

PMR Technical Workshop #1 – Crediting Mechanisms
Istanbul, Turkey
October 26, 2011

CHAIR'S SUMMARY

Session 1. Overview of Crediting Instruments¹

Presenter: Mr. Murray Ward, GTriple C, New Zealand

A. Key points made during the presentation

1. Context-setting:

- Carbon markets are regulated markets resulting from public policy decisions
- Lack of “tangible” good, so MRV (monitoring, reporting and verification) is essential to ensure quality of emission credits and a well-functioning crediting instrument
- Advantages of market instruments: (i) markets can bring finance & lower costs of meeting objectives; (ii) scaled-up crediting instruments may have applications in either international or domestic policy frameworks; and (iii) crediting instruments are a means of drawing-in a much broader set of opportunities than if focus were only on (major) regulated sectors
- There are useful experiences and insights from existing crediting instruments (CDM, JI, as well as voluntary markets) to draw from; this experience has drawn-in many people around the world from different professions
- Markets require supply and demand (created by scarcity)

2. Key Issues for a scaled-up crediting instruments

- Boundary-setting is fundamental for the determination of the crediting baselines
 - Need to consider (i) accounting system (MRV); (ii) treatment of new entrants; and (iii) treatment of existing CDM projects
- Crediting baselines are key for market integrity & credibility
 - Need to consider (i) who sets the baseline and what is the process; (ii) technical issues (CDM provides a good basis, including standardized baselines, but new mechanism may need new methodologies); (iii) implications of baseline decision (i.e., what are the implications of getting baseline “wrong”? who benefits?), while taking into account that perfect can be the enemy of the good
- MRV
 - Critical to setting baselines, and measuring performance against baselines
 - Affects economic value and potential environmental outcome
- Program authority and administration
 - CDM & JI offer a basis but there are key differences with proposals for scaled-up crediting instruments

¹ The presentation was based on the PMR Technical Note #1 (*Overview of Characteristics of Crediting Instruments*).

B. Key issues raised/discussed

(The discussion took the form of questions and comments by participants and responses by the presenter. The notes from the discussion below do not necessarily reflect all perspectives and views of workshop participants.)

General

- **Setting-up and clarifying legal framework up-front** – important to provide clarity early on in the process with regard to legal and fiscal frameworks in order to give visibility to markets.
- **Contribution of project-based mechanisms for the elaboration of scaled-up crediting instruments and idea/possibility of a “nested” approach** – It was pointed out that the experience with project-based mechanism provides good elements from which to build upon for a scaled-up crediting mechanism. From a financing perspective, given that financial investments are typically made at the project level (and not at an overall sector level), it was suggested that it may be useful to consider the possibility of a “nesting” approach where projects/programs are “nested” within a broader sector sphere – similar to discussions in the REDD context – which could be, for example, a sector-level crediting scheme for renewable energy enabling a developing country to receive credit revenues based on sector-level performance, but where the incentives at the project level would not be through credits, but through a feed-in tariff.
- **Possibility to draw from ETS experience for elaboration of scaled-up crediting instrument** - It was also highlighted that emissions trading schemes provide an important reference point (e.g., in terms of setting boundaries and MRV).
- **Definition of “scaled-up crediting instrument”** – It was noted that there is no agreed upon definition internationally for scaled-up crediting instruments. It was suggested that it may also be possible to consider what “scaled-up crediting instrument” means within a country.
- **Demand for scaled-up crediting instruments** – The importance of demand for scaled-up crediting instruments was highlighted. The fact that crediting instruments can contribute to achieving GHG mitigation objectives at lower costs is expected to remain of interest.
- **A single, scaled-up crediting instrument or several and potential link**– It was discussed that there may be scaled-up crediting instrument at the international level; some countries may (also) elaborate a crediting instrument domestically. It was suggested that should a country decide to develop a domestic scheme with units created within a domestic context, a connection to an international scheme may not be intended.

Baselines

- **Validity of baseline (for how long?)** – it was pointed out that for a crediting instrument to maintain environmental integrity (link with “additionality”), it is important to consider the appropriate length of time a baseline should be valid for a given type of activity – after which (e.g., when a given technology becomes fully commercially viable), the baseline should be revised (downwards) and the type of activity may no longer be able to generate emission credits.
- **Defining what is business-as-usual (BAU)** – it was noted that there is not an agreed-upon approach to defining BAU; it depends on trends. Sometimes BAU is defined to include existing and planned policy measures; sometimes not.

