

Scaling up carbon markets in developing countries post-2012: Are NAMAs the way forward?

Prabhat Upadhyaya,

Ecologic Institute, Berlin

January 2012



Alexander von Humboldt
Stiftung/Foundation

Scaling up carbon markets in developing countries post-2012: Are NAMAs the way forward?

Final report

January 2012

Author:

Prabhat Upadhyaya

Advisors:

Benjamin Görlach

Michael Mehling

Host Institute: Ecologic Institute, Berlin



Supported by: Alexander von Humboldt Foundation



This report is an outcome of the study “Scaling up carbon markets in developing countries post-2012: Options, concerns and way forward”. The author was hosted by the Ecologic Institute, Berlin and supported by the Alexander Von Humboldt Foundation’s International Climate Protection Fellowship 2010-11 for the duration of the study. The views reflected in the study are solely attributable to the author. The contents of this report do not necessarily reflect the views of the Ecologic Institute or of the Alexander von Humboldt Foundation. The author can be reached at upadhyayaprabhat@gmail.com.

Acknowledgements

I would like to thank the people and institutions to whom I have incurred great debts. My first debt of gratitude goes to Michael Mehling who suggested and encouraged me to apply for the International Climate Protection Fellowship. My second debt of gratitude goes to Benjamin Görlach whose timely suggestion to realign my study has made it more relevant to the current climate policy discourse. This study draws immensely from their advice and assistance in conducting my research.

I am grateful to the Alexander von Humboldt Foundation for affording me the International Climate Protection Fellowship for the year 2010-11. I thank the Ecologic Institute for hosting me for a year in the historical city of Berlin.

I express my gratitude to all the respondents I engaged with as part of this research work for their precious time and views. I sincerely hope that I have been able to incorporate your views satisfactorily. To Alexander Vasa (CPI, Berlin) and Daniel Klingefeld (PIK, Potsdam) a special thank you for providing me with your friendship in an unknown land. I am also thankful to Camilla Bausch, Killian Wentrup, Ralph Bodle and Eike Dreblow at the Ecologic Institute for their suggestions.

This thesis would not have been possible without the patience, careful reading and helpful comments on various drafts of the report by Meagan Jooste. I am grateful to the well balanced doses of positive criticism and encouragement during various stages of the study from Jagjeet Sareen and Nirmalya Choudhury. I would also like to thank Javed Aziz for making me feel at home and opening the secrets of Berlin to me.

To my family and loved ones, I thank you for your encouragement and support throughout my fellowship.

Contents

- List of Acronyms6**
- Executive Summary7**
- A note on the categorization of responses11**
- 1 Introduction 13**
 - 1.1 Background 13**
 - 1.2 Research questions 14**
 - 1.3 Methodology 15**
 - 1.4 Outline..... 15**
- 2 NAMAs and carbon markets: Setting the context16**
 - 2.1 NAMAs: Origins and interpretations 16**
 - 2.2 Carbon markets in developing countries: Current state of discussion
..... 18**
 - 2.3 Integrating NAMAs and Carbon markets: Setting the context..... 19**
- 3 Defining the study themes21**
 - 3.1 Objectives of NAMAs 21**
 - 3.2 Enhancing mitigation by NAMAs 22**
 - 3.3 NAMAs and Carbon markets..... 22**
 - 3.4 Credited NAMAs and their interaction with existing institutions..... 23**
 - 3.5 NAMAs in national context..... 25**
- 4 Results of the expert interviews26**
 - 4.1 Objectives of NAMAs 26**
 - 4.1.1 Perception of respondents..... 26
 - 4.1.2 Other key points 30
 - 4.2 Enhancing mitigation by NAMAs 30**
 - 4.2.1 Perception of respondents..... 31
 - 4.2.2 Other key points 33

