Views on Mitigation Value and its Application

Andrei Marcu

ICTSD
International Centre for Trade and Sustainable Development

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European Roundtable on Climate Change and Sustainable Transition

Policy Brief

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LIST OF ABBREVIATIONS

AAU	Assigned Amount Unit
B&C	baseline and credit approach
C&T	cap and trade system
CDM	Clean Development Mechanism
CER	certified emission reductions
CMP	Parties to the Kyoto Protocol
COP	Conference of the Parties
CV	Compliance Value
EB	executive board
ETS	emission trading system
EUA	European Union Allowance
EU ETS	European Union Emissions Trading System
FV	Financial Value
GHG	greenhouse gas
HFC	hydrofluorocarbons
KP	Kyoto Protocol
MRV	monitoring, reporting and verification
MSR	Market Stability Reserve
MV	Mitigation Value
NAMA	Nationally Appropriate Mitigation Actions
NCM	Networked Carbon Markets
NDC	Nationally Determined Contribution
PA	Paris Agreement
RE	renewable energy
UNFCCC	United Nations Framework Convention on Climate Change

ABSTRACT

The concept of Networked Carbon Markets, and more specifically the relationship between the mitigation, compliance and financial values of units in various carbon trading systems has been extensively discussed. However, better understanding of these concepts is necessary as the Paris Agreement could lead to more plurilateral efforts—such as carbon clubs—emerging. For this reason, the paper analyses the concept of mitigation value and its application, and the relationship between mitigation value and compliance value.

1. BACKGROUND

The Networked Carbon Markets (NCM) concept is based on the acceptance of the idea that units in a carbon market have a Mitigation Value (MV), and that the relationship that exists between the Mitigation Value, the Compliance Value (CV), and the Financial Value (FV) of a unit in a carbon trading system, has a significant impact on market functioning, and on regulatory governance.[1]

Discussions about these concepts has been ongoing for a while, but as parties enter into negotiations leading to the operationalization of Art 6 of the Paris Agreement (PA), addressing these concepts, and gaining better understanding of some of the important issues that need to be addressed, takes on new urgency.

Considering that the governance of Art 6.2 of the Paris Agreement will be considerably decentralized, with parties being able to set the Compliance Value of domestically issued units, both for international compliance (for the PA) as well as for domestic compliance, the role of Mitigation Value, as well as the relationship between the Mitigation Value and Compliance Value, become even more significant and important to address. The concept of Mitigation Value can also be seen as relevant for the plurilateral efforts that are expected to emerge, in the form of what some may call "carbon clubs," and their relationship with Art 6.2 of the PA.

1 This paper builds on, and quotes from the paper entitled "Mitigation Value, Networked Carbon Markets and the Paris Climate Change Agreement"by Andrei Marcu. It can be accessed through http://pubdocs.worldbank.org/en/840951442526241099/Mitigation-Value-Networked-Carbon-Markets-and-the-Paris-Climate-Change-Agreement.pdf

2. WHAT IS MITIGATION VALUE?

What is Compliance Value? Compliance Value is the face value of any unit, and its value for compliance purposes, in the jurisdiction where it is accepted, and used, for compliance. The regulator is the only one that can set a Compliance Value for any unit that it allows as good for compliance in that jurisdiction. The EU sets the European Union Allowance (EUA) as a compliance value of 1 tonne. Similarly, the EU decided that some certified emission reductions (CERs) have Compliance Value=1, and some hydrofluorocarbons (HFCs) have a Compliance Value=0.

What is Mitigation Value? The Mitigation Value is associated with the outcome of a mitigation action – what is the amount of reduction associated with that mitigation effort. A Mitigation Value is, in our view, most representative, and useful, when associated with a unit of effort, or the face value of a unit. That does not preclude the discovery of the Mitigation Value of a discrete mitigation action.

The question that can be raised is: "what is the mitigation value of a CER (from a clean development mechanism (CDM) project), or an EUA from the European Union Emissions Trading System (EU ETS)?" The mitigation value is a floating value, which can change based on a number of factors, including economic and regulatory conditions. For illustration purposes, if the oversupply of EUA were to increase as a result of an economic recession and not mitigation actions, the Mitigation Value of an EUA may be seen as having decreased.

