may have a high **likelihood of going beyond BAU** and NDC trajectories. They also have the potential to increase **transparency** and to reduce **administrative costs**.
- There are **quick wins** for the use of stringent benchmarks developed and improved over time under the CDM in Article 6.4 for selected mitigation actions related to avoidance of industrial gases (e.g. production of nitric acid, adipic acid and HFC-23).
- However, **for most products and emission sources**, the operationalization of consistent (global) benchmarks is **not feasible**. It may be suitable for industry (including energy use) and global fuel efficiency standards in transport.
- As the use of benchmarks is not possible on a broad scale, **continuing the work on default values** done in the CDM is an option. An **international database** on benchmarks would be helpful.

3. *Agenda*

| Time | Agenda Item |
|----------------------|--|
| 9.30 – 10.00 | Welcome Coffee |
| 10.00 – 10.15 | Welcome and Introduction Karsten Karschunke, German Environment Agency Wolfgang Obergassel, Wuppertal Institute |
| 10.15 – 10.30 | Overall Mitigation and Ambition Raising – Synonyms or Distinct Concepts? Input: Wolfgang Obergassel, Wuppertal Institute |
| 10.30 – 11.15 | Options to Achieve Overall Mitigation Input: Hanna Wang-Helmreich, Wuppertal Institute Discussant: Stephanie La Hoz Theuer, adelphi |
| 11.15 – 12.30 | Options to Achieve Ambition Raising Input: Jürg Füssler, INFRAS Discussant: Aki Kachi, NewClimate Institute |
| 12.30 – 13.30 | Lunch Break |
| 13.30 – 14:15 | How Can the Voluntary Market Contribute to Ambition Raising? Input: Wolfgang Obergassel, Wuppertal Institute Discussant: Antoine Diemert, ICROA |
| 14.15 – 14:45 | Coffee Break |
| 14.45 – 16:00 | The Potential for Establishing Baselines on the Basis of Benchmarks Input: Jürg Füssler, INFRAS / Vicki Duscha, Fraunhofer ISI Discussant: Lambert Schneider, SEI Associate |
| 16.00 – 17.00 | Concluding Discussion |

4. Report on the Expert Workshop

Welcome and Introduction

Karsten Karschunke welcomed the participants of the workshop and introduced them to the topic and to the project “Development of Options and Design Options for the New International Market Mechanisms under Art. 6 of the Paris Agreement”. He pointed out that after three years of negotiations, there was still no clarity about key items such as raising ambition and overall mitigation. The workshop was to contribute to a better understanding of these objectives and how to achieve them.

Session 1: Overall Mitigation and Ambition Raising – Synonyms or Distinct Concepts?

One key innovation of the new mechanism is the objective to “deliver an overall mitigation in global emissions” (Art. 6.4(d)). As the meaning of this term has not yet been clarified in the negotiations, the project team developed a working definition of overall mitigation and ambition raising which is derived from the language that was agreed in the Paris Agreement:

- The concept of **raising ambition** encompasses Parties’ targets and actions: In line with the aim of Article 4.3, which requires NDCs to progress over time and reflect Parties’ highest possible ambition, use of Article 6 is to lead to a ‘dynamic’ improvement of Parties’ mid-term mitigation targets (NDCs) and their long-term low greenhouse gas emission development strategies. At the same time, ambition raising may also relate to an immediate climate change mitigation impact, as indicated by the wording of Art. 6.1, which refers to Parties’ “actions”.
- The concept of **overall mitigation** applies to the net climate benefit of Art. 6.4 activities resulting from the mechanism’s design as such. The contribution to overall mitigation of Art. 6.4 activities will therefore be achieved and determined by the decision on the mechanism’s design and irrespective of whether or not Parties increase their ambition when using the mechanism.

Participants agreed that this working definition could be helpful for negotiators.

Session 2: Options to Achieve Overall Mitigation

In the second session, Hanna Wang-Helmreich presented options, an assessment and recommendations on how to implement the Art. 6.4 mechanism’s objective to achieve overall mitigation:

- Options that are generally feasible under the Paris Agreement:
 - Cancellation ((a) at issuance, (b) at transfer or use)
 - Discounting ((a) at issuance, (b) at transfer or use)
 - Shortened crediting periods
 - Stringent baselines

When the mitigation activity is outside the host country’s NDC, all of these options lead to overall mitigation. When the mitigation activity is within the host country’s NDC, corresponding adjustments to the host country’s NDC have to be made in order for these options to lead to overall mitigation.