4.3	NAMAs and Carbon markets.....	34
4.3.1	Perception of respondents.....	34
4.3.2	Other key points	36
4.4	Credited NAMAs and their interaction with existing institutions.....	38
4.4.1	Perception of respondents.....	38
4.4.2	Other key points	42
4.5	NAMAs in national context.....	43
4.5.1	Perception of respondents.....	43
4.5.2	Other key points	46
4.6	Summarizing the responses	46
5	Analysis and way forward	49
5.1	Analysis	49
5.2	Conclusions.....	54
5.3	Outlook	55
6	References	56
	Annexures.....	59

List of Acronyms

AI	Annex I
AWG-LCA	Ad Hoc Working Group on Long-Term Collaborative Action
BAP	Bali Action Plan
BAU	Business as Usual
C-NAMA	Credited NAMA
CBDR	Common But Differentiated Responsibilities
CDM	Clean Development Mechanism
CER	Certified Emission Reductions
CO ₂	Carbon Dioxide
COP	Conference of Parties
DNA	Designated National Authority
DoE	Designated Operational Entity
EB	Executive Board
ENB	Earth Negotiating Bulletin
ERPA	Emissions Reduction Purchase Agreement
GCF	Green Climate Fund
GHG	Greenhouse Gases
GtCO ₂ e	Giga tonnes of Carbon Dioxide equivalent
IEA	International Energy Agency
LCDS	Low Carbon Development Strategy
LDC	Least Developed Country
MDG	Millenium Development Goals
MRV	Measurable, Reportable, Verifiable
NAI	Non-Annex I
NAMA	Nationally Appropriate Mitigation Actions
NMBM	New Market Based Mechanisms
PoA	Programme of Activities
SD-PAMs	Sustainable Development - Policies and Measures
SIDS	Small Island Developing Countries
UN	United Nations
UNFCCC	United Nations Framework Convention on Climate Change
USD	US Dollar, US\$

Executive Summary

Introduction

Nationally Appropriate Mitigation Actions (NAMAs) are seen as a pivotal means for enhanced mitigation in developing countries. The design and implementation intricacies of NAMAs are however still unclear. Additionally, there is a lack of clarity on how carbon markets can be utilized to support NAMAs in developing countries, mainly because much uncertainty remains on how NAMAs will actually look like. The purpose of this study is to bridge this gap in policy analysis by engaging with relevant stakeholders from the public, private, academic and civil society sectors in the developed and developing world (with a focus on India and Germany) to determine how NAMAs and carbon markets can be combined to enhance mitigation in developing countries.

Study Objectives

The compatibility of NAMAs with carbon markets is a complex issue. In order to tackle this question more strategically, a literature review was carried out and five key themes were identified within this issue so as to tease out key considerations in making NAMAs and carbon markets compatible. These are: 1) What are the objectives of NAMAs, 2) How to enhance mitigation using NAMAs, 3) Integrating NAMAs and carbon markets, 4) The interaction of credited NAMAs (C-NAMAs) with existing and emerging institutions, and 5) The role of NAMAs in the national context.

A questionnaire was designed around these key themes to engage and gather qualitative responses from stakeholders. The stakeholders were categorized across country (Indian, German and others) and stakeholder (negotiators, researchers, market players, and civil society) perspectives. A total of thirty nine interviews (both structured and unstructured) were carried out over the course of seven months (from March 2011 to September 2011). This allowed consideration of views after the Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC) in Cancun, Mexico (COP16), as well as the developments in the run-up to COP17 in Durban, South Africa.