We accept the fact there are uncertainties regarding how much greenhouse gas (GHG) reduction any unit represents. The Mitigation Value provides a measure for these uncertainties. That uncertainty is associated with a number of elements, but should primarily fall into two categories

- **The Monitoring, Reporting and Verification (MRV) uncertainty.** There is always uncertainty associated with how precise the MRV is.
- **Uncertainty about whether a tradable unit is backed by a real reduction, or rather, what is the nature of the reduction.** In the case of an emission trading system (ETS), that can be seen as the amount of "good surplus," as opposed to "bad surplus." These concepts of "good" and "bad" surplus need to be elaborated, as they also are fundamental to understanding the concept of Mitigation Value. All reductions are welcome, but their causes are also important. "Bad" surplus is a surplus that emerges from causes other than mitigation actions (e.g. economic recession). "Good" surplus is the result of mitigation actions that lead to reductions.

Who sets the Mitigation Value? While only the regulator can set the Compliance Value, anyone can determine a value that he feels is the Mitigation Value: the regulator, any institution that the regulator designates, NGOs, rating agencies, etc.

For illustration purposes it is important to realize that the Mitigation Value is currently "de facto" being set, but not in a systematic way. Every time civil society passes judgement that the value of an assigned amount unit (AAU) is not 1, and that surplus EUAs are not the result of mitigation action, but of economic recession, it is setting a Mitigation Value for those units.

Where does Mitigation Value apply? First and foremost a Mitigation Value applies to the output of a mitigation effort, be it of a project, ETS units, Renewable Energy trading certificates, etc. It can be the Mitigation Value of the units issued by baseline and credit approach (B&C) (e.g. CERs from CDM), or allowances issued for a cap and trade system (C&T) (e.g. EUAs).

The Mitigation Value concept can become more complex and be applied to Nationally Appropriate Mitigation Actions (NAMAs), or other mitigation activity outputs. It is possible that a Mitigation Value could also be a useful for rating climate bonds.

A Mitigation Value can also be useful in addressing competitiveness, as different Mitigation Values, in two systems, may ensure that the level of effort in the two systems is quantified and works towards creating a level playing field. Finally, in the same context, the Mitigation Value will be very useful for discussions about linking different carbon pricing mechanisms, such as ETS. The contribution of the concept of Mitigation Value to the linking may be very important, and be an alternative to "classic linking," whereby two systems link when they have a similar level of effort, with Mitigation Value1=Mitigation Value2. As economies change, and Mitigation Value1 and Mitigation Value2 change, the concept of a floating Mitigation Value may become very useful in linking different ETS.

Since Mitigation Value is complex enough, the discussion in this paper is focused on the Mitigation Value of ***units*** *issued by baseline and credit (B&C) or cap and trade (C&T) approaches. Once this is well understood and accepted, the Mitigation Value can be expanded to other approaches and their outputs.*

Not the atmospheric value. Mitigation Value does not refer to the atmospheric impact of a tonne of CO2e reduced. One expression that has been sometimes used in relation to NCM and Mitigation Value is that "a tonne is not a tonne." This has sometimes been interpreted as implying that a tonne of GHG reduced in one place does not have the same environmental effect in terms of combating climate change. That is not the case, and is not the intent.

Units not tonnes. If nothing else, to avoid confusion, and to avoid re-starting the discussion whether "a tonne is a tonne," one must strongly advocate that we address the issue of Mitigation Value of **units**, not of **tonnes**. A floating Mitigation Value for a ton of CO2e would be difficult to explain, and persuade others of its existence. The expression is a red flag for many.

Is Mitigation Value real, and can its effects be observed? It is also important that the Mitigation Value, and the relationship between Mitigation Value and Compliance Value, can be correlated with events that have taken place in carbon markets, and be used to explain actions that the regulator has taken place in the carbon market.A system can be said to be in a steady state when the Compliance Value assigned by the regulator is equal to the Mitigation Value of the units in that system. Once that equilibrium is broken, then regulatory intervention is needed to redress it.

The evaluation and use of the Mitigation Value needs to be observed as influencing what is happening in the real world, even if the name of Mitigation Value as such does not appear anywhere. Examples of regulatory interventions as the result of the stress introduced in the market by the emergence of inequality between the Mitigation Value and Compliance Value of AAU, CERs and EUAs, albeit at different times, and for different reasons.

Mitigation Value of which units? Mitigation Value of units should not be applicable to a specific set of units in carbon markets (such as some restricted number of EUAs, such as residual EUAs – the surplus at the end of a trading period) unless these units can be clearly identified through a characteristic that would affect the worth of their Mitigation Value. It can be applied to such a restrictive set, but that would only be a special case, and it would limit the value of the concept and its applicability, unnecessarily.

