CPF METHODOLOGY RESEARCH PROGRAM

Approaches to Methodologies in Carbon Finance Programs

Concept Note for CPF Implementation[*]

25 April 2008

The World Bank has been engaged in carbon offset projects for over a decade now. The Bank's Carbon Finance Unit has made significant contributions to the establishment of methodologies for such projects, in particular for CDM and JI projects under the Kyoto Protocol.

In September 2007, the Bank's Board approved the Carbon Partnership Facility, which will take the Bank's carbon finance work, including the work on methodologies, to the level of large-scale programs. These programs are expected to assist Bank client countries in lowering their carbon emission trajectory and sell emission reductions into the carbon market.

Carbon offset projects measure the reduction of greenhouse gases in comparison with established baselines. This concept is being used in joint implementation (JI) projects and the clean development mechanism (CDM) of the Kyoto Protocol. In principle, it is also used in registry-based systems (e.g. in California and the north-eastern US states) and in the voluntary carbon market, often supported by voluntary standards (Gold Standard, WRI Greenhouse Gas Protocol, ISO 14064, VCS, and others).

Offset systems must be distinguished from allowance-based, or cap-and-trade, systems (e.g. the European Emissions Trading System (EU ETS) and trading under Art.17 of the Kyoto Protocol (international emissions trading or IET). These systems establish a baseline (or cap) as an emissions limit, which allows covered sources to sell emission allowances if their emissions are below their limit, and, conversely, makes them liable to buy allowances (or emission reductions) if they exceed the limit. As a result, while offset systems, following a project-by-project approach, establish a baseline in accordance with business-as-usual emissions trends for each specified source, cap-and-trade systems build the overall reduction target into a specific allocation of allowance to all covered sources. Cap-and-trade systems are generally viewed as more cost-effective, but they have the drawback of the initial distribution of allowances being politically difficult to determine.

Offset and allowance-based systems are often portrait as distinct systems. However, transitions between the two systems may be possible. Baselines in offset systems could gradually move away from (business as usual) scenarios of "what would happen otherwise" and integrate elements of standardization leading beyond the project-by-project approach. Standardized baselines can be used for individual sources (multi-

[*] This draft note is written for potential CPF Participants. It may be updated following consultations with interested parties and further consideration and elaboration of the ideas contained in this note and the policies and strategies to be pursued by the CPF.

project baselines) and for sectors of an economy. Emission limits could be agreed upon as baselines to facilitate trading – without implying commitments or requiring compliance should actual emissions exceed the set emission limit.

A system of program-based and sector-wide emission reductions would ideally explore all options for standardization and simplification of methodologies and baselines, where this would be needed in order to scale up mitigation efforts and the impact of carbon finance in a cost-effective way. The World Bank's proposed Carbon Partnership Facility (CPF) attempts to do just that – within the UNFCCC system, and possibly in the context of regional or national systems – by exploring and piloting methodological alternatives. However, there are important risks and significant hurdles along the way, which CPF management and participants need to consider, and which have consequences for the operation of the CPF.

Progress with CDM methodologies

The CDM has, to date, provided the richest experience with methodologies for offset projects, using a bottom-up approach for methodology development by project proponents combined with a rigorous review and approval process. However, the experience with CDM methodologies is mixed. On the one hand, the CDM has demonstrated that offset-based reductions of greenhouse gases can work in an international context and for a variety of project types and technologies. On the other hand, it has become apparent that the process of creating new methodologies and applying an accepted methodology to a proposed project is expensive, time consuming and often risky, including sometimes due to political considerations. In addition, many have the view that the CDM is restrictive and not able to unlock all emission reduction opportunities, and that the CDM would need to move to more streamlined, simpler methodological approaches if it is to be scaled up significantly.

The reason for the ambivalent assessment of the CDM is partly due to the strict project-by-project approach that the CDM requires. This means that methodologies have to ensure the precise tracking and accounting of almost all emissions on the project level and that generalization and assessment of emission reductions on a more aggregate level has typically not been acceptable. However, the desire to develop methodologies that are broader and less expensive in their application makes such standardization, generalization and assessment of emissions on more aggregate levels practically inevitable.

