THE COMPLIANCE FUND

A New Tool for Achieving Compliance Under the Kyoto Protocol

The Center for International Environmental Law

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EXECUTIVE SUMMARY

How Annex I Parties to the Kyoto Protocol will achieve compliance with their substantive obligations, and how the Parties will collectively enforce those obligations, are two of many questions left unanswered by the Protocol's text. Parties may fear they could commit to obligations with which they are unable to comply, and they are concerned that their efforts may be undercut or their economic competitiveness undermined if other Parties "free ride" by failing to implement their own obligations adequately.

Parties legitimately need assurances that these concerns can be met as they negotiate rules that will determine how the first and subsequent commitment periods will be managed. During the first commitment period, domestic action to reduce emissions should be the centerpiece of each Party's compliance strategy. The cooperative mechanisms—joint implementation, emissions trading, and the Clean Development Mechanism—provide additional flexibility and cost-effectiveness to the Parties' implementation efforts.

After the commitment period ends however, the opportunity for a Party to meet its obligations for that period through domestic reductions will no longer be available to it. Annex I Parties with an overage at the close of the commitment period will thus effectively be bound to purchase credits from the cooperative mechanisms if they desire to comply with their substantive obligations. When the commitment period ends, Parties will "true-up" their greenhouse gas ledgers to ensure that their aggregate domestic emissions have not exceeded their assigned amounts, as required by Article 3.1. If a Party finds that its aggregate emissions are greater than its assigned amount, its only option for remaining in compliance will be to increase its assigned amount through cooperative mechanism purchases, until the amount is equal or greater than its emissions. Should it choose not to purchase sufficient credits, it will be out of compliance with its substantive obligations, and in turn will be exposed to an enforcement response.

However, there is no way of knowing in advance whether these mechanisms will provide the market with enough credits to satisfy the Parties' needs. If there are insufficient credits available on the market at the end of the true-up, or if speculators controlling available credits insist on prohibitively exorbitant prices, Parties could be faced with breaching their Protocol obligations, even if they have the will to comply.

Other Annex I Parties may decide that it makes political or economic sense to ignore their overages and risk the consequences of an enforcement response, or to delay honoring their commitments until an unspecified future time.

The first of these groups needs a mechanism that will enable them to stay in compliance with their commitments, should the cooperative mechanisms fail to provide the means. The second necessitates an enforcement response that will induce them to comply. The *Compliance Fund*, coupled with a binding arrangement for assessing and collecting contributions, provides a way to address both needs.

The basic idea of the Compliance Fund is uncomplicated. If a Party's emissions exceed its assigned amount at the end of the true-up period, and no cooperative mechanism credits are available on the open market, the Party has the opportunity to pay into the Fund a fee commensurate with its overage. Fees collected by the Fund are used to underwrite highly reliable GHG mitigation projects throughout the world. The Fund sets fees on the basis of actual estimated mitigation costs, plus a surcharge or "multiplier" to account for administrative costs, the risk of project failure, and other factors. The multiplier also serves to make the price of Fund credits high enough to dissuade Parties from relying upon them as a first choice for their commitment period implementation strategies.

Upon payment of the fee, the Party receives emissions credits equivalent to the amount of its overage. The Party adds the credits to its assigned amount, thereby ensuring that its aggregate emissions no longer exceed the amount and that it is in compliance with its substantive Article 3 obligations.

Because it requires an up-front payment from a Party with an overage, the Fund (1) provides an assured way of "making the climate whole" by balancing carbon ledgers for the commitment period, and (2) removes any economic advantage the Party might have received from failing to adequately mitigate its emissions during the period. The Fund is thus superior to "borrowing," or a "reduction of future assigned amount," the most oft-discussed proposals for allowing such Parties to avoid a declaration of non-compliance. These approaches neither make the climate whole nor remove a non-complier's economic advantage. They merely shift the responsibility of emissions reduction to future generations by allowing Parties to borrow portions of their assigned amounts from future commitment periods as a way to pay back their excess emissions in a current period.

For those situations in which cooperative mechanism credits are available during the true-up but a Party fails to honor its obligations by purchasing them, effective enforcement responses are essential to preserving the Protocol's integrity. Traditional responses—publicizing a Party's non-compliance, suspending its treaty privileges, or imposing trade measures or fines—can deter non-compliance. They should thus be part the Protocol's reserve of non-compliance consequences. However, none of them alone will guarantee that the twin needs of making the climate whole and neutralizing a non-complier's economic advantage are successfully addressed.

The Compliance Assessment can help accomplish both. Should an Annex I Party not correct its overage during the true-up, then a Compliance Assessment is levied against it. The amount of the Assessment is determined automatically, based upon the size of the overage. Parties satisfy an Assessment by making payment to the Compliance Fund, which uses the collected monies to underwrite highly reliable emissions mitigation projects.

The Assessment can become enforceable by applying traditional enforcement responses to secure its payment. However, a *Compliance Assessments Recognition Agreement* could provide a more efficient and reliable way to assure that Assessments are satisfied. Under this Agreement, Annex I Parties would consent to recognize Compliance Assessments as arbitral-type awards that can be collected in their domestic courts, where they are not subject to appeal or review. Countries have already accepted similar arrangements under the NAFTA Environmental Side Agreement and the New York Convention for the Recognition of Arbitral Awards.

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Center for International Environmental Law

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I. INTRODUCTION

How Annex I Parties to the Kyoto Protocol will achieve compliance with their substantive obligations, and how the Parties will collectively enforce those obligations, are two of many questions left unanswered by the Protocol's text. On the one hand, Parties fear that an effective compliance and enforcement system may punish them for committing to obligations with which they are unable to comply. On the other, they are concerned that without such a system their efforts may be undercut or their economic competitiveness undermined by "free riders"—Parties that fail to implement their own obligations adequately.

Parties legitimately need assurances that these concerns can be met as they negotiate rules that will determine how the first and subsequent commitment periods will be managed. During the first commitment period, domestic action to reduce emissions should be the centerpiece of each Party's compliance strategy. However, the Protocol's cooperative mechanisms—joint implementation, emissions trading, and the Clean Development Mechanism—can help promote compliance by providing flexibility and cost-effectiveness.[1] The United States and others are relying heavily on them as part of their compliance strategies.

An especially important compliance function to be provided by the cooperative mechanisms is to make additional GHG reductions available to Parties that have exceeded their assigned amounts at the end of the commitment period. Once the commitment period closes, the opportunity for a Party to meet its obligations for that period through domestic reductions will no longer be available to it. There is no guarantee, however, that a sufficient number of credits will be available through the cooperative mechanisms to satisfy demand. If they are not, some other mechanism will be required to enable Parties to avoid non-compliance. The *Compliance Fund* proposed in this paper is such a mechanism. It can both help Parties avoid non-compliance with their substantive Kyoto Protocol obligations and help enforce those obligations when Parties fail to comply.

[1] These mechanisms have been referred to as "flexibility mechanisms," "cooperative implementation mechanisms," and "Kyoto mechanisms." The authors prefer the term "cooperative mechanisms," because cooperation amongst Parties is the key to their success.

Part II of this paper will review the substantive obligations of Annex I Parties, explain why such Parties are effectively obligated to purchase credits from the cooperative mechanisms in the event of overage at the end of the commitment period, and identify several different classes of Parties that might find themselves in such circumstances.

Part III will introduce the basic idea of the Compliance Fund, identify its attractions, particularly in comparison to "borrowing," propose the procedural mechanics by which it might work, and discuss the merits of having it administered by the Clean Development Mechanism or the Global Environment Facility.

