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Time to Decide

Katowice conference to lay the foundations for operationalising Art. 6

Content

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editorial

Dear Reader!

it is time to decide. This year's UN climate conference in Katowice is to adopt the Paris rule book, the implementation framework of the 2015 landmark climate change agreement. Regarding the Paris Agreements's cooperative approaches, it is clear that Katowice conference can only take basic decisions; the bulk of technical discussions will be shelved for 2019.

What are the core elements to be resolved this year? This Carbon Mechanisms Review gives the answers and reflects on how to build an appropriate foundation for Article 6 in Katowice. Our authors review the overall state of the negotiations, paint a picture of an effective Article 6.4, and discuss governance models for the different Art. 6 approaches. The issue is complemented by a view on the shipping sector, which has currently debates introducing emission reductions measures, including offsetting provisions.

Katowice is going to be an end and a starting point at the same time. A solid foundation for market-based action in the Paris world is urgently needed, not least with regard to double counting issues of schemes outside the UNFCCC world. Now is the time to decide.

On behalf of the editorial team, I wish you an informative read!

Christof Arens, Editor-in-chief

Wuppertal Institut

Carbon Mechanisms Review (CMR) is a specialist magazine on cooperative market-based climate action. CMR covers mainly the cooperative approaches under the Paris Agreement's Article 6, but also the broader carbon pricing debate worldwide. This includes, for example, emission trading schemes worldwide and their linkages, or project-based approaches such as Japan's bilateral offsetting mechanism, and the Kyoto Protocol's flexible mechanisms CDM/JI. CMR appears quarterly in electronic form. All articles undergo an editorial review process. The editors are pleased to receive suggestions for topics or articles.

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Growing Momentum on Mechanisms

Could Katowice deliver on substance?

by Thomas Forth, Advisor to BMU

UNFCCC negotiations past and present have had their ups and downs, produced milestones and slow track processing has since become the norm. It thus makes sense for expectations to be lowered at times when they are set too high. This approach was successfully implemented at the beginning of SB48.2 in Bangkok. There was clear messaging that climate negotiations on Article 6 progressed on the basis of mutual understanding and assembling options. However, the progress achieved did not go far enough to allow decisions to be made now on the rules need to enable use of Article 6 mechanisms.

What has largely been missing up to now is work on new market mechanisms and activity-level consideration of NDCs. On the asset side, we have some general exchanges on ambitious baselines and far more advanced reflections on NDC accounting, meaning corresponding adjustments and inside/outside deliberations. This might be a good point of departure for Katowice on which to build the foundation for use of Article 6 mechanisms and provide valuable input for the Paris Rule Book. By contrast, negotiations did not progress to the working out the details of concrete mechanisms, among other things, which must also be addressed.

Looking at the statements made by many negotiators, the focus seems to follow the tradition of a project-based mechanism with a regulatory extension on NDC accounting. New market mechanisms designed to promote programmatic, sectoral and policy-related approaches are being postponed for the near future.

The heavy workload listed in the draft Workplan (Annex II) will keep us busy over the next 12 months when the delivery of the complete set of rules occurs as actually intended at COP25. The Guidance on Article 6.2, the rules, modalities and procedures (RMP) for Article 6.4 and the work program arrangement on Article 6.8 must all be finalized. Evidently, adhering to this timeline poses something of a challenge. Realistically, Katowice can only really prepare for the success of COP25 if it produces a breakthrough on the core elements of Article 6. What would be needed to get to this point in terms of substance and agreeing on a sequence for decisions?

Success factors

Assuming that Katowice will deliver on robust accounting and environment integrity, the foundation for use of the Article 6 mechanism would be laid. It is only then that meaningful questions concering the transition from the Kyoto Mechanisms, which need to address requirements under the Paris Agreement – especially regarding NDC accounting and a contribution to overall mitigation – could be answered. This cannot be done in advance. On this basis, implementing Parties will be enabled to make their choices on authorization and approval note or letters under Article 6.3 and Article 6.5, both of which

Growing momentum: the SB session in Bangkok this year.

are key to the functioning of global carbon markets by providing the legal basis for the avoidance of double counting of emission reduction units. A decision on this in Katowice would have a direct, positive impact on CORSIA, the aviation regulation on GHG emissions under the ICAO, which could use these notes in implementing the avoidance of double counting units. Also, reaching an early consensus on robust accounting and the double counting issue may allow negotiators to reach a meaningful compromise on the CDM transition in Katowice. If negotiators fail here, the unresolved CDM items will continue to burden work on Article 6.4.

Let us also assume that Parties reach a mutual understanding on the need to address sustainable development in operational manner. Article 6 asks for the promotion of sustainable development. The interpretation of the term "promotion" has become a contentious issue since Paris and has the potential to delay any decision. But could the fact that Article 6 is about promotion of sustainable development and not about regulation help to inform decisions based on the prerogative of implementing countries? Could reporting and reviewing then be understood as the informational platform on which Parties are able to reflect on their domestic strategies? One strong argument for an early decision on reporting and review formats is that many Parties are intending to strengthen their sustainable development contribution by integrating Article 6 and SD activities into their domestic policies, programmes and measures. Parties could pursue such an approach much easier when acting within an encouraging international framework rather than in isolation. Decisions may be taken easier when a group of Parties can negotiate without challenging the prerogatives of implementing countries and another group of Parties can depoliticize transparency because it is the condition for cooperation.

Assessing the risks

In case the assumptions are proven, Katowice could become a milestone for the Article 6 mechanism and pave the way to COP25 with its pressing timeline of

Weighing the options: SBSTA Chair Paul Watkinson speaks with Wael Aboulmagd, Egypt.

only 12 months to complete the remainder of the technical work. Should the assumptions prove false and all substantial decisions are not postponed for the future, COP25 will not provide the legal basis for ITMOs or the Article 6.4 mechanisms. Such a result will impact the global carbon market. And there might be an unintended rebound effect: With every delay, mechanisms under Article 6.4 will become more and more restricted, while the development of cooperative approaches under Article 6.2 will become more likely because the transfer, when bilaterally agreed, could be implemented later.

The main risks of time being wasted in Katowice involve the Kyoto Mechanisms. One risk could emerge by postponing transition issues even if the robust accounting has been done. The second risk appears less apparent. There is conservative bias in favour of historical experiences with the CDM and JI, and subsequently an underlying motivation to be satisfied with recreating a CDM-like situation under the Paris Agreement – the reason being that the project-based approach has performed successfully in technical terms and could be easily designed for use in the private sector. These aspects could obstruct serious negotiations on new market mechanisms beyond Katowice, which would lead to a supplemental risk – especially when demand for upscaled mechanisms will not grow and any foreseeable upscaled demand, mainly from CORSIA, will be met by projects.

These risks could be minimized, however, if Parties were to concentrate on their own interests. Those intending to use the cooperative approaches under Article 6 to contribute voluntarily to ambition raising based on the current mitigation level of NDCs have a vested interest in getting the rules on the use of ITMOs in place. Those Parties intending to use only Article 6.4 or use it in addition to Article 6.2 would have reason to focus on the rules needed and especially those that avoid the failures of the CDM and enable Parties to increase their ambition over time. And Parties expecting non-market approaches under Article 6.8 as a better form of cooperation (in principle) or as an additional cooperation format, whichever is appropriate, need decisions now – both on the work program and on limiting vagueness, which should be kept relatively low for all three SBSTA negotiation tracks.

Walking off the Wobbles?

Issues and options in standing up a new carbon crediting mechanism under Article 6.4

by Annie Petsonk, Environmental Defense Fund

Among the issues to be considered by the 2018 UN Climate Change Conference, are the inter-related questions of the future of the Kyoto Protocol's Clean Development Mechanism (CDM) and rules for standing up the new mechanism established under Article 6.4 of the Paris Agreement. The CDM got off a wobbly start. Will the Article 6.4 mechanism stand up and walk off the CDM's wobbles? The answer depends on whether the negotiators agree on clear, high-integrity guidance for 6.4 and an environmentally credible transition for the CDM – tasks that would be added by drawing on learnings from two decades of carbon market development. The answer will also help determine whether the International Civil Aviation Organization (ICAO)'s Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) actually contributes to Paris goals, as ICAO States in 2016 pledged to do, or instead becomes a dumping-ground for dubious carbon credits from the old CDM or from a wobbly Article 6.4.

