# Submission on Standardised Baselines under the Clean Development Mechanism

August 2010

The Carbon Markets and Investors Association (CMIA) fully welcomes the discussion of standardised baselines as a means to enhance the environmental integrity of the Clean Development Mechanism (CDM), reach a better distribution of project activities, and introduce a more standard base approach to additionality. The implementation of a standardised approach should result in a more predictable and clear set of rules, leading to a scale-up of investment in low carbon technology within the CDM.

CMIA sees an important distinction in the degree of standardisation that can feasibly be introduced in the immediate future given the existing CDM procedures and systemic amendments that could be achieved in the midterm. It is important that the existing CDM be improved through step-wise changes that can be implemented by the CDM Executive Board (EB) operating under its current mandate from the CMP and in a manner that builds on ten years of experience in CDM project activity development.

In summary we see the following distinction:

- Immediate improvements in CDM, including standardization of the qualitative and quantitative description of baselines and methods of automating the additionality test; and
- Systemic improvements that could involve use of benchmarks or performance standards. These would evolve the way in which additionality is determined and would allow for multiple actions and technologies to be implemented relative to a single baseline. For this approach to be implementable, amending existing CDM modalities and procedures will be required.

To understand the different degrees of standardisation that can be achieved, it is necessary to focus on the precise definitions of the commonly used terms of: baseline, benchmark and emissions factor, whilst identify some of the key challenges in implementation of these concepts.

**BASELINES**

In the context of the CDM, a baseline is a group of actions which describe the future scenario for an activity, assuming that the related emissions reduction project activity does not occur.[1]

This can be further divided into two components: a qualitative baseline, which is a description of the baseline, and a quantitative baseline, which is the calculation of baseline emissions against which emission reductions are awarded. The CDM methodologies contain procedures for establishing a qualitative definition of the baseline, and quantifying it such that it can be used to determine emission reductions.

A baseline must also be tested to ensure that it does not describe the same scenario as that of the project activity. This is done by reviewing a number of potential scenarios including at a minimum, both the baseline and the project scenario, and showing that the selected baseline does not face any barriers whilst the proposed project activity does. Therefore, the additionality test helps to establish whether or not the baseline and the project activity are the same.

[1] Paragraph 44 of Decision 4/CMP.1 established that: "The baseline for a CDM project activity is the scenario that reasonably represents the anthropogenic emissions by sources of greenhouse gases that would occur in the absence of the proposed project activity. A baseline shall cover emissions from all gases, sectors and source categories listed in Annex A within the project boundary. A baseline shall be deemed to reasonably represent the anthropogenic emissions by sources that would occur in the absence of the proposed project activity if it is derived using a baseline methodology referred to in paragraphs 37 and 38 above."

In summary, there are three steps:

- Define the baseline
- Prove it is not business as usual and that the project activity faces one or more barriers
- Quantify the baseline

The CDM is by definition a project-based mechanism and has over ten years of implementation, struggled to deliver projects that implement more than one technology[2]. There are two main reasons for this:

- The additionality test only works when it is used to test a specific activity or set of activities implemented at a specific level. If the activities change from what is tested in the PDD, then it is necessary to re-assess the additionality because in some circumstances increasing or decreasing the scale of activity, or adding or subtracting elements of the proposed project, may impact upon the additionality; hence the need for procedures for dealing with changes in project activities. This means that it is very difficult to assess the additionality of a project which has multiple components. The chances that such a project will eventually be implemented exactly as planned are small, and therefore the likelihood of consistent and predictable issuance of CERs is also low; and
- If two or more activities impact upon the same baseline, then it becomes impossible to accurately quantify the emission reductions associated with each activity.

Many of the submissions made to SBSTA on the topic of standardised baselines in March 2010, include reference to terms such as benchmarks, performance standards, programmes, and so on. However, because of the design features of the CDM, intentional or not, great care must be taken when considering how a standardised baseline can be implemented in practice. If standardised baselines are designed to facilitate the implementation of an open-ended range of activities, they will prove extremely difficult to implement under the existing CDM structures, requiring further systemic changes.