- For all options, potential for overall mitigation depends on political ambition.
- Key trade-off of all options: Potential reduction of mitigation activity for activities with marginal costs close to the credit price that become uneconomic.

- Shortened crediting periods backload the impact on project profitability and on overall mitigation. One question is who would pay for MRV after the end of the crediting period?
- The assessment is the same for both discounting and cancellation.
- Stringent baselines may be used to incentivise particularly innovative technologies.
- Which option to choose is a question of priority:
 - Cancellation and discounting at issuance, transfer or use without differentiation are the most straightforward options to be implemented and applied.
 - Transparency largely depends on the implementing entity and is expected to be higher with administration at UN level than with administration at host or buyer country level. For both shortened crediting periods and stringent baselines, administration at UN level is likely, while discounting and cancellation options may well be administered at country level.
 - Whether or not the options are applied equally to all types of activities, sectors, and geographical regions (differentiation) has a huge impact on both how easy it is to implement the options and how easy it is to apply them to different activities and sectors. Differentiation of the options may boost the mechanisms effectiveness as it could limit the amount of emission mitigating activities that would become uneconomic when options are applied.
 - Shortened crediting periods and stringent baselines offer the potential to cater to project-type specifics.

Stephanie La Hoz Theuer was the discussant of this session:

- In general, she expressed pessimism about how quickly Article 6.4 could be operationalized. She hopes for COP 24 to come to a clear understanding of what overall mitigation of global emission is and to provide a mandate to analyse clear, precise options to achieve overall mitigation.
- While many people see overall mitigation as being implemented through stringent baselines, her favourite option for the mechanism would be cancellation
- She stressed difficulties resulting from differentiation.

The presentation was followed by a number of questions and discussions with the following key points:

- One workshop participant highlighted that even though there could be a potential reduction of mitigation activity as some activities with marginal costs close to the credit price might become uneconomic, in total, the mechanism would still clearly lead to an additional climate benefit (under the assumptions that all activities are additional) as well as to an increase of the credit price. Furthermore, the participant assumed that the different options presented would indeed have different impacts on the potential reduction of the mitigation activity, though these would presumably be small. This would, however, still have to be calculated to be able to give a definitive answer.
- Several participants agreed that in all options the buyer would in the end have to pay for the price increases caused. The options therefore made no difference in terms of equity. Which option to choose was in their view more of a psychological question of who would seem to bear the burden.

- Asked for a clear recommendation which option to employ, Hanna Wang-Helmreich stressed that this was ultimately a question of priority:
 - Transparency largely depends on the implementing entity. As she considered transparency to be very important, she would clearly favour administration at UN level.
 - She saw postponing the additional mitigation effects of shortened crediting periods as a big disadvantage of this option.
 - In the end, she spoke for stringent baselines as this option could provide the strongest incentives to use innovative technologies in some sectors and go further beyond BAU, maximising additional emission reductions.
- Wolfgang Obergassel pointed to one core decision being independent of the options: whether to employ a flat rate or to differentiate between project types, sectors, or geographical regions. He underscored that stringent baselines would be most useful to rule out incremental projects and that employing this option would fully reward every ton of reductions which goes beyond the baseline.
- Participants, however, stressed that ease of implementation and applicability were essential for making overall mitigation workable and limit transaction costs. Application of stringent baselines would even be methodologically challenging without differentiation, requiring setting two baselines. Therefore they supported cancellation or discounting without differentiation as option to achieve overall mitigation, taking the CDM's share of proceeds of 2% of CERs issued for a CDM project activity to the Adaptation Fund as point of reference.
- One participant pointed to the option of shortening crediting periods at the beginning of a project cycle instead of at the end, eliminating this option's drawback of postponing the achievement of overall mitigation.