In response to calls for improvements, and significant work in that direction, (including by the World Bank) the CDM has developed the concept of a Program of Activities (PoA). This concept is based on the idea that a program is, in essence, nothing but a repetition and multiplication of the same or several individual activities to which a project-by-project methodology can be applied. The simplification introduced by the "programmatic CDM" thus lies more on the procedural than on the methodological level, although certain generalizations, such as sampling of data, are allowed. This is helpful since it opens the CDM for very small activities (e.g. household level energy efficiency). It also signals a willingness to explore the methodological territory beyond the strict project-by-project approach of the CDM.

The World Bank is now actively exploring the practicalities and operational implications of different arrangements for PoAs under the CDM. First results are encouraging, but they also expose limitations and teething problems, which the CDM Executive Board has promised to address.[1] A background paper to this note describes the programmatic CDM, reports first World Bank experience and explains how this approach can be used for CPF programs.[2] The Bank has recently created a Expert Group on Energy Efficiency and Carbon Finance, which explores how the CDM, and PoAs in particular, can be used to promote energy efficiency programs, and which has already produced a first report on the use of programmatic CDM for demand-side management programs.[3]

From projects to programs

The CPF intends to build on the CDM experience in the quest for suitable methodologies and business models that will allow a scaling-up of mitigation activities and ultimately a transformation and scaling-down of the emission trends in selected economic activities.

Methodologies that are suitable for scaling up may be found over a wide spectrum of options. These options are partly provided by the current CDM, partly are they outside of the CDM's current limits. Concretely, CPF programs can utilize traditional CDM project-by-project methodologies and procedures or follow rules for Programs of Activities under the CDM. Beyond this, the CPF may target activities in specific sectors of an economy using methodological approaches that emphasize the emission reduction trend and transformational impact over the tracking and accounting of every individual ton of reduction.[4] Such approaches have been described in the literature as "sector CDM" and "policy CDM". If designed well and sufficiently conservative, they can have the same credibility and infer the same environmental integrity on the traded emission reductions as the traditional CDM project-by-project approach. At the extreme end, sector and policy CDM come close to what is known in the literature as "no-lose sectoral targets", which in turn reside at the transition point to (sectoral) cap-and trade systems. The continuum between programs of stand-alone projects and trading on the basis of no-lose targets is well described in one of the background papers to this note.[5] The CPF could explore and pilot alternative approaches and methodologies in this option space.

The main operational tools of the CPF are mitigation programs. Programs can be described as "the purposeful implementation of sets of measures by public or private agents within a sector or region."[6] In the context of the CPF, "purposeful" refers to the purpose of large-scale mitigation and to the strategic choices that will need to be made to maximize the impact on emissions over a long period of time, in the most effective way,

[1] See UNFCC Secretariat Press Release, 13 March 2008.
[2] See [3] below.
[3] See [7] below.
[4] For a discussion of moving from tons to trends in the post-2012 regime see Christiana Figueres "From Tons to Trends". In "Global Environmental Governance, Perspectives on the Current Debate, Lydia Swart and Estelle Perry eds., Center for UN Reform Education, New York, May 2007.
[5] See [1] below.
[6] Ibid.

through mobilizing partners and bundling resources. This definition of programs includes PoAs, but its scope – like the CPF approach to programs – is much broader. The definition covers programs of lending and investment activities, which may rely on single-project methodologies under the CDM, but also programs and appropriate policies and measures, which can be implemented as PoAs or for which new approaches need to be developed. Programs, broadly defined, may be good vehicles to tackle sector- or system-wide emissions as it may be possible to use (sub)sector- or system-wide characteristics to define the program (such as common efficiency benchmarks for an industry or a technology, and common organizational structures).[7]

Methodologies for programs

Methodologies that support programs of emission reductions, in particular if they intend to target specific activities in a (sub)sector of an economy in a cost-effective way, will have to rely on certain simplifications across individual activities. Simplifications in programmatic methodologies can be achieved through, or may involve, standardization, generalization and procedures to assess emissions on an aggregate level. Program or sector-wide methodologies would involve modifications to existing project-level methodologies in at least four areas, which are addressed in more detail in an Annex to this note: demonstration of additionality, assessment of baseline scenario and emissions, monitoring and verification, and the treatment of policies and standards in relation to emission reduction programs. In addition, for certain technologies it may be possible to standardize performance and project emissions, which could lead to a standard emission reduction factor for these technologies.[8] A background paper to this note discusses the different ways in which methodologies can be simplified through standardization and generalization.[9]