In the context of the current CDM system an alternative approach to standardised baselines would be to use the concept to define a set of scenarios which constitutes the baseline for specific types of activities. This baseline would still need to be tested for additionality OR some specific types of projects in some countries could also be considered to be automatically additional (i.e. a “positive list” of technologies which are considered additional). This approach is developed further below but only after looking at benchmarks and performance standards that would require a significant systemic change of the CDM.

**BENCHMARKS AND PERFORMANCE STANDARDS**

A benchmark or performance standard is a target operation criterion which already includes the concept of additional action. A benchmark should be a set for a homogenous group of entities such that the goal is lower than the historical performance of all of the participating entities.

For this reason, we refer to the benchmark as an entity-based performance standard, where the key is the definition of the group of entities (in statistical terms the “n” population) to which a particular benchmark is

[2] There are some methodologies which promote two technologies e.g. ACM0008 which promotes both methane abatement and use of methane for power or heat. This works because the project addresses two different baseline; the two technologies (flaring and power generation) do not impact the same baseline. The guidelines for Programmatic CDM also permit the use to more than one methodology, although in practice, it becomes terribly complex. There are also new CDM methodologies under consideration which are more closely aligned to the concept of benchmark approach, however these methodologies, if approved will either be very restrictive or struggle to cope with the accurate description of the project activity and the long term proof of additionality.

applied. For example, a benchmark could be set at the lower 95% confidence interval of historic performance or it could be set at the level of well-managed, best commercially-available technology. This is a technology standard which can be established by reference to theoretical calculations, publications, operation manuals, technical specifications and the like.

The boundaries of the group of entities would have to be approved by a regulator to ensure that the benchmark is relevant to the entire group of entities or population. A benchmark will not motivate improvement if an entity's performance is already better than the benchmark, or the benchmark is technologically impossible to achieve given the existing installed technology, scale or product mix. Nor should an entity whose performance already exceeds the benchmark receive any certified emission reductions.

Benchmarks are relative targets based on total emissions of greenhouse gases (GHG) per unit of activity (raw material consumption, production, output, etc). Hence, verification of benchmarked activities focuses on total GHG output, production and boundaries. It does not need to look at the individual parameters as currently required under the CDM. This means that benchmark projects are not confined to individual technologies. This is a vital point, and it is essential to understand the implications of such an approach:

- Benchmarks are already permitted under the CDM as established in Decision 3/CMP.1 paragraph 48 (c) of the Marrakech Accords[3]. In practice, this option has not to date resulted in a significant number of methodologies or projects. Existing methodologies tend to be extremely restrictive as to how the project is implemented and to date these have not provided a means of scaling up the CDM. The latest cement benchmarking methodology NM0302 under CDM, for instance, is being severely curtailed by the Methodology Panel in its comments back to the project participants and would be nearly impossible to implement in practice.
- Since a benchmarking or performance standard approach opens the door to multiple technologies, any kind of financial analysis of additionality becomes redundant. Validating the costs of multiple, potentially interacting interventions which may be implemented at variable levels is simply not practical. The common practice analysis would need to be redefined.
- Existing procedures, documentation, templates and methodologies will all need to be substantially revised to incorporate a benchmark approach.
- DOE validation and verification procedures would need to change too.

An advantage of a benchmark is that it can enhance environmental integrity by providing a balance between under and over crediting. The concept of using a benchmark to balance out the risk of over crediting projects against under crediting elsewhere in the population is not practical. This supposes that the benchmark will come with strict applicability criteria. Whilst this will require many different benchmarks to enable fair and equitable participation of different facilities in the same sector (i.e. the number of benchmarks will reflect the level of homogeneity within the sector), the applicability criteria will ensure that credits are not over issued.