Against this backdrop, it is important to recognize that the need to implement Article 6.4, combined with the prospect of new demand markets for carbon credits, are generating growing interest in developing a new and reformed project-based mechanism. What is needed, however, is research-based policy that can give stakeholders the confidence that the new mechanism will deliver high-integrity reductions which can be readily scaled-up and avoid cherry-picking. Such interest means that both Article 6.4 and the CDM merit re-examination.

As is well understood in climate policy circles, the CDM was established to assist non-Annex I Parties with their sustainable development, and to assist Parties included in Annex I in meeting their KP Article 3 quantified emission limitation and reduction commitments. The CDM was not designed to achieve an overall mitigation in global emissions. That is because the Kyoto Protocol's accounting rules specify that credits generated from CDM by reducing emissions below BAU can be used to offset emissions above capped levels in industrialized countries, but the transacted credits need not be subtracted from allowable emissions in developing countries, since developing countries had no emissions caps under Kyoto.

Such an approach creates an inadvertent incentive for both the selling and purchasing country to inflate the BAU baseline. Moreover, as long as host country BAU emissions are growing, total emissions taking into account both the host country and the using country will go up, not down – even if the CDM is working perfectly. That makes the CDM a wobbly foundation on which to try to build a new mechanism whose goal is "an overall mitigation in global emissions."

Mixed success

And, the CDM hasn't worked perfectly. As others have documented elsewhere, many CDM projects have turned out not to be additional (Cames et al. 2016, Erickson et al. 2014, Strand and Rosendahl 2012). High transaction costs have led project developers to seek out economies of scale, with the result that China, India and Brazil have about 85% of the total CER

Economies of scale: about 85% of the total CER issuance is attributable to China, India and Brazil.

issuance (UNEP DTU 2018), crowding out projects in many smaller, highly climate-vulnerable countries. But those latter countries also need investment to help shift their economies toward low-carbon development – and they especially need investment that delivers adaptation co-benefits.

How can the negotiators ensure that Article 6.4 learns from this experience? And how might the CDM be transitioned into a high-integrity Article 6.4?

A high-integrity Article 6.4

First, it is important to consider the positive roles carbon crediting – that is, credits for reducing emissions actually below-what-would-have-otherwise-occurred – can play in the context of carbon markets. As Parties move toward economy-wide nationally determined contributions (NDCs) under the Paris Agreement, those NDCs can be implemented through various policies and measures – including cap-and-trade programs – applied in different sectors of the economy. Crediting programs in uncapped sectors can play a useful role in helping capped sectors transition more smoothly and cost-effectively to new technologies, while delivering environmental and sustainability co-benefits in uncapped sectors. This is especially important for capped sectors with long-lived capital stock, where forcing technology turnover before new technologies have proven themselves can drive costs up with questionable environ-

mental benefits. Care must be taken, however, to ensure crediting programs operate with strong additionality rules and high levels of transparency. These safeguards are important not only for environmental integrity, but also to ensure that if requirements are included for channeling a share of proceeds toward adaptation in highly climate-vulnerable countries (as is the case with the CDM), there is assurance that the projects that undergird the adaptation funding actually mitigate emissions and thereby help reduce climate vulnerability.

The foregoing implies that Article 6.4 would do well to focus on project types with proven environmental track records, where carbon finance can make a real difference, and where the results can be well accounted for in national inventories.

How to ensure that focus? One possibility could be to follow the approach suggested by Fearnehough et al (2018) to screen projects based on their "risk of discontinuation" – i.e., whether the projects would stop mitigating GHG emissions if their carbon market support ceased. Such analyses are challenging to undertake. Looking at marginal GHG abatement cost relative to scenarios where GHG abatement is discontinued, Fearnehough et al reviewed a sampling of projects that had previously been examined by others (Vivid Economics 2013, Warnecke et al. 2015, Warnecke et al. 2017). In order to focus on the risk of discontinuation if carbon finance ceased, Fearnehough et al excluded, firstly, the sunk capital costs and, secondly, any fixed sunk operational expenses.

This is an approach that should be carefully considered. One advantage of this approach is that the results of such screening would be to focus Article 6.4 on projects that either have relatively low initial capital costs but high operating costs for GHG abatement, or where the up-front capital costs are borne by others – via private investor rate-of-return finance, or public/green finance. These two foci may be quite useful in terms of prioritizing market-based finance under Article 6.4 to ensure that such finance is directed to projects that need it most – that is, projects that depend on market-based finance to overcome marginal operating GHG abatement costs. These projects, in turn, may be those that most promote poverty alleviation.

For example, under such a risk-of-discontinuation approach, certain cookstove projects, certain projects that reduce methane from landfills, and certain agricultural projects that require operational expenditures to keep maintaining GHG abatement, might receive priority, because their marginal operating costs to continue GHG abatement would not be covered if carbon finance were withdrawn. By contrast, large hydroelectric projects, whose carbon benefits have been sharply questioned, would not receive priority, since once the dams are constructed, the GHG abatement expenses – i.e. the continued operation of the dams – are at very low risk of discontinuation.

Caveats

Several cautions are worth noting. First, as the authors of various studies considering such an approach recognize, this type of approach could inadvertently shift focus away from otherwise-worthy projects for which a particular new low-carbon technology or policy initiative requires up-front, capital-intensive investment, including capacity-building. Second, as the authors rightly point out, the actual operating costs can vary greatly even across different exemplars of a single project type.

For example, projects that process municipal solid waste to turn it into fuel may reduce methane emissions at landfills. The exact mixture of the waste going into the landfill varies greatly from locale to locale, and can be affected by the external policy environment. In locations with little to no advance sorting of waste, operating costs can be high. In locations where other regulatory and/or incentive-based policies require waste streams to be well sorted, such that a high proportion of recyclable wastes can readily be diverted, recycled, and sold at market rates to displace virgin materials, the project operating costs may be different. And those differences may vary not only from one locale to another, but also over time as

new regulatory and/or incentive-based policies are instituted.

Third, external shifts in project operating environments (e.g., fuel cost fluctuations) can greatly affect relative marginal costs of GHG abatement. Therefore, premising an Article 6.4 prioritization primarily on "risk of discontinuation" is likely to be difficult as a practical matter. Fourth, the "risk of discontinuation" approach inadvertently increases the risk that Article 6.4 would focus on the least sustainable programs and projects, because those are the ones that most need carbon credits to remain financially viable; they are therefore most exposed to market volatility in carbon credit prices, which in turn would lead them to favor government subsidies as a means of keeping their revenue picture more stable.

Vulnerable: certain landfill gas projects are among the ones that risk of discontinuation if carbon finance ceases.

Two timeframes

An alternative could be to focus Article 6.4 in a time-bound way. For example, while the Paris Agreement itself does not mention 2020, the decisions accompanying the Paris Agreement divide mitigation timeframes into the 2016-2020 timeframe and the post-2020 timeframe. Consequently, some have proposed to focus Article 6.4 on mitigation that occurs in these two timeframes. This could in turn be undertaken by focusing Article 6.4 on, alternatively,

(a) projects that are initiated in these two timeframes;

(b) projects whose investments occur in these two timeframes, or

(c) projects whose mitigation occurs in these two timeframes.

To the extent that it would award credits to environmentally dubious projects initiated one or two decades ago, Option (c) is environmentally risky. To the extent that it invites rapid anticipatory registration of environmentally dubious projects, Option (a) is environmentally risky. Option (b) seems to be the most sensible, but the question of what constitutes "investment" is one that may entail further clarification.

A third possibility could be to focus Article 6.4 geographically, specifically toward smaller developing countries who haven't received much benefit from the CDM. The groupings of countries that could be the subject of Article 6.4 focus are relatively well-defined (e.g., small island developing states (SIDS), least developed countries (LDCs), and land-locked developing countries (LLDCs). Focusing Article 6.4 on emission reduction opportunities in smaller climate-vulnerable countries could offer them quick access to capital for low-carbon development, while larger countries move to build domestic cap and trade programs (which operate much more efficiently, since there is no project-by-project need to demonstrate additionality, but which require greater policy-capital and capacity-building up-front). Such a geographic focus for Article 6.4 could also be undertaken in ways that encourage projects that contribute to both mitigation and adaptation.