Part IV will begin by describing how *Compliance Assessments* might be levied against non-complying Parties after the first commitment period and true-up end. Next, it will outline the need for effective enforcement responses under the Protocol, explain why traditional enforcement responses alone may not adequately satisfy that need, and propose that the Parties adopt a *Compliance Assessments Recognition Agreement*. Under this Agreement, Annex I Parties would consent to recognize Compliance Assessments as arbitral-type awards that ultimately could be collected without recourse in their domestic courts.

II. MEETING THE TARGETS: THE NEED FOR COMPLIANCE OPTIONS

By adopting the Kyoto Protocol in December 1997, the United States and other Annex I Parties to the UN Framework Convention on Climate Change agreed for the first time to accept binding limits on their emissions of greenhouse gases.[2] Each Party pledged to ensure that its aggregate emissions for the first commitment period of 2008-2012 would not exceed its "assigned amount," calculated as a specific percentage of its 1990 base year emissions, multiplied by five.[3]

Annex I Parties are not limited to achieving their commitments through domestic measures alone. If they choose, they may increase their assigned amount by purchasing "emissions reduction units" (ERUs) from other Annex I countries, or by buying unused parts of those countries' assigned amounts (PAAs). Purchases are conducted through "cooperative mechanisms" including joint implementation (JI) projects and emissions trading. Each unit purchased increases the buyer's assigned amount by an equivalent amount, allowing it to emit more greenhouse gases domestically while still adhering to its Article 3 obligation to not exceed its assigned amount. Conversely, sellers must reduce their assigned amounts by the number of ERUs or PAAs they sell.

Another cooperative mechanism, the Clean Development Mechanism (CDM), allows Annex I Parties to increase their assigned amounts by acquiring "certified emissions

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[2] *See* Kyoto Protocol to the United Nations Framework Convention on Climate Change, Conference of the Parties, 3rd Sess., Agenda Item 5, U.N. Doc. FCCC/CP/1997/L.7/Add.1, *adopted* Dec. 10, 1997, *opened for signature* Mar. 16, 1998 [hereinafter Kyoto Protocol or Protocol]. Unless specified otherwise, all citations in this paper are to the Kyoto Protocol.

[3] Protocol art. 3.1.

reductions" (CERs) accruing from CDM projects in non-Annex I countries. Because non-Annex I "host" countries are developing countries not subject to emissions limitations or reductions, they do not have assigned amounts, and CERs are consequently not deducted from their emissions accounts.[4]

The Kyoto Protocol thus creates binding emissions limits for Annex I Parties and cooperative mechanisms to help them comply. However, it does not specify what should be done in the event an Annex I Party exceeds its assigned amount at the close of the commitment period. When a commitment period ends, there will need to be a limited "true-up" period during which Parties balance their national emissions ledgers. Parties will do this by first monitoring and tallying their commitment period performance, and then "truing up" their actual emissions to their assigned amounts.[5]

If a Party's aggregate emissions exceed its assigned amount, it will be effectively bound to purchase ERUs, PAAs, or CERs through the cooperative mechanisms. Article 3.1 requires Annex I Parties to ensure that their domestic emissions do not exceed their assigned amounts by the end of the commitment period. A Party can do this either by (1) reducing or limiting its domestic emissions so they remain below its assigned amount; (2) increasing its assigned amount through cooperative mechanism purchases, until the amount is equal or greater than domestic emissions; or (3) a combination of numbers 1 and 2.[6] If a Party finds during the true-up that its aggregate emissions are greater than its assigned amount, options 1 and 3 will necessarily no longer be available to it, because the period for reducing domestic emissions will be past. Accordingly, the Party will have no alternative but to increase its assigned amount by purchasing cooperative mechanism credits, if it is to comply with its obligation of ensuring that its aggregate emissions do not exceed its assigned amount.

[4] The "bubble" provisions of Article 4 are often referred to as an additional kind of cooperative mechanism. Adopted particularly with the European Union in mind, Article 4 allows any group of Annex I Parties to agree to fulfill their Article 3 commitments jointly, so long as the group does not collectively exceed the sum of its individual Parties' assigned amounts. For the purposes of this paper, "cooperative mechanisms" will not include the "bubble," because it does not provide for a formalized, market-based system of increasing or decreasing a Party's assigned amount, as do JI, the CDM, and emissions trading.

[5] *See* Donald M. Goldberg, Glenn Wiser et al., Center for International Environmental Law & Euronatura, *Building a Compliance Regime Under the Kyoto Protocol* 14 (1998). For legal purposes, the true-up should be considered an extension of the commitment period. Article 3.1 requires Annex I Parties to ensure that their aggregate emissions during the commitment period do not exceed their assigned amounts. It does not require them to demonstrate any specific progress during the commitment period, and thus permits them conceivably to accomplish all their reductions or adjustments at the last moment. Accordingly, it will not be possible to ascertain whether a Party has or has not complied with its substantive obligations until the commitment period ends. Defining the true-up as an extension of the commitment period will allow Parties who discover their accounts do not balance at the close of the period to remedy the situation promptly, without risking an automatic declaration that they are "out of compliance."

[6] Parties may also enhance their sinks to help meet their commitments and avoid exceeding their assigned amounts. This option will not be discussed in this paper.

For all three cooperative mechanisms, the implementing language of the Protocol provides that participation in the mechanisms shall be voluntary.[7] However, should an Annex I Party with an overage during the true-up fail to avail itself of the mechanisms, it will fail to ensure that its aggregate emissions do not exceed its assigned amount. That failure will constitute a violation of the Party's Article 3 obligations, which will leave it out of compliance with the Protocol and exposed to an enforcement response.

Annex I Parties could thus find themselves at the end of the true-up needing to purchase cooperative mechanism credits to avoid the alternative of non-compliance. Many predict that the system will produce large quantities of such credits. However, there is no way to gauge in advance what the supply or demand will ultimately be, making it distinctly possible that there could be insufficient credits available at the end of the true-up to satisfy the needs of all Annex I Parties. This could be particularly so if several of the largest polluters delay implementation of their reduction plans during the commitment period, on the assumption that it will be cheaper to wait and purchase their compliance at the end of the period rather than make significant domestic reductions early on.

Alternatively, should available credits be concentrated in the hands of a few speculators, Parties needing them to remain in compliance could find themselves facing a difficult choice. They could pay an unconscionably high price to stay below their assigned amounts, or face the consequences of being out of compliance at the end of the true-up and subject to an enforcement response.

At the close of the true-up period there could be three classes of Annex I Parties whose emissions exceed their assigned amounts, and who therefore face compliance problems. First, there could be Parties who would like to purchase sufficient credits to remain in compliance but cannot, because adequate supplies of credits are unavailable on the market. Second, there may be Parties with overage who willfully refuse to increase their assigned amounts through cooperative mechanism purchases. Third, there may be Parties that would like to cure their problem by purchasing credits, but haven't the financial means to do so.

Parties in the first class, who have the desire and financial means to cure their overage but cannot do so because sufficient credits are unavailable, will need a mechanism that enables them to stay in compliance with their commitments. Parties in the second class, who have an overage but are unwilling to cure it, will require an enforcement response that induces them to comply. The *Compliance Fund*, coupled with a binding arrangement for assessing and collecting contributions, can provide a way to address both needs.

