

Scoping study for innovative climate finance facilities for testing scaled-up mitigation programmes

FINAL REPORT

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Summary

This report provides an overview and suggestions for innovative climate finance through NEFCO for testing scaled-up greenhouse gas mitigation.

This work started out under the title “Scoping study for innovative *carbon* facilities for testing *sectoral approaches*”. Over the course of our work this has been changed to “Scoping study for innovative *climate finance* facilities for testing *scaled-up mitigation programmes*”. This reflects two important insights.

The first is that NEFCO has very unique attributes for a bilateral financial institution (BFI). Within one organisation it offers a full ‘menu’ of finance types (grants, concessional loans, carbon finance). The change from “carbon” to “climate finance” reflects NEFCO’s fuller scope of products.

The second change, from “sectoral approaches” to “scaled-up mitigation programmes” follows both political and practical considerations. Since the term ‘sectoral approaches’ first appeared back in 2007-08, concerns have been raised by major developing countries. In one of its uses, in particular through work by European policy groups and consultants (but also in ideas stemming from Japan) it was perceived as mainly concerned with competitiveness. Major developing countries saw this as a potentially slippery slope to future border tariffs by developed countries.

The other main early use of ‘sectoral approaches’ has been around the notion of voluntary sectoral crediting baselines. This became known as sector no-lose targets (SNLTs). These have been put forward as a means to scale up investment in low carbon technologies and systems by moving beyond the constraints of the project-based Clean Development Mechanism (CDM). But there have been concerns by developing countries that these ideas might represent attempts to lead them to binding emissions commitments, sector by sector. However, the ‘no-lose’ feature of these proposals, and that baselines most logically would be considered in intensity terms for key sectors, have been ways to respond to these concerns, to some degree at least. An EU proposal for ‘sectoral trading’ (so of ex ante allowances, not ex-post credits) has been added to the mix. These ideas remain on the table. One reason why there continues to be momentum around these sectoral mechanisms is because of the positions of the EU and the United States about international offsets from sectoral mechanisms, as expressed in their proposals for domestic policies. Such policies, if implemented, would create the primary demand for credits from actions in developing countries.

Following the use of the phrase ‘nationally appropriate mitigation actions’ in the Bali Action Plan that framed the negotiations in the two year run-up to Copenhagen, the term NAMAs became commonplace in the negotiations. These would be specific actions that developing countries might take (and register) in doing ‘their part’ for global mitigation. Over time, this became elaborated to ‘unilateral NAMAs’, ‘supported NAMAs’ and ‘credited NAMAs’. The last of these refers to NAMAs that might produce compliance grade credits that could be used by developed countries, or their entities, to meet international or

domestic emissions trading scheme (ETS) obligations. Supported NAMAs comprise mitigation actions in developing countries which are supported by funds from developed countries. Unilateral NAMAs would then be those actions undertaken by the developing countries on their own (without support from climate finance).

This advent of the concept of NAMAs, and these various potential forms of NAMAs, opened up a whole new avenue to what the term 'sectoral' might mean. However there is a lack of any clear and common understanding of what NAMAs will actually be in practice. Currently it seems they could be just about anything, which is a source of confusion. Moreover, this topic too has become contentious in the negotiations. A position of some key developing countries is that the support for nationally appropriate mitigation actions should only come from public funds of developed countries.

Understanding this political context for work on enhanced market and finance mechanisms stresses the importance of what NEFCO is considering. We propose that NEFCO concentrates on **scaled-up mitigation programmes** and drops the 'sectoral' label.

As we frame things here, practical on-the-ground mitigation programmes are inherently implemented at a sectoral level anyway – to the extent that the term 'sectoral' can be seen as redundant. Programmes will be implemented in sectors (e.g. electricity production) and sub-sectors (e.g. energy efficiency in buildings or enhanced public transit). A given programme will need a boundary drawn around it; there will need to be measures of performance established to see that it is being successful, or not; and a range of financing tools and other support may be necessary to implement the actions.

This new framing of 'mitigation programmes' provides a much clearer way to think about the different types of initiatives that NEFCO might consider. We have developed a policy framework matrix to help clarify these possibilities and locate them within the range of options. In this matrix we identify eleven qualitatively different existing and potential international policy frameworks that can provide the international basis for action in developing and developed countries:

- Supported NAMAs – Non-crediting
- Supported NAMAs with voluntary carbon market (VCM) crediting
- Crediting NAMAs
- Sectoral CDM
- Sector no-lose targets (SNLTs)
- Sectoral trading
- Public finance mechanisms (PFMs), and public-private mechanisms
- International emissions trading, with international offsets
- Domestic emissions trading, with international offsets
- Joint Implementation (JI)
- Green Investment Scheme (GIS)

We furthermore identify eight types of domestic policy tools that countries might use to scale-up the implementation of mitigation actions, some of which have direct links to specific international policy frameworks:

- Government-led policies and measures (e.g. feed-in tariffs, tax credits, emissions charges, renewable performance standards, building and appliance standards) that do not include a trading element.
- Green (renewables) certificate trading
- White (energy efficiency) certificate trading
- Technology-based targets with crediting
- Domestic 'offsets' with domestic process
- Domestic 'offsets' with international process
- Domestic (sectoral) emissions trading (cap and trade)
- Installation-level baseline and crediting scheme

While not all the intersecting 'boxes' of this matrix represent practical fits of international policy frameworks and domestic implementation policy tools, many of them do.

We apply a set of criteria (and have drawn insights from interviews) to drill down and identify a number of specific areas that we think are options for NEFCO to explore further.

In short, we find that:

1. It is useful to look at mitigation programme opportunities from the bottom up. In particular there are many possibilities to scale up mitigation in cities; for example programmes could be in the sectors of energy (e.g. buildings, appliances, waste-to-energy, transport), waste (minimisation) and land use (restoration of urban forests). Programmes will tend to have multiple elements. Current CDM and 'programme of activities' (PoA) CDM (and, in developed countries, JI) are less appropriate 'scaling up' finance mechanisms because of their restriction on addressing to multiple technologies..

Bottom-up does not just mean cities; it can also mean taking ideas and technologies that have been proven through small scale methodologies and local projects in the CDM and aggregating them into multi-element regional programmes.

In either case, these bottom-up mitigation programmes can have high value development co-benefits. In addition to being attractive to host countries, this also means the likelihood of useful partnerships and collaborations with UN Agencies such as UNDP and UNEP. Partnerships can also be expected with groups involved in the C40 (cities) and R20 (regions) global initiatives.

In both these types of bottom-up situations a multi-element finance package may be appropriate, so across the full range of possible NEFCO finance instruments. In addition, NEFCO could consider new instruments such as those being discussed in the recent literature on PFMs including, for example, the provision of lower cost-of-capital debt finance raised by NEFCO through issues of 'climate bonds'.

With respect to carbon finance for these programmes, it is possible to develop and have approved innovative new methodologies through processes of the Voluntary Carbon Standard, and potentially other standards bodies working in the non-compliance carbon markets 'space', e.g. ISO. This would set the stage for the origination of credits that, in the future, might achieve compliance grade status as well as have value in voluntary markets.

2. There is value in pursuing some more top-down approaches such as sectoral crediting baselines. However, finding 'right sized' (small-medium) and 'right circumstance' countries to work with will be important. Countries should have a keen self-interest to take up these enhanced market mechanism ideas and be prepared to commit to their side of the necessary institutional and technical process that must be gone through to implement an actual programme.

While NEFCO can be the instigator of initiatives, it will be important to take a partnership approach to scaled-up mitigation programmes. By their nature, programmes are likely to require a larger number of actors working collaboratively. Having these actors take ownership of the programme and its successes will be an important risk-management strategy for NEFCO. In particular, it will be important to have partners that can facilitate and handle the engagement of policy makers at local, regional and potentially even national levels. This all suggests that while NEFCO may be a, or the key financing partner, the leaders of specific initiatives may be local groups supported also by other agencies. The latter might be directed towards capacity and institution building in support of the implementation of scaled-up programmes.

For reasons of 'appropriate scale', technical and political complexity, and staying clear of other organisations' busy efforts, we recommend that a NEFCO initiative should focus elsewhere than on the 'big six' developing countries, except where initiatives may be viable in 'gap areas' (e.g. rural China). Nordic country development agencies are already active in 'second row' developing countries, including through the Energy and Environment Partnership (EEP) initiatives which, among other things, are assisting countries develop the institutional capacity to help move ideas into sustainable and bankable investment projects that will bring substantial benefits. This suggests that the following regions might be good initial targets for a NEFCO "Facility for Scaled-Up Mitigation Programmes":

- Mekong River region – Vietnam, Thailand, Cambodia, Lao PDR
- Other SE Asia – Malaysia, Philippines
- East Africa – Kenya, Ethiopia, Tanzania
- North Africa – Morocco, Tunisia

- Latin America – Nicaragua, and rest Central America; Chile, Peru
- Central Asia – Kazakhstan, Kyrgyzstan, Uzbekistan

In moving from concepts to design and implementation, there are a number of key questions and issues that are crucial to the design and scale of possible programmes, including:

- For a given initiating body (or group), what does “scaled-up” mean in practice? – The question is whether scaled-up is just an incremental step up in size of project-based activities already being undertaken, or whether it is something of a new paradigm for supporting mitigation activities involving considerably more players and support instruments.
- Who will be the main players and partners? – On the host country side, what levels of government may be involved in helping to ensure the success of programmes? And which other partners (or separate players) will need to be actively engaged in the implementation, including the early efforts of needed capacity building and feasibility assessments?
- On scaled-up “climate finance”, who will be the investors and why? – What portions might be from public sector bodies (donors and, potentially, host country-side) and of these funds, what might be grants and what concessionary loans? What might come from carbon finance, and is this likely to be for existing and future expected compliance markets or non-compliance (voluntary) markets? For regular equity and debt finance needs, are there smart public sector policy and finance mechanism interventions that can lower the risks and thereby open the door to investment at scale by institutional investors? And can technology players involved get help from relevant export credit agencies?

In the light of these points there are clearly a number of critical issues that NEFCO will need to address before coming up with a well designated programme that could be executed by NEFCO. We expect that this could be done, in particular, through further consultation and design efforts in conjunction with possible key partners such as the EEP program and UNDP.

An alternative to, or perhaps a complement to, such an internal ‘supply-side’ driven design exercise may be to have more of a ‘demand driven’ approach where NEFCO puts out a general call for proposals for partnerships for scaled-up mitigation programmes. The call can be communicated, in particular, to potential partnership agencies and groups; but should be open enough to allow other interested parties to respond. The call could be tailored in a number of ways, including:

- It can focus on specific regions of interest and possible types of measures and sectors/sub-sectors.
- It can address other issues of “Nordic interests”, as applicable.
- It can set out what specifically the nature of ‘mitigation programmes’ are in this context. In this way, it can make it clear what is meant by ‘scaled-up’ and that an assessment of climate mitigation outcomes is a fundamental objective, even if this

might not always be the primary metric of performance. This also makes clear the intent to explore means to, where possible, include a value for the carbon performance in the economics of the programme, e.g. through current or future compliance carbon markets, or the 'voluntary' market. The call can ask for any details about methodologies that might be available, or needed, in this regard.

- It can be open to proposals covering both the bottom-up and top-down recommendations in this report – and for the bottom-up, both city/municipal-based and others.
- It can set out the general menu of forms of financial support that might potentially be available from this new facility, and ask those making proposals to set out the nature and scale of their programme's financing needs.
- It can request those making proposals to set out the policy environment within which such programmes might operate, including issues that may be seen as policy risks and measures that could be taken to minimise these risks. Similarly it could ask about what capacity issues there might be and what is planned (by programme partners or others) to address these.

An important final insight is that we believe this work and conceptual thinking will be well received by many in the climate policy community, including many negotiators. In particular, we sensed from the interviews that it is important that thinking like this penetrates the negotiations. If NEFCO decides to take this 'demand driven' approach, it would be particularly timely if NEFCO can announce this new initiative and put out the first call for proposals at the time of the UNFCCC COP16 meetings in Cancun.

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1 Introduction

The Nordic Environment Finance Corporation (NEFCO) is currently exploring its potential role for supporting Economies In Transitions (EIT) and developing countries in mitigation of climate change in the context of sectoral approaches. This *scoping study on innovative climate finance facilities for testing sectoral approaches* provides insights in the current status of international discussion and gives recommendations on how NEFCO with its interests and attributes can play a positive and practical role in advancing climate change action along sectoral lines.