Such projects could potentially be given higher scoring under an Article 6.4 evaluative scheme, since they would provide double benefits, and therefore merit a higher priority in terms of carbon market finance. For

Bright future: Conservative baseline can safeguard environmental integrity.

example, mangrove and coastal wetlands preservation and restoration projects might help small islands reduce emissions from the destruction and degradation of these biotic systems, while re-building resiliency to coastal flooding from storm surges and sea level rise. Projects that conserve water in agriculture might help land-locked developing countries reduce emissions from energy use in agriculture (e.g., energy used to pump deep-aquifer water) while helping combat desertification.

How to ensure that Article 6.4 achieves an overall global mitigation of emissions? Some have proposed "discounting" credits issued under Article 6.4, or requiring that a portion of the credits be cancelled (Schneider et al. 2018). Such approaches, while well-intentioned, could simply aggravate the above-noted incentive to inflate projections of BAU. More troublingly, such approaches could disincentivize higher-cost mitigation, and thereby discourage greater ambition. Such a discount approach could inadvertently advantage primarily those projects with lots and lots of credits – which may include really non-additional projects – that still make sense at the lower price-per-ton that such discounted credits would garner. The result could be to reduce even further the average quality of project-based mechanisms.

An environmentally preferable approach would be to combine the "conservative baselines" approach identified in the 15 October 2018 Joint Reflections note (UNFCCC 2018) with the requirement that the originating country has to contribute reductions up to the baseline before transacting reductions that go beyond the conservative baseline – which could be demonstrated by requiring corresponding adjustments, particularly for reductions occurring within the scope of NDCs. That might entail further research to clarify methodologies for identifying "own contri-

butions" toward NDCs, but such research might produce results that could effectively guide the Article 6.4 mechanism to focus on approaches that strengthen rather than undermine the economic incentives for robust climate action. And while there is disagreement among nations about whether such crediting should be authorized for reductions occurring outside the scope of NDCs, focusing Article 6.4 on strict quality standards via conservative baselines coupled with incentives to go beyond "own contributions" could contribute to the integrity of carbon crediting programs whether the reductions occur outside or within the scope of NDCs.

Transitioning the CDM into a high-integrity Article 6.4

Should such guidance be adopted for Article 6.4, the question remains as to what to do with the CDM, whose current structure does not meet this guidance. A legal hurdle is that in the absence of in-force "quantified emission limitation and reduction commitments under Article 3" of the Kyoto Protocol, the CDM Executive Board may have no legal authority to issue CERs for purposes other than those specified in the Protocol – unless the CMP decides to do so. Should the CMP take such a decision as a means of transitioning the CDM into Article 6.4, then, given the serious concerns about the CDM's environmental integrity, it may wish to prohibit use of pre-2020 CERs for post-2020 purposes.

Instead, it may wish to decide to decide to allow the CDM to undertake limited post-2020 CER issuance focusing on origination in the most vulnerable countries, including as a transition measure until the CDM is fully administratively absorbed into Article 6.4 and integrated into assuring an overall mitigation in global emissions as described above. And, while discounting (as noted above) can result in suboptimal outcomes, it could be useful to undertake further research on the potential usefulness of discounting in the case of the CDM, where project baselines have already been set, prices are already quite low, and for CDM projects that do actually achieve environmental benefit (as determined through the kinds of screens discussed above), discounting may be useful in generating an overall mitigation in global emissions.

Two more questions should be addressed regarding Article 6.4. First, who wants it? As noted above, a high-integrity Article 6.4 mechanism could be especially helpful to smaller developing countries who currently lack the policy and institutional capacity to institute sector-wide domestic cap-and-trade programs. However, it should also be noted that as countries – including some very large countries – move to implement and strengthen such programs, they will want to protect against the risk – amply demonstrated by the European Union's early experience with the CDM – that large flows of arguably non-additional credits will undermine the effectiveness of their domestic carbon markets. Consequently, those focused on standing up Article 6.4 should not be surprised if concerns about potential wobbles in project-based crediting mechanisms prompt governments to place sharp restrictions on the amount of project-based credits flowing into such programs.

A final note concerns CORSIA and the Paris Agreement. While ICAO Member States certainly have legal capacity to establish Standards that set eligibility riteria for emissions units flowing into CORSIA, all of those emissions units originate in countries. The countries of origination – via the Paris Agreement and the UNFCCC – have legal capacity to establish criteria to ensure that the goals of the Paris Agreement and the UNFCCC are not undermined when emissions units flow out of those countries to CORSIA. To ensure that the Article 6.4 mechanism directly addresses this concern, the Parties to the UNFCCC and the Paris Agreement should ensure that the governance rules for the Article 6.4 mechanism specify that if Parties transfer Article 6.4 credits, whether to other Parties or to entities other than Parties (such as airlines in CORSIA), corresponding adjustments are required in order to prevent overselling of credits and avoid double counting of aggregate emissions. These

adjustments should be done hand-in-hand with adjustments for transfers under Article 6.2, and should flow through accounts based on the emissions inventories and take into account the NDCs. The rules should also clarify that Article 6.4's "overall mitigation of global emissions" aim applies to all Article 6.4 transactions, whether the 6.4 reductions are being used "used by another Party to fulfil its nationally determined contribution", or being used "to promote the mitigation of greenhouse gas emissions" (which could include CORSIA), or "to incentivize and facilitate participation in the mitigation of greenhouse gas emissions by public and private entities authorized by a Party," which could include airlines. Further research could identify pathways through which Parties could operationalize such rules. These clarifications and accompanying research would help ensure that Article 6.4 serves, and does not undermine, the goals of the Paris Agreement.

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Centralized or Host Party-led?

Design options for the Art. 6.4 body

by Christof Arens and Wolfgang Obergassel

How to govern Paris Article 6.4? While many questions on operationalizing Art. 6.4 are still open, the Paris texts are clear that the mechanism is to be supervised by a dedicated body. The Paris Agreement and the decision adopting the agreement (Decision 1/CP.21) delineate to some extent what role Parties should play and also envisage a role for independent third-party auditors. However, there are no detailed provisions for the work of the body, say, its mandate, its exact tasks and competences, its composition as well as its rules of procedure. The role and functions of the body are therefore among the key topics on the agenda of the 2018 CMA in Katowice.

The current negotiating document (UNFCCC 2018) envisages two core options for governing Art. 6.4: on the one hand, a "centralised system" where the Body has a strong regulatory and approval function, and on the other a "host Party-led system" where Parties do most things on their own. The document also envisages a "dual system", where the mechanism would be operated by the Parties and the Body would assess their national processes rather than individual mitigation activities.

Against this background, the Wuppertal Institute on behalf of BMU hosted a workshop in Berlin on 02 October 2018 on the governance for Art. 6.4. The meeting focused solely on possible governance models and left out issues such as „composition" and „voting rules".

Tasks and responsibilities

The workshop started with a discussion of possible functions of the Art. 6.4 body. Wolfgang Obergassel outlined potential tasks and responsibilities, the associated decisions already made in Paris and the issues that still need to be addressed. Following a prototypical project cycle, these cover the whole range of possible supervisory assignments such as

- Project Design
- Validation
- Authorisation
- Registration
- Implementation & Monitoring
- Verification & Certification
- Issuance & forwarding from the/a registry

Further possible tasks cover aspects such as guidance, standards, tools, operating a registry, methodology development, DOE accreditation as well as supervising the geographical distribution of mitigation activities. Some of these tasks have already been assigned to the body in negotiation texts, others are still open to discussion, cp. table 1.