Standardization can have important trade-offs and consequences for the design and application of methodologies:

- To be politically acceptable, standardized methodologies would have to result in a clearly conservative assessment of the emission reductions from a program, i.e. one would have to expect that the methodology, on average, would underestimate the actual reductions. The more diverse the emissions sources covered by a methodology are, the greater could be the uncertainty and variability of reductions from individual sources, and the more conservative the methodology may then have to be to ensure environmental integrity of the reductions at the level of the individual source. However, on the aggregate level standardized methodologies could produce a fairly accurate assessment of achieved reductions, because individual source variations in a diverse portfolio of covered sources can cancel out.

[7] Brief information on sector characteristics is contained in Rob Bardley et al. "Slicing the Pie: Sector-based Approaches to International Climate Regimes, Issues and Options", RWI report, December 2007 (with Kevin A. Baumert, Britt Childs, Tim Herzog, Jonathan Pershing).

[8] For an example, see the "Deemed Savings" methodology for efficient lighting discussed in the background paper [4] below.

[9] See [2] below.

- The use of a standardized methodology to determine reductions for individual sources may lead to an underestimation of reductions for some included sources, while for other sources the calculated reductions may be too generous. This could encourage "cherry picking" by those with superior knowledge about the activity for which emission reductions would be underestimated. If individual activities can be removed from the program and use a more favorable project-by-project methodology, activities with overestimated emission reductions could become dominant in the program portfolio, making the aggregate less conservative (adverse selection). This could suggest a need to make the inclusion of activities and sources in a program, or at least the use of the standardized methodology, mandatory for all sources that the program and/or the methodology targets.
- All covered sources may have to agree to a program and/or sector-wide methodology before it can be applied uniformly. However, since methodologies can have distributional consequences and because the release of company data, which may be needed to design the methodology, could raise confidentiality concerns, an agreement may be difficult to reach and may require the involvement, decision or approval by a political body or an otherwise competent entity representing the sector. This may not be easy to achieve. In addition, if emission reductions are intended for compliance with an international agreement, the competent international body would need to approve the methodology – in the case of the CDM, this would be its Executive Board or the Meeting of the Parties to the Kyoto Protocol.

Risks for CPF participants

The CDM has arguably already been successful. Yet, it is clear that the CDM can continue to evolve and become better. The other two trading mechanisms in the Kyoto Protocol, Joint Implementation (JI) and emissions trading (Art.17), have so far not been able to demonstrate their full potential, as they only became effective in 2008. This may well change over the next few years, perhaps in the form of green investment schemes (GIS) becoming popular. We have also seen the successful start of a regional trading block (the EU Emissions Trading System, EU ETS) and plans for national trading systems in Australia and the US are being drawn up. Yet, the future of the carbon market is uncertain: UNFCCC Parties have begun to negotiate an agreement for the post-2012 period; potential trading restrictions are being discussed for the next phase of the EU ETS; it is not clear what types of assets and how much of these assets governments are willing to sell and buy; and market participants continue to wonder whether the first commitment period Kyoto market will ultimately be long or short.

There are three possible broad scenarios for post-2012 market development: (i) status quo with limited CDM and JI activity, (ii) a fragmented market of regional trading blocks, and (iii) a fully integrated global trading system. The regulatory system in all three scenarios is likely to be different, and barriers between market segments may be difficult to overcome. This is relevant for CPF Participants as they seek to maximize the benefits from engaging in long-term emission reduction programs. Ideally, these programs would use methodologies that are widely accepted for compliance with emission targets in all three scenarios and would not hinder arbitrage between market segments. But we are far

away from knowing what such methodologies would be, and if and how investment programs and sector- or system-wide approaches would be accommodated. We also don't know what the process for introducing and approving such methodologies would be. Herein lie risks, but also opportunities, that the CPF will need to carefully weigh in pursuing its objectives.