The report begins with a section outlining the background of the current state of research on NAMAs. Section 2 sets up the context for NAMAs and their integration with carbon markets. Based on literature and policy discussions, section 3 then introduces the reader to the central themes and their importance for answering the questions this report seeks to address. Section 4 provides detailed insights into the responses of interviewees. Finally, the last section brings the various perspectives together and analyses the implications that different views pose for the implementation of NAMAs in the future. Key messages emerging under each theme are based on views expressed by the respondents, literature sources, and analysis conducted by the author. They can be summarized as follows:

Objectives of NAMAs

The Bali Action Plan (BAP) was adopted as one of the decisions by the Conference of Parties at its thirteenth session (COP-13). Paragraph 1(b) of the BAP “*enhanced ... mitigation*” and 1(b) (ii) “*NAMAs... in context of sustainable development*” indicates that the prime objective of NAMAs is to a) achieve greater emission reductions and b) mainstream sustainable development. Although responses indicate that NAMAs are expected to enhance mitigation, there is divergence in opinions on whether mitigation should be a key benefit of NAMAs or merely a co-benefit. Incorporating sustainable development objectively under the NAMAs garners high acceptance, although agreeing on any one matrix is seen as a challenge. Enhancing cooperation and increasing accountability by promoting transparency are also seen as important outcomes for NAMAs. Due to the national appropriateness element of NAMAs, there is a strong sense that the objective of NAMAs is a host nation prerogative and that NAMAs need to fit in with the development priorities of the host country. Low Carbon Development Strategies (LCDS) are seen as a common reference point for different NAMAs of a country.

Enhancing mitigation by NAMAs

Respondents felt that NAMAs will lead to higher mitigation than the CDM. Although it is difficult to pinpoint specific factors for this expectation, a recent study by Wang-Helmreich *et al.* (2011) indicates that the cumulative absolute emission reductions of eight NAMAs until 2020 can easily supersede the total CERs issued worldwide. Two factors that are seen as influencing the efficacy of any NAMA are the domestic policy environment and the level of support provided to a particular NAMA. In general, a country with a proactive government and mitigation potential will attract greater collaboration.

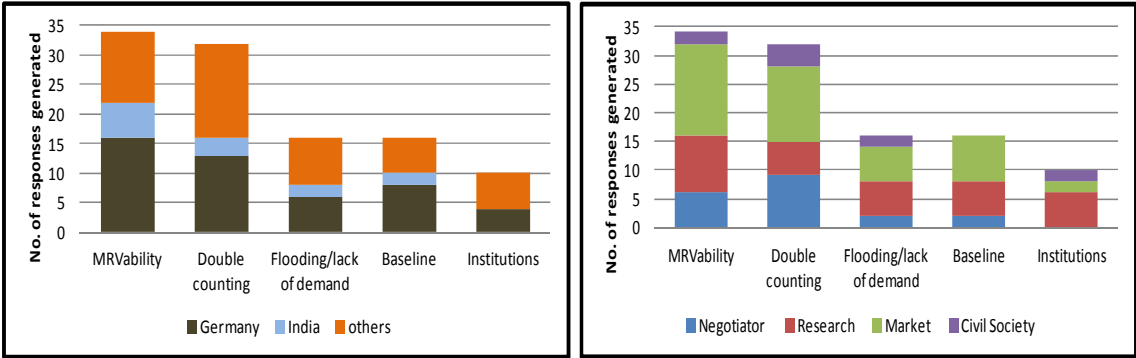
Private sector financing is crucial for the implementation of NAMAs, but it is not clear how NAMAs can be made attractive to the private sector – particularly if NAMAs should not generate emission reduction credits (something that is commonly expected for both unsupported and supported NAMAs), which can then be traded as offsets. One suggestion would be that the confidence of investors can be won if the benefits of NAMAs can be monetarily quantified or illustrated through a business case. An altogether limited role of carbon markets in NAMA financing is seen for two reasons: a) market players do not foresee a great role for themselves in NAMA financing; and b) carbon markets provide finance *ex-post* whereas NAMAs may need finance *ex-ante*. Two factors were identified as hindrance to technological collaboration: a) a lack of clarity on the cost of patents and related issues, and b) a lack of agreement on the definition of technology transfer.

Integrating NAMAs and carbon markets

While there is a high level of agreement that NAMAs are compatible with carbon markets, a large number of respondents see this compatibility depend on certain conditions being met.