Parties in the third category may have an overage because they oversold some of their assigned amounts through emissions trading during the commitment period. For instance, Russia's severely contracted economy has caused its domestic emissions to fall far below the emissions rate reflected in its 1990 baseline. Unless it experiences one of the greatest

[7] *See* Protocol art. 6 (stating that Annex I Party *may* acquire ERUs from another); art. 12 (stating that Annex I Parties *may* use CERs accruing from CDM projects); art. 17 (stating that Annex B Parties [those with quantified emissions limitation or reduction commitments (QELRCs)] *may* participate in emissions trading).

economic recoveries of modern times, it will not be able to produce domestic emissions during the commitment period anywhere near its assigned amount. The only reason it could realistically exceed that assigned amount at the end of the true-up period would be that it sold too much of its assigned amount to other Annex I Parties.

If emissions trading is subject to a buyer responsibility or hybrid buyer/seller responsibility ("traffic light") regime, the assigned amount units that Russia oversold will not be redeemable by the purchasing Party.[8] In effect, their sale would be void, and they would be added back to Russia's assigned amount. Russia's aggregate emissions would thus not exceed its assigned amount, and it would consequently not be out of compliance with its Protocol Article 3 commitments.[9]

However, the Annex I buyer—now holding irredeemable assigned amount units—could be left in the position of finding its aggregate emissions exceeding its corrected, reduced assigned amount. Unless it had made provisions to obtain adequate backup credits from another source, it might be unable to acquire them at the end of the true-up period, placing it in the first or second class of Parties above and out of compliance with its Article 3 commitments. For this Party, a Compliance Fund also provides a solution.

Finally, there may be Parties in the third class that either sold less than their overage, or are net buyers (or did not participate in the cooperative mechanisms at all). Their lack of financial capacity may warrant special treatment. The remaining Annex I Parties might provide loans, grants, or concessional funding to enable these Parties to purchase the needed credits through the Compliance Fund. In any event, provisions should be made so the environment does not suffer from their incapacity.

III. ACHIEVING COMPLIANCE DURING THE TRUE-UP WITH THE COMPLIANCE FUND

A. THE BASIC IDEA

The basic idea of the Compliance Fund is uncomplicated. If at the end of the true-up period a Party's emissions exceed its assigned amount and no cooperative mechanism credits are available on the open market, the Party has the opportunity to pay into the Fund a fee commensurate with its overage.[10] Fees collected by the Fund are used to underwrite highly

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[8] *See Building a Compliance Regime*, *supra* note 5, at 24-25; *see generally* Donald M. Goldberg, Stephen Porter et al., Center for International Environmental Law & Euronatura, *Responsibility for Non-Compliance Under the Kyoto Protocol's Mechanisms for Cooperative Implementation* (1998) (describing how a "traffic light" approach to emissions trading would operate) *See also* WWF, *Creating an Effective Compliance System for the Kyoto Protocol* (May 1999).

[9] An alternate formulation of buyer/seller responsibility would place both the buyer and the seller in non-compliance until one or the other resolved the overage.

[10] This aspect of the Compliance Fund is similar to the Clean Development Fund proposed by Brazil. *See Proposed Elements of a Protocol to the United Nations Framework Convention on Climate Change, Presented by Brazil in Response to the Berlin Mandate, U.N. Framework Convention on Climate Change,* Ad Hoc Group

reliable GHG mitigation projects throughout the world. The Fund sets fees on the basis of actual estimated mitigation costs, plus a surcharge or "multiplier" to account for administrative costs, the risk of project failure, and other factors. The multiplier also serves to make the price of Fund credits high enough to dissuade Parties from relying upon them as a first choice for their commitment period implementation strategies.

Upon payment of the fee, the Party receives emissions credits equivalent to the amount of its overage. The Party then adds the credits to its assigned amount, thereby ensuring that its aggregate emissions no longer exceed its assigned amount and that it is in compliance with its substantive Article 3 obligations.

B. ADVANTAGES

The attraction of the Fund is multi-fold. First, it provides an assured means of making the climate whole.[11] To stay in compliance with its Article 3 commitments, a Party using the Fund must pay, up-front, the full costs of removing its overage from the atmosphere. Because the Fund uses collected fees to underwrite only carefully designed projects bringing actual, verified GHG reductions, it assures that carbon ledgers for the commitment period will truly balance. Consequently, so long as a Party's overage is removed, or offset, in a timely manner—as it can be under the Compliance Fund—its long-term harm to the climate will be avoided.[12]

Second, the Fund removes any economic advantage a Party might receive from failing to adequately mitigate its emissions during the commitment period. When it pays the assessed fee, a Party places itself in a (marginally) worse economic position than it would have been had it made its reductions in a more timely manner. In other words, the Party immediately internalizes the cost of honoring its obligations, and by doing so places the same financial burdens of compliance upon its economy that other complying Parties have already placed upon theirs. Any economic advantage the Party might have enjoyed had it failed to comply or further delayed making its reductions is thus wiped out when it purchases Compliance Fund credits.

Third, the Fund gives a Party with overage at the end of the true-up a way of demonstrating its good faith, while avoiding non-compliance. States generally take their international commitments seriously. They enter into agreements with the intention of honoring them, knowing that their compliance with legal norms is necessary if they are to

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on the Berlin Mandate, 7th Sess., Provisional Agenda Item 3, at 3, U.N. Doc. FCCC/AGBM/1997/MISC.1/Add. 3/GE.97 (1997). However, the reader will note that the design, operation, and purpose of the Compliance Fund differ in many important respects from the Brazilian proposal.

[11] For the purposes of this paper, "making the climate whole" means balancing the carbon accounts of Annex I Parties so that their aggregate emissions—adjusted as permitted through the cooperative mechanisms—do not exceed the levels they committed to under the Kyoto Protocol.

[12] At least in the early period of the Fund, there will be some lag time between the end of the commitment period and the time that GHG reductions are actually accomplished by the Fund. The "multiplier" would enable the fund to purchase extra reductions that exceed the overage sufficiently to offset any incremental damage resulting from this lag time. For a more in-depth discussion of the multiplier, see "Setting the Price," *infra* p. 10.

receive reciprocal treatment from others.[13] By purchasing Fund credits and thereby avoiding being deemed as having breached its commitment, a Party can avoid the stigma of being seen by the international community and by its own citizens as an environmental outlier or treaty violator. If a Party with the capacity to correct its overage through Fund purchases fails to do so, however, that failure would clearly demonstrate a lack of good faith, and would trigger an enforcement response.

Fourth, the existence of the Fund can help make the Kyoto Protocol a more robust, reliable instrument for addressing the threat of climate change. By providing a means of immediately paying for overages at the end of the true-up, the Fund gives Annex I Parties the chance to "put their money where their mouth is" and thereby honor their Kyoto commitments. This "immediate mitigation opportunity" minimizes the chance that Parties will continually delay making necessary sacrifices by shifting them to future generations. Coupled with the deterring effect of reliable enforcement responses, the Fund will thus increase Parties' confidence that their respective implementation efforts will not be undercut by free riders.

Fifth, the Fund will help enhance confidence in the cooperative mechanisms by minimizing the possibility that speculators might try to corner or distort the market. If speculators bought up large amounts of credits during the commitment period and waited until the very end of the true-up to offer them at unconscionably inflated prices, Parties needing credits might simply "throw up their hands" and choose non-compliance over price extortion. The knowledge that Compliance Fund credits—fairly if not inexpensively priced—will be available to Parties in need would act as a disincentive to those who might otherwise be tempted to try "gaming" the system.

C. An Alternative to "Borrowing"

Considering its potential for (1) making the climate whole, (2) removing the economic advantage of non-compliance, (3) providing a means of avoiding non-compliance while demonstrating good faith, (4) increasing the reliability of the Protocol, and (5) enhancing confidence in the cooperative mechanisms, the Compliance Fund is superior to the proposal most often discussed for helping Annex I Parties avoid non-compliance when they have an overage. Whether identified as "borrowing" or a "reduction of future assigned amount," this scheme purports to address the problem of substantive non-compliance by allowing a Party to defer some of its obligation to reduce its emissions to a future commitment period. Parties are ostensibly deterred from using the scheme as a compliance tool of first resort by being required to add a "penalty," or GHG surcharge, when they repay their debt in the future.