	CMA	Parties	Body	Secretariat	Panels, WGs, Teams...	DOE
Approval & Registration		X	(X)	X	(X)	X
Issuance		X	(X)	X	(X)	X
Guidance, standards...	X		(X)			
Methodology development		(X)	(X)	(X)	(X)	
Registry		(X)	X	X		
DOE accreditation	(X)	(X)	(X)	(X)	(X)	
Geographical distribution	(X)	(X)	(X)	(X)		

Table 1: Potential tasks and responsibilities for the Art. 6.4 body. ‚X' denotes that responsibility for a task has already been assigned while '(X)' denotes that responsibility for a task is still open.

What governance model?

The workshop participants then went on to discuss different governance models. For the sake of simplicity, the options laid out above were narrowed down to "centralized" vs "decentralized". Participants thus worked out the details of what a centralised and a decentralised governance system might look like.

With the decentralised approach, the participants felt that the body's mandate would be more or less limited to the issues concerning environmental integrity. The topics of sustainable development and ambition raising were left solely to Parties' discretion. Responsibility for processing of activities was also largely a matter for Parties themselves. These are required to establish national systems which must then be evaluated and approved by the body. The body would not, however, be responsible for approving individual activities or issuance of certificates – this is left to Parties themselves. The same applies when it comes to developing methodologies. This ensures that the methodologies meet national needs.

On the centralised approach, the participants identified the relationship between activities and NDCs, participation criteria and double counting as additional responsibilities. Activities must be approved by Parties and also by the body. The host country must also declare that it does not intend to use the emission reductions itself and state both the quantity of emissions and the period in which they are to be achieved. When issuing certificates, the host countries should have no right of appeal. This is necessary to ensure investment security and preventing Parties' from changing their minds and deciding to use the emission reductions themselves. The participants found the idea of combining validation with the first verification acceptable. The project developer then carries the risk of the project not being approved. Methodologies could be developed by anyone, but to ensure environmental integrity, centralised approval would be required from the body. Accreditation of DOEs must also be assigned to the body. Under the Kyoto Protocol, there is the example of a DOE that had performed well under the CDM, but signed everything without question under JI. A top-down

Tall host: Most sessions of UNFCCC bodies take place at the secretariat's seat in Bonn.

approach to methodology development should provide for balanced regional distribution.

Weighing the options

In the ensuing debate on both approaches, it came to light that they were based on differing assumptions. The centralised approach assumes that compliance with minimum standards must be monitored to avoid the mechanism being misused. The decentralised approach follows the premise that the mechanism would only be used by ambitious Parties in any case, as less-ambitious Parties would see no reason to invest as there are no penalties for not achieving NDCs. The issue of quality would thus be regulated by the market. Also, the example of the CDM shows that even a centralised system cannot guarantee permanent high quality.

This was countered by the argument that with this approach, all responsibility lies with the buyers. The system could, however, be structured so that the buyers were not required to evaluate everything themselves. The question also arose as to whether the buyers were sufficiently able to assess quality. Also, the argument regarding ambitious buyers would no longer hold if the certificates could be used under CORSIA.

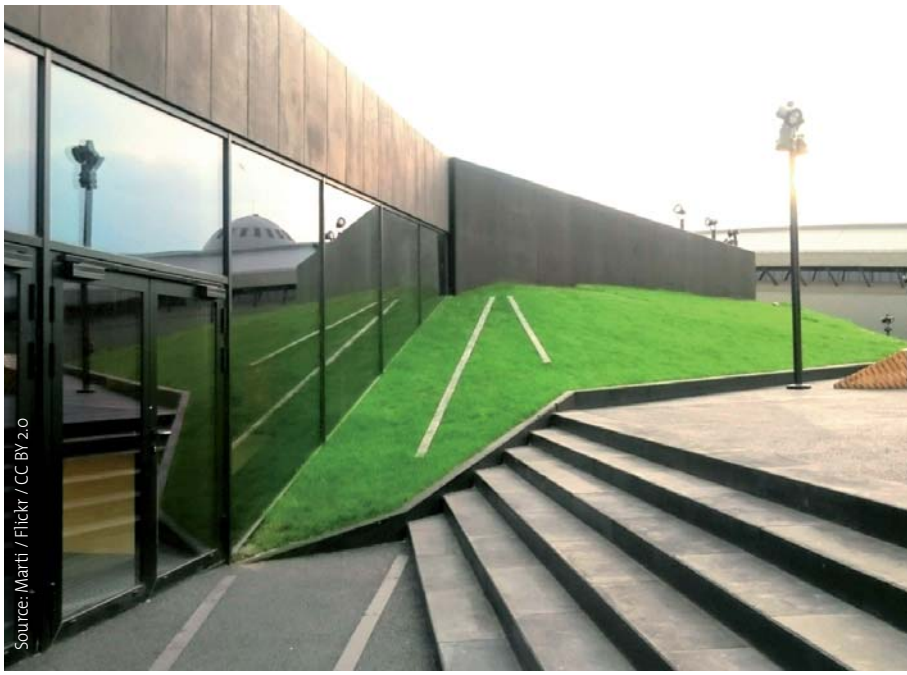
The question was raised as to why the body would be needed at all in a decentralised system. Could the

Secretariat not perform system evaluations? This was countered with the argument that the Secretariat is a neutral body and has no policy mandate to perform evaluations of that kind. These could only be performed by the body. Also, the body provided a fallback option for countries that are unable to establish and maintain national systems. For those countries, the body could assume responsibility for processing of activities.

The issue of decentralised approval of methodologies was discussed in depth. On the one hand, it was stressed that the integrity of individual methodologies was what counted most. It was thought that evaluation of national systems for methodology approval would not go far enough. There were also concerns about the need to link methodologies with NDCs. Most NDCS are not disaggregated enough to enable them to be linked to specific activities. The body need not, therefore, evaluate the NDCs – it suffices if the activities are required to go beyond prevailing policy provisions.

The matter of accreditation of DOEs was also the subject of lively debate. What would be the outcome in a decentralised system if the body determined that the national processes in place in a given country did not go far enough? Must the country's license to issue certificates be withdrawn? Would such a measure really be implemented in practice? Whatever the outcome, accreditation should also cover monitoring of services performed by DOEs.

The question came up as to whether the decision on the components to be centralised and those to be decentralised should depend on the 'sales argument' for Article 6.4 as opposed to Article 6.2. The workshop participants were unanimous that the function of the body should be to award a UN quality label for mitigation activities. Building on this, they all agreed that evaluations performed by the body must go beyond the mere evaluation of national systems. Evaluating methodologies is a central responsibility, it was felt. The example of JI has shown that it is difficult to assess the integrity of mitigation activities on the basis of superordinate methodology criteria.



Breakthrough in Katowice? Negotiators will need to take a balanced decision on the Art. 6.4 body.

The way forward

The question at hand is whether the Art. 6.4 body should already be established at the Katowice conference even though the modalities of the mechanism have not yet been agreed. On the one hand, operationalisation of the mechanism could be accelerated, but on the other, there is the question of what mandate the body might be given in the first year and whether the body and SBSTA processes might not get in each other's way. How much substantive work could the body actually take on? Establishing the body and determining its rules of procedure would take at least the first six months of the year. Therefore, leaving further drafting of the text in the hands of the SBSTA Chair, with the support of the Secretariat, seems to be the more effective solution.

A joint Article 6 Body

Why oversight matters for all Paris market approaches

by Sandra Greiner, Mandy Rambharos, El Hadji Mbaye Diagne

When Parties agreed in Paris on the basic principles for international cooperation under Article 6, they designed two distinct market-based approaches: (i) the Article 6.4 mechanism that -much like the CDM of the Kyoto Protocol - is centrally governed and overseen by a Supervisory Body; and (ii) the Article 6.2 cooperative approaches that are conceived as bottom-up, and where Parties are in the driver's seat to design how they'd like to cooperate. While not seeking to question the differences between the two approaches, this article argues for the benefits of establishing a joint Article 6 body (the Article 6 Body). The basic rationale is that a joint Article 6 Body would allow harnessing linkages between all market-based approaches of the Paris Agreement, ensure balance between them and present a solution to the still open question of oversight arrangements for the cooperative approaches. It can do so without blurring the line between the two concepts or taking away the prerogative of Parties to design their own cooperative approaches - which is one of the key innovations of the Paris Agreement.