These conditions include: the availability of reliable data sources and avoiding double counting, establishing a uniform Monitoring, Reporting and Verification (MRV) system, avoiding the threat of the carbon market being flooded with cheap credits in the absence of ambitious targets, establishing a baseline of comparisons across time, as well as developing an appropriate institutional balance in personnel and responsibilities. As displayed in Figure 1, across respondents the most crucial of these were the role of MRV and the elimination of double counting.

Figure 1: Parameters key to the compatibility of NAMAs with carbon markets



Country perception

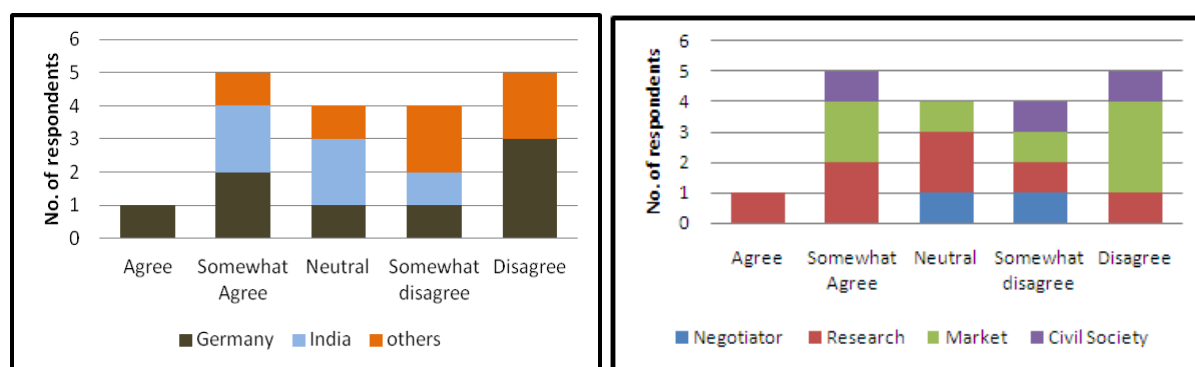
Stakeholder perception

The compatibility of a NAMA is seen to be inversely proportional to the *uncertainty level of the data* made available by a NAMA. NAMAs are seen as slightly better placed to address regional distribution challenges, but it is still early to comment on the same about C-NAMAs. The case of C-NAMAs diverting the finance available to certain NAMAs will not be beneficial in this regard.

The interaction of credited NAMAs (C-NAMAs) with existing institutions

C-NAMAs can only co-exist with the CDM if the operating boundaries are clearly defined at the national level. In the absence of such boundaries, less stringent mitigation mechanisms could potentially proliferate, thus undermining the efforts to assertively mitigate climate change. The need for good governance and strong institutions were identified as the most important lessons from the CDM for NAMA governance. Conflicts are expected when multiple mechanisms are in operation, and having a central body to maintain oversight of the implementation of NAMAs is seen as a crucial element in avoiding these conflicts. However, the CDM-EB, in its current form, is not favoured as the right institution to handle C-NAMAs (Figure 2) for two main reasons. Firstly, the CDM-EB is a technical body, whereas for C-NAMAs, the capacity to factor in socio-economic aspects would also be needed. Secondly, the CDM-EB does not have enough capacity and resources available to take on any more responsibility.

Figure 2: CDM-EB is well equipped to handle C-NAMAs



Country perception

Stakeholder perception

The role of NAMAs in the context of national responsibilities

Generally, respondents felt uncomfortable dealing with questions related to appropriateness. The appropriateness discussion is strongly attached to the national context, provides very little space for an outsider to contribute to the discussion, and by default involves a substantial degree of subjectivity. Rather than trying to develop a globally relevant definition of appropriateness, some respondents suggested placing the focus on defining the parameters that may lead to a NAMA's appropriateness. Responses to managing different national appropriateness definitions in a global arena, such as under the UNFCCC negotiations, were mixed, but in general it was felt that factoring these different definitions into global carbon markets would be more complex. As such it is difficult to specify how the variance can be dealt with, given that the discussion is still very much in flux. Common MRV guidelines providing the same level of accountability to all NAMAs or a common reference point in the form of a central body that can provide central oversight may prove useful. A greater role for governments is foreseen in implementing NAMAs, but if the national appropriateness defined by a country is not thought to be ambitious and coherent enough, then access to demand centres might be limited.