But borrowing could fail on all counts, other than as a bookkeeping trick. Its deterrent value is low because it lets the non-complier off the hook financially, allowing it to defer payback until the end of the next commitment period (if at all). Accordingly, it rewards

[13] This idea is encapsulated in the maxim *pacta sunt servanda* and codified in the Vienna Convention on the Law of Treaties: "Every treaty in force is binding upon the parties to it and must be performed by it in good faith." Vienna Convention on the Law of Treaties, May 23, 1969, 1155 U.N.T.S. 331, art. 26.

the Party that delays the financial sacrifices necessary for compliance, and harms the Party that faces up to its obligations in a timely fashion. Because borrowing is based on the dubious premise that a Party lacking the will or wherewithal to honor its current commitments will nonetheless somehow discover the means to meet its future targets—*increased* by the amount of its present overage—borrowing all but assures that the GHG debt will never be repaid and that the overage will become a permanent addition to total atmospheric accumulations. The only likely way such a Party could attain its subsequent commitment period targets would be if the targets were inflated to account for both the Party's projected future emissions and the overage.

Viewed in this light, borrowing can be seen not as a way of avoiding non-compliance, but of avoiding responsibility by further shifting the burden of emissions reduction to future generations. It is thus analogous to a binge buyer purchasing compliance on unsecured credit. The Compliance Fund, on the other hand, requires payment in cash. By not relying upon bookkeeping gimmickry, and instead requiring Parties to pay up front for the reductions they committed to, the Fund can invest payments in real projects that reduce GHG concentrations to where they would have been had the Party made more timely reductions on its own.

To be fair, proponents of borrowing schemes recognize that Parties with overages at the end of the commitment period will need some kind of mechanism by which they can cure the overage. The Compliance Fund addresses this need while avoiding borrowing's shortcomings. Still, the fact that borrowing is an inadequate way to deal with a Party's overage does not mean that an overage from the first commitment period should not "carry over" into the second. A Party's assigned amount for the second period should be reduced by its previous overage until that overage is fully remedied by payment to the Compliance Fund. If overages do not carry over, Parties could conceivably raise the funds needed to satisfy their Compliance Assessments from the first period by selling parts of their assigned amount (PAAs) from subsequent periods. That would amount to borrowing by another name.

So long as overages *do* carry over (and emissions trading is governed by a buyer responsibility rule), potential buyers are unlikely to purchase PAAs from such Parties, because the risk that those PAAs will lose all of their value at the end of the commitment period will be too great to make them a worthwhile investment. Indeed, as discussed in the last section of this paper, Parties that exceed their assigned amounts should sell under a buyer responsibility rule ("yellow light") or be prohibited from selling altogether ("red light") until their non-compliance is cured. If they are permitted to sell, the first proceeds from sales should go to satisfy their Compliance Fund obligation.

D. THE QUESTION OF COST-EFFECTIVENESS

Because the Compliance Fund will enable Parties to use Fund credits upon payment of a fee rather than upon the accrual of GHG reductions, the overwhelming consideration for mitigation projects underwritten by the Fund should be reliability. Fund projects will be fundamentally different in this regard from projects conducted under the cooperative mechanisms already established by the Protocol. From a developed country's perspective, the attraction of CDM and Article 6 joint implementation projects is that they promise GHG reductions that are less expensive than those obtained at home. But seeking the best mitigation buy need not necessarily compromise the integrity of such projects because, regardless of how inexpensive they may be, they will presumably still be subject to rigorous monitoring, verification, and certification before any resulting credits are awarded.

The Compliance Fund, by contrast, may award credits before an underwritten project produces any actual climate benefits.[14] It will thus be viable as a mechanism for making the climate whole only if collected payments result in genuine GHG reductions equal to or greater than the amount of overage for which a Party is given credit. Because project reliability is of such overriding importance, Fund managers should consider cost-effectiveness only after reliability is fully assured.

Because cost-effectiveness will not be a primary consideration, projects could be sited in any country that is willing to participate and committed to the success of the project. Depending on the mandate of the institution selected to manage the Fund, projects could be located solely in developing countries, Annex I countries, or both.[15]

Vigorously stressing reliability over cost-effectiveness will mean that credits obtained through the Fund will cost more than credits Parties might have obtained through the other cooperative mechanisms. However, unlike those mechanisms, which were created to help Annex I Parties achieve compliance with their obligations at a lower price then through domestic reductions alone, the Compliance Fund is designed to enable Parties to achieve compliance when there is no other way for them to do so. The higher price of Fund credits will reflect the increased marginal cost of achieving reductions after the commitment period is over, as well as the environmental cost of delay.

E. INSTITUTIONS AND PROCESS

The Fund's chief tasks will include setting the price for compliance credits, collecting and managing monies, evaluating the merits of particular projects, and distributing monies to project developers. These responsibilities will require financial and developmental expertise, such as that possessed by the Global Environment Facility (GEF) or presumably, the Protocol's Clean Development Mechanism (CDM). While the Fund will ultimately make the climate whole by funding projects that avoid emissions and/or remove them from the atmosphere, project development, monitoring, verification, and certification need not be among its responsibilities. Instead, the Fund should function primarily as an underwriter, and should devolve as much responsibility as possible to the local level by leaving actual project development and management to those players who have demonstrated expertise in the area.

[14] Depending on how the Fund is set up, it could eventually acquire a portfolio or reserve of credits from projects that already exist. This could occur if Parties choose to establish the Fund with an initial investment endowment, or if the price charged for credits is high enough over actual costs to create a surplus, which is re-invested in projects that generate credits before they are actually needed.

[15] *But see* discussion *infra* p. 11 (examining reasons why it may be preferable to site projects in developing countries).

1. Setting the Price

The price of Fund credits during the true-up period should be high enough to 1) fully remove emissions in a quantity at least equal to a Party's overage, and 2) neutralize any economic incentive Parties might have to delay making timely reductions on their own. As discussed above, the risk associated with prospective credits will naturally increase the cost of Fund projects, which may dissuade Parties from using the Fund as an option of first resort. However, to assure that the Fund does not create a temptation for some Parties simply to delay implementing their compliance strategies until the end of the commitment period, the Fund will likely need to add a multiplier, or surcharge, to the base price.

The Fund's rules could establish a fixed multiplier for cases in which Parties are assumed to be acting in good faith but have no other compliance options. Too small a multiplier could induce Parties to "game the system" by avoiding or delaying accomplishing their reductions during the commitment period. But too large a multiplier would amount to a punitive response, which could cause Parties to reject cooperating with the Fund altogether. A punitive response may be inappropriate when Parties are assumed to be acting in good faith. Specific factors relevant to setting the multiplier during the true-up could include the marginal cost of reductions, financial discount rates, risk of project failure, incremental damage resulting from delay, and administrative costs.

After the true-up period expires, the cost of Compliance Fund credits must of course be higher. Delaying purchasing credits increases the cost to the environment while potentially decreasing the cost to the non-complying Party. As is commonly done with late tax payments, late payments to the Compliance Fund should incur penalty and interest charges, with some exceptions for Parties legitimately pleading hardship. The penalty and interest payments could be used to purchase additional reductions, both to offset environmental damage caused by delay and to build up a reserve of credits that could be used in future true-up periods.