There are a number of arguments in favour of such a view. One argument is that the Mitigation Value and NCM concepts are being introduced to address a real phenomenon that emerges in carbon markets where the market puts a Mitigation Value on units, but not in a formal way.

Segmentation can and should take place if there is an objective reason, or if units have specific characteristics – say at issuance or usage.For illustration purposes one can see the expiration date for compliance use, the ability to bank, the jurisdiction where they can be used for compliance, and the special conditions for transfer from jurisdiction to jurisdiction, as reasons for units to be segmented.

Otherwise, units are issued through free allocation or through a primary market (auction), then traded on secondary markets, and finally used for compliance. In most jurisdictions the issuance and compliance cycles overlap, and as such, even if there was the desire to do so, it would be difficult to identify residual units.

Similarly, and as further illustration, one could imagine different Mitigation Values for CERs from different projects types in the CDM. Or alternatively, one could imagine putting a Mitigation Value for ALL CERs from CDM. However, that would have to then take into account the characteristics of all units issued from all CDM projects.

The argument can be made also against differentiating between Mitigation Value for the same units used domestically, in the trading system where they were issued, versus the Mitigation Value of the same units, but being traded (and transferred) internationally.

This is an interesting discussion, but one that needs to take place, and is elaborated below, against the set of assumptions made of how the compliance value is used in relation to the Mitigation Value, and who sets the Compliance Value and the Mitigation Value in any given jurisdiction.

Last, but not least, the objective of the NCM would seem to militate against assigning different Mitigation Values for units issued in the same system. The NCM, justified and supported by the concept of Mitigation Value, is an effort to help in the creation of a global and liquid carbon market, and as an alternative to the more “classic” linking approach.

Assigning different Mitigation Values to units of the same vintage from the same ETS, would go against that goal, and does not seem to be justified – if the arguments made here are convincing.

Prediction of the number of tonnes to be issued. The Mitigation Value is neither the prediction of the number of units that will be issued from a project, nor the probability that a number of units promised will be issued. That is something that is very useful as a rating from investors who would like to buy a CDM project (or its output), but it is not the Mitigation Value.

3. MITIGATION VALUE IN EMISSION TRADING SYSTEMS

It is said that a market should be long in the short-term and short in the long-term. "Good" surplus is the amount that results in efforts to reduce GHG emissions.

"Bad" units are those that have been physically reduced, but that reduction is not due to efforts to mitigate, but is the by-product of activities that have other objectives. Carbon leakage, economic recessions, renewable energy (RE) overlap, are all examples where physical reductions are achieved, but as the result of undesirable causes or overlapping actions, not of efforts intended to reduce GHGs.They are not really "bad," as they reduce GHGs, but they result in a "bad" effect on the value of the units in the ETS and on future incentives, through an artificially depressed ETS price, to continue to reduce.

There is no intention to have every activity in society tested for non-interference with the ETS. Society has many priorities and objectives and they need to be recognized and addressed. What we are arguing for is the recognition of these overlapping activities, and an adjustment to an ETS, based on the number "bad" units in the system.

In the case of an ETS, at any given time, there are in the system a certain number of allowances. They were allocated freely, or had been auctioned, but they are in the system. And they are indistinguishable from each other.

The amount of allowances in the system, and the amount that is forecast at any time in the future to exist in an ETS, is the result of what has been put in, what has been used for compliance, what has been reduced as a result of mitigation actions (good reductions), and what is the result of non-mitigation-intended events/activities (bad reductions).

> ***Allowances in the ETS at any time = Auctioned + free allocation-used for compliance + good reductions (surplus)+ bad reductions (surplus)***

The key is how to calculate, through a methodology at any given time, what amount of allowances are in the system as a result of efforts to mitigate.

However, a methodology needs to be defined, and for that purpose we may consider MILESTONES, which may be the end of trading periods in an ETS, if they are defined. However, the Mitigation Value, in order to be a valid concept, needs to be able to be calculated at any given time. **Using a milestone is a simplification, which is only intended to make the concept, and methodology, easier to grasp.**

The methodology should, at a given moment in time, determine OR forecast, with a certain probability, that there is NOW, or there will be at some time in the future (e.g. end of the trading period) an X amount of units that are due to non-GHG mitigation activities.

We must emphasize that the Mitigation Value derived applies to all units, not only a surplus that can be identified at a determined moment, be it the end of the trading period. Units are bankable and fungible and there can be no stacking order or things will get very complex and unenforceable.