Simpler, programmatic methodologies may be more cost-effective for many emission sources and may allow accessing many more emissions sources than the current CDM/JI regulatory regime. However, developing and testing such methodologies in the current environment of regulatory uncertainty may not necessarily be the preferred option for CPF participants. Given that the CDM/JI is a workable regulatory system, which is like to continue in the post-2012 period, many CPF participants may not be willing to trade the higher probability of receiving compliance grade CDM/JI assets, albeit at high costs, for the greater opportunities that may come with new methodologies, should those be finally accepted by the regulator.

In addition, like in the current CDM/JI system, those bearing the costs of new methodology development may not reap the full benefit of doing so, because methodologies are public goods. To help pay for these costs, the CPF proposes to set up a Carbon Asset Development Fund, which will draw on participants' contributions, but will also invite funding from other sources such as grants from governments and donor organizations. Nevertheless, the demand for CPF-supported new methodologies and testing of new approaches may initially be small given the inherent risks, at least in areas where CDM/JI methodologies can readily be used.

Therefore, to pilot new approaches, the CPF may have to pursue a dual track approach for the same assets. The CPF could work on the development and testing of new methodologies for its programs, while at the same time "insuring" these assets by also applying approved methodologies (or methodologies eligible for approval) under the current Kyoto regime (or under some national or voluntary regime) for these same activities. Using CDM methodologies as a backup would allow making comparisons that could help establish the conservativeness and acceptability of new approaches.

The CPF could also test new methodologies by developing and using them for programs in Annex I countries and requesting approval of these methodologies under JI First Track or Second Track procedures or under a GIS procedure that some Annex I countries are developing.[10] This approach would effectively "underwrite" the piloting of new methodological approaches using JI Emission Reduction Units (ERUs) or directly Assigned Amount Units (AAUs) traded under Art. 17 of the Kyoto Protocol.[11] While JI methodologies are currently heavily influences by CDM methodologies, programmatic or sector-wide methodologies under JI or GIS could help inform formulation of future CDM approaches and methodologies.

[10] See [6] below.

[11] The full effect of this "guarantee" would, of course, depend on the continuation of these trading schemes in some appropriate form in the post-2012 period.

A third option for the CPF in dealing with the divergent risk preferences and interests of its participants could be to establish special windows for different regulatory regimes and/or methodologies. One special window could, for instance, comprise programs for the voluntary market, another window for the (future) US regulated market, and a third window could include programs that use experimental methodologies. In this way, participants could tailor their individual portfolios in accordance with their willingness to accept risks while helping to promote the scaling-up objective of the CPF.

Finally, it should not be forgotten that the CPF may simply not be able to develop certain types of carbon assets using methodologies that are regulated under some (existing) regime. If buyers and sellers want to develop and trade such assets, new methodologies would be needed, and the risk of developing and applying such methodologies would then presumably be shared through the price that would be agreed for such assets.

The CPF management team will work with CPF participants to identify the opportunities involved in the development of new methodologies and to come up with the appropriate strategies in pursuing them. The World Bank will also support its client countries in designing CPF programs, develop new methodologies and provide assistance for capacity building where this would be needed.

Work underway and next steps

The World Bank's Carbon Finance Unit is already working on a number of studies and background papers to this note, which will explore in greater detail the methodological options that can and should be pursued by the CPF. The following papers will be available shortly:

[1] Murray Ward et al., "*Policy Instruments and Approaches for Scaling up Investment in Climate Change Mitigation Activities and Their Interface with the World Bank's New Carbon Partnership Facility*", World Bank, Environment Department (ENVCF), draft, March 2008. (With Jose Alberto Garibaldi, Kate Hampton, Niklas Höhne, Martina Jung, Alex Bakir, Steven Gray). – This paper explores the opportunities and challenges for scaling up GHG mitigation efforts through sector-based programs, in particular in the context of the negotiations for a post-2012 climate agreement.

[2] Felicity Spors, "*Options for Further Standardization in the Climate Change Project (JI and CDM) Framework*", World Bank, Environment Department (ENVCF), draft note, April 2008. – This paper takes stock of the various options for simplifying and generalizing methodologies through standardization.

[3] Monali Ranade, "*Program of Activities under the CDM: Application to the World Bank's Carbon Partnership Facility*", World Bank, Environment Department (ENVCF), draft note, April 2008.