2. Issuing Compliance Fund Credits

In cases where Annex I Parties wish to use the Fund because they have an overage and cannot obtain cooperative mechanism credits on the open market, the process of applying for and issuing Compliance Fund credits should be straightforward. Substantive non-compliance will not yet be at issue during the commitment period and true-up, because Parties are not required to show they have met their assigned targets until the close of the period.[16] Accordingly, no enforcement procedures for substantive non-compliance should come into play at this time, and they should not be triggered by a Party's application to purchase credits. Similarly, outside review pursuant to Protocol Article 8 will not be a necessary consideration for the credit-issuance process, because final review will be designed

[16] *See* discussion *supra* note 5 (arguing true-up should be considered extension of commitment period).

to evaluate and verify whether a Party complied with its substantive commitment-period obligations, and will not yet be relevant during the true-up.[17]

The only meaningful criterion for whether a Party should be able to purchase Fund credits will be need. Considering that credits should be priced with an added multiplier (so they are unattractive as an option of first resort), need should be presumed whenever a Party asks to make a purchase from the Fund during the true-up.

Upon receiving such a request, the Compliance Fund would advise the Party of the price, computed by multiplying the quantity of emissions units desired, times the base price per unit, times the multiplier. The Fund would issue the credits to the Party as soon as it made payment.

3. Selecting the Fund Administrator

As mentioned above, the CDM and the GEF are two potential Fund administrators. Each choice presents different legal questions of how the Fund might be adopted and how the Fund might implicate the particular institution's mandate.

(a) The Clean Development Mechanism

The Fund could plausibly be created as a division of the Clean Development Mechanism (CDM) under Article 12. Under this scenario, when credits were unavailable on the open market, Annex I Parties who needed them could purchase Compliance Fund credits in the form of certified emissions reductions (CERs) from the CDM. The CERs would be priced to include the multiplier, as described above. The Party could then add the CERs to its assigned amount as provided in Article 3.12. The CDM in turn would use the acquired funds to underwrite highly reliable mitigation projects.

A Compliance Fund thus envisioned would serve to fulfill the CDM's purpose of assisting Annex I Parties in achieving compliance with their quantified emissions limitation or reduction commitments (QELRCs).[18] Naturally, it would also have to fulfill the requirement that CDM projects contribute to sustainable development in the host country and respect any other CDM requirements or restrictions. None of these are likely to conflict with the aims of the Compliance Fund.

There would be several advantages to having the CDM administer the Compliance Fund. First, generating GHG mitigation credits is consistent with the CDM's mission and operational strategy. From an Annex I perspective, the CDM was created to generate credits;

[17] This paper assumes that Article 8 review will occur after the true-up. Others might assume that it will occur during the true-up. A full discussion of the design of the true-up is beyond the scope of this paper.

[18] *See* Protocol art. 12.2. Note that Article 12.2 articulates a *dual* purpose for the CDM: helping Annex I Parties achieve compliance *and* assisting non-Annex I Parties achieve sustainable development and contribute to the ultimate objective of the FCCC. If that paragraph is interpreted to mean each project activity must fulfill *both* purposes, then projects underwritten by the Compliance Fund and administered by the CDM would arguably have to be sited in non-Annex countries only.

tasking it with generating Compliance Fund credits would not require much more legal or institutional capacity than it already will require under its present mandate.

Second, because the CDM is devoted in part to helping non-Annex I countries achieve sustainable development, implementing the Fund under its auspices could greatly benefit developing countries. This might not be the case if the Fund is administered by an institution tasked mainly, or exclusively, with achieving emissions reductions or offsets.[19]

Third, this potentially large influx of funds to the CDM could help establish it as a major player in sustainable-development project underwriting. Such an infusion would help to make the CDM viable even if its projects initially prove not to be as cost effective or attractive to Annex I investors as many Parties predict. By endowing the CDM with significant resources, Compliance Fund proceeds could enable the CDM to develop the institutional capacity it will need to operate efficiently and effectively. This in turn could ultimately lead to greater availability of affordable credits on the open market.[20]

(b) The Global Environment Facility

The Global Environment Facility (GEF) provides grants and concessional funding to recipient countries for projects and programs that protect the global environment and promote sustainable economic growth. Originally set up as a pilot program in 1991, it was restructured in 1994 and replenished with over US$ 2 billion.[21]

Choosing the GEF as the Compliance Fund's managing institution also has specific advantages. First, the GEF has the resources to finance emissions mitigation projects before the first commitment period begins. Such projects could produce verified emissions reductions before the true-up, when compliance credits may be needed. This would allow the Fund to amass an inventory of credits that were backed up by actual, accrued reductions instead of by commitments to achieve reductions in the future. Should Parties need to purchase credits during the true-up, selling credits representing accrued reductions would be the most fool-proof way for making the climate whole.

Second, the new resources and role gained from managing the Compliance Fund could help ensure the GEF's viability. Developing countries have been disappointed by the relatively modest amount of resources that have been made available to them through the

[19] *Cf.* discussion *supra* Part III.D (discussing importance of reliability, and suggesting that projects could be sited anywhere where reliability can be assured).

[20] This last observation raises two caveats. First, the Compliance Fund must not relieve the pressure on Annex I countries to pursue domestic GHG reductions. Properly setting the multiplier will avoid this pitfall. Second, a sudden demand at the end of the true-up period for large amounts of CDM/Fund credits could overwhelm the institution if it has not been adequately endowed and staffed beforehand. Parties could minimize this possibility—and thereby assure that all credits issued lead to reliable and timely emissions reductions—by insisting that any authorization of the Compliance Fund be accompanied by an adequate appropriation of monies for its implementation.

[21] *See Introduction to the Global Environment Facility* (visited Feb. 9, 1999) <http://www.gefweb.org/intro/gefintro.htm>.

GEF.[22] Compliance Fund fees, augmented by the multiplier, could increase those resources dramatically. Such an increase could allow the GEF to underwrite major infrastructural development programs in the transport, housing, or energy supply areas, which it will likely never be able to do so long as it relies solely on voluntary contributions.[23]

Third, a GEF-managed Fund could support activities that will probably not be funded by the project-oriented CDM. These could include broad-based or general activities to develop infrastructure, build capacity, or transfer technology. However, GHG emissions benefits resulting from these kinds of activities may be difficult to quantify, which could make them inappropriate as a basis for issuing Compliance Fund credits to Parties.

4. Legal Considerations

Article 3 is explicit in naming the ways that an Annex I Party can increase its assigned amount and thereby raise the quantity of emissions it can legally produce during the commitment period. These include obtaining ERUs or parts of assigned amounts through joint implementation and emissions trading between Annex I Parties, and purchasing CERs through the CDM.[24] Thus, an amendment of the Protocol may be required to enable Annex I Parties to use Compliance Fund credits to increase their assigned amounts.[25]

On the other hand, if the CDM administers the Compliance Fund, an amendment may not be necessary, because Fund credits would be CERs recognized under Article 3. The need to use Compliance Fund credits *ex ante* (before they have been earned) might conflict with the stipulation that "Parties included in Annex I may use the [CERs] *accruing* from such project activities to contribute to [their] compliance . . ." (emphasis added).[26] Construing this language to limit Annex I Parties to using CERs only *after* the reductions have been achieved may be overly legalistic, however, and the language should not be a bar to a Compliance Fund if the Parties want one.