Background

Sectoral approaches or sectoral actions are general terms covering all concepts which include elements at a sectoral scale. This includes country specific sectoral actions based around technology choices or policy instruments (e.g. the diffusion and deployment of carbon capture and storage, implementation of fuel efficiency standard for vehicles), as well as emission-based actions, such as sectoral crediting and sectoral trading and cooperative sectoral approaches across countries.

The debate around 'sectoral approaches', as used in international climate change policy, is rooted in two main issues:

- The first issue that sectoral approaches are trying to address is around **scaling up** mitigation action, in particular (but not only) in developing countries for which the project-based Clean Development Mechanism (CDM) has been the main instrument of international climate change policy so far. For the post-2012 period, policy practitioners have sought to move beyond a project by project incentive scheme. Important elements were to increase scale and to provide net greenhouse gas emission benefits¹. This led to concepts of *sectoral crediting baselines* and *sector no-lose targets* (SNLTs) which have been the subject of a number of key policy research papers in recent years.
- The second issue that sectoral approaches are trying to address is around **competitiveness**, in particular means to attempt to level the playing field between developed and developing countries for the international production of globally traded commodities (e.g. cement, steel, aluminium). This led to concepts of *internationally applied performance benchmarks* and a range of research papers around this. The competitiveness issue is also explored at a practical level by the work of the sector groups of the Asia Pacific Partnership.

Progress in international negotiations for these ideas has been slow, and in the case of international benchmarks essentially zero. Reasons for this include that key major developing countries saw this as potentially a slippery slope to border tariffs by developed countries in the future. Notions of sectoral crediting mechanisms have proven contentious, since key major developing countries see this as the attempt to, in the

¹ Because the CDM is based on creating credits (CERs) that are used by developed countries to meet their commitments, it does not provide net GHG benefits, as the 'first round' effect anyway.

future, draw them into taking on binding emissions commitments, sector by sector. Nevertheless, there continues to be momentum around sectoral crediting (or trading) mechanisms, in particular, because of the positions of the EU and the United States about international offsets from sectoral mechanisms, as expressed in their proposals for domestic policies. Such policies, if implemented, would create the primary demand for credits from actions in developing countries.

During the last year, the notion of 'sectoral' has taken on broader meanings for a number of reasons. Key among these is the emergence of the discussion of NAMAs – nationally appropriate mitigation actions – by developing countries. There is no clear or common definition of NAMAs yet. Current examples in the NAMA discussions and research have however shown that programmes of mitigation actions can be implemented at a sector level. This broadens the sectoral discussion in two important ways:

1. it is not just about crediting mechanisms – other forms of incentive and support are also relevant;
2. the scale and scope of the sectoral intervention can be much smaller than what has previously been countenanced in research on SNLTs, for example.

However, the focus on 'scaling up' remains. This more holistic approach to 'sectoral approaches', is also fully translatable to programmes of mitigation activities in EIT countries. Both existing Joint Implementation (JI) project based experience and Green Investment Schemes (GIS) experience, where it exists, can be explored for its scaling up programme potential.

Approach of this study

This current status of discussion provides the context for our approach to this scoping study. The broader vision of sectoral that is now emerging seems more appropriate and fitting the particular nature of NEFCO and its funding and financing experience to date in the climate change mitigation-relevant space.

First, we provide two sections of background and contextual detail. Chapter 2 gives more information on international climate change policy on 'sectoral approaches' – setting out the sectoral landscape. Chapter 3 provides details on initiatives by others that are working in this same/similar space (e.g. on market mechanism 'readiness') with a view to seeking complementarities and synergies and avoiding overlaps and clashes.

In Chapter 4 we set out a scaling-up options matrix across the dimensions of international policy frameworks and domestic policy implementation. This provides a typology for identifying possible 'intersections' that may be feasible in practice. This analysis provides the basis for Chapter 5, where we then drill down further and set out a range of possible options for initiatives that NEFCO might consider. The evaluation is based on a set of criteria and the input we have received through the interviews with experts and our own ideas.

Finally, in Chapter 6 we provide some concluding insights and recommendations for taking the ideas forward.

2 The landscape on sectoral approaches

2.1 Existing mechanisms – the base to build from

Discussions about sectoral approaches need to be seen against the backdrop of existing project-based mechanisms under the Kyoto Protocol – the Clean Development Mechanism (CDM) in developing countries and Joint Implementation (JI) in developed countries. Also relevant in this context is a mechanism that has emerged in some Eastern European countries, the Green Investment Scheme (GIS).

The CDM has been the only instrument which allows developing countries to participate in, and get credit for, mitigation efforts within the Kyoto Protocol. The CDM has played an important role for the implementation of the Kyoto Protocol. It is expected that approximately 1 billion Certified Emission Reductions (CERs) will be issued that can be used by the end of 2012 for developed countries' compliance obligations under the Protocol and entities' obligations under the EU Emission Trading System (ETS) and the New Zealand ETS. This carbon finance, and the additional primary underlying project finance, represents a very significant investment in mitigation in developing countries.

This said, the CDM is increasingly criticized with regard to its implementation, e.g. additionality concerns, slow project cycle with institutional bottlenecks, geographic distribution, and lack of scale. This has led to calls for reform of the CDM and many ideas for such reform have been proposed by parties in the ongoing UNFCCC negotiations. This includes ideas on broadening the system with the help of different mechanisms like program based CDM (PoA) and 'sectoral' CDM.

The push for sectoral crediting mechanisms is also based on the need to incentivise actions that lead to net reductions in developing countries. This requires mechanisms that do not (only) create offsets, but also some level of reductions by the host country for which credits are not given. To address this, two main ideas have emerged:

- sectoral crediting approaches;
- nationally appropriate mitigation actions (NAMAs).

These two ideas need not be seen as mutually exclusive. They are discussed in more detail in sections 2.3 and 2.4.

On the developed country side, JI has been a much slower mechanism to get up and running. It has the added complexity of having two tracks; one (Track 2) that is CDM-like and one (Track 1) that is more streamlined and just has the baseline and additionality provisions agreed by the two Parties involved. Whereas the Track 1 process may only be applied if the host Party fully meets all mechanisms eligibility requirements, the Track 2 provision allows Parties to issue and transfer ERUs if only the basic eligibility requirements are met, provided the projects go through the verification procedures under the JISC (Track 2).

In practice, even where countries have met eligibility requirements, under Track 1 it has in some cases proven difficult to get host countries to agree on baselines and the additionality of projects.² Track 2 has been slow mostly because of the delay in getting the institutional process up and running. But, given its similarity to the CDM, it also then suffers a similar set of concerns in terms of the effectiveness of the mechanism, given the scale of mitigation opportunities possible. There can also be added complexities for EIT countries that have joined the EU, thus fall under the EU ETS and thereby run into potential 'double counting' problems for given mitigation actions.

Another mechanism has emerged in some Eastern Europe EIT countries, the Green Investment Scheme (GIS). This uses the proceeds from sales of AAUs³ and invests them in additional mitigation actions. GIS schemes can already be seen as sectoral-like approaches (in the broader definition) in that most schemes invest the proceeds of the sale of AAUs in additional mitigation activities in specific sectoral programmes, for which further emissions reductions can be measured and verified. This is usually an explicit part of the agreement with the buyer of such 'greened AAUs'.

2.2 Emergence of sectoral approaches

From about 2006-07, two qualitatively different 'discussions' began to emerge in informal research and dialogue processes that support the international negotiations. A recent UNEP document provides a useful summary across both of these.⁴

The first track, which can be seen as being rooted in **competitiveness** concerns was around the notion of global sectoral agreements for specific industries (e.g. cement, iron and steel, aluminium) and the use of standardised performance benchmarks. This work was mostly led out of initiatives by the World Business Council for Sustainable Development (WBCSD)⁵, the Centre for European Policy Studies⁶ and the Asia Pacific Partnership⁷. This thinking mostly failed to gain traction in the negotiations, in particular due to suspicions that the analytical work could form the technical basis for future application of border tariffs by developed countries. This discussion track, which seems to now have died off in the negotiations, is not taken up any further here. However, any future implementation efforts of a sectoral nature in the sectors that have been the focus of this work should be aware of the wealth of practical and technical information available from it.

The second track was around means to **scale-up investment** in zero and low carbon technologies and practices in developing countries. A number of organisations have put significant effort into the conceptual research and testing of sectoral approaches in the past years and contributed with original work:

² Because developed countries have a cap under the Kyoto Protocol, it is the government that bears the risk of credits being given for projects that are not truly additional or have 'generous' baselines as ERUs come out of the government's initial supply of AAUs.

³ AAUs largely stem from either reduced economies and production since 1990 or, in some cases, higher efficiency economies and cleaner production, mainly in Eastern European Countries

⁴ See http://www.unep.org/pdf/industrial_sectoral.pdf

⁵ e.g. see <http://www.wbcscement.org/pdf/WBCSD%20rev%20final%20low.pdf>

⁶ e.g. see <http://www.ceps.eu/book/global-sectoral-industry-approaches-climate-change-way-forward>

⁷ See <http://www.asiapacificpartnership.org/english/default.aspx>

- The OECD and IEA (for the Annex I Experts Group) have been active in the theoretical elaboration of many concepts.⁸ Their publications lay out the principles, rules and requirements of the most feasible options and lately also differentiate between the different implications at the international (negotiation) and domestic side of issue.
- The 'proof of concept' project, conducted by CCAP and CEPS and funded by the European Commission, explores sectoral options to facilitate developing country participation in international climate actions.⁹ Both project partners have been involved in the debate around sectoral approaches more broadly for many years.¹⁰
- A recent report by IETA lays out three possible design options for a Sectoral Crediting Mechanism (SCM), explaining the implications of each in terms of incentives to participate, finance structure, and investment risk.¹¹
- The Nature Conservancy's "A nested approach to REDD+" elaborates on effective and transparent carbon accounting systems and incentive mechanisms that motivate both national and sub-national actors and has important insights which are also applicable to sectoral approaches more broadly than just REDD.¹²
- The World Bank is one of the groups with the longest experience in carbon market mechanisms. Their recent reports contain valuable information on industry involvement at the sectoral level.¹³
- Ecofys together with GtripleC has been leading some of the most practical work on sectoral approaches thus far. Apart from several analysis reports on possible design options, their requirements and implications¹⁴, we have tested the application of 'sectoral proposal templates' for no-lose targets in several sectors in Mexico and China¹⁵ and are working on the possible design of a crediting scheme between California and a Chinese province.

From all this work on sectoral crediting approaches some important general themes have emerged, and in some cases been the focus of investigation, in particular:

- Host country buy-in and capacity is critical to develop the needed understanding of the mitigation potential in the specific circumstances of a given sector in a given country (including what support might be available separate from the incentive of carbon credits) and the governance and MRV systems needed for

⁸ IEA: <https://www.iea.org/subjectqueries/sectoralapproaches.asp>;

OECD: www.oecd.org/env/cc/sectoral.

⁹ CCAP: <http://www.ccap.org/index.php?component=programs&id=26>

¹⁰ CEPS: <http://www.ceps.eu/faceted/category/results/taxonomy%3A8>

¹¹ IETA: <http://www.ieta.org/ieta/www/pages/download.php?docID=3408>

¹² The Nature Conservancy and Baker & McKenzie:

http://www.nature.org/initiatives/climatechange/files/nested_paper_final_60110.pdf

¹³ World Bank:

http://siteresources.worldbank.org/INTCARBONFINANCE/Resources/10_Years_of_Experience_in_Carbon_Finance_Corrected.pdf and

http://siteresources.worldbank.org/INTCARBONFINANCE/Resources/State_and_Trends_of_the_Carbon_Market_2010_low_res.pdf

¹⁴ Ecofys/GtripleC: e.g. for UK DEFRA: *The role of Sectoral No-Lose Targets in scaling up finance for climate change mitigation activities in developing countries* (2008), and for World Bank CFU: *Scaling Up Investment in Climate Change Mitigation Activities: Interface with the World Bank's Carbon Partnership Facility* (2009), both available at <http://www.gtriplec.co.nz/future-framework/>

¹⁵ Ecofys/GtripleC: see www.sectoral-approaches.net

- implementation. ➔ All this implies that a significant capacity building effort is required;
- For nation-wide (and even city/regional) application, sectoral crediting approaches will likely only be feasible for specific types of sectors/sub-sectors given the needs to define boundaries, develop baselines and put in place the required MRV systems. ➔ Sectoral crediting mechanisms are not a silver bullet for all key sources of emissions and emissions reduction potential in developing countries.
 - There is a danger that taking a sectoral approach may break the link between carbon finance and specific investments on the ground, because credits accrue, in the first instance, to governments for a country beating its sectoral baseline.
 - ➔ This may serve to drive away private sector investors and kill off the in-country capacity that has been developed through the CDM. (See the discussion in 2.3.2.)