Session 3: Options to Achieve Ambition Raising

In his presentation on options for fostering increase of ambition levels of NDCs under the Article 6.4 mechanism, Jürg Füssler stressed that without adequate incentives, rules and procedures, the Article 6.4 mechanism may fail to achieve its goal of contributing to ambition raising of NDC targets. For host countries the Article 6.4 mechanism provides perverse incentives not to raise ambition or not to extend the scope of their NDC because that would mean losing market potential. There also was an incentive to inflate crediting baselines and interpreting NDC targets non-conservatively. For acquiring countries it was not obvious if lower mitigation costs lead to more ambitious NDCs. There also was a risk of locking in carbon intensive infrastructure.

Jürg Füssler presented options in four general lines of action to mitigate perverse incentives and foster NDC ambition raising in host countries:

1. Strengthening reporting, transparency and comparability:
 - a. Strict rules for the provision of upfront information;
 - b. Strict rules for reporting and review under the transparency framework;
 - c. Reflection of Article 6.4 use in the Global Stocktake;
 - d. Consideration of Article 6.4 use under the Compliance Mechanism.
2. Reconciling the design of the Art. 6.4 mechanism with ambition raising of host countries' NDC targets:
 - a. Requiring host countries to also account for transferred mitigation outcomes that were generated outside the scope of their NDC;

- b. Restricting crediting periods and adjusting baselines in alignment with the 5-year NDC cycle;
 - c. Requiring ambitious crediting baselines for participation in Art. 6.4;
 - d. Defining eligibility criteria for the Article 6.4 mechanism relating to technologies/type of action, and/or NDC scope, ambition and quantification, and development of long-term strategies;
 - e. Requiring inclusion of emissions targeted by Article 6.4 activity into the future NDC.
3. Supporting the host country to raise ambition through the Article 6.4 mechanism:
 - a. Supporting ambitious target-setting and long-term planning activities;
 - b. Facilitating investments in new low-carbon technologies.
 4. Fostering the acquiring country to raise ambition through the Article 6.4 mechanism
 - a. Using lower compliance costs for ambition raising;
 - b. Increasing ambition with long-term strategies;
 - c. Risk reduction;
 - d. “Insetting”: Linking use of mitigation outcomes from other countries to strengthening domestic mitigation activities.

Jürg Füssler stressed, however, that some of the actions would be extremely difficult to implement at international level. Action can be taken on different levels:

1. CMA/ rulebook level (international governance setting required)
2. Supervisory Body for Article 6.4
3. “Club” of like-minded parties
4. Individual acquiring countries defining criteria for MO purchase

Aki Kachi was this session’s discussant:

- He argued that environmental integrity was a prerequisite for ambition, but not the same.
- He favoured not allowing crediting outside NDCs.
- He pointed to a lack of understanding in many countries that the Art. 6 mechanism differs significantly from the CDM.
- He noted that the Kyoto Protocol’s principle of complementarity was missing from the list of options. In his view this principle was a key safeguard for the ambition of acquiring countries.

Participants noted that the Umbrella Group supported corresponding adjustments for emission reductions outside NDCs and that the EU was even stricter, requiring the extension of NDCs to cover proposed Article 6 activities.

Asked which options he favoured, Jürg Füssler stressed that some options were difficult to implement and that progress should be made on all fronts. The framework for transparency and rules for Art. 6.4 were crucial points to support host countries in raising ambition. In case the international framework fails to provide rules, host and buyer country would need to come to bilateral agreements.

Session 4: How Can the Voluntary Market Contribute to Ambition Raising?

In this session, Wolfgang Obergassel presented how the Paris Agreement affects the voluntary carbon market as well options for the voluntary market to contribute to ambition raising.

The Paris Agreement introduced two paradigm shifts for market-based cooperation.

- The ‘uncapped environment’ is much reduced and set to shrink further. Transfers of reductions from within NDCs will require corresponding adjustments to prevent double counting.
- Ambition raising now is a key component of market-based cooperation.

Generally, there are two ways for voluntary market actors to contribute to market-based cooperation: They may invest in mitigation activities or they may provide standards for the certification of mitigation outcomes.