The fundamental legal impediment to using the GEF as the Fund administrator can be found in its basic mandate: to operate "as a mechanism for international cooperation for the purpose of providing *new and additional grant and concessional funding* to meet the agreed

[22] *See* UNITED NATIONS DEVELOPMENT PROGRAMME, ISSUES & OPTIONS: THE CLEAN DEVELOPMENT MECHANISM 64-5 (José Goldemberg ed., 1998). The GEF's financial commitments are broad, requiring it to channel its resources in several different directions. In addition to climate change, the GEF is charged with operating as a mechanism for international cooperation in the areas of biological diversity, international waters, and ozone layer depletion. Instrument for the Establishment of the Restructured Global Environment Facility, *adopted* 1994, sect. I.2, *available at* <http://www.gefweb.org/PUBLIC/instrume/instum2.htm> [hereinafter GEF Instrument].

[23] *See Issues & Options*, *supra* note 22, at 114.

[24] Article 3.13 also permits Parties to "carry over" any unused portions of their assigned amounts to subsequent commitment periods, if they so request.

[25] If the Compliance Fund also operates as part of a non-compliance mechanism, as proposed in Part IV of this paper, then an amendment would probably be required in any event, under Article 18.

[26] Art. 12.3(b). An income, expense, or other item that has accrued is one that has already been earned or incurred, even if it has not yet been paid. *See* Black's Law Dictionary 19-20 (5th ed., 1979).

incremental costs of measures to achieve agreed global environmental benefits. . ." (emphasis added).[27] The mandate requires the GEF to operate as a redistributional mechanism, under which developed-country funders underwrite the costs of projects or activities in developing countries.

Although the climate change mitigation aims of the Compliance Fund would fall under the GEF's competence, the generation of emissions credits arguably would not. The GEF Instrument contains no provisions for funders to receive any in-kind return from their contributions. Giving credits to developed countries in exchange for their payments would entail giving them direct benefits in exchange for GEF contributions, making those contributions neither grants nor concessional funding, as the GEF Instrument requires.

IV. ASSURING COMPLIANCE AFTER THE TRUE-UP

During the true-up period, the Compliance Fund can give the system solvency by providing credits to Parties who are unable to locate sufficient cooperative mechanism credits on the open market. After the commitment period ends, the Fund can be a key component in inducing Parties who willfully fail to comply to remedy their non-compliance. Should an Annex I Party not correct its overage during the true-up, then a *Compliance Assessment* would be levied against it. The amount of the Assessment would be determined automatically, based upon the size of the overage. Parties would satisfy Assessments by making payment to the Compliance Fund, which would use the collected monies to underwrite highly reliable emissions mitigation projects, as explained in the preceding sections of this paper. Regardless whether its monies come from voluntary purchases during the true-up or satisfaction of Assessments after, the Compliance Fund will function in precisely the same way.

The Compliance Assessment thus provides a formalized way of translating a Party's substantive non-compliance into a monetarily denominated amount. However, the question remains: how will an uncooperative Party be induced to pay its Assessment to the Compliance Fund? Just as the integrity of a domestic lien or penalty depends upon its enforceability, the integrity of a Compliance Assessment depends on the existence of reliable and effective enforcement responses. The traditional suite of responses for enforcing multilateral environmental agreements—including public approbation, suspension of treaty privileges, trade measures, and fines—may be useful and should receive careful consideration by the Conference of the Parties as it continues to develop the Protocol's compliance regime. A more efficient way to enforce Compliance Assessments, however, would be for Annex I Parties to consent to recognize them as arbitral-type awards that could be collected without recourse in their domestic courts. Countries have already acknowledged similar arrangements under the NAFTA Environmental Side Agreement and the New York Convention for the Recognition of Arbitral Awards.

[27] GEF Instrument, *supra* note 22, sect. I.2.

A. THE COMPLIANCE ASSESSMENT

The Compliance Assessment is a notification by the COP/MOP at the end of the commitment period that a Party has exceeded its assigned amount, is thus out of compliance, and must remedy its non-compliance by paying a specified amount into the Compliance Fund. Determination that a Compliance Assessment is due could take place as a corollary to the Protocol's Article 8 review and verification process. Article 8 authorizes expert review teams to conduct an in-depth review of annual inventories and national communications submitted by each Annex I Party.[28] Among their terms of reference, the expert review teams could be tasked with the responsibility of tallying and verifying the accuracy of the Parties' final inventories submitted at the close of the true-up to the commitment period.[29] The teams would then report any overage to the COP/MOP through the Article 8 procedures.

As part of its consideration of the report, the COP/MOP could refer the matter to an expert panel, which would quantify the dollar value of the overage by using a multiplier based on the various relevant factors discussed earlier in this paper.[30] One of the most important functions of the multiplier will be to deter Parties from failing to comply with their obligations. Consequently, the panel would set it significantly higher than were it being used to set the price of Compliance Fund *credits* during the true-up. Additionally, the rules should provide that the Assessment will increase over time for as long as it remains unpaid. Upon receiving the panel's determination, the COP/MOP, pursuant to its powers under Article 8.6, would issue a Compliance Assessment to the non-complying Party, effectively ordering it to mitigate its overage by paying its quantified dollar value into the Compliance Fund.

Payments to the Compliance Fund would be in cash. For some Parties (e.g., economies in transition), it might sometimes be necessary to arrange financing terms in conjunction with a multilateral development bank or other international lending institution. It may also be acceptable for a non-complier to satisfy the "principal" of its Assessment (i.e., the portion representing its overage, but not related penalties) by procuring unused, "banked" assigned amounts from third parties.[31] Such purchases would be acceptable from a climate perspective, because they would come from the (now closed) first commitment period, and they would represent a surplus in the overall goals for that period. On the other hand, a non-complier should not be allowed to satisfy its Assessment with a third party's assigned amounts from a later commitment period, because there would be a chance that the third-party seller might exceed its assigned amount during that period, thereby continuing delay and uncertainty in balancing the carbon ledgers for the previous period.

[28] Annual inventories will be the vehicle by which Parties show their progress toward meeting their emissions targets, while national communications will demonstrate compliance with overall Protocol commitments. The COP/MOP is scheduled to adopt guidelines for both at its first session. *See* Protocol art. 7.

[29] *See supra* note 5 and accompanying text (discussing need for true-up at close of commitment period).

[30] *See* discussion *supra* Part III.E.1.

[31] *See* Protocol art. 3.13 (permitting Annex I Parties that emit less than their assigned amounts during a commitment period to apply the difference to their assigned amounts for subsequent commitment periods).

B. Appeal and Arbitration

As described above, at the close of the true-up period, the COP/MOP would refer all cases of substantive non-compliance to an expert panel. The panel would prepare a factual record, including details of the Party's overage, the applicable multiplier, and a recommended Compliance Assessment. If the concerned Party chose to dispute the record or request an abatement of the Assessment, the record would be submitted to an arbitral panel. Depending on the degree of autonomy the COP/MOP wished to grant to the process, the panel could be standing or ad hoc. Panels could be composed solely of disinterested experts, including members of approved non-governmental organizations (NGOs); representatives from Annex I countries, non-Annex I countries, or both; or even a panelist chosen by the Party charged with non-compliance.

The arbitral panel would evaluate the record and recommendations submitted by the expert panel, and would hear mitigating evidence from the non-complying Party. Questions of a Party's capacity to comply also could be entertained at this stage. After deliberating, the panel would release a final report, which would be adopted automatically by the COP/MOP unless that body rejected it by a consensus or supermajority vote. For Parties who were adjudged to lack the capacity to comply, a plan to facilitate their compliance could be designed, possibly under the multilateral consultative process (MCP) envisioned under Protocol Article 16.[32] For all other non-complying Parties, the Compliance Assessment would become final as soon as the COP/MOP adopted the report, and the non-complying Party would be legally bound to pay it.[33]

C. Enforcing Compliance Assessments

1. Creating Effective Enforcement Responses

Most countries enter into international agreements with the intention of complying with them. Annex I Parties to the Kyoto Protocol are presumably no exception. However, the Protocol pushes them into un-chartered waters, committing them to make changes that could have significant implications for their industries and economies. Given the uncertainty, the technological challenge, the potential costs, and the possibility of continuing resistance to the Protocol, there is a danger that some or even many Annex I Parties will fail to comply with their first commitment period targets.