Way forward

C-NAMAs can scale up carbon markets in developing countries post-2012, but their future implementation is contingent upon addressing certain issues. Ambitious targets are needed to give a strong demand signal to markets and motivation to Non-Annex I (NAI) countries to go beyond supported NAMAs. If the global community wants to promote sustainable development within C-NAMAs in earnest, it needs to urgently identify and agree on how to go beyond subjective interpretations. Clear boundaries need to be defined for different mechanisms to avoid conflicts. Greater clarity on private sector participation for supporting NAMAs is urgently needed, particularly on how to go ahead if emission reduction credits that can be used as offsets are not generated. Without addressing these issues, C-NAMAs may still be able to scale up carbon markets, but they will not be able to do so in a just and sustainable manner and they will not contribute to keeping the temperature rise within the widely endorsed 2°C threshold.

A note on the categorization of responses

Stakeholders were engaged with so as to elicit what the distribution of perspectives amongst various parties interested and affected by NAMAs may be.¹ In order to determine this distribution of perspectives, stakeholder views were categorized into five groupings, namely; 1. Agree with the statement/yes, 2. Somewhat agree with the statement, 3. Cannot say/neutral, 4. Somewhat disagree with the statement, and 5. Disagree with the statement/no. As outlined in Table 1, if a respondent agreed/disagreed or, in other words, expressed strong views without any conditions attached then it was categorized as *agree/disagree*. In contrast, agreement/disagreement with certain conditions attached was categorized under *somewhat agree/disagree*. If a respondent was indifferent in their response, it was classified as *neutral/cannot say*. In instances where no responses were recorded, this was interpreted as the respondent lacking awareness on a particular aspect.

From each grouping, two to four key responses – the ones that were echoed most frequently – have been analysed across the respondents. Some other responses that were raised have also been covered so as to identify the range of perspectives beyond oft repeated responses. In such instances, the analysis is limited to a subjective discussion. Responses raised by less than three respondents have not been analysed separately in the study, but where relevant such responses have been used to substantiate other findings. Responses from unstructured² interviews have not been used for graphical representation but where possible, views of these respondents have also been used to substantiate the findings. Once this categorization was completed key issues of concern revealed themselves when observing the frequency of the responses to various questions.

Table 1: Categorization of the views shared by the interviewees

Response/views	Category
Strong, unconditional agreement with a specific viewpoint	1. Agree with the statement/yes
Agreement with a specific viewpoint with some sort of conditionality involved	2. Somewhat agree with the statement
Indifferent/unable to respond to a specific viewpoint	3. Cannot say/neutral
Disagreement with a specific viewpoint with some sort of conditionality involved	4. Somewhat disagree with the statement
Strong, unconditional disagreement with a specific viewpoint	5. Disagree with the statement/no

¹ The parties were approached with a questionnaire designed around five key themes. These themes have been outlined in the methodology section.

² The unstructured interviews refer to the interviews where the author could only engage with the respondent for a brief discussion (15-20 minutes). All such interviews were carried out during the Bonn Inter-sessional meetings in June 2011.

If a particular question received no response from any of the respondent, the respective category in the graphs contained in this report, contains no numerical figure and thereby appears as missing information. For example, the category 'neutral' in Figure 4.I.a (see page 27) reflects no response.