[4] Monali Ranade et al. " *'Deemed Savings' – a New Methodology for Demand-Side Energy Efficiency*", World Bank, Environment Department (ENVCF), draft note, April 2008. – This paper presents and discusses a new methodology that the World Bank has

recently proposed to the CDM Executive Board for small-scale efficient lighting projects. The methodology is based on the idea that the average use of energy efficient household equipment – in this case compact florescent light bulbs (CFLs) – can be estimated fairly accurately based on technical information for the equipment (e.g. average lifetime of CFSs) and some statistical sampling. The methodology attributes a specific, conservative quantity of emission reductions to each CFL that is installed. The documentation of the sales of the CFLs and some sampling of their installation and continued use is thus the only information that is needed to estimate the resulting emission reductions for the entire program. The Bank is already testing this methodology in a light bulb replacement program in Africa. This methodology, if approved by the CDM Executive Board, could become seminal for a whole generation of new methodologies that move away from the idea that every ton of CO2 that is reduced must be traced and accounted for.

[5] Julie Godin, "*A Benchmark Approach for CDM Projects in the Cement Industry*" World Bank, Environment Department (ENVCF), draft note, April 2008. – This paper reports on the efforts of the major cement producers to develop a methodology that would use a common efficiency benchmark instead of the CDM's project-by-project baseline scenario. The cement industry is currently testing such a methodology. World Bank, Environment Department (ENVCF), 2008 (forthcoming).

[6] Alexandrina Platonova-Oquab, "*Joint Implementation and Green Investment Schemes as Opportunities for Testing New Methodologies for Emission Reduction Programs*", World Bank, Environment Department (ENVCF), 2008 (forthcoming).

The Carbon Finance Unit is also studying ways to analyze GHG mitigation opportunities in different sectors and to determine how these opportunities can be approached in a strategic way. These efforts could lead to the preparation of carbon finance sector strategy papers. These papers would analyze the mitigation opportunities and related challenges in a given sector and propose a strategy, possible program features and methodologies that could promote a transformation toward lower-carbon emissions.

Through this work, the CPF could identify areas of early engagement. Contributing to demand-side energy efficiency measures is proposed to be one of the priorities of the CPF. Building on its long experience with energy efficiency programs, the World Bank has recently created an Expert Group on Energy Efficiency and Carbon Finance. Its objective is to study and demonstrate how the CDM can make energy efficiency programs a reality on a large scale, specifically such programs that have to date faced insurmountable barriers and have not taken off. To kick-start this network, the Bank has published a first report:

[7] Christiana Figueres, Michael Philips, "*Scaling Up Demand-Side Energy Efficiency Improvements through Programmatic CDM*", ESMAP Technical Paper 120/07, The World Bank, Washington DC, December 2007. – This paper describes in its main part how energy efficiency practices and CDM procedures can be integrated.

Annex:

Elements of new methodological approaches

For a scaling up of GHG mitigation through strategic programs, modifications to existing CDM methodologies would probably be necessary in the following four areas: demonstration of additionality, assessment of baseline scenario and emissions, monitoring and verification of emission reductions, and the treatment of policies and standards in emission reduction programs. In addition, for certain technologies it may also be possible to standardize performance and project emissions to generate a standard emission reduction factor.

Additionality

The CDM requires a demonstration that a particular project activity is additional, i.e. it would lead to reductions in GHG emissions that would not have occurred in the absence of the CDM project activity. This requirement has given rise to an elaborate tool to determine additionality, which in essence relies on a demonstration that barriers or financial inferiority would impede the investment compared to alternative investment scenarios, unless the investment is undertaken as a CDM project. Nevertheless, much uncertainty remains about what is eligible under CDM rules.

Under programmatic methodologies, additionality rules could be simplified. New approaches to additional testing should emphasize the performance of the planned CDM activity in terms of its long-term contribution to mitigation and move away from the problematic concept of financial or other barriers. There could be several ways to do this, for instance one could:

- Develop simplified and standardized additionality tests that can be applied more objectively, e.g., using the market penetration rate of a specific technology as an indicator.
- Determine that specific project activities, e.g., specific technologies such as photovoltaic, possibly limited to certain countries and circumstances, should be considered additional for a specified period of time, e.g. for a crediting period.
- Agree that project activities with emissions that are lower than the baseline emissions agreed for this type of activity would automatically be considered additional.