- **Space (wedge) between BAU and crediting baseline** – The possibility of using the “wedge” to meet domestic mitigation pledges was discussed. It was suggested that countries may wish to consider domestic mechanisms to lower emissions from BAU to the crediting baseline (i.e., in the wedge between BAU and the crediting baseline).
- **Absolute and relative baselines** – the distinction between the advantages and disadvantages of both types of baselines were discussed. While relative baselines may be interesting for developing countries that are in the process of growing and “peaking,” it was suggested that it may be possible to consider how to support a transition/evolution from a relative baseline to an absolute baseline. In this context, it was suggested that it may be possible to consider an evolution from a baseline and credit scheme to a cap-and-trade scheme.

Monitoring, reporting and verification (MRV)

- **MRV is critical, but there may be different ways to do it** - The link between coverage and boundaries with MRV was highlighted. It was cautioned that “perfect is the enemy of the good” and different tiers of MRV accuracy may be possible (e.g., the EU-ETS has different tiers of accuracy for different sectors/activities depending on the size of an installation's emissions). Also, it was pointed out that methodologies for national inventories are too aggregate for a crediting instrument and it was suggested that “installation-based” MRV may offer an appropriate level of aggregation for a scaled-up crediting instrument.

Session 2. The Role of Geothermal Energy in Indonesia's Emission Reductions and Carbon Market Program

Presenters: Mr. Andi Samyanugraha, National Council on Climate Change, Indonesia
Technical perspective: Mr. Harikumar Gadde, Carbon Finance Unit, The World Bank

A. Key points made during the presentations

1. Geothermal Energy in Indonesia

- 1,189 MW of geothermal energy has been developed, with significant potential remaining
- Indonesia has 2 registered CDM geothermal energy projects
- The National Energy Policy has a target of 9,500 MW of geothermal power (i.e., 5% of total energy mix) by 2025
 - Greater use of coal is foreseen in BAU scenario
- The Government's policy on geothermal power, along with the relevant laws and regulations, were presented
- Only off-taker of electricity in Indonesia is PNL (Indonesia's state-owned electricity company)
- Some key barriers to the further development of geothermal energy were highlighted:
 - Higher price than least-cost option (coal)
 - Up-front risk associated with exploration
 - Land-use issues

2. Climate Policy and Scaled-up Crediting Instruments

- Indonesia's domestic mitigation target is to reduce its net GHG emissions by 26% below BAU by 2020. With international support, Indonesia aims to reduce emissions by 41% by 2020
 - It was clarified that geothermal energy is not included in Indonesia's target of a 26% reduction Indonesia is looking into policy support and market instruments to reach the 41% reduction target
 - Indonesia proposed its energy sector in the context of Reducing Emissions from Fossil Fuel Burning (REFF-Burn) as a potential area for PMR support
- Carbon revenues can contribute to leveraging investments in geothermal energy
- The development of standardized baselines (at the sector level) would be a welcome development under the CDM, but also for a future scaled-up crediting instrument

3. Technical Elements and Considerations for a Scaled-up Crediting Instrument

- Important to recognize specific country and sector conditions
- Boundary and scope could be defined in a rather straight-forward way around electricity generators and differentiated by grids. The treatment of capacity additions would need to be considered
- Crediting baseline for the energy sector may be relatively easier to develop compared to other sectors. Elements of the CDM consolidated methodology for grid-connected renewable energy (ACM002) provide a useful basis
- MRV for a scaled-up crediting instruments could also draw from the CDM ACM002 consolidated methodology

- For each grid, monitoring of electricity generated and supplied is already in place, as well as information on fuel consumption at each power plant (although some improvements may be needed)
- Systems would be needed to collect information on a timely basis
- Benefit of scaled-up crediting instrument and incentive to participate:
 - To help cover incremental cost of generation from geothermal power that require unsustainable levels of electricity subsidy
 - To help address high up-front cost of development (“resource risk”)
 - Address PLN’s current inability to off-take geothermal power (given high cost of generation)

B. Key issues raised/discussed

(The discussion took the form of questions and comments by participants and responses by the presenter. The notes from the discussion below do not necessarily reflect all perspectives and views of workshop participants.)