Scoring for key factors

Certain questions had more than one response. For example, in regard to the question 'What are the three key learning from the CDM?' Such views have been analysed in a different manner. If the respondent indicates a strong preference for an option then, a scoring of +2 has been given to the option. Similarly, conditional preference implies +1, mild disagreement regarding a statement implies -1, whereas a strong disagreement regarding an option earns -2. Based on the scoring, one can identify which option is preferable as well as the category of stakeholder whom prefers it. For example, in NAMAs and C-markets, market respondents see Measurement, Reporting and Verification ability (MRVability) and double counting as key parameters/problems. However, across the responses from researchers there is no single preference in this vein.

Limitations

Most of the experts working on Credited NAMAs (C-NAMAs) are based in Annex I (AI) countries. As a result the representation of experts from non-Annex I countries is limited.

The findings in section 4 only reflect the views of a sample of all the respondents interviewed on various statements and not the views of every respondent. As mentioned above, only the most frequently raised responses have been analysed across respondents. The questionnaire was subjective and the interview fluid in nature, therefore all the questions were not asked to all the respondents. Some questions were thus raised more frequently. Generally these were the questions which then initiated a key study theme. Nevertheless, having a relatively representative sample of respondents was useful to observe trends, specifically in stakeholder perceptions.

I Introduction

I.1 Background

In December, 2011 the seventeenth Conference of the Parties (COP-17) was held in Durban, South Africa. It marked four years since the COP-15 in 2007 when, by means of paragraph 1 of the Bali Action Plan (BAP), a decision was taken by the COP “to launch a comprehensive process to enable the full, effective and sustained implementation of the Convention through long-term cooperative action, now, up to and beyond 2012, in order to reach an agreed outcome and adopt a decision at its fifteenth session” (UNFCCC 2007). Unfortunately, the negotiations have not yet reached an agreed outcome, while global Carbon Dioxide (CO₂) emissions reached their highest level in 2010 (IEA 2011).

Identifying how the greater responsibility for reducing Greenhouse Gases (GHG) in the future can be undertaken while upholding the basic tenants of countries’ in terms of “*common but differentiated responsibilities and respective capabilities and their social and economic conditions*”, as enshrined under the United Nations Framework Convention on Climate Change (UNFCCC) will be important. After COP-15 in Copenhagen a number of countries, including developing countries otherwise recognized as Non-Annex I (NAI) countries, have come up with national plans to combat climate change. Developing countries have submitted their plans to the UNFCCC as Nationally Appropriate Mitigation Actions (NAMAs). Nevertheless, the current international reduction targets and pledges put forward by countries fail to reach the reduction gap required. A gap of 8-10 billion tonnes of CO_{2e} remains even with the most stringent targets (Höhne *et al.* 2011). Finding a means for enhanced mitigation is needed particularly in developing countries. In conceptualizing this, cognisance must be taken of the national interests and responsibilities of developing countries.

Mitigation in developing countries has come into the mainstream as a result of the Clean Development Mechanism (CDM). Although the CDM has been instrumental in providing low cost options to Annex I (AI) countries to meet their commitment obligations, it has its limitations. For example, it has not lead to the expected level of technology transfer (UNFCCC 2008). The additionality of the credits has also been questioned. The CDM has also been very bureaucratic and time consuming. Further, CDM is entirely driven by AI demand. In the absence of strong AI emission reduction targets it becomes constrained due to insufficient demand. In order to overcome some of these constraints, it is being suggested that CDM needs to be scaled up and that developing countries also, especially the emerging economies, need to go beyond an offset-based regime. It is argued that this will help increase the healthy competition towards a global green economy while enhancing mitigation in developing countries. However, Non-Annex I (NAI) countries argue that they cannot take mitigation commitments at the moment as it would come at the expense of them addressing their social welfare responsibilities.