While some options for cooperative approaches have already been introduced in the Article 6 negotiations, including Japan's Joint Crediting Mechanism (JCM) or plans of the European Union and Switzerland to link their emissions trading schemes, the full spectrum of approaches that can emerge under Article 6.2 is still unknown. The international community should therefore stay closely involved in monitoring the use of cooperative approaches, evaluating their contribution to global efforts in mitigating climate change and adopt a governance structure that enables it to react to the developments.

The concept

In a nutshell, the Article 6 Body would serve the Article 6.4 mechanism, the cooperative approaches under Article 6.2 and possibly the non-market approaches under Article 6.8. It would function as one body with the same composition, members and rules of procedures, possibly based on those agreed on for the Supervisory Body of the Article 6.4 mechanism. It would, however, have very distinct mandates.

For Article 6.4, the Article 6 Body would act as the Supervisory Body and assume all functions delegated to it under the rules, modalities and procedures of the Article 6.4 mechanism, cp. Article „Centralized or Host Party-led?" elsewhere in this issue. While the details are still subject to negotiation, it is commonly agreed that the Supervisory Body should be responsible for operationalising the mechanism and ensuring its proper development.

For Article 6.2, it is proposed that the Article 6 Body should be the central entity to oversee the development of cooperative approaches and internationally transferred mitigation outcomes (ITMOs) as a whole, monitor their use and suggest specifications or improvements to the Article 6.2 guidance. In addition, the Article 6 Body should be in charge of the review process of cooperative approaches to ensure their con-

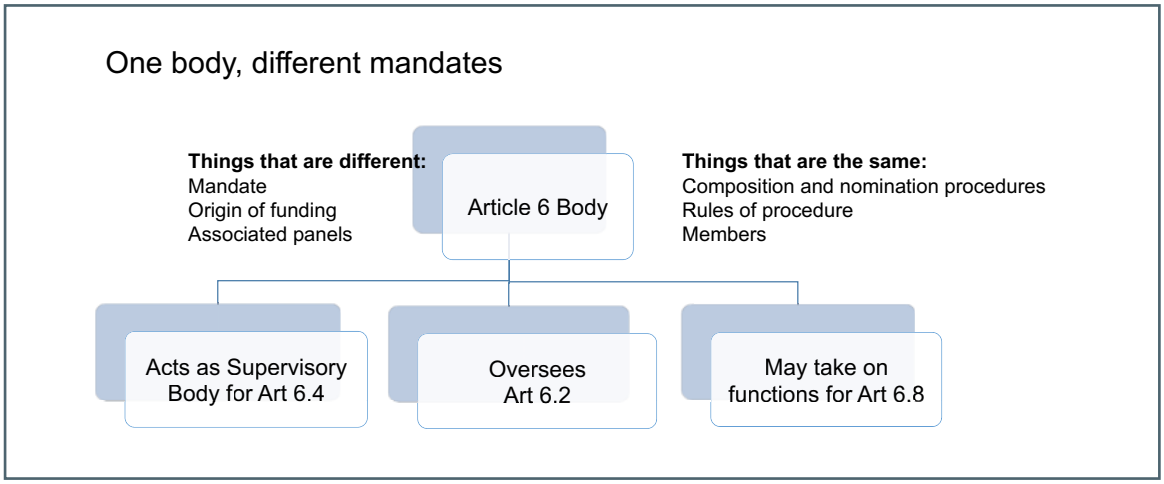


Figure 1: The Article 6 Body – One body, different mandates

sistency with the Article 6.2 guidance. This is not to say, however, that the Article 6 Body should approve cooperative approaches or international transfers – herein lies the clear distinction with respect to the mandate it has for activities under the 6.4 mechanism. How the Article 6.2 review process would work is described further below.

For Article 6.8, the Article 6 Body could undertake functions related to overseeing the framework for non-market approaches. This represents an additional possible mandate of the Article 6 Body, yet does not form the core rational of the proposal.

The Article 6 Body in the UNFCCC negotiations

The Article 6 Body was formally introduced to the negotiations by the African Group of Negotiators (AGN) during the second part of the SBSTA 48 negotiations in Bangkok, replacing the concept of a dedicated Article 6.2 body formerly supported by the group. Prior to that, it was proposed in South Africa's submission on accounting across Articles 4, 6 and 13 of the Paris Agreement from August 2018[1]. Following the Bangkok negotiations, the concept has been included as an option in all three draft negotiation texts[2]:

- In the textual proposal for Article 6.4, an option is included where the Supervisory Body oversees not only the mechanism but Article 6 as a whole
- The textual proposal for Article 6.2 refers to the establishment of an Article 6 body to ensure the consistency of cooperative approaches with the guidance
- The textual proposal on Article 6.8 makes reference to the Article 6 Body as one of the options for a body created to govern the framework.

While the Article 6 Body is among the options on the table in Katowice, it is also one of the most contentious issues. In Bangkok, several Parties voiced their concerns with the concept

1 Available here: https://www4.unfccc.int/sites/SubmissionsStaging/Documents/201809011649---180830%20SA%20SUBMISSION%20ON%20MTM%20ACCOUNTING%20DRAFT%204%20220818%20-%20final%20version1%20(3)%20correct%20version.pdf

2 As contained in the Joint reflections note by the presiding officers of the APA, the SBSTA and the SBI, addendum 2, matters relating to Article 6 of the Paris Agreement and paragraphs 36-40 of decision 1/CP.21, 15 October 2018

and opined that no such institution was needed for cooperative approaches.

Why African countries are supporting the Article 6 Body

It is a relatively small step to move from supporting dedicated international oversight for cooperative approaches to backing a joint Article 6 Body. Key reasons are heightened efficiency (e.g. meetings could take place back-to-back, travel costs be saved, and resources shared), as well as the cohesiveness of decision-making. The move to support a joint Article 6 Body is a natural progression for the African positioning in the negotiations.

The more fundamental question is why an international institution to oversee cooperative approaches is considered necessary in the first place, if these are developed and overseen by Parties themselves.

The first reason is that African countries have always subscribed to the view that international cooperation in implementing mitigation activities should not solely ensure the avoidance of double counting of emission reductions by more than one Party but also safeguard environmental integrity and promote sustainable development. For example, international cooperation in mitigation should not lead to the transfer of "hot air" from one country to another, as this would undermine the stringency of the acquiring Party's NDC.

Many Parties, including African countries, have stressed the need for certain quality criteria that cooperative approaches and ITMOs should adhere to. It is therefore necessary to draw up basic rules that Parties should follow as well as to establish an international review process that checks the adherence to these rules. This goes beyond the mere checking of reported quantitative data on international transfers under Article 13. What is needed is an institution with the ability to oversee the review of cooperative approaches and the Parties' fulfilment of obligations when participating in voluntary cooperation.

The second reason why African countries are supporting the creation of an Article 6 Body is the expected need for further specification or improvement of the Article 6.2 guidance. It is unrealistic to assume that once the guidance has been adopted by the CMA, all issues will be solved. Rather, there will be a need for further interpretation of the guidance in order to make it fully operational, which SBSTA is not equipped to deliver. The gathering of all Parties working on the basis of consensus is notoriously ineffective in deciding on rules that go beyond principle decisions. Parties are already now struggling to adopt the finer rules for corresponding adjustments, given the complexity of the implications.

With cooperative approaches only starting to take off, chances are that real-life experiences will only add complexities and deliver new challenges that must be addressed by the Paris Agreement community if it does not want to risk missing opportunities or tarnishing the reputation of cooperative approaches as a whole. It is also important to have a central authority that is in charge of tracking the progress of cooperative approaches, communicating how these contribute to the Paris goals and is able to recommend any corrective action to the CMA – should this become necessary following the developments.

Thirdly, levelling the playing field for all Parties to participate in international cooperation has always been a key concern for African Parties, especially given their experience with the CDM, where compared to more advanced developing countries, African countries benefitted the least. This can largely be attributed to rules that were established without consideration of the African project context and that were remedied

only later through inventions such as programmatic approaches, standardized baselines and micro-scale additionality. Comparability of the requirements posed on Parties wanting to participate in either the mechanism or cooperative approaches is similarly a matter of equity. Less developed countries will bear the brunt of any differences in requirements, given that countries with fewer capacities will less likely be able to participate in cooperative approaches and are more likely to engage in the Article 6.4 mechanism. Tangible examples of putting a greater onus on participants in the mechanism already exist. For example, activities under the Article 6.4 mechanism have to achieve an overall mitigation in global emissions and contribute to the costs of adaption through a share of proceeds, while for cooperative approaches these requirements are not explicitly stated.