2.3 Current status of sectoral crediting approaches

2.3.1 Potential new international mechanism

Support in the negotiations for the establishment of a new carbon market mechanism currently comes mainly from the EU. It is proposing sectoral carbon market mechanisms (either trading or crediting) for economically more advanced developing countries and highly competitive economic sectors. From earlier on, Japan has been an active proponent of building reduction commitments for developed countries in a bottom-up manner based on the emissions performance of sectors. Japan also supports international voluntary sectoral industry initiatives based on best practice standards and benchmarking. But Japan's views have been seen as contentious and have received considerable push-back in the negotiations by G77/China countries.

Sectoral crediting is also an important element in current proposals for an energy and climate bill in the US. In addition, regional initiatives (e.g. in California and more broadly the Western Climate Initiative) are considering international sectoral offsets in order to involve developing countries at the sub-national sectoral level.¹⁶

The importance given to sectoral crediting by many carbon market players however is not currently finding much visible support in the reality of the UN negotiations. Sectoral crediting is not prominent in the latest negotiation text of the AWG-LCA¹⁷. It is understood to be part of the option (2):

Decides to establish “new market-based mechanisms that complement other means of support for nationally appropriate mitigation actions by developing country Parties, enhance the cost-effectiveness of mitigation and assist developed country Parties in meeting part of their mitigation commitments.”

This fact needs, however, to be put in some context. First, the major discussion about reform of market mechanisms is occurring in the AWG-KP track, primarily around reform

¹⁶ e.g. see <http://www.arb.ca.gov/cc/capandtrade/meetings/073010/arbpresentation.pdf>

¹⁷ FCCC/AWG/LCA/2010/14 from 13 August 2010

of the CDM. But here too, the language that can be seen to support sectoral crediting is very general. In the latest negotiation text of the AWG-KP¹⁸ can be found an option 2:

“Decides to establish new and additional market-based mechanisms that provide for the voluntary participation of Parties, reflect net contributions to global mitigation efforts by developing country Parties, and are subject to the authority and guidance of the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol;

Requests the Subsidiary Body for Scientific and Technological Advice to recommend modalities and procedures for the new and additional market-based mechanisms referred to in paragraph 37 above, with a view to forwarding a draft decision on this matter to the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol for adoption at its seventh session

A second important point of context is that the market for credits from mitigation activities in developing countries (or developed for that matter) doesn't only depend on the UNFCCC and its decisions. This can already be seen in the fact that the EU ETS domestic cap and trade scheme has already set out plans for the next commitment period 2013 - 2020. The same may happen in the US. And if it doesn't happen federally there, state- and region-based programmes (e.g. California, RGGI, WCI) will exist. To the extent that these domestic compliance schemes have rules with respect to purchasing credits from sectoral programmes in developing, or other developed, countries, the demand side of a market is established. This can be very substantial, especially the US-side demand. Where there is demand, supply will emerge.

Moreover, thus far this has been a discussion about compliance carbon markets. It doesn't take into account the voluntary carbon market, which is expected to gain in prominence as/if compliance regimes fail to make the needed progress either at international or domestic levels.

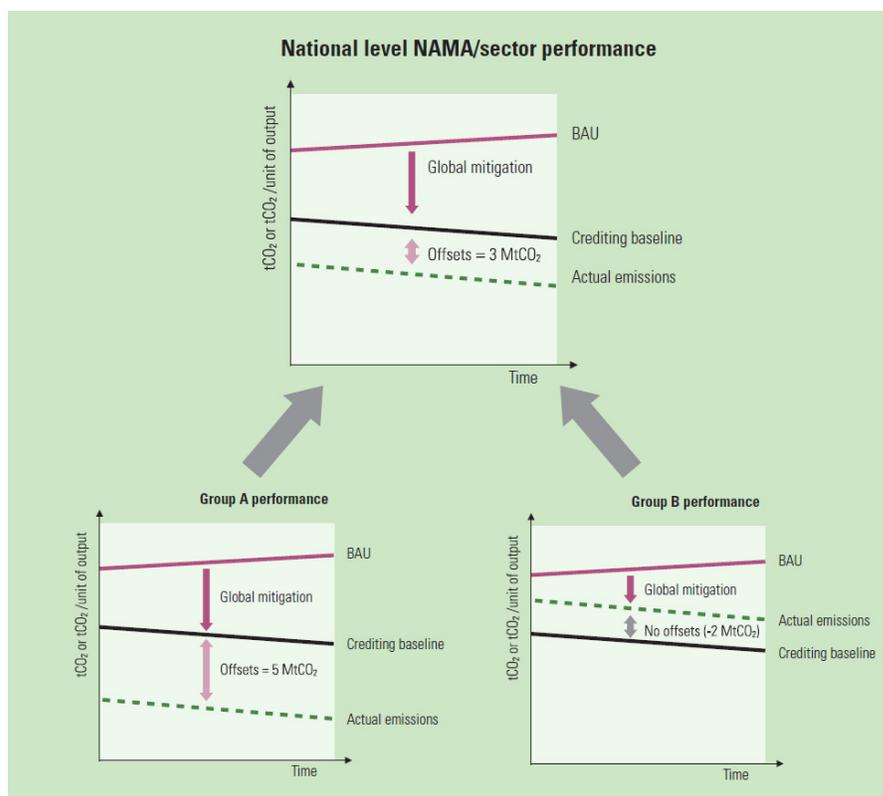
2.3.2 National implementation issues

As noted at the end of section 2.2, a key concern that has been taken up in the literature is whether, in the implementation of SNLTs, a result could be unacceptable uncertainty and risk for external investors, in particular the private sector. This is a critical point, especially to finance/investment organizations. It is well captured in a recent OECD/IEA discussion on sectoral crediting approaches, a useful diagram from which is excerpted below.¹⁹

¹⁸ FCCC/KP/AWG/2010/CRP.2 from 6 August 2010

¹⁹ <http://www.oecd.org/dataoecd/54/4/44200317.pdf>

Figure 1 Underlying performance of groups within a sector



Source OECD/IEA

The point being made here is about the uncertainty that is introduced for investors in underlying projects or programmes, caused by how a government may deal with a situation where the performance of some portions of a sector covered by a sector crediting baseline is worse than the baseline, so detracts from the overall level of credits for the sector. In the depiction above, this is Group B. If an investor is involved in projects or programmes covered under Group A, will they get the full credit their activities have produced?

This issue has led to solutions being proposed around so-called 'nested approaches' (e.g. in The Nature Conservancy work noted above) whereby project-scale investments can continue (and continue to be credited) within sectors that are covered by a sectoral baseline. This issue is taken up further in the discussion about 'Row 6' in the options matrix in section 4.2.

2.4 NAMAs

The advent of the concept of 'NAMAs', opened up a whole new avenue to what the term sectoral might mean, in particular given the additional elaboration of 'credited', 'supported' and 'unilateral' NAMAs. The lines between sectoral crediting approaches and supported or credited sectoral NAMAs are not yet clearly drawn. It seems NAMAs can be anything at this stage – which is a source of confusion.

Figure 2 Broad vs. narrow NAMA definition and link to national plans

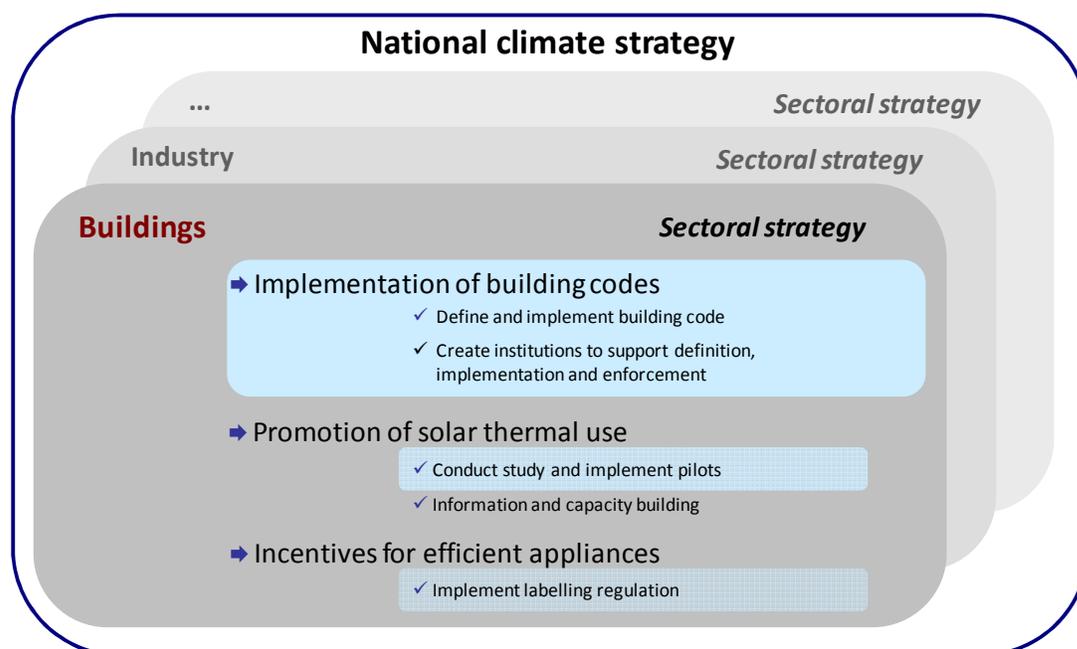


Figure 2 illustrates different options for the definition of a NAMA. Actions can take the form of elaborating a sector strategy, e.g. buildings, the implementation of a package of policies, like a building code with various connected elements, or individual activities within different elements of the sectoral strategy. The national strategy provides a framework for the respective activities and ensures that they are in line with national development strategies (e.g. the country's 'Low Carbon Development Plan'). A key point is that, in practice, most domestic policies are implemented at a sector and sub-sector level.

Some points to possibly help clarify the confusion around NAMAs are:

- The term 'sectoral NAMAs' can probably be used for every situation that would not more appropriately be called a sectoral crediting mechanism (SCM). It's mostly an issue of scope, and perhaps form of support. Something covering a specific sector across the whole economy (e.g. power generation, cement, steel etc) and connected to compliance carbon credits for beating a sectoral baseline (or target) would fit the SCM term. Something at a more partial level, in the sense of subsector or city/region might better be described as a NAMA.
- It seems feasible that the support for a 'supported sectoral NAMA' could be either through carbon finance connected to some GHG emissions performance or some other finance instruments (grants, concessionary loans, guarantees, etc). However the view exists in some developing country quarters that supported NAMAs should not create offsets that help developed countries meet their emission reduction commitments, i.e. should not produce compliance grade credits. (It is less clear whether these countries have a view about carbon credits that may have value in voluntary carbon markets and which do not help developed countries meet their commitments.)

The key issue here is the contribution expected of developing countries to global mitigation in addition to the 25-40% emission reductions compared with 1990 levels expected of developed countries. In short, mitigation by developing countries that generates compliance grade credits does not have a net global reduction benefit. This will likely become a question of definition and balance, i.e. what NAMAs or what level of NAMAs can produce compliance grade credits for at least some portion of the emission reductions they achieve.

- It is also unclear whether negotiators may see supported NAMAs where some form of finance other than carbon finance is provided as being a “new and additional market-base mechanism” – i.e. in the context of the language in the negotiating texts above.²⁰

²⁰ Our enquiries with officials indicate that, at present, developing countries are blocking discussion of NAMAs by the negotiating group looking at possible new market mechanisms. NAMAs are discussed instead in the climate finance topic stream. And here, a position of some key developing countries is that the support for nationally appropriate mitigation actions should only come from public funds from developed countries. These strongly drawn divide lines are preventing a more cross-cutting discussion between the mechanisms and finance negotiators. Sub-groups looking at monitoring, reporting and review (MRV) issues are similarly caught in this position.

3 Current initiatives in the scaling-up, sectoral, readiness space

This section sets out a summary of a number of relevant 'known, relevant and significant' initiatives by a range of international / bilateral organizations that are seeking to assist countries with programmes for enhanced climate change mitigation.²¹, e.g.