As investors, voluntary market actors may in the future play three potential roles with different pros and cons:

- Role 1: Voluntary market actors may continue in their current role as **buyers of carbon neutrality credits**. This role has the advantage of continuing the established product. It also has a clear link to buyer’s emissions as the carbon neutrality claim requires to cover all of the buyer’s emissions with units. However, there is the need to implement corresponding adjustments if the mitigation outcomes are achieved within the scope of NDCs.
- Role 2: Voluntary market actors may become **supporters of NDC implementation**. In this role, mitigation outcomes accrue to the host Party while the voluntary market actors receive a certificate of having supported the host Party in implementing its NDC. This role has the advantage that there is no need for corresponding adjustments as there are no transfers. A disadvantage is that this would be a new product, but there is some interest among buyers, especially multi-national companies who might in this way demonstrate support for countries where they operate. On the downside, as there would be claim of carbon neutrality, there is a risk of window-dressing, with buyers acquiring only some units instead of covering all of their emissions.
- Role 3: Voluntary market actors may become **drivers of ambition**. In this role, units would be transferred and cancelled in order to claim to have contributed to ambition raising. There is strong interest among potential buyers to be able to claim a role in ambition raising. However, there is a question whether the ambition raising concept can be related to non-Party actors or only to Parties. There also is a question whether units used to claim carbon neutrality can at the same time be used to claim ambition raising, or whether this would constitute double claiming.

As for private certification standards, there are three options for their future use:

- Option 1: The voluntary market may act as a **testing ground**, developing new methods and approaches that may later be adopted by the compliance market.
- Option 2: **Recognition** of private standards **under Article 6.2**. In principle, Parties may use any standard that suits them to certify mitigation outcomes under Article 6.2. However, use of private standards may be open to political challenges.
- Option 3: Use of private certification schemes **outside of Article 6**. This is the current modus operandi of most of the voluntary market. However, as corresponding adjustments will be implemented under Article 6 it is questionable if this option could at all be possible.

The discussant of this session was Antoine Diemert:

- He argued that corresponding adjustments were only needed where a national regulation was being implemented. In his view, corresponding adjustments were worthless when NDCs were weakened. The quality of NDCs was therefore a key problem that the voluntary market had to consider. He stressed that the purpose of corresponding adjustments is to avoid double counting and not to achieve ambition raising.
- He found it difficult to say whether host countries would be willing to make corresponding adjustments for exporting voluntarily generated mitigation outcomes. Obtaining Letters of approval had been difficult under the CDM already and under the Paris Agreement it might be even more difficult. One might expect countries to limit exports to expensive emission reductions.
- He recommended accreditation of voluntary standards under Article 6.
- He pointed out that it took 15 years to establish the current voluntary market and moving to a new product may be risky. Some actors in the market were concerned, others not.
- He noted that his organisation was working to create a voluntary market account to register retired credits and track all voluntary reductions by private actors.

Participants argued that the voluntary market was not just a question of Article 6 accounting. All activities under Article 6 were supposed to contribute to ambition raising; ambition raising should therefore be seen as a universal requirement, not as one option.

Participants also pointed out that the claims to be made would depend on the host Party's NDC. If the NDC was ambitious, supporting implementation of this NDC would be seen positively. However, if a project was undertaken in a country with a weak NDC, extra care would need to be taken to show that the project itself was nonetheless ambitious.

Participants also noted that corporations which wanted to become carbon neutral could do so with projects in their own supply chain, detached from Article 6.

Session 5: The Potential for Establishing Baselines on the Basis of Benchmarks

Jürg Füssler's presentation focused on the potential role of Benchmarks in the Article 6.4 mechanism:

A benchmark is a standard that can be used as a point of reference for evaluating performance against peers, i.e. GHG emissions per activity. The research question was whether benchmarks could be used as simple baseline reference level on a global level or for groups of countries (e.g. low, middle, high income countries). The advantage would be that stringent global benchmarks may have a high likelihood of going beyond BAU and NDC trajectories. They also have the potential to increase transparency and to reduce administrative costs.

Key questions to solve include:

- Shall benchmarks be based on performance or technology?
- Shall benchmarks depend on country / region / geographical context?
- Shall the fuel mix be considered?
- What should be the international governance process for agreeing and updating benchmarks?

A key limitation is that benchmark values or performance data exist only for a limited number of emission sources and processes and for restricted geographical areas.