The tendency of including higher and more stringent requirements for environmental integrity and sustainable development in the mechanism compared to the cooperative approaches can also be observed in the draft negotiation texts. It is important to recall that Article 6 is unitary and that the approaches have been bound together in order to ensure a balanced treatment. Having a joint body oversee their operationalisation is key to fulfilling this intent.

What should be the mandate with regard to Article 6.2?

For the cooperative approaches, the role of the Article 6 Body should be overseeing their consistency with the Article 6.2 guidance. This includes qualitative aspects, such as cooperative approaches fulfilling the rules on environmental integrity and sustainable development, as well as quantitative ones, i.e. whether ITMOs are appropriately accounted for through corresponding adjustments.

It is important that the review happens under the authority of Article 6 and is not outsourced to the enhanced transparency framework under Article 13. This is mainly because Article 13 has a different purpose than ensuring the consistency of cooperative approaches and ITMOs with the Article 6.2 guidance. The focus of Article 13 is to create and ensure transparency with respect to Parties' progress in implementing their NDCs, which serves as the basis for the overall assessment of progress towards the Paris Agreement goals. It thereby plays a pivotal role in the architecture of the Paris Agreement. Burdening the Article 13 process with the review of Article 6.2 requirements would be a distraction, and take away focus from the main purpose that the enhanced transparency framework serves. At the same time, the process under Article 13 is unlikely to provide sufficient capacity to do justice to the review. Moreover, it offers no structured opportunity to reflect upon lessons learned and to channel these back into the rulemaking process.

Another difficulty lies in the timing of the review. Under Article 13, the review process is structured around biennial transparency reports, while for Article 6.2, many Parties including African countries, point out the need for information to be provided and reviewed at various points in time, such as ex ante information provided before the exchange of ITMOs.

The Article 6 Body allows for a stand-alone and independently timed review process. As already stated, the Body's role would not be to approve individual cooperative approaches developed by Parties. Rather, the Body would be the political anchor of the process while the review itself would be carried out by technical experts as shown in Figure 2. The Article 6 technical experts could be established as a panel to the Article 6 Body. Under Article 6.2, participating Parties should clarify how they are meeting the participation requirements and responsibilities,

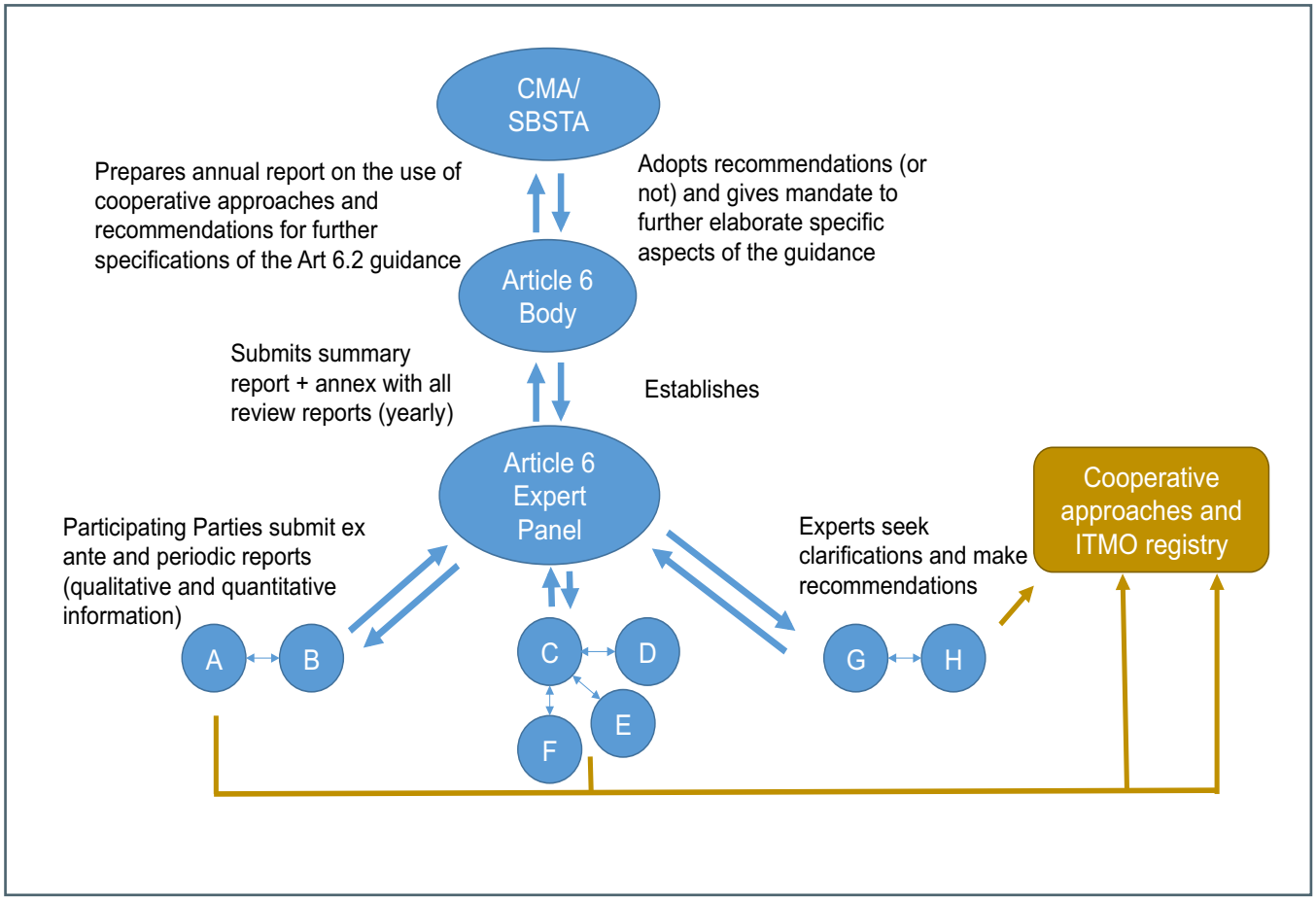


Figure 2: Article 6.2 review process

as well as provide quantitative information on the transfers or purchases of ITMOs. The information should be presented in a dedicated report format, to be reviewed by the Article 6 technical experts. Before issuing their review reports, the technical experts will communicate with Parties, seek clarifications on the information provided and make recommendations. The technical experts will also cross-check the consistency of the information by examining the data registered under the central registry on cooperative approaches and ITMOs.

The review reports will feed into the Article 13 process and inform the assessment of Parties' progress towards implementing their NDCs, as part of the facilitative, multilateral consideration of progress (FMCP). If inconsistencies with the Article 6.2 guidance are encountered, which could not be resolved during the expert review, these will be flagged for the Article 13 process and addressed through the same measures as other inconsistencies encountered in Parties' NDC reporting.

The review reports will further be submitted to the Article 6 Body. It is proposed that the Article 6 expert panel compiles the review reports into a summary report once a year, which in turn would be the basis of an Article 6 Body annual report to the CMA on the use of cooperative approaches. Besides statistical information, the report could assess the contribution of cooperative approaches to the Paris Agreement goals, highlight positive examples and challenges encountered. Additionally, the report could contain recommendations to the CMA to further clarify the guidance. Without singling out individual cooperative approaches, the experience made during the review could lead to an improvement of the rules or produce facilitative guidance. Vice versa,

the CMA can task the Article 6 Body with developing certain technical elements of the guidance, such as the elaboration of reporting templates.

Hearing the concerns

Many Parties have expressed strong concerns with or even aversions to the concept of an Article 6 Body, particularly those who believe in a limited role of the UNFCCC vis-à-vis cooperative approaches (i.e. being limited to the definition of accounting guidance to avoid double counting). Many are content with seeing the Article 6.2 review being integrated into the Article 13 process, with no need for a political authority besides SBSTA and the CMA.