Failure to comply will raise at least two broad issues. First, Parties that do comply may rightly fear that non-compliers have reaped an economic advantage by avoiding the financial sacrifices necessary to achieve their reduction commitments. Such suspicions could

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[32] The facilitative approach of the MCP was originally authorized as part of the U.N. Framework Convention on Climate Change, May 9, 1992, art. 13, 31 I.L.M. 849 (entered into force Mar. 21, 1994). *See Building a Compliance Regime*, *supra* note 5, at 11-12.

[33] Once a Party is substantively out of compliance after the true-up, the only way to cure the non-compliance should be by satisfying the Compliance Assessment (with the exception, noted above, that "principal" might be paid from banked PAAs, if any exist). This rule would apply even when the non-complying Party lacked the capacity or financial wherewithal to pay the Assessment. In such cases, a facilitative plan could be developed to structure loans, grants, or other means of raising the needed funds on the non-complier's behalf.

lead to calls from complying Parties for a relaxation of their own commitments or compliance, and could threaten a breakdown of the entire treaty regime. Second, any emissions overage by a Party means that overall GHG concentrations at the end of the commitment period will be that much higher than they would have been had the Party met its target.

Effective enforcement responses to substantive non-compliance should thus (1) allay the fears of complying Parties that free riders will enjoy economic advantages, and (2) compensate for a non-complying Party's overage by balancing carbon ledgers for the commitment period to "make the climate whole." On a more fundamental level, the expectation that effective enforcement responses can and will be used when necessary serves to deter Parties from failing to comply with their obligations in the first place.

2. The Array of Enforcement Responses

A broad array of enforcement responses for addressing Annex I Party non-compliance has been proposed. These responses include:

- Publication of a Party's non-compliance;
- Suspension of treaty privileges;
- Trade measures;
- Fines.[34]

These enforcement responses act to deter non-compliance by ensuring that Parties that willfully fail to comply will be punished. Once non-compliance has occurred, however, their efficacy is less certain. Indeed, in the absence of a Compliance Fund or similar mechanism, it is not clear what the aim of an enforcement response might be, other than to punish the non-complying Party and set an example for other Parties.[35] The targeted Party will have no means of curing its non-compliance or eliciting an end to the enforcement action.[36] In conjunction with a Compliance Fund, however, the coercive effects of these responses could help induce recalcitrant Parties to change course and cure an overage.

[34] It should be pointed out that, from the perspective of the non-complying Party, a fine would be no different than a Compliance Assessment, and hence would likely be ineffective as a mechanism to enforce the Assessment.

[35] Some measures, carefully tailored, could have direct climate benefits. *See, e.g.*, WWF, *Creating an Effective Compliance System for the Kyoto Protocol* 11 (May 1999) (proposing tariffs or outright ban on export of carbon-intensive goods).

[36] As it currently stands, the Protocol text permits unused parts of assigned amounts to be carried *forward* to subsequent commitment periods. *See* art. 3.13. However, it indicates no means by which credits or assigned amounts might be transferred *backward* to an earlier commitment period from a later one. Unless such a means exists (such as would be provided by the Compliance Fund), Parties that are out of compliance for the first commitment period will not be able to apply credits they might obtain during a second period to their first period overage. They will accordingly not be able to correct that overage, regardless of what enforcement responses might be directed against them.

Accordingly, all of them should be among the consequences to substantive non-compliance that the COP and COP/MOP consider in upcoming deliberations.[37]

3. A New Approach: A Compliance Assessment Recognition Agreement

The most effective enforcement response to substantive non-compliance will allay the fears of complying Parties that free riders might enjoy economic advantages, and will compensate for a non-complying Party's overage by balancing carbon ledgers for the commitment period to "make the climate whole." A *Compliance Assessment Recognition Agreement* could provide an automatic, pre-approved way to accomplish both of these goals by allowing Compliance Assessments to be enforced in the domestic courts of non-complying Parties.

The limitation of the Compliance Assessment is that, by itself, it provides no means for its collection if a recalcitrant Party chooses not to honor it. Public approbation, suspension of treaty benefits, or even trade measures could all be used to apply pressure; however, as pointed out earlier, those responses alone do not provide a remedy for overage. The most effective solution would be to add a provision to the authorizing Protocol amendment, whereby Parties agree to recognize Compliance Assessments as arbitral-type awards that can be enforced in their domestic courts. The NAFTA Environmental Side Agreement could serve as a model.[38] The Side Agreement's dispute resolution section provides for the creation of an arbitral panel when one Party alleges that another has failed to effectively enforce its environmental laws in a manner that affects commercial interests of the complaining Party.[39] Among its powers, a panel may impose a monetary enforcement assessment if the complained-against Party fails to remedy the situation.[40] Canada has further committed to allow such awards to be enforced in its domestic courts.[41] If Canada fails to pay a monetary enforcement assessed against it, the Council on Environmental Cooperation (CEC) may file a certified copy of the panel determination in a competent Canadian court.[42] For purposes of enforcement, the panel determination becomes an order of the court, which may then be used to enforce the assessment "against the person whom the panel determination is addressed."[43] Neither the panel determination nor the order of the court is subject to review or appeal.[44]

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[37] Of course, these enforcement mechanisms may also be needed to respond to cases of procedural non-compliance.

[38] North American Agreement on Environmental Cooperation, US-Canada, 32 I.L.M. 1482 (1993) (hereinafter Side Agreement).

[39] *See id.* art. 24.1.

[40] *See id.* art 34.4-6; annex 34A.

[41] *See id.* annex 36A.

[42] *Id.* ¶ 2 (a).

[43] *Id.* ¶ 2 (c)-(d). In this context, "person" refers to "Her Majesty in right of Canada or Her Majesty in right of the province concerned." *Id.* annex 41, ¶ 6.

[44] *Id.* annex 36A, ¶ 2 (g)-(h).

Similarly, the New York Arbitration Convention provides that arbitral awards made in any foreign state will be recognized and enforced in the domestic courts of Contracting States.[45] However, the Convention permits Contracting States to make two reservations, including one providing that only awards considered "commercial" under the national law of the Contracting State may be recognized and enforced.[46] The United States included this reservation in its ratification.[47] The provisions of the Convention do not affect the validity of other multilateral or bilateral agreements concerning the recognition and enforcement of arbitral awards into which the Contracting States may enter.[48] Accordingly, the New York Convention can serve as a precedent for, but need not interfere with, a Kyoto Protocol amendment in which Parties agree to recognize Compliance Assessments as enforceable awards.

Under a Compliance Assessment Recognition Agreement, the enforcement body, the UNFCCC secretariat, the COP/MOP, or another competent body would be given legal personalty and authority to file an Assessment determination in the domestic courts of any Party.[49] When filed, an Assessment would become an order or judgment of the court, and would not be subject to appeal. After the judgment was properly enrolled, the authorized body could seek to satisfy it by attaching property belonging to the non-complying Party.