- Strategic low carbon development/growth plans
- Policies and methodologies for 'scaling up' incentive mechanisms (both of a carbon market nature and other incentives)
- Capacity building/"readiness" for these plans and mechanisms

Due to the rather broad focus on *scaled-up mitigation programmes*, almost all climate mitigation activities and initiatives implemented at a more programmatic level will have some relevance with regard to our study. Therefore, the following list can only be considered a selection of existing activities and is not comprehensive. However, these have been selected for their potential specific relevance (e.g. possible linkages, avoidance of duplication, approaches to readiness).

World Bank

Relevant initiatives by the World Bank (WB) are:

- Carbon Partnership Facility (CPF)²²
The CPF aims at supporting scaled-up mitigation actions beyond the project-by-project approach of CDM and JI in the current uncertain international regulatory environment. It is designed to develop emission reductions and support their purchase over long periods after 2012. Its objective and business model are based on the need to prepare large-scale, potentially risky investments with long lead times, which require durable partnerships between buyers and sellers. Furthermore, it aims at supporting long-term investments in the current uncertain market environment. 'Learning by doing' approaches will be an essential aspect of the Carbon Partnership Facility as it moves from individual projects to programmatic approaches, including methodologies needed for such approaches.
- Partnership for Market Readiness
In order to address the need for capacity building, piloting and technical dialogue, the World Bank, in consultation with a number of developed and developing countries, is discussing to establish a *Partnership for Market Readiness* supported through a capacity building trust fund. The Partnership aims to mobilize US\$100 million over time and is expected to be launched by COP16 in Mexico. Depending on the overall size of the fund, the Partnership would provide packages of capacity building and implementation support to 10 - 15 countries, mainly targeting

²¹ In addition a number of private sector consultancies are actively pursuing the strategic low carbon development space, e.g. McKinsey and Booz & Co

²² See <http://wbcarbonfinance.org/Router.cfm?Page=DocLib&CatalogID=47265>

middle-income countries. The minimum amount for contributions would initially be set at US\$3 million and may, in future, be adjusted by the Bank. For a place on the Partnership Committee the minimum contribution would initially be set at US\$5 million

The Partnership will provide a platform for technical discussions and exchange of information on market instruments for mitigation, and help interested countries to build capacity for scaling up their mitigation efforts through market instruments and pilot instruments appropriate to their domestic context. It seems that the Partnership is likely to cover a broader range of market instruments, e.g. domestic offsetting, certificate trading, reformed CDM (standardized baselines), sectoral crediting.

A design document has recently been prepared by the WB Carbon Finance Unit (CFU)²³ and the next workshop on this initiative will be held in Tianjin, China in the margins of the UNFCCC session, 4-9 October 2010.

- Forest Carbon Partnership Facility

The Forest Carbon Partnership Facility (FCPF), which has been operational since June 2008, is a global partnership focused on reducing emissions from deforestation and forest degradation, forest carbon stock conservation, sustainable management of forests and enhancement of forest carbon stocks (REDD+). The FCPF assists tropical and subtropical forest countries develop the systems and policies for REDD+ and provides them with performance-based payments for emission reductions. The FCPF complements the UNFCCC negotiations on REDD+ by demonstrating how REDD+ can be applied at the country level. The focus to date has been on 'REDD+ readiness', though it is expected that the Carbon Fund, which will provide payments for verified emission reductions from REDD+ programs in countries that have achieved, or made considerable progress towards, REDD+ readiness, will be launched in the course of 2010 as a public-private partnership.

- Climate Investment Funds (CIF)²⁴

The CIF are a pair of financing instruments – the Clean Technology Fund (CTF) and Strategic Climate Fund (SCF) designed to support low-carbon and climate-resilient development through scaled-up financing channeled through the African Development Bank, Asian Development Bank, European Bank for Reconstruction and Development, Inter-American Development Bank, and World Bank Group. Donor funds of over USD 6 bn have been committed to the CIF initiative.

The key relevance of the CIF, in particular the CTF, to this NEFCO scoping study is that it has involved a number of countries preparing Climate Investment Plans (CIPs). These have set countries' investment priorities, e.g. in renewable energy and energy efficiency and are the result of a relatively detailed process in including the country governments, MDBs and key stakeholder groups. As of May 2010, thirteen investment plans under the Clean Technology Fund (CTF) were approved by the CTF Trustee Fund Committee. The investment plans are from Colombia, Egypt, Indonesia, Kazakhstan, Mexico, Morocco, Philippines, South Africa, Thailand, Turkey, Ukraine, Vietnam, and a regional plan for the Middle East and North Africa. In these plans,

²³ Partnership for Market Readiness – Design Document, 28 July 2010, WB CFU

²⁴ See <http://www.climateinvestmentfunds.org/cif/>

countries provide analysis of sources of emissions and the shares of the sectors or subsectors in total emissions. On the basis of such analysis, countries identify sector strategies and options for mitigation, including ranking them by costs, savings, emission-reduction potential, and technical and institutional feasibility. In addition, the investment plans also outline the enabling policy and regulatory environment and assess readiness for implementation, including institutional arrangements. Therefore, these plans provide an existing source of analysis and focus, should potential NEFCO activities be considered in these same countries.

In addition, the CIF has a sunset clause connected with the eventual agreement of a new climate finance mechanism under the UNFCCC. This means CIF programmes may need to transition to a new scheme in the future, opening up possible opportunities for other finance institutions and facilities – which could also occur under specific exit plans.

Climate and Development Knowledge Network (CDKN)²⁵

The Climate and Development Knowledge Network (CDKN) is an initiative of UK DFID. It will have access to GBP 50mn over five years to co-ordinate the supply of research and policy information from thinktanks, NGOs and universities to governments and civil society organizations in up to 60 of the world's developing countries.

PricewaterhouseCoopers was selected by DFID to lead the consortium after accepting applications from a number of organisations.

The Climate Network will address shortcomings in the current knowledge base on climate change, with special emphasis on its implications for development and poverty reduction. The objective of the Climate and Development Knowledge Network (“The Climate Network”) is to enhance developing country access to high quality, reliable and policy-relevant information on climate change and development. It will do this through a combination of:

- Knowledge management;
- Research;
- Advice and information services to support policy making and practice
- Strengthening developing country research capacity and supporting emerging international climate change knowledge systems.

World Resources Institute (WRI)

WRI is planning a new initiative *Capacity-building on MRV in Key Developing Countries* in selected developing countries to build technical capacity on measurement, reporting, and verification (MRV) of inventories, policies, and measures. The initial target countries are India, South Africa and Brazil, with several other countries also being considered.

The goal of this project is to assist target countries to design and implement in-country MRV programmes across different levels (National, Policy & Measures, Industry and

²⁵ Sources: <http://www.odi.org.uk/work/projects/details.asp?id=2202&title=climate-development-knowledge-network-cdkn>, and “New climate network to help developing countries”, Guardian.co.uk of 12 March 2010, retrieved from <http://www.guardian.co.uk/sustainable-business/climate-and-development-knowledge-network-dfid-pwc>

International) to meet domestic goals such as generating data for evaluating and developing low carbon policies and measures and to support any domestic or international communication needs such as demonstrating progress in relation to the voluntary goals under the Copenhagen accord. This assistance will develop capacity and readiness to measure, report and verify climate policies and measures and corporate/sectoral emissions and reductions strategies consistent with international guidelines and best practices by engaging policymakers, businesses and civil society.

E3G

E3G are proposing a project that will focus on helping the governments of selected countries (Brazil, South Africa, Mexico and Costa Rica) to work through the strategic and governance issues of preparing and implementing low-carbon development plans for key sectors and regions. For these countries, they will analyse the economy-wide decarbonisation (or low-carbon development) plan. Subsequently, through desk-research and interviews of in-country experts and partners, they will assess the capacity of these countries to deliver the strategic objectives. In the third phase, they will then identify top sectoral/institutional/political opportunities. Where can these countries set precedents that build confidence at home and build leadership abroad?

In a separate element of work, E3G will also look into Low Carbon Zones (LCZs) in China. The LCZs concept emerged from joint work by E3G and other European groups and Chinese research institutes in a report published in November 2007. Since then, E3G has conducted seminal work in this field with Chatham House and the next steps include expanding their work to include India.

Global Green Growth Institute (GGGI) ²⁶

The GGGI is being established in Seoul, South Korea. As we understand it, core funding has been provided by George Soros (as part of a broader Climate Policy Initiative ²⁷). The purpose of the GGGI is to provide services to developing countries to support them in their efforts to systematically develop and implement green growth strategies and policies, and to engage in analytically sound, fact-based activities to spread green growth practices and approaches as a new growth paradigm around the globe, making significant contribution to the protection of environment by promoting green growth strategies. Activities comprise direct technical support, capacity-building, and the creation of a global network of expertise (e.g. assessment of economic development and environmental sustainability objectives, micro economic modeling of detailed, sector-by-sector mitigation potential, including cost-curves, detailed, step-by-step analysis of the plausible pathways from business-as-usual to the desired outcomes, analysis of the financial flows required by the transition, and an assessment of potential financing sources)

US AID Clean Development and Climate Program (CDCP) ²⁸

Since 2007, the USAID Environmental Cooperation-Asia Clean Development and Climate Program (ECO-Asia CDCP) has built partnerships to help put in place those clean energy

²⁶ See <http://www.gggi.org>

²⁷ See <http://www.climatepolicyinitiative.org/>

²⁸ See <http://usaid.eco-asia.org/programs/cdcp/> and http://pdf.usaid.gov/pdf_docs/PNADO826.pdf

technologies and practices that would most immediately help to address Asia’s energy challenges and reduce greenhouse gas emissions. Active in six countries – China, India, Indonesia, the Philippines, Thailand, and Vietnam – ECO-Asia CDCP works with partners from national policy institutions, utilities, energy ministries, state-level governments, banks, investors, and clean energy project developers to catalyze policy and finance solutions for clean energy through targeted assistance, training, regional cooperation, and knowledge-sharing. Activities include:

- Expanding access to private financing for clean energy.
- Increasing the capacity of financial institutions.
- Scaling up financing for energy-efficiency projects.
- Building a regional dialogue and exchange on clean energy policy and regulation.
- Promoting energy-efficient lighting and regional lighting standards.
- Building regional cooperation and knowledge-sharing.

KfW

- *KfW Global Climate Protection Fund* ²⁹
 The Global Climate Protection Fund was launched by KfW and German Federal Ministry of the Environment (BMU) in June 2010. The fund provides financial support to small and medium sized enterprises (SMEs) as well as private households in developing countries and threshold countries for investment in energy efficiency measures and renewable energies. The BMU has provided the fund with equity capital totaling EUR 20 million (around USD 28 million) from the international climate protection initiative, while the KfW Entwicklungsbank has promised USD 75 million for the fund. The fund will be managed by a private fund manager. These public funds will be used to leverage private capital by taking on some of the commercial risks, thus mobilising up to USD 500 million for international climate protection. Access to funding and consultation services will be implemented via the relevant principal banks, which will provide access to refinancing packages. The fund also has a financing component of some EUR 2.5 million for accompanying consultation services.³⁰
- *EIB-KfW Carbon Programme II*
 The EIB-KfW Carbon Programme II was launched in December 2009. It is the second tranche of an acquisition programme for emission certificates that was established together with the European Investment Bank (EIB). The EIB-KfW Carbon Programme II purchases project-based carbon credits (CER and ERU) under Kyoto Protocol’s flexible mechanisms (CDM and JI) at attractive prices directly from the project companies for delivery up until 2020. It offers participating enterprises the opportunity to purchase these certificates and to use them to fulfil their commitments under the European emission trading system.

²⁹ Source: http://www.kfw.de/EN_Home/Presse/PressArchiv/2010/20100629_35700.jsp

³⁰ Details on implementing strategies, including associated target countries and possible capacity building initiatives, to follow when KfW announces more of its plans in September 2010.

ICI 'International Climate initiative', German Environment Ministry³¹

The International Climate Initiative (ICI) is an innovative, international mechanism for financing climate protection projects. It receives funding from the sale of tradable emission certificates. The overall objective of the fund is to provide financial support to international projects supporting climate change mitigation, adaptation and biodiversity projects with climate relevance. The ICI will support mitigation (mainly sustainable energy systems), adaptation and preservation and sustainable use of natural carbon sinks/ REDD. The criteria on which projects will be selected include: demonstration of mitigation effect; anchorage in partner countries' national strategies; innovative and impact beyond the individual project itself and transferability; build on the strengths of German climate policy and have synergies with the conservation of other global environmental goods.