[3] 48. In choosing a baseline methodology for a project activity, project participants shall select from among the following approaches the one deemed most appropriate for the project activity, taking into account any guidance by the Executive Board, and justify the appropriateness of their choice:
(a) Existing actual or historical emissions, as applicable, or
(b) Emissions from a technology that represents an economically attractive course of action, taking into account barriers to investment, or
(c) The average emissions of similar project activities undertaken in the previous five years, in similar social, economic, environmental and technological circumstances, and whose performance is among the top 20 per cent of their category.

However, there is one fundamentally important and positive aspect to a benchmark approach which makes benchmarking a very powerful concept. So powerful, in fact, that we propose that a benchmarking approach is used as a basis for a reformed CDM or as the basis of a completely separate new approach for carbon finance mechanisms.

If the benchmark defines a more ambitious (lower) performance standard than the population currently exhibits, any entity which achieves the benchmark is exceeding business as usual behaviour and acting additionally. This means that the concept of additionality and environmental integrity can be addressed through suitably defined performance standards. Whilst the challenge is then setting the performance standards, the advantage of moving on from a technology by technology and project by project additionality test to a facility wide performance standard is enormous.

Under the CDM, conservative or default emission factors are used to support environmental integrity but the benefit is not quantified and not reported. Under a benchmark approach, the improvement from current or business as usual (BAU) performance to the benchmark performance would NOT generate credits, given that benchmarks will include national or sectoral policies. This larger and more deliberate improvement in performance can be estimated or measured and reported as a host country contribution. Credits would be generated by the improvement beyond the benchmark, which may be achieved by any number of hard or soft interventions. Consequently, the investment is not entirely driven by carbon credit revenues nor is it restricted to individual technology based additionality tests. This removes one of the major barriers which has inhibiting the scale up of emission reduction activities under the CDM.

For these reasons, we propose that the concept of standardised baselines is more narrowly defined, as described above, to facilitate immediate improvements to the CDM. The concept of benchmarks would therefore be part of a broader discussion on how to scale up and reform the CDM. On this topic, CMIA has prepared a paper entitled *Overarching Architecture for a Global Emission Management Strategy* which expands on the concept of a benchmark mechanism. More details are provided at the end of this submission.

**EMISSION FACTORS**

An emission factor should not be confused with a baseline or benchmark. Like a benchmark, an emission factor is the amount of GHG emitted per unit. The crucial difference is that a benchmark is directly related to the activity in question, whereas an emission factor is a parameter which feeds into the calculation of the benchmark.

For example, in a project attempting to improve energy efficiency in a building, the benchmark may be expressed as tonnes of CO2 per 1000m2 per annum (or Kg per m2). This is calculated by multiplying electricity usage per unit area by grid emission factor. The benchmark is electricity usage and the project focuses on reducing electricity usage. The grid emission factor converting consumed electricity into CO2 emissions is an external factor which is not under the control of the project developers.

In a separate initiative, it might be feasible to set a benchmark for grid electricity and work with grid connected power stations to reduce the CO2 emissions per MWh. In this case the benchmark happens to be related to the grid emission factor but an individual facility's performance is calculated on the basis of fuel consumption multiplied by an emission factor for the fuel.

In summary, a benchmark is the emission intensity of an output, product or service. An emission factor is the emission intensity of an input such as energy, a feedstock or a raw material.

**RESPONSE TO REQUEST FOR INPUT**

Within this context, the CMIA would like to respond to the questions from the SBSTA as follows:

**A. The scope of the development of standardised baselines**

Many of the CMIA's members are CDM project developers and project participants. The CMIA would like the scope of the development of standardised baselines to focus on immediately simplifying the CDM, reducing and removing transaction barriers and facilitating the distribution and development of CDM in under-represented countries and sectors. Additionally, we call for a systemic change in the CDM to accommodate broader benchmark approaches as described above.