Scaling-up from CDM to scaled-up crediting instrument

- It was pointed out that rules and procedures for CDM programmes of Activities (PoA), particularly in respect to new guidance for determination of additionality, are not likely to simplify the process for a geothermal energy programme. Developments on sector standardized baselines under the CDM may be interesting for geothermal energy in Indonesia
- It was suggested that a “real sectoral approach” may require a boundary that is broader than only geothermal energy, i.e., include the entire power sector
- Indonesia clarified that it did not make a distinction between a “scaled-up crediting instrument” and a “credited NAMA”
- Carbon market revenues are now too low given high infrastructure and upfront costs, but Indonesia is seeking to utilize market instrument in an optimal way
 - It was pointed out that carbon revenues can help with revenue enhancement and risk mitigation

Policy

- It was clarified that as geothermal energy is not part of Indonesia’s mitigation commitment (which is a commitment based on domestic financing), geothermal energy would be open to a market instrument
- While it was suggested that it may be useful to consider a technology neutral approach, covering all renewable energies (and not only geothermal energy), it was clarified that:
 - Indonesia’s interest in geothermal energy is based on the fact that each site is large and can replace large installations (it can generate much more than other forms of renewable energy)
 - The geothermal development perspective is very different from that of other forms of renewable energy, with scale and risks more comparable to oil exploration and production

Session 3. Mitigation Program in the Housing Sector – Example from Mexico

Presenters: Mr. Luis Muñozcano (SEMARNAT, Mexico) and Mr. Jorge Wolpert (National Housing Commission (CONAVI), Mexico)

Technical perspective: Mr. Chandra Shekhar Sinha, Latin America and Caribbean Region, The World Bank

A. Key points made during the presentations

1. Mexico's Policy Context

- Mexico's short-term mitigation objective (as defined in the Programa Especial de Cambio Climatico 2009-2012) is a reduction of 51 MtCO₂e/year in 2012 (i.e., -6% from BAU)
- Mexico's voluntary pledge under the Copenhagen Accords is up to a 30% reduction below BAU by 2020 (i.e., approximately 264 MtCO₂e/year)
 - Reaching this pledge is expected to require significant domestic, as well as international, financial assistance
 - Carbon market expected to play a significant role: approximately 1/3 of the effort (i.e., 90 MtCO₂e/year)
 - Key questions: will carbon market generate such a demand? Will effort sold to market still be counted toward Mexico's voluntary pledge (while avoiding double-counting)?

2. Mitigation Program in the Housing Sector: URBAN NAMA

- Context: Mexico builds between 800,000 and 1 million houses per year;
- Objective of NAMA is to enhance GHG emission reductions through the "Green Mortgage" and "Esta es tu casa" (subsidy program for poorest households) programs and build on Housing PoA. Enhancements would involve:
 - Increase penetration (more houses covered in same time period) and/or
 - Technology up-scaling (more ambitious efficiency standards and/or inclusion of technologies currently not covered)
- Introduction of USCO concept (Urban Service Company)

3. Technical elements and considerations for a scaled-up crediting instrument

- Building on PoA experience
 - disadvantage of lock-in in terms of technologies and institutions; looking for more flexibility in a scaled-up crediting instrument
 - Can build on CDM methodologies, but need innovation and simplifications
- URBAN NAMA to provide a framework for mitigation action in line with national development strategies
- NAMA for scaled-up crediting instrument can be defined with broad (e.g., an emission baseline for entire housing sector) or narrow scope
- Alternate methodology based on standardized baselines and benchmarks:
 - Introduction of energy performance benchmarks and/or minimum appliance standards based on whole-building energy performance
 - Boundary should be the houses through whole building approach
 - Whole building approach would allow inclusion of renewable energy technologies (e.g., SWH and PV)

- Benchmarking
- Robust MRV essential for a creditable NAMA
 - CONAVI to develop electronic database to include: (i) baseline and monitoring information at household level; (ii) unique identification for each household
- Registry: mitigation action at NAMA level to be reported to national registry/tracking system that will be linked to International Registry (NAMA registry and/or International Transaction Log)
- Leakage and double-counting: (i) installation of new equipment and scrapping of inefficient appliances; (ii) avoid cross-effects between measures; (iii) unique identification of households.

B. Key issues raised/discussed

(The discussion took the form of questions and comments by participants and responses by the presenter. The notes from the discussion below do not necessarily reflect all perspectives and views of workshop participants.)