We will use, for illustration purposes, an example that has been used in other instances:

- 1000 allowances issued at the start of P1
- There is a forecast that at the end of P1 there will a surplus of 100 left.
- There is a determination that:
- 75 are the result of mitigation efforts: "good surplus"
- 25 are the result to economic recessions, plants moving outside the ETS, etc.
- This forecast has a probability of Y%
- In this case the Mitigation Value for all units in the system should be
- Mitigation Value= 1- 25/1000= .975

An alternative calculation of the Mitigation Value is Mitigation Value=(1000+75)/(1000+100)=.977

The calculation of the Mitigation Value can be done at a given time and determine at any given time what is the good/bad surplus. Or it can be done as a forecast, in which case the calculation of the Mitigation Value could be done in conjunction with the Y% probability that this result will be obtained, which will result in a different Mitigation Value.

During P1, as times goes by, that 100/75/25 forecast will change, based on economic conditions, efforts, technology development.

This MAY result in a change in the defined Mitigation Value.

An important discussion needs to take place, which was raised above, regarding the applicability of the Mitigation Value for certain units in an ETS. The case has been made that there could be a different Mitigation Value for units traded outside the system, that is units traded internationally.

It must be made clear that no one waits, or should have to wait, to see whether there is a surplus at the end of a trading period, get permission and see if they are allowed to trade internationally, and then trade. In a liquid market, which is what we aim for, this does and should not happen.

The Commitment Period Reserve for AAU trading was an attempt in that direction, but no such discussion has emerged as a desirable feature in discussions regarding linking systems.

4. THE RELATIONSHIP BETWEEN COMPLIANCE VALUE AND MITIGATION VALUE

An important element in creating fungibility across heterogeneous markets is the relationship between Mitigation Value and Compliance Value. That relationship is not well understood, and yet it can be used to explain many of the symptoms emerging in GHG markets, and which need to be addressed.

The Regulator, or any stakeholder can set a Mitigation Value. It is an important value as it provides the credibility of the GHG market, which is purely regulatory in nature, and therefore needs a license to operate.

The tendency of the Regulator is to set (assume) a Compliance Value=Mitigation Value=1. As long as this equation holds true, the GHG market will maintain credibility, and stability, and will be given societal license to operate.

Once the set Mitigation Value starts to deviate from the Compliance Value, then the market losses credibility, and is under pressure to introduce measures to address the situation. A few examples can illustrate this type of situation.

When Kyoto Protocol was signed, the CMP, as a Regulator, saw AAUs as having as Mitigation Value=Compliance Value=1. Stakeholders initially accepted this Mitigation Value. However, as soon as significant amounts of "hot air" started to emerge in Russia, Ukraine, etc. perception of AAU having a Mitigation Value less than 1 became prevalent. However, the Compliance Value of the AAUs was maintained at 1 for Kyoto Protocol (KP) compliance, which led to a loss of credibility of AAUs (the ones available on the market were from former Eastern Bloc countries) as a trading for compliance unit, while maintaining its accounting function.

This situation eventually led to pressure to "do something" about surplus AAUs. That pressure materialized in Doha, when provisions were introduced to eliminate the surplus AAU in the Second Commitment Period of the KP.

The EU ETS currently finds itself in a situation that is not dissimilar. There is currently a huge surplus of EUAs, due to, among other causes, the economic recession (could be seen as EU ETS "hot air"). This has led the Mitigation Value of the EUA to be seen as less than it assigned Compliance Value, resulting in efforts to address the situation in an ad-hoc manner through back loading, and through the Market Stability Reserve (MSR), on a more permanent and predictable basis.

One aspect that needs to be highlighted is the fact that the Mitigation Value and Compliance Value of units, can be binary or risk adjusted. For illustration purposes, currently a CDM project is deemed to be additional (and meet the rest of the Regulatory cycle).In the case that project is deemed additional a CER is issued. If not there is no issuance.

The reality is that as a counterfactual argument, a project can never be said with 100% certainty to be additional or not. As such, an alternative approach would be to assign it a risk-adjusted value (between 0% and 100%). This would be an approach more in line with the realities of how credits are created and the Mitigation Value of a unit of reduction.

An assumption that is made regarding the Mitigation Value, Compliance Value and the relationship between them is that regulators will not set the Mitigation Value, since they can set a Compliance Value directly. It is more likely that rating agencies, or other organizations or institutions may set the Mitigation Value, and that regulators will use it as an input in setting the Compliance Value of any unit used for compliance in their jurisdiction.