The CDM Executive Board has not accepted such additionality rules in the past because of the project-by-project requirement for CDM projects contained in the Marrakesh Accords. However, the Parties could amend these requirements as part of an agreement on the CDM for the post-2012 period, possibly in exchange for tighter, yet simpler baselines requirements.

Baseline scenario and baseline emissions

The CDM requires the development of a baseline scenario, i.e. a description of the situation that would evolve in the absence of the CDM incentive. The CDM Executive

Board has developed a tool for the determination of baseline scenarios. The baseline scenario is the basis for a calculation or estimation of baseline emissions. In many methodologies, the baseline scenario is translated into a set of formulae, which, in combination with monitored variables, produce a number that reflects baseline emissions. In several methodologies, the baseline scenario is used to generate a baseline emissions factor, which can remain fixed or may have to be adjusted following monitored data.

The standardization of baseline scenarios and emissions is probably the single most important simplification that could be consider under programmatic approaches. The best way forward would arguably be to develop, and agree on, standard baseline emission factors for certain project types, technologies and host-country conditions, which could then be applied in a particular country, region, supply system, or economic sector, sub-sector or subset thereof. For instance, one could come up with a baseline emission factor for an existing power grid or for all power plants of a certain type (technology, fuel) on this grid. To some extent, this simplification is already occurring where CDM methodologies include a procedure to calculate a sector or system wide emission factor, e.g. for a power grid to which renewable energy is added.

An agreed system or sector wide emission factor would be conservative, i.e. a plant's baseline emissions would, using this factor, be already relatively low. The factor could be fixed for a (crediting) period or could go down over time to reflect an autonomous trend. Baseline factors could also be established as good practice benchmarks standards for an industry, for instance to reflect the minimum expected energy efficiency (or the maximum acceptable emission intensity) of a production or consumption process. Such a benchmark is currently being developed, and a related methodology is being tested by a group of global cement producers.[12] Where minimum energy efficiency standards or at least a labeling scheme for consumer products (e.g. appliances) exist, it should be fairly easy to develop a conservative benchmark for these products.

Baseline emission factors could be developed using as a benchmark efficient plants of a particular type. The little-used baseline approach in Article 48(c) of the CDM decision in the Marrakesh Accords contains in essence the same idea: baseline emissions can be determined using as benchmark the most efficient 20 percent of all recently constructed plants in this sector. It is thus clear that an acceptable benchmark cannot simply reflect the business-as-usual operation of the plants in this (sub)sector, but must take into account economically viable refurbishments and upgrade possibilities. Emission reductions would then only be granted to those activities that drive their actual emissions below the agreed baseline factor.

With the establishment of an emission factor for target activities, it would be fairly easy to replicate the same activity in a program of activities, provided this simplification can be combined with the simplification of additionality testing as outlined above – in particular if additionality for such approaches would be defined as reducing emissions below the established standard baseline. The incentive to undertake these activities would then be clearly known.

[12] Compare [5] below.

The use of a highly conservative baseline emission factor for a given type of activity in a sector, an industry or a mitigation program would mean that some part of the actually generated emission reductions may not be credited and traded. This quantity of reductions would entail a contribution by the host country to global mitigation efforts.

Monitoring and verification

The possibility to simplify monitoring and verification procedures and to apply them to programs and sectors depends almost entirely on the methodologies and procedures required to quantify emission reductions. More data-heavy methodologies require greater monitoring and verification efforts. For programs and sector wide approaches with many sources, the use of sampling for monitoring and verification is very important. Some limited sampling is already available in some CDM methodologies and in the procedures for Programs of Activities.

Equally important are well developed and standardized monitoring plans for covered sources in a program. Monitoring activities in CDM projects have traditionally been left to the project operator. In CDM programs, monitoring activities may need to be carried out by a central managing agency which coordinates and oversees the program. These agencies may seek the help of specially trained (CDM) engineers, which can advise on the design and implementation of monitoring plans and on the installation, use and maintenance of monitoring equipment.