Choice of Housing Sector for a Scaled-up Crediting Instrument

- Focus on housing rather than power generation: (i) power sector has its own challenge, such as too much installed capacity; and (ii) need to help households and need to lower cost to government in terms of subsidy (could not expand programs on its own)
- Regarding difficulty of working with many dispersed units: housing production is so significant that it is co-managed by government and private sector and a system is needed to monitor each household in order to track every subsidy and emission credit
- Baseline may not be so complex, as characteristics of buildings are standardized (decided by builders)
- Distribution of credit revenues – Carbon credits would not go to homeowners (when signing-off for a loan, they sign off ownership of credits); they would go to the government to upscale mitigation

Scaling-up from CDM to scaled-up crediting instrument

- **Regarding the outlook for a demand for eventual credits:** The assessment is that it is better to make the investment early in terms of setting-up a solid program for crediting rather than waiting to see what will happen
- **Rationale for building from PoA and ensuring flexibility:**
 - Makes sense to build on what is known. Need to build on good sector policy and build on known methodologies that have been tested. It is a logical place to start
 - At the end of the day, it is the underlying mitigation activity that must deliver emission reductions and it is thus this activity that must receive financing. Efforts to scale-up involve developing the capacity for delivery of good sector development programs that also have GHG reduction benefits, which then can adapt to a scaled-up crediting instrument
- Importance of flexibility to be ready for unknowns; strategy in time of uncertainty is to increase options, rather than close them

Session 4. A Mitigation Program Across Multiple Sectors: Examples of Application of the City-wide Approach

Presenter: Ms. Monali Ranade, World Bank Institute

A. Key points made during the presentations

1. Multi-sector in a City Context

- Sectors considered: (i) solid waste; (ii) water; (iii) energy; (iv) transport; and (v) greening
- Cities matter: fastest growing source of GHG emissions, representing 70% of global GHG emissions.
 - Challenge is to balance development and environmental needs
 - Access to financing is critical to facilitate low GHG development in cities
- Cities work in multi-sector framework

2. Examples of Work in Cities on GHG Mitigation

- Multi-sector CDM/VCS Programs (e.g., Greater Amman Municipality)
- Voluntary targets (e.g., San Francisco)
- City-based sector-specific emissions trading scheme (e.g., Tokyo Municipal Government)

3. Technical Elements and Considerations

- MRV is heart: boundary is the city
- Importance of stakeholder consultations and confidence-building
- For cities in developing countries, the objective is to “bend” the emissions curve. Market instruments can help cities reduce GHG emissions
- Need coordination with national authorities (emissions accounting)

B. Key issues raised/discussed

(The discussion took the form of questions and comments by participants and responses by the presenter. The notes from the discussion below do not necessarily reflect all perspectives and views of workshop participants.)

Boundaries and MRV

- **Regarding potential leakage, double-counting and cross-city effects:** It was suggested to draw the accounting boundary around consumption and leave out aviation and transport of goods, as well as power generation and industry. It was suggested to focus on the emissions a city can control. This, however, leaves cities with large amounts of small dispersed sources, such as housing or in-city transport, which poses significant challenges to monitoring, reporting and verifying emissions.

Additionality and emission reductions

- The question of additionality of city-wide programs was debated, as in the context of urban transport, carbon finance makes a small contribution to financing. There are reasons other than emission reductions, such as congestion or air pollution, why cities have an incentive to optimize urban transport. On the other hand, it was pointed that climate-friendly urban transport was not necessarily happening under a BAU scenario. It was also suggested that cities may be able to create markets within themselves (e.g., opportunities both supply and demand within the city)
 - It was noted that “city-wide” is about avoiding future emissions, which was unlikely to happen today in many developing countries

Market-based instruments and cities

- **Regarding suitability of cities for market-based approach:** It was pointed out that a city has emissions that can be quantified and reduced. Moreover, a city – as a political and legal entity – can provide stability that is important for the market. However, it was pointed out that cities typically do not have authority to regulate large point sources in energy and industry sectors, which typically are natural candidates for market-based instruments. Moreover, cities do not have extensive experience dealing with market-based instruments.
- **Regarding harmonization between (i) sectors and cities; and (ii) cities and national framework:** A well functioning registry and tracking system was viewed as critical to allow mitigation to happen at whatever level makes most sense
 - Importance of coordination and dialogue between city and national levels

Concluding Remarks

All Participants

This workshop

- Very useful session; good to see participants develop innovative ideas
- Appreciate case studies
- Many references to CDM and PoAs were made; encouragement to look also at emissions trading schemes (e.g., installation-level boundaries) and to innovate
- Appreciation of discussion on how countries viewed supply and demand and interest of first-mover advantage
- Background papers are very useful to help get all participants on the same page
- Transition from the theoretical framework to the case studies could have been smoother; something to consider for future workshop formats

Suggestions and ideas for future PMR workshop(s)