The great advantage of enforcing substantive compliance by means of an Assessment Recognition Agreement is that enforcement actions would be pre-approved by each Party, allowing them to be automatic, timely, and predictable. Pre-authorized collection of Compliance Assessments would thus be more efficient than relying upon traditional enforcement responses. The Agreement's potential weaknesses include the possibility that it may sometimes be difficult to actually attach and execute sufficient property of a non-complying Party to satisfy an Assessment, and the likelihood that some Parties may object to accepting the Agreement on the grounds that it would be too intrusive upon their sovereignty (or, in fact, that it might be *too efficient* in remedying non-compliance). Because the Agreement would be more efficient than other enforcement responses, and because it would be most effective if a large number of Parties accepted it, it might make sense to offer a reduced Compliance Assessment penalty rate as an inducement to those Parties that do accept it.

In practice, the value of an Assessment Recognition Agreement may be mainly as a deterrent: having created a mechanism for enforcing their obligations, Parties will be more inclined to voluntarily use the Compliance Fund if during the true-up they find themselves

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[45] United Nations Convention on the Recognition and Enforcement of Foreign Arbitral Awards, June 10, 1958, art. 3, 21 U.S.T. 251 [hereinafter New York Convention].

[46] *Id.* art. 1.3.

[47] *See* BASIC DOCUMENTS OF INTERNATIONAL ECONOMIC LAW, vol. 2, 975 (Stephen Zamora & Ronald A. Brand eds., 1990).

[48] New York Convention, *supra* note 45, art. 7.1.

[49] For maximum effectiveness, enforcement of Assessments should not be limited to the courts of the non-complying Party, but should include the courts of all Parties, so that assets held outside the non-complying Party's borders could be subject to garnishment and execution.

over their assigned amounts. The availability of a binding and enforceable Assessment would enhance the spirit of international cooperation and trust that is essential to developing an equitable, long-term plan for dealing with the climate change threat. If each Party is confident that others will make the financial expenditures needed to carry their own weight, incentives for free riding, cheating, and foot dragging can be minimized. Finally, by maximizing the likelihood that Parties will balance their individual GHG ledgers, a Compliance Assessment enforced under an Assessment Recognition Agreement can ensure that overages are not carried on indefinitely into subsequent commitment periods and do not contribute to increased concentrations of greenhouse gases in the atmosphere.

4. A Note on Emissions Trading

A Party whose emissions exceed its assigned amount during a commitment period should face restrictions on its ability to sell any part of its assigned amount in a subsequent commitment period. Under a hybrid buyer/seller responsibility ("traffic light") scheme, Parties that have sufficient financial resources to cure their overage should be subject to a "red light."[50] That is, they should be prohibited from selling PAAs until they have demonstrated their good faith by paying their Compliance Assessment.

Parties with overage and limited financial resources—for example, Parties with economies in transition—might be subject to a lesser restriction, i.e., a "yellow light," if it is determined that they are not acting in bad faith. A yellow light would require buyers to assume the risk that the selling Party will both pay its Compliance Assessment and remain within its assigned amount during the subsequent period. Faced with this financial and legal risk, buyers presumably will negotiate the price of PAAs accordingly. Buyers will be able to seek contractual guarantees that sellers will not oversell. If a seller nonetheless does oversell, so that its buyers lose their purchased PAAs, the market will punish the seller by discounting the value of its future PAAs to little or nothing. If a non-complying Party is permitted to sell PAAs in a subsequent period, the first proceeds of such sales should go to satisfy the Compliance Assessment.

V. CONCLUSION

In adopting the Kyoto Protocol, Annex I Parties agreed to ensure that their aggregate emissions for the first commitment period will not exceed their individual assigned amounts. For those Parties faced with an overage during the true-up, that commitment will impose a duty upon them to purchase enough credits through the cooperative mechanisms so they can still honor their obligations. However, sufficient credits may not be available on the open market at that time to satisfy all the Parties' needs.

In that situation, Parties will require a means by which they can acquire enough credits to avoid non-compliance. The most oft-heard proposal, borrowing, or "reduction of future assigned amount," purports to address the problem by allowing a Party to defer some of its obligation to reduce its emissions to a future commitment period. But by allowing a

[50] *See generally* Goldberg et al, *Responsibility for Non-Compliance Under the Kyoto Protocol's Mechanisms for Cooperative Implementation, supra* note 8.

Party to indefinitely defer the costs of mitigating its emissions, borrowing makes non-compliance more attractive than compliance. Moreover, it provides no guarantee that the Party will ever reduce its emissions to the level they would have been had it complied with its commitment period target.

The *Compliance Fund* can give Parties with overages a way to stay in compliance with their Article 3 obligations, while avoiding the economic and environmental shortcomings of borrowing. By requiring Parties to pay, up front, fees that in turn are used to underwrite highly reliable GHG mitigation projects, the Fund:

- provides an assured means of "making the climate whole" and balancing carbon ledgers for the commitment period;
- removes any economic advantage a Party might receive from failing to adequately mitigate its emissions during the period;
- gives Parties with overages at the end of the true-up a way of demonstrating their good faith, while avoiding non-compliance;
- makes the Kyoto Protocol a more robust, reliable instrument by minimizing the chance that Parties will continually delay making necessary sacrifices and by increasing Parties' confidence that their respective implementation efforts will not be undercut by free riders;
- enhances confidence in the cooperative mechanisms by minimizing the possibility that speculators might try to corner or distort the market.

After the true-up ends, Parties with overages who have failed to offset them with cooperative mechanism or Compliance Fund credits will be out of compliance with their substantive obligations. Such Parties should be issued a *Compliance Assessment*, which places a monetary figure on the cost of the Party's non-compliance, increased by a pre-determined multiplier. Parties can satisfy their Assessments by paying the full amount to the Compliance Fund, which will use the monies to underwrite GHG mitigation projects.

A Party's failure to satisfy its Compliance Assessment will warrant an enforcement response designed to induce it to comply. Optimally, such a response will remove any economic advantage the Party enjoyed from its non-compliance, balance carbon ledgers for the period the Party was out of compliance, and be punitive enough to serve as a deterrent to non-compliance in the first place. A suite of enforcement responses, possibly including public approbation, suspension of treaty privileges, and trade measures, should be considered and adopted by the COP/MOP to enable it to respond to a broad range of substantive and procedural enforcement challenges. However, a *Compliance Assessment Recognition Agreement* would be a simpler, more efficient and direct response to substantive non-compliance. The Agreement would permit Compliance Assessments to be recognized as arbitral awards by the domestic courts of a non-complying Party, so that the UNFCCC secretariat, COP/MOP, or other competent body could obtain satisfaction of an Assessment by attaching property belonging to the non-complying Party.

In most cases, the availability of an Assessment Recognition Agreement will make the use of other enforcement responses unnecessary. However, such an Agreement might not always be fully effective in satisfying an Assessment, and some Parties might not accept it. Moreover, the COP/MOP will also need tools to respond to procedural non-compliance. For those reasons, it will still be desirable for the COP/MOP to adopt a range of enforcement responses. The Compliance Assessment and Compliance Assessment Recognition Agreement may provide the best response to substantive non-compliance. But only a full range of enforcement responses, adopted with a realistic understanding of their respective strengths and weaknesses, will empower the Parties to respond to all non-compliance challenges that might arise at the close of the first commitment period.

LIST OF ACRONYMS

CDM	Clean Development Mechanism
CEC	Council on Environmental Cooperation
CER	certified emissions reduction
COP	Conference of the Parties
COP/MOP	Conference of the Parties serving as the meeting of the Parties
ERU	emissions reduction unit
EU	European Union
GEF	Global Environment Facility
GHG	greenhouse gas
JI	joint implementation
MCP	multilateral consultative process
NAFTA	North American Free Trade Agreement
NGO	non-governmental organization
PAA	parts of assigned amount
QELRC	quantified emissions limitation or reduction commitment
UNFCCC	United Nations Framework Convention on Climate Change

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