Scaling-up carbon markets in developing countries beyond 2012, so to promote faster emission reductions globally would require time, capacity building, large-scale investment, ambitious targets adopted by developed countries, and above all greater political will. There are a number of proposals which aim to reform or replace the CDM in such a way as to make

the process more efficient and effective. Some of the key proposals are sectoral crediting or sectoral trading (EU), Credited NAMAs (C-NAMAs) by Korea, and hybrid approaches (New Zealand). Reforming the CDM per se will not change its inherent features (i.e. the project-by-project approach and its nature as an offset mechanism). Sectoral approaches, though much-researched and advocated by Annex I countries, have found little support among developing countries. India and China in particular, are of the opinion that having a cap on a sector will ultimately lead to an economy-wide emissions cap, and thus have negative implications for their development efforts. NAMAs can be supported or unsupported, and may also lead to credits under certain condition(s) (Section 2.1). Not all developing countries are open to the option of crediting NAMAs. Nevertheless, post-Copenhagen a number of developing countries have submitted their strategies to undertake mitigation in the form of NAMAs to the UNFCCC.

The concept of NAMAs is at infancy stage with the intricacies still in the process of being defined. Most literature on NAMAs is to date in forms of research policy reports. Work has been carried out on the scope, design and support for NAMAs (Breidenich & Bodansky 2009; Ellis & Moarif 2009; Levina & Helme 2009; Fransen *et al.* 2008). Sterk (2010a and 2010b) and Fukuda and Tamura (2010) map and categorise mitigation actions of NAI Parties listed in Annex II of the Copenhagen Accord. A recent study by Wang-Helmreich *et al.* (2011) analyses the developments being made by 16 pilot NAMAs on a range of issues. Country specific analysis on how to design policies and the institutional aspects of NAMAs has also been studied (van Asselt *et al.* 2010; Teng *et al.* 2009). Bakker and Huizenga (2010) analyse the potential of NAMAs spurring sustainable transport transformation in developing countries and NAMAs in relation to financial markets in support of a low-carbon transition (Glemarec 2010). Financing the NAMAs by means of public private partnerships (KPMG 2010) has also been discussed. Going ahead from a Programme of Activities (PoAs) to NAMAs (South Pole 2011) and assessing offsets from policy based NAMAs by means of C-NAMAs (Okubo *et al.* 2011) also indicates that market players are interested to invest in developing countries by means of NAMAs.

One area of further research to be tackled in this context regards the interaction between NAMAs and carbon markets. Sterk (2010a) suggests that the relationship between NAMAs and the carbon market is unclear. Resolving whether NAMAs can be credited or not in the near future, has been identified as a basic issue by van Asselt *et al.* (2010). Jung *et al.* (2010a) suggest a greater role for the crediting mechanism if international funds are insufficient to support NAMAs. Whether carbon markets and NAMAs will be able to co-exist is still however an open question. This study will **therefore focus on whether NAMAs and carbon markets can be integrated to enhance mitigation in developing countries and, will highlight the key considerations in combining these policy tools.**

1.2 Research questions

Against this background, five themes surrounding NAMAs were identified for further investigation. As C-NAMAs are still at a conceptual level the questionnaire was kept subjective in nature so as to capture a range of views represented by different stakeholders. A guiding question was identified for each theme followed by a range of questions (at times impromptu) depending on the background of the interviewee and the flow of discussion.

These themes along with the respective guiding research questions and the general discussion points are provided below:

1. **Objectives of NAMAs:** What are the objectives of NAMAs?
2. **Enhancing mitigation by NAMAs:** How effective can NAMAs be in enhancing mitigation?
3. **NAMAs and Carbon markets:** Are carbon markets compatible with NAMAs?
4. **Interactions of C-NAMAs with existing institutions:** Assuming that C-NAMAs are the way forward, then what will the interaction between NAMAs and existing institutions be?
5. **NAMAs in the national context:** What does Appropriateness entail?