This first has to do with Parties being adamant to not expose their cooperative approaches to political judgement. Compared to the activities under the Article 6.4 mechanism, which are associated with the private sector, cooperative approaches are seen as a pathway to cooperation between governments. Governments therefore have a higher level of identification with cooperative approaches. In the same vein as Parties resist to have their NDC ambition level judged by other Parties, they do not want their policies and measures placed under political scrutiny.

This concern is addressed in this proposal. The Article 6 Body would neither have an approval function nor directly get involved in the review of individual cooperative approaches.

A second concern is that political bodies may produce political blockades, which could throw a spanner into the wheels of bottom-up approaches. The Article 6 Body, however, would not decide on the fate of individual approaches – this is in the hands of the Article 6 technical experts and the Article 13 process. Rather, the Article 6 Body could help to unblock political stalemate at the higher level of SBSTA and the CMA by providing time and space for deeper discussions.

A third concern brought forward is the possible proliferation of bodies, as negotiators could ask for more issues reported under the transparency framework to have their own body. Article 13 covers both the transparency of action and the transparency of support provided to developing country Parties in the form of finance, technology transfer and capacity building. Noting that all issues under the enhanced transparency framework of support already have constituted bodies under the Convention[3], the Article 6 Body would set no precedent.

The final concern relates to the high costs of establishing and maintaining a body under the UNFCCC, an issue that has been raised with respect to the CDM Executive Board. However, pointing out the costs without weighing the overall benefits is insufficient. Besides fulfilling a key role in the architecture of the Paris Agreement – overseeing one of the most important triggers to increasing ambition – the work of the Article 6 Body could directly lead to cost savings through reducing meeting times of the SBSTA and the CMA. The Article 6 Body moreover has a high degree of efficiency as the Article 6.4 mechanism already establishes the Supervisory Body to which only another mandate is added. The CDM Executive Board is a successful example of being self-sufficient, financed by the proceeds of its activities. Given the notoriously scarce contributions to the UN this is a model worth replicating for the Article 6 Body as a whole.

Disclaimer and acknowledgements

While seeking to further clarify the proposal made by the African Group of Negotiators (AGN) during the Bangkok session, the ideas presented in this article do not constitute a formal negotiating position of the AGN. The presentation of the Article 6 Body in this article has been informed by and benefitted from discussions with a broad range of stakeholders, including during the Workshop on Article 6.4 Design Options organised by BMU/Wuppertal Institut on 02 October 2018 in Berlin, the ICTSD meeting on Article 6 in Glion on 17-18 October 2018 and the Pre-COP24 Forum for East African negotiators from 30 October – 1 November in Nairobi, hosted by GIZ Uganda.

3 Including the Standing Committee on Finance, the Technology Executive Committee and the Paris Committee on Capacity Building

Towards Decarbonisation

Should the shipping sector deliver emission reductions inside or outside the sector?

by Lucy Gilliam, Transport & Environment

Shipping is one of the largest greenhouse gas (GHG) emitting sectors globally, responsible for around 1 Gt of CO2eq every year.[1] Shipping emissions have grown by some 70% since 1990 and are projected to increase by between 50% and 250% by 2050.[2] This means that on a business-as-usual pathway, total shipping emissions could account for about 18% of worldwide greenhouse gas emissions by 2050.[3] In April 2018 after years of negotiations, the International Maritime Organisation agreed a target of at least a 50% reduction in greenhouse gas emissions (GHG) from the shipping sector by 2050 and to improve carbon intensity by at least 40% by 2030. Reductions higher than 50% were sought by many nations, especially those at significant threat from climate change and sea level rises, so the reference to 'by at least by 50%' was accompanied by a commitment to see short term measures to be agreed and in place, with emissions reductions being realised by 2023. The April agreement, importantly, directed the shipping sector to achieve the reductions 'in-sector'.

Despite the agreement directing shipping to reduce emissions in-sector there is nonetheless a debate within the negotiations for measures to reach the goal for shipping GHG to develop carbon offset programmes for shipping. The decision to pay for someone else to make those emission savings, rather than making in-sector reductions can depend on the marginal abatement curves for mitigating CO2 for the industrial sector in question. Marginal abatement (MAC) curves set out the costs of a basket of different measures to achieve CO2 savings. Faber et al. have explored the MAC curves for shipping and have shown that profitable technologies exist to improve the fuel efficiency of ships[4]. However, the study also shows that barriers exist to deployment of these technologies which are not purely price related, including institutional and financial barriers.

Solutions to decarbonise shipping exist

Technologies exist to decarbonise shipping[5]. The challenge is predominantly in the implementation and scaling those technologies. A range of short, medium and long term regulatory measures to achieve the goals exist and are now being discussed at the IMO. Options for short term measures include mandatory requirements on individual ships to improve operational carbon intensity based on carbon intensity metrics yet to be agreed or based on mandatory ship speed reductions. Other measures proposed involve strengthening the Ship Energy Efficiency Management Plan (SEEMP), a non mandatory management tool that aims for better operational ship management, digitalisation to improve voyage and port planning, use of wind propulsion and mandatory retrofits. In-sector allowances, which can be traded, can also play a role in driving these technologies.

1 3rd IMO GHG study, 2014.
2 3rd IMO GHG Study, 2014.
3 EP, Emission Reduction Targets for International Aviation and Shipping, 2016 · https://bit.ly/1N5xK4f
4 Faber at al. Analysis of GHG Marginal Abatement Cost Curves, 2011 · https://bit.ly/2ztoU3G
5 International Transport Forum – OECD announcement, Decarbonising Maritime Transport by 2035, 2018 · https://bit.ly/2GC3eY2

Source: © Xin Fou Zhou / Pixelio.de

New fuels needed: Chinese Cargo Ship.

Shipping needs new propulsion fuels

The longer term challenge is more fundamental as decarbonising shipping will be possible but will effectively depend on a shift to zero carbon fuels/propulsion technologies which include electrification, hybridisation and hydrogen/ammonia fuels[6]. This transition will depend on many variables – regulatory aspects within and outside the remit of the IMO, the wider transition to renewable electricity production worldwide, further technological improvements, ship designs and investment in port infrastructure[7]. All the evidence suggests that this transition is technically possible but major questions remain as to implementation pathways both to scale up production of the new fuels which are considerably more expensive and at the same time see them adopted by the sector. Emission trading schemes such as the EU-ETS could theoretically play a role but not at the allowance prices seen over recent years. Such ETS schemes depend critically on trading being within a closed system with a robust and declining emissions caps.

Are offsets an option for shipping?

Offsetting was explored as an option for shipping in the 2016 report on CO_2 emission from international shipping[8], within a range of scenarios for the sector to manage its emissions, along with the different options for offsets within emission

6 Transport & Environment, Roadmap to decarbonise European Shipping, 2018 · https://bit.ly/2FNgvhd
7 International Transport Forum – OECD announcement, Decarbonising Maritime Transport by 2035, 2018 · https://bit.ly/2GC3eY2
8 Smith et al 2016, CO_2 emission from international shipping, UMAS, London · https://bit.ly/2P70OAH

trading schemes like the EU-ETS or other future schemes which could enable the sector to buy credits for its emissions or for the sector to sell emissions reduction within the sector to other sectors. While offsets or emission trading is mentioned in all the pathways, there is no discussion on implementation within the shipping sector.

What is key is whether these emissions reductions are traded, within a clearly defined sector (or not) and if those emissions are capped and declining over time in line with the Paris Agreement temperature goals. Within the Paris Agreement all countries are called on to establish emission reduction targets and to make emission reduction commitments in the form of Nationally Determined Contributions (NDCs). Under the Paris agreement the question is now: given that all countries will have emission reduction targets to what extent does offsetting still make sense? Shouldn't the reductions from these offset projects be allocated to the country where the reductions are being made, rather than the sector purchasing the offset credits?