Common and standardized verification procedures for all emission reduction auditors (Designated Operational Entities (DOEs) in the CDM) are also very helpful. The World Bank has helped DOEs develop such common verification procedures for CDM projects (in the form of a Validation and Verification Manual) and such procedures are now being made available by the CDM Executive Board to all DOEs. These verification procedures would need to be adapted to programs and sector-wide activities

The CDM shows that the liability of verifiers has an important impact on how thoroughly verification activities are carried out and how costly the process is. Some DOEs apply a risk-based approach, where they pay particular attention to information that is critical for, and has a material impact on, the quantity of emission reductions that would finally be certified and issued. It is currently not clear what the optimum level of monitoring and verification efforts would be for a mitigation program, but some form of sharing of verification risks and liabilities between verifiers and project owners could lead to greater standardization and overall cost savings. The liability of DOEs that validate or verify emission reductions from Programs of Activities under the CDM is particularly severe, and it is already clear that programs may have to shift some of the liabilities of DOEs onto project participants in order to encourage DOEs to make their service available to mitigation programs.

Policies and standards, law and regulation

A major issue for emission reduction programs and sector approaches is related to emission reducing policies and standards. Obviously, well designed policies and standards (e.g. energy efficiency standards) can lead to very significant emission reductions. But policies and standards cannot be CDM project activities. There are political and technical reasons for this decision made by the Parties to the Kyoto Protocol at their first meeting (COP/MOP 1). The CDM Executive Board has determined that the connection between the activity (the creation of a policy of standard) and the resulting emission reductions must be traceable and verifiable to generate emission reductions and that this is usually not the case for programs and standards. However, the rules for CDM Programs of Activities make activities under a program eligible if they implement or enforce a policy or standard. This leads to a sophisticated design of CDM-related policies and standards on the one hand, and CDM programs of activities on the other hand in such a way that they are mutually supportive, yet distinct from each other. It is still a matter for experimentation and debate how this interface will work in detail and how emission reductions from CDM project activities that are supported by a policy or standard will be traced.

The CDM is also grappling with the question of the appropriate baseline scenario if a law or regulation already requires certain emission reducing activities. If such laws or regulations define the baseline scenario, countries can be expected to refrain from enacting such mitigation measures for fear of undermining a more favorable baseline that they would otherwise enjoy. The CDM Executive Board has addressed this perverse incentive by ruling that new laws and regulations that lead to GHG reductions can be disregarded when establishing the baseline scenario for a CDM project. The Board has also allowed disregarding laws and regulations in the baseline if they are not enforced. Yet, the role of laws and regulations remains a grey area. There are CDM methodologies that require updating the baseline scenario to conform to applicable laws and regulations at the time when the crediting period for the activity is renewed. In addition, the CDM Executive Board has never explicitly stated how this rule translates to the determination of additionality. An activity that is required by law or regulation is therefore currently not eligible as a CDM projects or activity under a PoA.

This situation could have important consequences for the CPF, since many of its programs may have to be accompanied by a domestic regulatory system, which is designed to enable or promote the mitigation program. It is therefore important to clearly identify the CDM context if changes in policy, regulation or law are made in support of a mitigation program, and to ensure that the policy, regulation or law sets or improves framework conditions, but does not in itself – i.e., without concrete and specific program activities – lead to emission reductions.

However, this may prove to be difficult in practice. For instance, if a CDM program involves a public utility that is prevented from dealing in emission reductions, for instance due to central investment planning, strict least-cost procurement rules, or tight profit controls, the CDM incentive will have no effect. If in this situation a policy or

regulatory change is made to enable a mitigation program, it may be difficult to attribute the resulting emission reductions to the new policy or to any changes in investments that the policy change has induced. Similar issues can occur in many complex programs, for instance in a transport program involving a modal shift where public policy changes and private decisions have to be aligned to impact emissions, so that it may be very difficult to separate the CDM incentive and its mitigation effect from the policy change and any other exogenous factors.

These problems can potentially be overcome if new methodologies become available that base emission reductions on fixed, agreed baselines and measured program performance and that do not have to trace the direct causality for each ton of GHG emissions that is reduced under the program. To help make this a reality and clear the way for larger mitigation programs is one of the objectives of the CPF.