It is not as if when the Mitigation Value is set at .977 every regulator will automatically set the Compliance Value for those units, when used in their system, at .977. Regulators may set their Compliance Values at any value they

wish, even if the Mitigation Value of units from A is =.977.

It is therefore possible that, in the absence of an agreement among regulators to use the same Compliance Value for a "generally accepted" Mitigation Value, that distortion in the overall environmental calculation may occur when units are transferred internationally.

4.1 Baseline and credit

In the case of a B&C system, what credits represent is, and will always be counterfactual, as additionality is a fundamental concept and the question to be answered is "what would have happened in the absence of." In this case the uncertainty comes from the probability of a project being additional, setting the appropriate baseline, etc.

So in the case of a CDM-like B&C mechanism, whether it is used as an offset or not, the uncertainty will emerge from

1. MRV
2. The probability that the project is additional or not. The CDM considers that this is a binary decision, when in fact it will always be a probability.
3. The amount of "bad" credits that could be issued due to an inflated baseline.

5. NCM AND THE UNFCCC REGIME POST-2020

There are four scenarios that need to be considered in analysing how Mitigation Value and Networked Carbon Markets fit with the post-2020 United Nations Framework Convention on Climate Change (UNFCCC) framework for markets. These scenarios, as described below, show an increasing level of centralization in the governance to decide what is the Compliance Value of a domestically produced unit, used internationally, for compliance with UNFCCC obligations.

NCM is characterized by the importance that is given to the Mitigation Value of units and its relationship with the Compliance Value, which is assigned by the Regulator.As such the main issues that needs to be examined are:

- Is NCM a relevant concept in the context of an international climate change regime with compliance obligations?
- How would it work under different scenarios, and what provisions, if any, need to be put in place to make NCM compatible with individual scenarios?
- Who sets the Compliance Value, for domestic and international compliance purposes?
- How do the domestic and international Compliance Values relate to each other, and how do they relate to the Mitigation Value of the unit?

Scenario 1: Decentralised, no international guidance on Compliance Value

From a markets point of view, this scenario is not dissimilar to not having a UNFCCC post 2020 agreement, as there is no international Regulator assigning an international Compliance Value to each domestically issued unit. Each domestic Regulator is free to assign any domestic and international Compliance Value to any unit imported from another system.

In this case, NCM can function without any concerns of overlap or conflict between NCM and the UNFCCC framework for markets. The conflict would emerge if the international Regulator would set an international Compliance Value for domestic units, which would be different from the one set by national Regulator (in the exporting or importing jurisdictions).

Under such a scenario parties are free to use any units they choose for international compliance. The international Compliance Value is decided at the domestic level (decided by the user). As such, a party, through its national Regulator, may use any domestic units issued in another jurisdiction that it has purchased, and assigns it a Compliance Value (national and international).

How does this Compliance Value relate to the Mitigation Value of unit? Since the domestic Regulator sets the Compliance Value, a number of scenarios should be highlighted. One scenario is that the domestic Regulator, which imports the unit, sets its Compliance Value (international and domestic) at what it perceives/determines the Mitigation Value to be.

Another scenario is that it will set the Compliance Value (domestic and international) at the Compliance Value in the domestic jurisdiction that had issued the unit. It seems logical that the same Compliance Value should apply in this case nationally and internationally.

Who will set the Mitigation Value for a unit in this scenario? One possibility is that there will be market players and stakeholders who will determine what the Mitigation Value is. There may be more than one Mitigation Value produced. Each party will be free to use the Mitigation Value it chooses in setting the Compliance Value for its jurisdiction. Alternatively, a 'club' could be formed that will decide on an organization whose Mitigation Value those in the club will use.

As discussed above, if the Compliance Value set at the national level differs dramatically and consistently from the generally accepted Mitigation Value, then the credibility of the market suffers. The Financial Value will hold

for a while but it will move in the direction of the Mitigation Value, in the expectation that the Regulator will take steps to adjust the Compliance Value to the level of the Mitigation Value.

Scenario 2: Decentralised with guidance on Compliance Value

This scenario has slightly more centralized governance than Scenario 1. In this case the Conference of the Parties (COP) provides some international guidance on what is good for compliance with international obligations. This would be likely expressed in terms of environmental quality. What this implies is that a domestically issued unit may have an international Compliance Value of 0 or 1, under some conditionality, and that the COP guidance will indicate what is equivalent to 1.

Technically this will not in any way change the relationship between NCM and the UNFCCC framework for markets when compared to the discussion under Scenario 1 above. There is still no international Regulator assigning an international Compliance Value to domestically issued units.