DFID-sponsored work on standardized baselines

The UK's Department for International Development (DFID) is seeking to offer a contract for a study called 'Piloting greater use of standardised approaches in the CDM', for which the successful bidder will develop specific practical examples of performance standards and default factors that could be applied to CDM projects. The project should demonstrate how standardised approaches can be adapted to suit national circumstances. In demonstrating the benefits of standardised approaches, and targeting project types of particular interest to low income countries, the work should help demonstrate how standardised approaches can help improve access to the CDM for countries that are currently underrepresented in the mechanism.

This study is the follow-up of the finalized DFID study 'Towards a more standardised approach to baselines and additionality under the CDM- Determining nationally appropriate performance standards and default factors'.³²

Europe Aid sponsored work on emission trading and greenhouse gas mitigation

EuropeAid³³ published two calls (ca. 2 Mio. € each) which aim at capacity building in developing countries with regard to climate mitigation activities. The first call "Greenhouse gas emissions trading system outreach to developing countries and emerging economies (e.g. China, India, South Africa, Brazil, Mexico, South Korea) focuses on outreach and capacity building with regard to the implementation of national emission trading systems.³⁴ This project aims at exploring the potential to introduce emission trading systems in the case study countries in a first phase, while the second phase includes capacity building and outreach activities.

The second call aims at supporting Mexico and Indonesia on monitoring, reporting and verification of greenhouse gas emissions and mitigation actions, including NAMAs. The likely starting date of this project is beginning of 2011.

³¹ See <http://www.bmu-klimaschutzinitiative.de/en/results>

³² Results of the finalized study can be found at: <http://www.perspectives.cc/Publications.971.0.html>

³³ EuropeAid is the Directorate-General of the European Commission that is responsible for implementing external aid programmes and projects around the world.

³⁴ The deadline for submission of bids by shortlisted consortia was April 2010.

Japanese bilateral emission reduction agreements

The Japanese Ministry of Economy, Trade and Industry (METI) of Japan will make individual bilateral agreements (at this stage with 9 countries)³⁵ financially supporting the development of projects which use Japanese greenhouse gas reduction technologies. The bilateral agreements consist of the purchase of emission reductions by Japan achieved by the technology transfer from Japan. The methodology for the calculation of emission reduction is agreed on a bilateral basis. Focus areas selected include areas like coal fired power generation, coal gasification, nuclear power, water, smart-grid, renewable energy and urban development.³⁶

³⁵ Indonesia, Vietnam, Philippines, India, Thailand, Laos, Myanmar, China and Peru

³⁶ See <http://moyanagijapan.thoseinmedia.com/2010/08/08/japan-leverages-bilateral-agreements-to-initiate-low-carbon-businesses/>

4 A matrix of scaling-up options

4.1 A macro-level view of sectoral approaches

Almost all policy measures that aim at reducing greenhouse gas emissions are implemented at a sectoral level. This is a direct consequence of quite discernable technological options in any given sector as well as naturally grown governance structures, i.e. a sectorally organized institutional environment, including government agencies, standardization bodies and industry associations. Sectoral environmental policies focused especially on the energy, specific industry, waste, agriculture and forestry sectors – just to name a few – are therefore the norm.

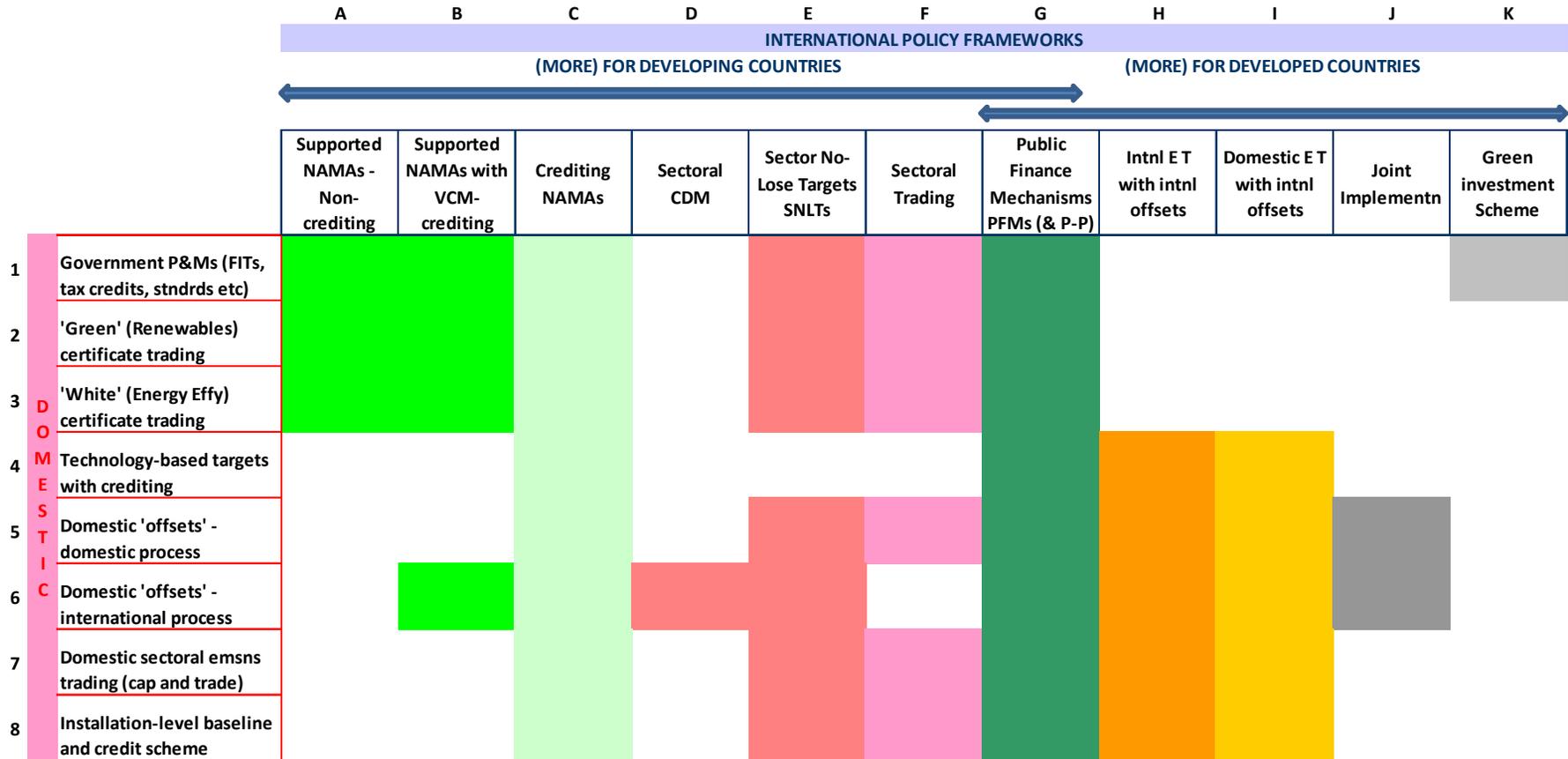
A number of approaches have emerged in international discussions over the past years, all with distinct strengths and weaknesses, levels of ambition and different focus. Most of them have been briefly introduced above. Before getting into an analysis of the appropriateness of individual approaches for NEFCO, a more macro-level look at sectoral approaches is however useful to begin with.

When discussing actions at the sectoral level, an important distinction is between the **international** policy framework and **domestic** implementation policy tools. In Figure 3 below, we map these in a column and row 'matrix'.

The 'international' *columns* list approaches that link domestically achieved emission reductions to the international community. Their focus is on the ways to generate finance flows out of domestic reductions and generally connect them to the donor/compliance block of countries in the international climate regime – and as well, potentially, buyers in the voluntary carbon market. Another way to view this is that the international policy frameworks provide incentives of a range of types for domestic reductions.

The 'domestic' *rows* list different type of policy / instrument options that are available to a country wishing to achieve emission reductions. The domestic reductions in a country can be implemented internally through trading, financing or other ways listed here. Their applicability depends on each country's circumstances, capacity and preferences – and available international support. Not all international and domestic options are compatible, and each 'box' has its individual benefits and shortcomings.

Figure 3. A matrix of international policy frameworks and domestic implementation policies



4.2 Description of international and domestic policy types

This section provides a brief description of each column and row heading.³⁷ This allows to put the following analysis on interesting options (section 5) in the right context.

International mechanism

Column A: Supported NAMAs, non-crediting

This is a 'catch-all' of possible support for nationally appropriate mitigation actions by developing countries that does not create credits (offsets) which can be used by developed countries to meet their international emission reduction commitments. In time, this definition might become further narrowed under a future international climate change agreement, e.g. in what constitutes NAMAs, or types of support, or institutional means by which this support is directed. But since this remains open in the negotiations at this stage, such possible constraints cannot be predicted with any certainty.

Column B: Supported NAMAs with VCM-crediting

This is a category where support is provided that does not produce compliance grade offsets (so like Column A), but where methodologies and MRV systems are additionally followed that allow credits to be created that have value in the voluntary carbon market. This could be the established, formalised voluntary carbon market (e.g. the Gold Standard or Voluntary Carbon Standard), or carbon market 'like' schemes that work on the basis of generating carbon based credits. Credits can be sold to buyers in developed countries (most often the case) or developing countries (e.g. producers under some form of self-imposed or externally imposed pressure to meet supply chain carbon footprint benchmarks). So carbon finance of a form plays part of the overall support.

Column C: Crediting NAMAs

This represents supported NAMAs where some or all of the support comes from carbon finance associated with the origination and sale of compliance grade offsets (carbon credits). 'Compliance grade' means units that can be sold into international emissions trading schemes; either to countries with obligations under a Kyoto Protocol-like agreement or to entities that have obligations under domestic climate change programmes (e.g. domestic or regional cap and trade schemes).

Column D: Sectoral CDM

A term now usually used in 'CDM reform' discussions to mean the use of standardised performance-based baselines (or benchmarks) across a sector to streamline decisions about additionality, increase the number of projects of these types in a given sector and speed up the decision-making processes.

³⁷ Columns in Figure 2 are marked with a letter code, while rows are marked by numbers. This allows to clearly identify each of the 'boxes'.

Column E: Sector No-Lose Targets (SNLTs)

A proposed policy framework for (some sectors in some) developing countries where they would voluntarily take on a crediting baseline (the 'target') for a, or some, sectors (e.g. power generation, cement, steel etc). Compliance grade credits would be awarded 'ex-post' to the government of the country if the sector beats this target. There is no penalty if the sector fails to meet its target (hence 'no-lose'). These crediting baselines would be negotiated and agreed by parties and are expected to be below expected business-as-usual (or reference level) emissions. This means that there is some absolute reduction in a global emissions sense from the mechanism prior to the point where crediting begins. This is one key element that distinguishes this policy mechanism from sectoral CDM. Another key difference is that there would be no additionality assessments (just as there are not for developed country targets). The underlying issue is addressed in the setting and agreeing of the baseline.

Given the nature of the sectors for which SNLTs have generally been discussed as being most applicable, and given concerns by developing countries about targets that might cap their economic growth, SNLTs are usually proposed as being intensity based, i.e. tonnes CO₂eq per some metric of production (e.g. tonnes of cement, or MWh electricity, etc). Technically, they could also be absolute emissions-based. By comparison with intensity-based, this requires estimates to be made up front of the likely quantity of the intensity metric (the denominator) that will occur during the measurement period. Given this is still an ex-post crediting mechanism, it is feasible that adjustments could then be made for the real outcomes of these factors. (But all this creates uncertainty.)

Column F: Sectoral Trading

Under this mechanism, again proposed for some sectors in some advanced developing countries, an absolute target would be voluntarily taken on by the developing country. The key difference between this and an SNLT on an absolute basis is that this is an 'ex-ante' mechanism. The country would receive an allocation of compliance grade allowances up front and, like international emissions trading for developed countries, would need to hold compliance grade units equal to the sector's emissions in a given measurement period. These allocated units represent an asset (and asset value) that can be significant and provide a basis for the financing of emission reductions.

Column G: Public Finance Mechanisms (PFMs) – & Public-Private

This represents regular forms of multilateral and bilateral development finance (grants, concessionary loans, export credit guarantees, etc), but as well new ideas in recent literature for attracting private capital at scale (e.g. through 'green bonds', equity fund structures, foreign exchange risk and policy risk facilities, public guarantees, etc).³⁸

³⁸ See, for example, the recent GtripleC paper Engaging private sector capital at scale in financing low carbon infrastructure in developing countries (<http://www.gtriplec.co.nz/future-framework>) and the UNEP paper Catalysing low-carbon growth in developing economies – Public Finance Mechanisms to scale up private sector investment in climate solutions (http://www.unepfi.org/fileadmin/documents/catalysing_lowcarbon_growth.pdf)

Column H: International Emissions Trading with international offsets

A Kyoto Protocol-like international agreement where countries have obligations to hold compliance grade units – allowances (or ‘assigned amount’ in Kyoto Protocol terms) and credits – equal to their emissions in a given measurement period.