With the Kyoto Protocol second commitment period ending in 2020 the ability to transfer international mitigation credits between parties of the Paris Agreement is being negotiated under the Article 6 of the Paris Agreement. One of the key and unresolved problems of offsetting is how to avoid double accounting, which is where two separate parties could claim the emissions reductions from one project. The Paris Agreement requires countries to adjust their reported GHG emissions for international transfers of mitigation outcomes, in order to avoid double counting of emission reductions.

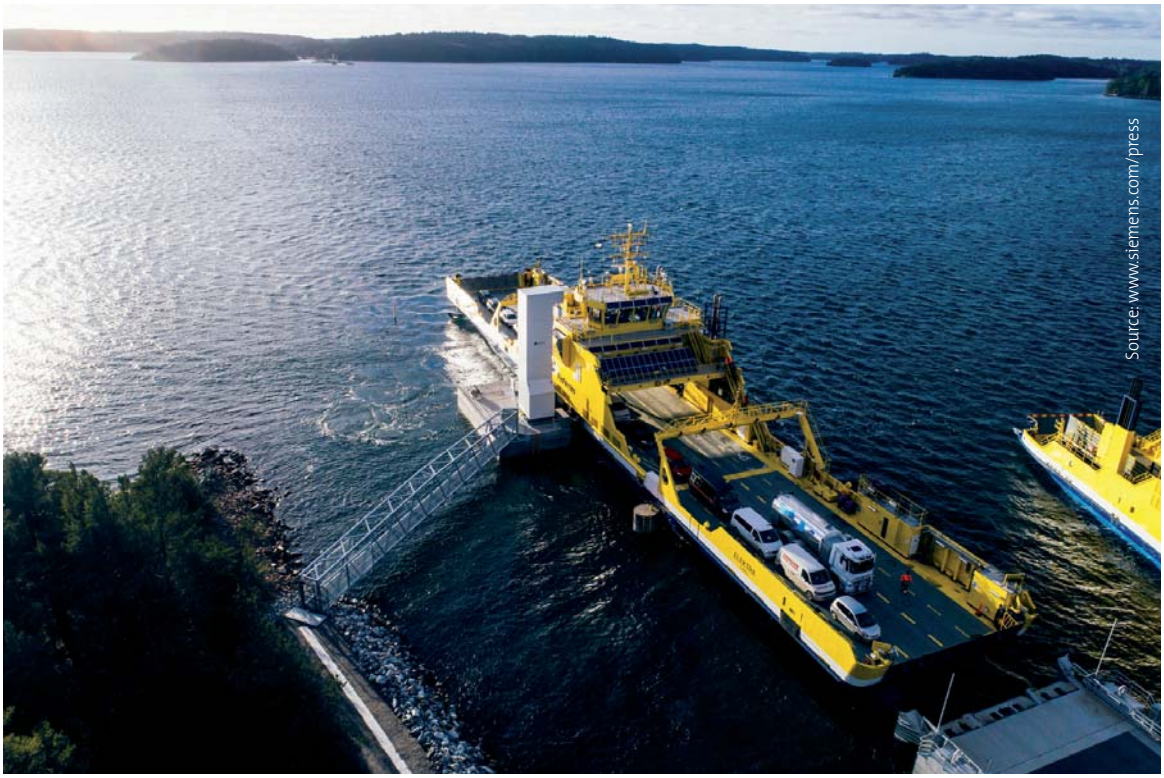
The soon to be implemented ICAO offset scheme for aviation called Corsia may have more than 100 programmes. To date, there is no agreement within ICAO of how to account for offsets purchased by airline operators within the ICAO CORSIA scheme in the UNFCCC Paris Agreement either. The rules for carbon accounting are on the agenda of the next UNFCCC Conference of Parties (COP24) in Katowice, Poland in December 2018. Several studies have explored these issues and developed proposals to overcome some of these challenges[9,10].

Prior to the Paris Agreement, offsetting as a climate mitigation tool was developed under the Kyoto protocol and its Clean Development Mechanism (CDM) to help countries meet their emissions targets and stimulate private sector and developing countries to reduce emissions. The efficacy of CDM offsets and technical challenges of offset schemes has been reviewed in a study[11] undertaken for the European Commission DG Climate Action to assess the project rules and projects for their ability to reduce climate emissions and concluded that only 2% of the projects had environmental integrity. The study also highlighted some of the challenges with auditing / verification of the number of programmes and projects involved in global offsetting schemes as this is a huge bureaucratic challenge.

Because offsetting gives rise to emissions reductions in other sectors, then it is questionable what impact offsetting could have on the shipping sector. And here aviation may help give us some answers. CDM offsets and those from voluntary offset schemes have long traded at a cost well below one dollar per tonne of CO_2. And even if the CDM disappears and is not replaced, there is a large supply of offsets from voluntary schemes suggesting that prices may not move very much. One reason the ICAO CORSIA offsetting scheme is being touted as a solution is because it will create demand for offset credits that hardly exists today. And at an effective carbon price of less than one dollar per tonne, their impact on the airline industry itself will be minimal to non existent given that fluctuations in oil prices are far greater. And in any case the whole raison d'etre of resorting to offsetting is to secure reductions in other sectors at an abatement cost far below that in the sector buying the offset credits.

This argument applies equally to aviation and shipping. In other words, offsetting was never intended to stimulate "in sector" emission reductions and there is still no evidence to suggest that it will in aviation. Recourse to offsetting in aviation has clearly been accompanied by a concerted campaign by airlines to limit global abatement measures to offsetting only - witness the continued industry attacks to abolish the aviation ETS once the CORSIA is implemented. There is little

9 Qui, K, The Future of the Clean Development Mechanism under a New Regime of Higher Climate Ambition 2018 · https://bit.ly/2PZRSCt · accessed 26th November 2018
10 Stockholm environmental institute,Potential for International Offsets to Provide a Net Decrease of GHG Emissions · https://bit.ly/2BF8JBO · accessed 26th November 2018
11 Cames, M. et al (2016). How additional is the CDM? Analysis of the application of current tools and proposed alternatives. Öko-Institut. Study prepared for DG CLIMA. Available here: https://bit.ly/2rbmfHl



Early mover: Electric ferry in Finland.

evidence to suggest things would be very different in shipping. What would be the logic of pursuing immediate emissions reductions through, say, in-sector speed limitation which is itself controversial, if industry had the choice of purchasing offset credits for less than a dollar? What would the incentive be to make the enormous investment to develop and bring to market new more expensive low/zero carbon marine fuels if the alternative was a one dollar offset?

Perhaps the most telling argument against offsetting for shipping is that the airline industry and ICAO insist that a market mechanism such as offsetting is a temporary stop gap measure that will end in 2035. At that date the industry fully expects that operational measures and biofuels will have generated sufficient emissions reductions to be able to replace the CORSIA. But all evidence suggests the opposite. Aviation emissions continue to soar globally and biofuel uptake remains essentially non existent – because of price. Aviation is on a course for its fuel burn and thus emissions in 2035 when CORSIA is due to end being on the same growth trajectory we see today. Hardly a drop of kerosene demand will have been reduced. For shipping that could mean that there is no incentive to slow down ship speed to reduce emissions and no financial incentive to create the new low carbon ship fuel industry. Presuming there is still such a market in 2035, offsetting would merely have robbed the decarbonisation process of a critical 15-20 years. Ship emissions would be far higher and the decarbonisation challenge that much greater and more urgent.

The course is clear. The shipping sector must embrace the challenge of reducing emissions in sector by at least 50% by 2050 now - starting with immediate reduction measures. They will help preserve shipping's remaining carbon budget, while new fuels and electrification battery technology are developed.

Briefing Note on Host Country Authorizations

A new briefing note examines the different types of host country approvals necessary for a transaction under Article 6.2 and Article 6.4 Paris Agreement (PA). Available at **www.carbon-mechanisms.de/en/LoA**

Art. 6 and the Global Stocktake: New Paper

A new JIKO Policy Paper explores the relationship between Article 6 and the Global Stocktake (Art. 14) of the Paris Agreement, both of which shall contribute to a raising of ambition over time. Download at **www.carbon-mechanisms.de/en/GST**

Glossary

All Carbon Market terms and abbreviations are explained in detail in the glossary on the JIKO website. You can view the glossary here: **www.carbon-mechanisms.de/en/service/glossary/**