However, in this scenario, the guidance of the international Regulator may influence the Mitigation Value of a unit and with it, its FV. However, there would be no conflict and NCM can function under this type of UNFCCC framework for GHG markets without any constraints.

Scenario 3: Decentralised, guidance must be observed, but no approval

This third scenario moves further away from the COP not setting an international Compliance Value for domestic units used internationally for compliance with UNFCCC obligations, and closer to having an approval role.

In this scenario the COP provides guidelines for the characteristics of a unit that has a Compliance Value=1, and they must be observed. However, under this scenario, the COP, as an international Regulator does not have the authority to set the international Compliance Value for these units.

This scenario may also include the requirement for the international compliance user of the unit to provide transparency, in the form of information on their environmental characteristics, and how they match with the COP guidelines.

Given these characteristics, there is no conflict, or constraint, between the UNFCCC market framework, and NCM. More so than in Scenario 2, the Mitigation Value is bound to be influenced by the guidance on conditionality set by the COP.

This influence on the Mitigation Value, as mentioned before, is likely to influence the FV, if a unit's Compliance Value is very different from the COP guidelines and the Mitigation Value. The FV is likely to move in the direction of the Mitigation Value in the expectation that the Regulator will adjust the Compliance Value, sooner or later. The Regulator, should seek to determine Compliance Value in accordance with transparent criteria so that the market is positioned to pre-empt any adjustments. This is intended to reduce uncertainty in the market and any large price swings that might occur when the Regulator decides to adjust the Compliance Value of certain units.

Scenario 4: Centralised governance, the COP assigns the international Compliance Value

This scenario represents the other side of the spectrum when it comes to market governance under the UNFCCC. In this case the Paris Agreement would have a provision that the COP (or the parties to the Paris Agreement), which is the Regulator, is the only entity that has the right to say what is good for compliance in regime set up under the Paris agreement. It could create an international Regulatory body, under the COP, which could be comparable to a "super CDM Executive Board (EB)."

It would also state that the Regulator would set the international Compliance Value of any unit issued domestically and used internationally, for compliance with obligations under the UNFCCC.

Under this scenario, there are constraints in using NCM together with the UNFCCC markets

framework. If the COP sets the international Compliance Value for domestic units (for UNFCCC compliance) this may clash with the Compliance Value set by the domestic jurisdiction that imports these units for domestic and international compliance at a Compliance Value=Mitigation Value (Mitigation Value determined as discussed above, and which may be different from the international Compliance Value set by the COP).

As such, running NCM inside a centralized UNFCCC GHG market framework requires that certain provisions be put in place. This conflict between the Compliance Value set by the Mitigation Value of a unit through the NCM and the right of the Regulator (COP) to set the Compliance Value inside a compliance regime can be addressed by setting up a "compliance bubble" inside the UNFCCC regime.

In setting up a "compliance bubble," and trading and transferring inside the bubble, the Parties that choose to operate through NCM can choose to set the Compliance Value of units at any Mitigation Value they see fit, even if it results in a Compliance Value different from what the COP would assign. All transfers take place inside the bubble, and all that needs to happen is to ensure that the Compliance Value seen outside the bubble is what the COP accepts. This does not matter, as it is the whole bubble that has to comply.

There are provisions for setting up a "compliance bubble" in both the UNFCCC and the KP.All EU member states are parties to the KP, but the EU uses the "compliance bubble" provision. This is a provision that implies joint UNFCCC compliance and obligations (notwithstanding that both the EU and EU member states are parties). This may not be easily attained, except of a more general level of integration such as is the case for the EU.

Hiving off the ETS part under a bubble provision is possible but it would have to ensure that the UNFCCC compliance looks at the total for the bubble and is not affected by the transfers that take place at a Compliance Value, which is different from the one that the COP assigns.

6. CONCLUSIONS

The concepts of Mitigation Value and NCM are complex and not always easy to accept. Floating exchange rates for currencies are here, but accepting this for an environmental product may create the impression of relativity in the area of environmental protection, which not everyone is willing to accept.

These concepts, in a world of asymmetrical climate change policies, could be valuable as they represent a potential solution to some very complex problems. There is complexity as a result of the different type of Nationally Determined Contributions (NDC), due to the lack of backstop created by the AAUs, by the change in economic circumstances, and the inherent differences between economies.

We want to emphasise that we see this as one of the competing approaches in a world where we can expect that carbon scarcity will increase, and we shall seek cooperative ways to address the asymmetries in carbon regimes.

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