Accordingly, the development of standardised baselines should extend to establishing guidelines and procedures for:

- Defining qualitative baselines for specific technologies;
- Defining quantitative baselines for specific technologies;
- Defining a list of technologies which may automatically be considered to be additional (similar to the recent approved guidance for very small scale renewable energy projects in Least Developed Countries); and
- An enhanced role of DNAs in data gathering, development and assessment of standardised baselines applicability.

The CMIA believes that if standardised baselines were to be developed in this way, they would neatly fit together with existing modalities and procedures such that project developers would be able to replace extensive sections of PDDs with pre-approved baselines and additionality statements. This in turn would substantially reduce the burden of validation, completeness check, information and reporting check, requests for review and reviews of project activities. Furthermore, enhanced standardisation would encourage project developers to focus on developing projects in otherwise under-represented sectors and countries.

Examples of a standardised baseline include:

Sector: Domestic energy consumption (Cook stoves in the absence of a reliable grid connection)
Qualitative description: The baseline is the use of non-renewable sources of biomass, charcoal, coal, kerosene or bottled gas.
Quantitative description (values are for illustration purposes only):

| Displaced fuel | Standardised baseline, t CO2 per household per annum |
|---|---|
| Charcoal | 5 |
| Unsustainable Biomass | 4 |
| Coal | 3 |
| Kerosene | 2 |
| LPG | 1 |
| CNG / natural gas | 0.5 |

Sector: Small scale renewable energy (on grid)
Qualitative description: The baseline is gird connected electricity
Quantitative description: the grid emission factor calculated using the tool

Sector: Small scale renewable energy (off grid)
Qualitative description: The baseline is diesel fired generation
Quantitative description: IPCC value for diesel fired generation

**B. The mandatory or optional nature of the use of standardised baselines**

Once a standardised baseline has been approved by the EB and accepted by the host country DNA, it must be applied to all projects in that sector. The justification for this recommendation is that it protects the environmental integrity by stopping project developers from taking advantage of situations where a standardised baseline works in their favour and avoiding it when it does not. However, there should also be processes for revising the standardised baseline and taking specific circumstances into consideration. If a host country government does not wish to approve or implement standardised baselines, then it is under no obligation to do so. In which case, project developers would continue to apply the existing methodologies and tools to select the most appropriate baseline scenario and demonstrate additionality.

**C. The procedural requirements for the development of standardised baselines, including the involvement of designated national authorities**

Assuming the scope of a standardised baseline is the definition of qualitative and if appropriate quantitative baselines to be applied to specific methodologies in specific geographies, it is proposed that the EB instruct the meth panel to:

- Develop guidelines for the preparation of standardised baseline
- Prepare standardised baselines for priority methodologies (prioritised by sector/host country)

The EB would be required to create procedures for project developers and DNAs to also prepare and submit standardised baselines for approval. Furthermore, we consider it a necessary step to enhance the capacity and role of DNAs in data gathering, development and assessment of standardised baselines applicability.

DNAs of countries where the standardised baseline is to be applied must accept the standardised baseline and approve its application on a country or regional wide basis. DNAs will continue to issue approval letters to individual projects. It may be feasible that a DNA can approve the qualitative definition of the baseline and develop country specific quantitative baselines.

DOEs would need to validate the eligibility of the project to use a standardised baseline, and assess the applicability of the selected methodology.

**D. The priorities for developing standardised baselines**

Methodologies and sectors for prioritization should include those which meet some of the following criteria:

- Lack of obvious commercial incentive to implement a project – for example cook stove, rural domestic heating, CFLs, etc. In these situations it is difficult if not impossible for project developers to derive revenues from anything other than the emission reductions.
- Small scale projects where transaction costs of defining and quantifying a baseline are typically high relative to the emission reduction benefits.

- Large scale projects which are effectively scaled up small scale projects which have the same environmental and social benefits but deliver larger quantities of emission reductions and larger quantities of social, environmental and sustainable development benefits without the transaction burden.
- Countries where the baseline coincides with legislative requirements or where there is a clearly defined common practice and/or methodologies where the baseline is quantified through direct measurement (such as landfill gas, where the baseline equals the methane captured).