- More workshops are welcome
- Interest in also hearing experience of Contributing Country Participants
- Interest in exploring further MRV and registry
- Look at Market Readiness Proposals and their components to identify areas where more discussion is needed (e.g., boundaries, MRV and baselines)

- Identify needs of PMR Participants as well as expertise and experience, with aim of matching both
- Explore difference between intensity and absolute baselines/caps
- Discuss different ways of designing emissions trading schemes
- Explore accounting issues, including how to reconcile national, sub-national and international
- While markets are focus, maybe also look at innovative finance
- Presentations on both policy and markets
- Seek to involve practitioners

**First PMR Technical Workshop:
Mitigation Programs for Scaled-up Crediting Mechanisms**

Annotated Agenda

October 26, 2011

Hotel Grand Hyatt Istanbul

Taskisla Cad desi No. 1

34437 Taksim

Istanbul, Turkey

Objectives

To enable PMR Participants as well as invited experts and observers to explore together technical issues associated with scaled-up crediting mechanisms through examples of concrete mitigation programs in different sectors in developing countries.

1. Opening and Introduction	
08:30	Registration: Welcome Coffee and Badge Pick-up
09:00	<ul style="list-style-type: none"> - Welcome (<i>Ms. Joëlle Chassard, World Bank</i>) - Remarks by the Chair (<i>Mr. Evren Turkmenoglu, Ministry of Environment and Urbanization, Turkey</i>)² - Introduction of meeting attendees (<i>tour de table</i>) - Presentation of agenda
2. Overview of Crediting Mechanisms	
9:30	<p>Overview of Crediting Mechanisms: Key Features and Issues in Existing Crediting Schemes and in Proposals for New Crediting Mechanisms <i>Mr. Murray Ward, Global Climate Change Consultancy, New Zealand)</i></p> <p><i>The presentation will provide a summary assessment of proposed scaled-up crediting mechanisms as well as existing project-based crediting schemes against a number of important general characteristics of such instruments.</i></p>
11:00	Break

² At the invitation of the PMR Secretariat, Mr. Turkmenoglu has kindly agreed to chair the workshop.

3. Mitigation Programs and Key Issues for the Consideration for Scaled-up Crediting Mechanisms – Examples from Case Studies	
11:15	<p>The role of Geothermal Energy in Indonesia’s Emission Reductions and Carbon Market Program</p> <ul style="list-style-type: none"> - Opportunities and Challenges for Scaling Up <i>(Mr. Andi Samyanugraha, Senior Officer, National Council on Climate Change and Ms. Gita Lestari, Ministry of Energy and Mineral Resources, Indonesia)</i> - A Potential Role of Scaled-up Crediting Mechanism: Technical Perspectives <i>(Mr. Harikumar Gadde, Carbon Finance Unit, World Bank)</i> <p><i>The presentations will highlight the potential and challenges for scaling-up mitigation, the contribution of carbon revenues in the overall financing and the associated policy and regulatory framework needs, as well as institutional considerations. The presentations will also discuss issues and options for setting a boundary, baseline and MRV.</i></p>
12:45	Lunch
14:15	<p>A Mitigation Program in the Housing Sector</p> <ul style="list-style-type: none"> - Introduction: Mexico Context <i>(Mr. Luis Alfonso Munozcano Alvarez, SEMARNAT, Mexico)</i> - NAMAs in the Housing Sector, <i>(Mr. Jorge Wolpert, National Housing Commission (CONAVI), Mexico)</i> - A Potential Role of Scaled-up Crediting Mechanism: Technical Perspectives <i>(Mr. Chandra Shekhar Sinha, Latin America and Caribbean Region, World Bank)</i> <p><i>The presentations will discuss how a sustainable development policy aimed at housing can be developed as a mitigation program for a scaled-up crediting mechanism, with particular focus on MRV issues associated with many dispersed units and several mitigation technologies, coordination and institutional responsibilities for the program, and financing.</i></p>
15:45	Break
16:00	<p>A Mitigation Program Across Multiple Sectors: Examples of Application of the City Approach <i>(Ms. Monali Ranade, The World Bank Institute)</i></p> <p><i>The presentation will explore options for grouping multiple sectors into one mitigation program aimed at enabling action in a sub-national jurisdiction (e.g., a city). The presentation will explore different approaches to engage with municipal authorities at the sub-national or national level, and will discuss the advantages and challenges of addressing multiple sectors in a single program.</i></p>
17:30	<p>Wrap-up</p> <p><i>Participants are invited to share general views on the workshop, including any implications for PMR work and identify issues to be further discussed/explored at future workshops.</i></p>
18.15	End of Workshop