Column I: Domestic Emissions Trading with international offsets

A domestic or regional emissions trading scheme where entities have obligations to match their emissions in a given period with compliance grade units – allowances and credits – and where there is a provision for accepting international compliance grade credits.³⁹

Column J: Joint Implementation

A trading programme that allows project-based compliance grade credits to be created in a country covered by an international emissions cap under the Kyoto Protocol and sold for use by another such country to help meet its obligations.

Column K: Green Investment Schemes

A programme where countries covered by an international emissions cap that have surplus allocations of allowances (assigned amount) can sell such surplus units to other countries (or entities). The terms of sale include an agreement where the revenue from the sale of the units will be used for specific environmental programmes and actions (usually with the result of further GHG emission reductions). In Kyoto Protocol jargon, these are often referred to as “greened AAUs”. GIS programmes have mostly been initiated in Eastern European countries whose emissions have dropped substantially since the 1990 base year.

Domestic implementation

Row 1: Government policies & measures

Here, a country seeking to achieve GHG emission reductions in a given sector (or sectors) implements standard domestic policies and measures from the broad menu of possibilities. These could include, for example, feed-in tariffs, tax credits, emissions charges, renewable performance standards, building and appliance standards and others that, however, do not include a trading element. These mitigation programmes may or may not require (international) financial support of some kind. These programmes may be implemented for other primary reasons (energy security, modernization of energy, industrial and land-use systems to improve efficiency and cost-competitiveness, etc), but include a climate benefit. This row can also cover policies implemented by regional and municipal governments

³⁹ In particular, this relates to the reality that the United States may never sign up to an international scheme of a Kyoto Protocol-like nature. Instead the US and/or some of its states or regions are likely to have cap and trade schemes over some (or most) GHG-emitting sectors and accept some level of international offsets based on their own rules and procedures. So for developed countries, the future base international framework is likely to be a mix of columns E and F, with the additional features of columns G and H.

Row 2: 'Green' Certificate Trading

This term, used generically here, applies to a number of possible designs of trading schemes for creating a market for financial instruments connected to a target, or obligation, for the *production of renewable energy*. These instruments have acronyms such as RECs (renewable energy certificates) and ROCs (renewable obligation certificates).

Row 3: 'White' Certificate Trading

An offshoot of the term 'green' certificates, 'white' certificates trading relates to schemes for creating a market for financial instruments connected to a target, or obligation, for *energy efficiency* outcomes in specific sectors. These instruments have acronyms such as ESCs (energy saving certificates) and EECs (energy efficiency credits)

Row 4: Technology-based targets with crediting

Under this policy mechanism, targets (obligations) could be taken up voluntarily (or binding) in technology penetration terms. It is feasible that credits could be calculated/originated in GHG terms where targets are beat, and these credits could be sold. The key issue here for the viability of these as domestic policies is that there has been a demand created for such credits. So this mechanism relies on this demand side policy framework to have been created which will most likely be external (i.e. international).

Row 5: Domestic 'offsets', with domestic crediting process

Under this policy measure, a country can operate a domestic project-based (or programme-based) 'offsets' scheme and have a domestic process for registering projects and certifying and issuing credits. The use of the term 'offsets' implies these credits can be used by others to offset some form of obligation. These others could also be domestic, suggesting the presence of some other regulatory obligation schemes in the country (e.g. domestic cap and trade, or performance standards). Or these credits could be compliance grade credits traded internationally.⁴⁰ In this latter case, this could be one version of a so-called **nested approach** that sits within some other overarching national sectoral programme linked to an international policy mechanism. (See the discussion below about possible international-domestic 'intersections'.)

Row 6: Domestic offsets, with international crediting process

This is essentially the same as for Row 5, the difference being that some international process is responsible for registering projects and certifying and issuing credits. This version, for example, has been advocated as a possible 'nested approach' mechanism in the REDD sector.⁴¹ (Also see the discussion below about possible international-domestic

⁴⁰ An example of this was the New Zealand "Projects to Reduce Emissions" (PRE) scheme operated between 2003-2004 prior to the design and implementation of the NZ ETS cap and trade scheme. Projects were awarded NZ AAUs or ERUs for sale to international buyers (under either Kyoto IET or Track 1 JI). The process for PRE, i.e. the rules and procedures for accepting the additionality of projects and calculating and providing the credits, was entirely of the NZ government's design.

⁴¹ This would also describe a possible situation where international CDM-like processes awarded credits to new projects inside sectors covered by an SNLT, and these credits then subsequently taken into account (so not double credited) when the sector was awarded its credits for beating the sectoral crediting baseline.

'intersections'.) The credits could also be sellable in the voluntary carbon market, using some international voluntary market standards.

In addition to having application just to achieve domestic outcomes, Rows 5 and 6 both represent domestic policy means (or actions within domestic economies) that can connect with the SNLTs international policy framework and address the concerns about the loss of external investor certainty under the SNLTs mechanism. (See the discussion in section 2.3.2)

Row 7: Domestic sectoral emissions trading (CO₂ or GHG cap and trade)

A cap and trade emissions trading scheme can be implemented for a given sector, or sectors; e.g. as is the case with the EU ETS and the NZ ETS.

Row 8: Installation-level baseline and credit scheme

In this domestic policy mechanism, emissions reduction obligations in the form of crediting baselines could be placed on all emitters in a given sector, or subsector, (e.g. power plants or cement plants). Theoretically, these could be of an intensity or absolute basis. Credits would then be awarded to those that beat their baselines and these credits could be sold to others in the sector that were out of compliance with their baselines – or, potentially, credits could be traded as compliance grade credits internationally. The key difference between this 'baseline and credit' scheme and 'cap and trade' is that credits are awarded ex-post, whereas in cap and trade allowances are issued ex-ante. Baseline and credit schemes are usually proposed where the baseline (or allocation) is established on an intensity basis, not absolute.

4.3 Intersections of international and domestic policy types

In Figure 3 above, we set out possible fits between specific international policy frameworks and possible domestic policy tools that could be implemented. Note that this is done in a general sense, so it can apply to developing and developed countries, as applicable to the policies in question. This said, clearly some of the international policy frameworks are currently those most for developed countries and some for developing countries.

Also this is about options for policies, not those which might be the most likely or recommended. This reflects the reality (and example set) that developed countries currently use a wide variety of domestic policy options even though they (excluding the US) are covered under a common international framework, the Kyoto Protocol.

This overall 'map' does not need exhaustive description here. In Chapter 5 we drill down to some specific possibilities that we think are most relevant to NEFCO's interests. However, some general comments and points of clarification are:

- Where the term "crediting" is used, it is meant as compliance grade credits (except in Column B where "VCM-crediting" refers to the voluntary carbon market).

- Column C (Crediting NAMAs) intersects with all domestic policy rows because we feel that, until such time as there is any narrowing of and constraints placed on exactly what NAMAs can and cannot be, we believe it is feasible that any actions can potentially be assessed for their GHG reduction outcomes and hence some level of credits awarded.
- Columns E and F (SNLTs and sectoral trading) also intersect with most rows because domestic governments may chose from a broad menu of possible policy choices, indeed just as developed countries are currently doing.
- Column G (PFMs and P-P) intersects with all domestic policy rows because the implementation of most policies requires some underlying finance, whether for the installation of technologies and systems or even if just for concessional technical assistance grants and the capacity building needed to implement something like standards or labelling.
- Regarding the intersection of Columns H and I (international or domestic emissions trading in developed countries with international offsets) with Row 4 (technology-based targets with crediting), this is an option that would require the emissions trading regimes to accept this form of crediting, likely with specifications around the technologies and MRV requirements.
- The intersection of Column J (JI) with both rows 5 and 6 (domestic offsets, domestic or international crediting) can be seen to reflect the Track 1 and Track 2 processes.

5 “Innovative climate finance” options for NEFCO

In this chapter, we outline a number of options for “innovative climate finance” initiatives⁴² that NEFCO could consider. The suggested areas of focus in particular take into account the development of the debate around sectoral mechanisms as set out in Chapter 2. They build on the experience that we and others have gained in thinking about and beginning to test approaches, and as well on what seems feasible in the current political landscape. They take into account the work that other funding entities have undertaken, or are planning to undertake in the same area, as noted in Chapter 3. They also take specific note of ideas provided by experts we interviewed.

In Chapter 4 we outlined the different policy options at the international and domestic level and examined the possible intersecting areas in detail. That macro-level view is a useful exercise to narrow down the number of approaches that are conceptually feasible, including for given categories of countries. Moving beyond this first step theoretical analysis, in this section we elaborate a set of criteria for the evaluation of concrete suggestions for mitigation programmes, according to our understanding of NEFCO’s interests. Applying these criteria, we then draw some broad conclusions about recommended areas of activity.

5.1 Criteria for evaluation

Box 1 summarizes the proposed criteria for the evaluation of any options for “innovative climate finance” initiatives to be developed by NEFCO. It is clear that any activities to be undertaken should be supportive of the international climate negotiations. Wherever possible they should conform to the intentions of the provisions of the Bali Action Plan and the AWG negotiating texts that are currently under discussion. They should also further a better understanding of the options for new market mechanisms. Programmes that are structured as pilots that can be replicated or emulated around one country or multiple countries are clearly preferable to one-off initiatives. They reach their full value by multiplying their effects through dissemination and guidance by example.

Box 1. Criteria for evaluation
Supportive of and helping to ‘pull forward’ international negotiations by practical ‘real world’ ideas (demonstration and dissemination value)
Manageable scale of intervention for NEFCO and appropriate match with likely ‘counterparties’ (ability to execute)
Institutional issues: <ul style="list-style-type: none"> • Capacities of host country(ies) • Existence, and capacity, of partners
Future value (return) of investments vis-à-vis specific UNFCCC outcomes
In line with Nordic priorities: <ul style="list-style-type: none"> • Geographic • Development assistance • Mitigation • ‘Clean tech’ industry strengths
Overlap with similar/related activities of others (conflicts and complementarities)

⁴² Note that at this stage we think it is premature to be speaking about “facilities”. The term initiatives seems more applicable.

But NEFCO needs to remain mindful of its size and 'place'. This is not to say that NEFCO's relatively small size means it cannot be influential. Indeed, we believe the opposite can be the case. NEFCO has some unique attributes that can mean it is more able to make quiet and depoliticized progress, which may not be possible for larger financial institutions such as the World Bank. However, NEFCO should not overreach and find itself caught up in, and undermined by, controversies and politics. Moreover, activities in host countries should be of a manageable scale for NEFCO so as to assure a sustainable commitment to the funded programmes. The programmes need in any case to be of a scale and nature that the host countries can execute.

As noted in Chapter 4, host countries' capacities for implementing mechanisms vary greatly. In developing concrete proposals, account must be taken of limitations brought about by the institutional conditions of the potential beneficiary countries – and target sectors/groups within these. Also important here is the existence of possible partners that can be involved in efforts to address local capacity issues.

Related to this issue, in-country capacity should be developed to a degree that the funded activities can be sustained long term, even after the NEFCO programme support. NEFCO and Nordic countries' ministries and agencies have long established partnerships with entities in host countries, as well as in-house country experience. It is in the interest of the success of any programme to make use of these relations, using them as a base for new activities, instead of building up a whole institutional infrastructure, trust and good will from scratch.

Although any activity should support the international negotiations, a certain independence of the formal UN process can be an advantage. The goal would be to limit the exposure to the whims of 'day-to-day' climate politics and language traps (e.g. the demise of the term "sectoral approaches" in the past two years) so as to ascertain a longer term viability of a programme. A key risk issue to be managed is whether the value of the outcomes sought in any initiatives or investments hinges on specific outcomes being secured in the UNFCCC negotiations.

Programmes should be in line with 'Nordic priorities'. In the first instance this can mean in a geographic and development assistance sense. NEFCOs activities have traditionally had Eastern European 'economies in transition' (EITs) as one geographical focus area, and given the existing connections, it is sensible to continue working in this area. Other locations may be least developed countries (LDCs) that are of particular interest to the Nordic states.