Priority may also be given to the development and use of standardised baselines in least developed countries, those with less than 10 CDM projects and under-represented sectors and technologies.

**E. Access by underrepresented regions, sub regions, sectors and least developed countries to the CDM**

Access by underrepresented regions, sub regions, sectors and least developed countries is supported, especially for domestic emission reduction initiatives such as fuelwood, charcoal and lighting. Yet it must be noted that to achieve the maximum benefit, these standardised baselines should be accompanied by positive additionality lists.

**F. The level of aggregation and the boundaries**

This is not relevant to standardised baselines with one technology. A standardised baseline with one technology applied within the context of an existing CDM project activity and therefore the boundary and leakage issues defined within the methodology still apply. This, however, is a key issue for performance-based benchmarks. In this case, systemic changes to CDM would need to be made.

**G. Data quality, availability, collection and confidentiality**

As indicated in (f) above, these are issues which are more relevant to the definition of benchmarks, not project specific baselines or standardised baselines. To the extent that data are required to determine quantitative standardised baselines, the following observations may be made:

- Existing PDDs may provide a source of publicly available, verified data
- The nature of the methodologies selected for the preparation of standardised baselines may mean that there is little or no commercial sensitivity surrounding the data
- Such data may be difficult to gather although academic institutions, donors, aid organizations or NGOs may have access to useful datasets
- Donor organizations might assist in meeting the costs of gathering such data, via academic institutions and NGOs
- DNAs themselves may be able to assist in accessing data sets or data collection
- IPCC values may be suitable for some standardised baselines.

## H. The financing of the development of standardised baselines, including capacity building and data collection

Assuming that standardised baselines are developed within the context of existing methodologies and the current scope of the CDM, the cost and effort is significantly reduced, to the extent that standardised baselines could be developed and implemented within a relatively small space of time. However, a more sophisticated benchmark will require data from different sources which is likely to increase the cost.

Capacity building for DNAs would be required for which funding is required and can be delivered through the DNA Forum. DNAs or Project Developers, NGOs or other organizations may undertake the collection of data as long as the Meth Panel provides guidance as to what is expected.

## I. Accounting for developments over time, including past efforts

Irrespective of the final nature of a standardised baseline, the concept of varying the baseline and hence the number of emission reductions that may be generated from a given level of activity, after the project has been submitted for registration, completely undermines the kind of certainty which the private sector is seeking.

Baselines may be fixed or variable over the crediting period but the extent of the variation must be fixed *ex ante* so that project developers and investors have a reasonable degree of certainty over issuance volumes.

Project developers and investors already face the usual project based risks, exacerbated by the complexities of the CDM project cycle and the nature and location of the kinds of projects they implement. Adding a further variable in the form of a revised baseline would seriously undermine any investors' willingness to invest money in a project which does not have other good and reliable forms of income. Therefore a standardised baseline should be fixed for the duration of the crediting period.

The issue of past efforts is one which applies to the concepts of benchmarks applied to a given set of activities, where members of the group of entities already exceed the benchmark.

The description of standardised baselines and their integration with benchmarks and crediting baseline mechanisms is a topic which the CMIA has been focusing on through the work of its Financial Mechanisms and International Architecture working group. This group has prepared a working paper entitled *Overarching Architecture for a Global Emission Management Strategy*. Copies of the paper, a slide pack and a short summary, all of which are in draft form, are available upon request.

**CMIA is an international trade association representing close to 50 companies that finance, invest in, and provide enabling support to activities that reduce emissions. CMIA's membership accounts for an estimated 75 per cent of the global carbon market, valued at USD 130 billion in 2009. Solely representing organizations that provide services to and invest in the environmental sector, membership does not include any entities with compliance obligations under cap-and-trade schemes. This results in a unique advocacy platform with emphasis on the environmental integrity of market mechanisms and climate change policies.**

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