The research surveyed which sectors are suitable for BM-based baseline setting under Art. 6.4, as summarised in the following table. In conclusion, only a limited number of sub-sectors appear to be suitable. For most products and emission sources, the operationalization of consistent (global) benchmarks is not feasible. In addition, data availability is a challenge in particular for regular updating. Furthermore, as the definition of benchmarks will be a political process, there is also the risk of compromising environmental integrity.

| (Sub-) sector | Activity data availability | Benchmark data availability | Feasibility of global benchmarks | Carbon market contribution to profitability |
|--|----------------------------|-----------------------------|----------------------------------|---|
| Industry energy use – product benchmarks | *** | ** | ** | * |
| Industry energy use – other benchmarks | ** | * | * | * |
| Industry process emissions | *** | ** | *** | *** |
| Energy generation | *** | ** | * | * |
| Housing | ** | * | * | * |
| Transport – general | * | * | * | * |
| Transport – fuel efficiency standards | ** | ** | ** | * |
| Waste water | ** | * | * | ** |

Lambert Schneider was the discussant of this session:

- In his view, the analysis was solid and useful, highlighting where benchmarks could work and where not.
- He noted that it would also be useful to describe the process how benchmarks should be calculated.
- Given the limited applicability of benchmarks, he suggested to take one step back and consider what the overall objective was, namely to set baselines below BAU. If the use of benchmarks was not possible on a broad scale, other options should be considered, e.g. in the electricity sector to take a percentage of the grid emission factor as baseline. He argued that differentiating between the levels (1) ambition, and (2) where it makes sense to use benchmarks was very important.
- He pointed out that benchmarks could work for sub-sectors of housing, e.g. for refrigerators and lighting.

The inputs were followed by questions and discussions:

- Participants argued that Art. 6.4 had to go beyond the CDM and that approaches such as conservative default factors and deemed savings could be used.
- Jürg Füssler pointed out that there was a world of default values in the CDM methodologies. The research question had been whether there could be a new broader and much simpler approach that would be independent of countries and could be employed for the Art. 6.4 mechanism. Unfortunately, the answer seemed to be no and global benchmarks work only in some limited sectors, such as industrial gases.

- Participants, argued that if aggregation did not work, there was nothing wrong with going into disaggregation. While approaches such as default values were not benchmarks, they could still provide ambitious thresholds that would work, even though they were not derived from a benchmark methodology.
- Furthermore, participants pointed out that data availability was a huge problem for setting benchmarks etc. and that a technology database would be of great value. Also more generally participants saw a need for having an international institution to gather and discuss data.

Session 6: Reflections by the German Environment Ministry and Concluding Discussion

Thomas Forth concluded the workshop with reflections from the perspective of the German environment ministry:

- He pointed out that there were well-formulated options in the international climate negotiations on Art. 6.4 now and that this workshop had discussed a lot of issues that were not being discussed in the negotiations right now. While negotiations should finish in 2019, there would still be a lot of work to do.
- He highlighted that it was still unclear what the activity cycle of domestic policies was and where the border between international and domestic policies was.
- He asked how climate finance could be used to raise ambition in host countries and stressed that there was still a lack of clarity where and what kind of international support was needed. He argued that developed country Parties needed to support developing countries in improving their NDCs as well as their technical readiness, including the question of where to use domestic resources and where the carbon market.

Finally, Wolfgang Obergassel wrapped up the workshop with key take-aways from the sessions:

- Session 1: The working definition developed by the consortium seems to be acceptable for the moment.
- Session 2: Participants favoured simple options such as cancellation or discounting without differentiation to achieve overall mitigation.
- Session 3: All options to raise ambition should be used as international agreement on strict eligibility criteria for the use of Article 6 is unlikely.
- Session 4: Claims that can be made by the voluntary market depend not only on the quality of the individual activities but also on the quality of the NDCs within which the activities take place.
- Session 5: Setting global benchmarks is impossible for most sectors. Continuing the work on default values done in the CDM is an option. A database on benchmarks would be helpful.
- Session 6: To maximise the mitigation impact of the Art. 6.4 mechanism, key topics such as additionality will have to be drawn up very differently for Art. 6.4 than it had been done for the CDM.