Considering past NEFCO activities, 'Nordic priorities' can also mean a concentration on practical work with a clearly noticeable impact over a two to three year time horizon, as distinct from longer term capacity building exercises and workshops, for which the immediate impact is hard to assess. The focus of any activity should take into account the Nordic mitigation priorities, i.e. mitigation options in which Nordic entities have accumulated valuable experience and thus a competitive advantage over other providers of funding, expertise and 'clean tech'.

NEFCO needs to be aware of activities that other international entities are undertaking in the space of new market mechanisms. It is in the interest of all parties to combine activities in one area when this can lead to significantly scaled up programmes, but avoid overlaps, i.e. doing similar work twice.

5.2 Options for initiatives

Generally there is a huge number of opportunities for NEFCO to engage in climate finance with a focus on scaled-up mitigation programmes. This was made clear at a theoretical level in Figure 3. By applying the set of criteria (and drawing insights from interviews), it is possible to drill down and identify a number of specific areas that we think are options for NEFCO to explore further.

In short, we recommend that:

1. **It is useful to look at mitigation programme opportunities from the bottom up.** Many opportunities for emission reductions exist in cities and could be achieved through municipal mitigation programmes. Standard examples include in buildings, street lighting, waste (recycling/minimisation and methane recovery/utilization at landfills) traffic management systems, vehicle fuel switching and public transport. 'New and innovative' ones could include smart grids and electric vehicle recharging infrastructure (including solar and small scale wind turbines). Larger scale renewables are also possibilities depending on the city circumstances as are programmes associated with restoration/enhancement of urban forests. The multi-element programme nature of these initiatives makes it more difficult to apply them to scaled up carbon finance investment through the present CDM or JI. Moreover, municipalities in some countries have trouble raising capital given the state of public finances, and even the costs of needed capacity building associated with such mitigation programmes might not be seen as a priority use of public funds.

Bottom-up does not just mean cities; it can also mean taking ideas and technologies that have been proven through small scale methodologies and local projects in the CDM and aggregating them into multi-element regional programmes. In either case, these bottom-up mitigation programmes can have high value development co-benefits. In addition to being attractive to host countries, this also means the likelihood of useful partnerships and collaborations with UN Agencies such as UNDP and UNEP.

In both these types of bottom-up situations a multi-element finance package may be appropriate, so across the full range of NEFCO finance instruments available in given country and sector circumstances. In addition, NEFCO could consider new instruments such as those being discussed in the recent literature on PFMs including, for example, the provision of lower cost-of-capital debt finance raised by NEFCO through issues of 'climate bonds'.

With respect to carbon finance for these programmes, it is already possible to develop and have approved innovative new methodologies through the 'dual DOE'

process of the Voluntary Carbon Standard (VCS). This would set the stage for the origination of credits that, in the future, might achieve compliance grade status as well as have value in voluntary markets. It is likely that this possibility to develop innovative methodologies will also be taken up by other standards bodies serving the voluntary carbon market, e.g. ISO. In general, given the current political environment around 'scaled up' market mechanisms, it might be expected that there will be an increasing interest in carbon market-based mechanisms that, however, do not produce compliance grade offsets to help developed countries meet their international obligations.

- 2. There is also value in pursuing some more top-down approaches such as sectoral crediting baselines.** However, finding 'right sized' (small-medium) and 'right circumstance' countries to work with will be important. Countries should have a keen self-interest to take up these enhanced market mechanism ideas and be prepared to commit to their side of the necessary institutional and technical process that must be gone through to implement an actual programme.

In terms of things we do not recommend or have neutral views about:

- We do not think that NEFCO should pursue initiatives focussed on domestic cap and trade schemes. This is already a crowded space with a number of 'readiness' initiatives seeking to support advanced developing economies' burgeoning interest in this form of domestic mechanism (to the extent that this is real, in practice). Moreover, this is a controversial area of policy (as witnessed by the failure to make progress in some major developed countries), and one which is long-term in its nature and requires strong engagement at the national level.
- Similarly, initiatives based on domestic green and white certificate trading seem to not offer an obvious value-add proposition for a NEFCO intervention – although it is possible that NEFCO initiatives might benefit from such in-country policies, so they could be supported.
- Sectoral technology agreements seem outside the scope of NEFCO's interests, although, again, a NEFCO initiative might benefit from them.
- The 'REDD +' sector is already the focus of many initiatives, so is best avoided – although there may be elements in municipal programmes relating to urban forests that might be of interest.
- Many of the current activities of climate-related capacity building are focusing on the 'big six' developing countries – China, India, Mexico, Brazil, Indonesia, and South Africa. We therefore think that, with respect to developing countries, NEFCO can contribute a lot more with regard to catalyzing climate-related actions on a programme level by focusing on the countries in the 'second row', e.g. Vietnam, Thailand, Malaysia, Philippines, Chile, Peru, Colombia, Costa Rica, Egypt, Tunisia, Morocco or Venezuela. Exceptions (i.e. activities in the big six countries) should be considered when a clear regional/sectoral focus is possible which has so far been neglected by other programmes (e.g. rural China or India).

5.3 Issues for EITs

EIT countries represent an important region for NEFCO, given its original focus and that, currently, this region is where the full menu of NEFCO's finance instruments can be deployed. However, thus far, there has been much more attention paid by the policy community to scaling up mechanisms for developing countries. This raises the question about how EITs are different and, therefore, what mechanisms that may be applicable in developing countries may or may not work for EITs.

A key difference is that EITs can be expected to have quantitative absolute emission targets in the post-2012 period, as they have for the first Kyoto period. In addition, some EITs are also member states of the European Union and so fall under the EU ETS. The point, then, is that emissions reduction initiatives may already be incentivised from the top down with cap and trade-type market mechanisms applying at the national level and, for some, also at the entity-level. But does this mean that there is no need or place for new 'scaled up' mechanisms, e.g. that might apply from the bottom up? Would these just lead to double counting/double crediting problems?

Our assessment is that there is a need for innovations in climate finance in key sectors of these countries. It seems to be a fact that, thus far, the current cap and trade and JI project-based mechanisms have been relatively ineffectual in 'digging out' the very large potentials in these countries for energy efficiency and waste reduction and utilisation. New mechanisms and facilities are needed to work from the bottom up, while being mindful of the need to avoid double counting/double crediting. Conceptually these seem similar to ideas for 'nesting approaches' for developing countries that may take on some form of sectoral targets.

In addition, as noted in section 2.1, GIS schemes can already be seen as being sectoral mechanisms in their implementation. It may be possible to build off successful examples of GIS programmes in developing new climate finance mechanisms and facilities for EITs.⁴³

5.4 Nordic interests

We understand that "support of Nordic interests" is an important criteria for NEFCO's activities. However, what this means exactly with respect to the main topic of this report is not fully clear. But there seem to be two main, and quite different, aspects.

The first is around the inherent political/policy dimension of 'scaling up' mitigation activities. Nordic interests in this regard can be seen as being connected to, but not necessarily exactly the same as, the positions and ideas that the EU has put forward in the negotiations. Efforts by NEFCO in the next year or so can be seen as a means to road test practical implementation modalities, so as to help better explain the ideas and prove their efficacy.

⁴³ See, for example, the Working Paper *Green Investment Schemes: First experiences and lessons learned*, Tuerk, A et al, Joanneum Research, April 2010

The second dimension is connected to approaches taken to development assistance, in particular sustainable development. Nordic countries, individually and as a group, will have certain established preferences and priorities in terms of region, country and sector focus. To some extent these priorities may reflect specific technology and services expertise of leading Nordic companies.⁴⁴

These issues need to be explored in greater detail by NEFCO and its related government agencies. Our analysis so far, including from what we were able to glean from interviews, has just been at a preliminary level.

5.5 A partnership programme approach

While NEFCO can be the instigator of initiatives, it will be important to take a partnership approach to scaled-up mitigation programmes. Success on the ground will rely on this, much more so than for individual projects. By their nature, programmes are likely to require a larger number of actors working collaboratively. Having these actors take ownership of the programme and its successes will be an important risk-management strategy for NEFCO.

The policy environment within which the programme is to operate can be critical to success. Even for bottom-up programmes, it will be important to engage policy makers at local, regional and potentially even national levels. Having partners that can facilitate and handle this will be important (e.g. development agencies and their host country side counterparties).

This suggests that while NEFCO may be a, or the key financing partner, the leaders of specific initiatives may be local groups supported also by other agencies.

5.6 Potential countries and programme partners

Nordic country development agencies are already active in 'second row' developing countries. Table 1 below summarises the countries and focus of Nordic development cooperation.

While 'scaling up' mitigation suggests that least developed countries (LDCs) are not the focus for this NEFCO initiative (whereas they usually are for development and adaptation), it is probably feasible to take something of a regional perspective where neighbouring LDCs might somehow benefit from, or subsequently take up successful ideas from, mitigation programmes run in larger developing countries.

This suggests that the following regions might be good initial targets for a NEFCO "Facility for Scaled-Up Mitigation Programmes":

- **Mekong River region** – Vietnam, Thailand, Cambodia, Lao PDR
(Note that both Vietnam and Thailand have prepared Climate Investment Plans under the MDBs-managed Climate Technology Fund. This suggests some degree

⁴⁴ Two useful references here are (1) *Report from Workshop 1: Nordic Experiences from the Carbon Market*, Nylander, J et al, Vattenfall, July 2010; and (2) *Nordic Energy – Clean, Clever and Competitive*, Nordic Environmental Technology Solutions Project, 2008

of receptive national government policy environment and partnership possibilities with MDBs – which may be working more at the national level, so could welcome and support bottom-up initiatives by others.)

- **Other SE Asia** – Malaysia, Philippines
- **Central Asia** – Kazakhstan, Kyrgyzstan, Uzbekistan
- **East Africa** – Kenya, Ethiopia, Tanzania
- **North Africa** – Morocco, Tunisia
- **Latin America** – Nicaragua, and rest Central America; Chile, Peru

Table 1. Nordic Development Cooperation

	Countries	Relevant priority areas
Finland	Ethiopia, Kenya, Mozambique, Nepal, Nicaragua, Tanzania, Vietnam and Zambia (long-term partner countries) Afghanistan, Bosnia and Herzegovina, Kosovo, Sudan and the Palestinian Territories Southern Africa, Central America, the Mekong River region, Western Balkans, the South Caucasus and the Mediterranean region (regional/thematic cooperation) Eastern Europe (Belarus, Republic of Moldova and Ukraine), the South Caucasus (Armenia, Azerbaijan and Georgia) and Central Asia (Kazakhstan, Kyrgyzstan, Tajikistan, Turkmenistan and Uzbekistan)	Energy, including energy efficiency and energy conservation Agriculture and rural development Forestry Water, including water security and water resources management, and sanitation Environment and sustainable use of natural resources
Denmark	Bangladesh, Benin, Bhutan, Bolivia, Burkina Faso, Ghana, Kenya, Mali, Mozambique, Nepal, Nicaragua, Tanzania, Uganda, Vietnam, Zambia	Climate and environment
Sweden	Africa: Botswana, Burkina Faso, Burundi, Democratic Republic of Congo, Ethiopia, Kenya, Liberia, Mali, Mozambique, Namibia, Rwanda, Sierra Leone, Somalia, South Africa, Sudan, Tanzania, Uganda, Zambia, Zimbabwe Asia: Afghanistan, Bangladesh, India, Cambodia, China, Laos, Sri Lanka, Vietnam, the West Bank and Gaza, East Timor Europe: EU's most recent Member States, Albania, Belarus, Bosnia-Herzegovina, Georgia, Kosovo, Macedonia, Moldova, Russia, Serbia, Turkey, Ukraine Latin America: Bolivia, Columbia, Guatemala, Nicaragua	Environment, energy and climate
Norway	Africa (Angola, Burundi, Ethiopia, Liberia, Madagascar, Malawi, Mali, Mozambique, Nigeria, Somalia, South Africa, Sudan, Tanzania, Uganda, Zambia) Asia (China, East Timor, Indonesia, India, Nepal, Pakistan, Sri Lanka, Vietnam, Afghanistan, Bangladesh) Europe (Kosovo, Serbia, Bosnia-Herz.) Latin America (Nicaragua) Middle East (Iraq)	Climate and environment Energy (oil for development in 25 countries) Clean Energy (World Bank, REEEP) -Energy efficiency, -Institutional cooperation (twinning) -Rural electrification

Taking a cities perspective, a major international programme is the **C40** Cities Climate Leadership Group.⁴⁵ Cities in this programme in the above regions include:

- **Mekong River region** – Hanoi, Bangkok
- **East Africa** – Addis Ababa
- **Latin America** – Bogota, Caracas, Lima

⁴⁵ see <http://www.c40cities.org/>

There is also a new Club of 20 Regions (the **R20**)⁴⁶ spearheaded in 2009 by Governor Arnold Schwarzenegger. More will be known about this organisation's plans at the Governors' Global Climate Summit 3 in California on 15-16th November 2010, including possibly on an associated financing facility.

Closely connected with Nordic (and some other) donor countries is the Energy and Environment Partnership Program (**EEP**) of the Nordic Development Fund (NDF).⁴⁷ The EEP aims to promote renewable energy, energy efficiency, and clean technology investments in selected program countries, with the twin objectives of providing sustainable energy services to the poor and simultaneously combating climate change. EEP supports (pre-) feasibility and feasibility studies, resource surveys, demonstration and piloting activities, policy development, capacity development and the dissemination and exchange of information. The Program is designed to facilitate the development of innovative ideas, approaches and concepts, into sustainable and bankable investment projects that will bring substantial benefits to the partner countries.

There appears to be potentially a close alignment of interests between this initiative and a possible NEFCO facility for scaled-up mitigation programmes. The regional focuses of EEP include the Mekong, Indonesia, Southern and East Africa, Central America and the Andean countries.

5.7 The scale of a scale-up facility?

At this early stage of 'scoping' thinking, it is unclear what the constraints and limits for such a facility might be. The Climate Investments Plans for Vietnam and Thailand, for example, are both denominated in the billions. The regional EEPs are typically in the low tens of millions. Both these examples are over multiple years.

More broadly, any useful efforts by NEFCO need to be seen in the general context of a global need for zero and low carbon investment that, according to IEA figures in WEO 2009, in the energy sector alone exceeds US\$5 trillion in the coming decade.

In short, the potential scale for a NEFCO initiative is probably sufficiently large that NEFCO should look to how its facility might also mobilise large amounts of private sector capital..... or public funds of others including host country partners. One obvious possibility to explore is Green Bonds of some kind – "obvious" because other MDBs and BFIs are doing this and because Nordic institutional investor groups have been purchasing these bonds.⁴⁸ Other ideas to watch are new fund-of-fund models for equity, such as those being explored by UK DFID, IFC and the Asian Development Bank.

⁴⁶ see <http://ces.ucdavis.edu/ggcs3/>

⁴⁷ See <http://formin-origin.finland.fi/public/download.aspx?ID=58865&GUID={F535F048-BA04-4640-8A6B-BFE0752B5D91}>

⁴⁸ e.g. the Swedish national pension fund has purchased Green Bonds issued by the World Bank

5.8 Synergies (and avoiding conflicts) with existing efforts

NEFCO has recently initiated a €30 mn post-2012 procurement facility extending its existing carbon fund (NeCF). This adds to a number of other governments with similar procurement efforts, thus far focused mainly on project-based CDM and JI activities which are expected to continue. These facilities could potentially take on some form of role in seeding the 'scaled-up' market (for compliance units, anyway).

A number of governments are also looking at the broader policy issues for scaled-up mitigation, post-2012. It will be important for any new initiatives to seek synergies, and avoid conflicts, with existing mechanisms that continue to deliver finance to mitigation actions on the ground. A key issue here is the compatibility of programme-based efforts that are likely to provide support at higher levels than projects with maintaining incentives at the project level where most private sector engagement happens.

6 Concluding insights and 'ways forward'

This work started out under the title "Scoping study for innovative *carbon* facilities for testing *sectoral approaches*". Over the course of our work this has been changed to "Scoping study for innovative *climate finance* facilities for testing *scaled-up mitigation programmes*". This reflects two important insights.

The first is that NEFCO has very unique attributes for a bilateral financial institution (BFI). Within one organisation it offers a full 'menu' of finance types (grants, concessional loans, carbon finance), albeit there currently are some regional differences as to where menu items are available. The specific focus on environmental outcomes also is different than most other BFIs. The change from "carbon" to "climate finance" reflects NEFCO's fuller scope of products.

The second change, from "sectoral approaches" to "scaled-up mitigation programmes" follows political and practical considerations. On the political point, there has been a strong push-back from developing country negotiators to terms involving "sectoral" – seemingly because there are fears that they potentially create 'slippery slopes' to developing countries being led to binding emissions commitments, sector by sector or to creating a methodological basis for future border tariffs by developed countries.

The practical point is that on-the-ground mitigation actions are inherently implemented at a sectoral level anyway – to the extent that the term 'sectoral' can be seen as redundant. Programmes will be implemented in sectors (e.g. electricity production) and sub-sectors (e.g. energy efficiency in buildings or enhanced public transit), typically by bodies with a specific sectoral focus.

It is clear that the UNFCCC negotiations are struggling to reach common views on how new ideas for scaling-up investment in mitigation programmes might/should occur in practice. To what extent should support for such increased investment be from funds and not create carbon market offsets that help developed countries meet their emission reduction commitments? To what extent are carbon markets connected to higher levels of demand from developed countries the likely best route for scaled-up levels of activity?

The thinking and ideas raised through this project need to reflect this politically difficult environment. But, rather than just seeing this as a constraint, it can also be viewed as presenting the opportunity for bottom-up and practical innovation.

Clearly, there is a great need and appetite for support for practical mitigation programmes. The concept of taking a **scaled-up mitigation programme** approach, as presented here, has some specifically helpful attributes. The nature of a 'programme' is something that requires

- a boundary to be drawn;

- measures of performance to be established for the potentially multiple elements within the programme (to allow future evaluations of the success of the programme);
- a range of forms of support by a range of actors – some of which (but not all) will likely be financial in nature; and
- some means established to measure, report and (as needed/applicable) verify outcomes.

Importantly, programmes can be conceived of at many different scales – the term is neither ‘top-down’ or ‘bottom-up’ in nature. This allows useful efforts to be taken forward that can exist in situations where top-down rules are in a state of transition, and perhaps are slow to emerge and the directions they may take hard to foresee. If there is to be any chance to peak global emissions in the coming decade, bottom-up mitigation must occur at a very much higher scale than at present, even while international top-down rules might still be hard to get agreed.

An important insight is that we believe this work and conceptual thinking will be well received by many in the climate policy community, including many negotiators. In particular, we sensed from the interviews that it is important that thinking like this penetrates the negotiations. NEFCO’s link to government ministries in Nordic countries could provide one crucial channel for this to happen.

6.1 Putting programmes into practice

Beyond the general points set out above on what programmes will entail, when it comes to implementing “scaled-up mitigation programmes” there are a number of key questions and issues that are crucial to the design and scale of possible programmes, including:

- **For a given initiating body (or group), what does “scaled-up” mean in practice?** – Most players, institutional and private sector, thinking about scaling up will already have some experience in project-based initiatives and will have looked at whether PoA CDM (or JI) may offer a way forward. They may also have post-2012 procurement programmes for ongoing project-based activities, and do not want to see these undermined. The question then is whether scaled-up is just an incremental step up in size of activities already being undertaken, or whether it is something of a new paradigm for supporting mitigation activities involving considerably more players and support instruments.
- **Who will be the main players and partners?** – On the host country side, what levels of government may be involved in helping to ensure the success of programmes? And which other partners (or separate players) will need to be actively engaged in the implementation, including the early efforts of needed capacity building and feasibility assessments?
- **On scaled-up “climate finance”, who will be the investors and why?** – What portions might be from public sector bodies (donors and, potentially, host country-side) and of these funds, what might be grants and what concessionary loans? What might come from carbon finance, and is this likely to be for existing and future expected compliance markets or non-compliance (voluntary) markets?

How can you ensure there will not be double-crediting without rules and procedures so stringent and laborious as to kill off interest or stymie progress? For regular equity and debt finance needs, are there smart public sector policy and finance mechanism interventions that can lower the risks and thereby open the door to investment at scale by institutional investors? And can technology players involved get help from relevant export credit agencies?

6.2 Ways forward for NEFCO

In the light of the above points, and others (e.g. target regions and countries), there are clearly a number of critical issues that NEFCO will need to address before coming up with a well designated programme that could be executed by NEFCO. We expect that this could be done, in particular, through further consultation and design efforts in conjunction with possible key partners such as the EEP program and UNDP.

An alternative to, or perhaps a complement to, such an internal 'supply-side' driven design exercise may be to have more of a 'demand driven' approach where NEFCO puts out a general call for proposals for partnerships for scaled-up mitigation programmes. The call could be communicated, in particular, to potential partnership agencies and groups; but should be open enough to allow other interested parties to respond.

Such a call could be tailored in a number of ways, including:

- It can focus on specific regions of interest (which seem similarly aligned to those of the EEP) and possible types of measures and sectors/sub-sectors.
- It can address other issues of "Nordic interests", as applicable – once these are more fully elaborated by NEFCO (and NOAK) and agreed on.
- It can set out what specifically the nature of 'mitigation programmes' are in this context (i.e. as set out above) so as to make it clear what is meant by 'scaled-up' and that assessments of climate mitigation outcomes is a fundamental objective, even if this might not always be the primary metric of performance. This also makes clear the intent to explore means to, where possible, include a value for the carbon performance in the economics of the programme, e.g. through current or future compliance carbon markets, or the 'voluntary' market.⁴⁹ The call can ask for any details about methodologies that might be available, or needed, in this regard.
- It can be open to proposals covering both the bottom-up and top-down recommendations in this report – and for the bottom-up, both city/municipal-based and others.
- It can set out the general menu of forms of financial support that might potentially be available from this new facility, and ask those making proposals to set out the nature and scale of the programme's financing needs.

⁴⁹ Note that a distinction here is that credits used in the voluntary market are not credits used by developed countries or their entities to 'offset' their mitigation commitments. This may be important in addressing some host country policy perspectives/requirements.

- It can request those making proposals to set out the policy environment within which such programmes might operate, including issues that may be seen as policy risks and measures that could be taken to minimise these risks. Similarly it could ask about what capacity issues there might be and what is planned (by programme partners or others) to address these.

On timing, if such an approach is to be taken, it would be very desirable for NEFCO to announce this new initiative and put out the first call for proposals at the time of the UNFCCC COP16 at Cancun.

Some key benefits we see of this call for proposals approach are that

- (i) NEFCO can be seen as being an innovator and helping to clarify what scaled-up mitigation initiatives can look like at a practical level, while at the same time encouraging potential programme partners to bring forward their innovative ideas. NEFCO doesn't have to do all the thinking, or necessarily lead in the eventual implementation of such programmes.
- (ii) NEFCO (and Nordic governments) gets early 'runs on the board' in terms of the policy objective of helping to clarify and pull forward the negotiations on NAMAs and new mechanisms through practical on-the-ground initiatives.
- (iii) Key initial uncertainties (such as what is the demand out there for such an initiative, which countries/cities, which sectors/sub-sectors, what types and scale of finance, what need for mobilised funds from others including private sector finance, how much NEFCO needs to lead versus support others that will be its key programme partners) can be clarified to a significant extent through the outcomes of the first call round.
- (iv) NEFCO retains full flexibility in how it may move forward in 2011. It can tailor its eventual 'scale-up' facility to what it learns through the call for proposals and the politics on the ground after Cancun.
- (v) It can help clarify whether there are potential synergies or conflicts between any new programmes and support facilities and existing NEFCO post-2012 carbon procurement facilities. How might existing and future-planned CDM and JI project-based activities be affected, importantly including the interests of private sector players involved – and where there may be possible conflicts, what form of 'nesting approach' design features can be designed-in to address these?

Appendix: NAMAs submitted to the UNFCCC

The following table summarizes the NAMAs submitted to the Appendix II of the Copenhagen Accord.

	Unilateral	Conditional to support	Unclear
Target (climate neutrality)	Maldives	Bhutan, Costa Rica, Papua New Guinea	
Target (below BAU)	Brazil, Indonesia, Israel, Mexico, Korea, Singapore	Chile, Mexico, Papua New Guinea, South Africa	
Target (below base year)	Moldova	Antigua and Barbuda, Marshall Islands	
Target (intensity)	China, India		
Strategies, policies, specific projects	Colombia	Afghanistan, Congo, Madagascar, Sierra Leone, Brazil, Chile, Colombia, Ghana, Tunisia, Peru	Ivory Coast, Eritrea, Togo, Armenia, Benin, Cameroon, Central African Republic, Chad, Gabon, Jordan, Macedonia, Mauritania, Mongolia, Morocco, San Marino, Togo

Table 2: Countries submission to Appendix II to the Copenhagen Accord (by type)