1.3 Methodology

The methodology comprised of; a) literature review to understand the various country proposals on scaling up carbon markets in developing countries and identifying a key option for further research, b) Key option(s) were studied in much detail while paying close attention to related developments in the UNFCCC negotiations, c) A background paper and a questionnaire (Annexure I) were developed to engage and gather qualitative responses from expert stakeholders working on NAMAs and carbon markets (Annexure II), d) The UNFCCC negotiation meetings under the Ad Hoc Working Group on Long-Term Collaborative Action (AWG-LCA) were attended – where possible in person – as well as coverage being taken of the negotiations provided by the Earth Negotiating Bulletin (ENB) and Eco Newsletters and, e) The key issues or views echoed frequently by respondents were identified and categorised (see ‘A note on the categorization of responses’) on the basis of country (Indian, German and others) and stakeholder perspectives (negotiators, researchers, market players, and civil society).

1.4 Outline

The report is structured as follows. Section 2 sets the context for integrating NAMAs and carbon markets. It also provides the reasoning behind the identification of the five study themes. Section 3 provides an outline of the results of the expert interviews and the perception of respondents on the five study themes. Section 4 entails the author’s evaluation of the views shared by the respondents. Finally, Section 5 analyses the key issues related to the study; shares the conclusion and identifies further areas of future research.

2 NAMAs and carbon markets: Setting the context

2.1 NAMAs: Origins and interpretations

The Bali Action Plan (BAP) introduced the term NAMAs into the negotiations. Paragraph 1(b)(ii) of the BAP visualized a process for:

“Enhanced national/international action on mitigation of climate change, including, inter alia, consideration of:

(i)....

(ii) Nationally appropriate mitigation actions by developing country Parties in the context of sustainable development, supported and enabled by technology, financing and capacity-building, in a measurable, reportable and verifiable manner;”

The text on NAMAs is very broad and has subsequently been subject to varied interpretations. There is no indication in the text about; any specific type of action that is eligible or ineligible, how to incorporate sustainable development, the timescale of NAMAs under consideration, the process to identify a NAMA should be, who will track NAMAs, to whom NAMA progress is accountable to and, how the NAMAs will be accounted for. Subsequently the parties to the convention have suggested a wide list of types NAMAs, as shown in table 2 below.

Table 2: Possible NAMAs action mentioned by parties

Country ³	Type of possible action mentioned by the parties
Australia	Establish a national schedule
Brazil	Large scale mitigation programmes, beyond project
China	Country determination
EU	Develop Low Carbon Development Strategies (LCDS) covering all sectors, sectoral crediting and sectoral trading
Indonesia	No-lose target as deviation from Business as Usual (BaU)
Japan	Based on country differentiation
New Zealand	Categorization based on national circumstances and development level
Panama, Paraguay and El Salvador	Scale-up by aggregating mitigation measures
Singapore	Include sustainable development policies and measures (SD-PAMs)
South Korea	Range from economy-wide mitigation targets to specific policies
South Africa	NAMAs may comprise individual mitigation actions, sets of actions or programmes

Source: UNFCCC 2009a; UNFCC 2009b. Based on Sterk 2010a.

³ Not all country submissions included.

Sterk (2010a) further categorizes the NAMAs submitted under the Copenhagen Accord under five categories:

- a) National emission neutrality targets;
- b) National emission intensity targets;
- c) National emission targets in terms of a deviation from business as usual;
- d) Sectoral emission targets and
- e) Specific actions at national and/or local level.

Jung *et al.* (2010a) takes a broader categorization and suggests that a NAMA can very well be:

- a) One measure, or;
- b) A set of measures which are part of such a comprehensive plan, or even
- c) The definition and/or implementation of the whole plan itself.

The European Commission though undertakes a different approach to categorize NAMAs. While suggesting that developing countries need to define their own NAMAs, it sees the differentiation of NAMAs as a layered concept (Figure 2.1), based on whether and how a NAMA receives support (European Commission 2009). It categorizes NAMAs as:

- a) **Unilateral NAMAs:** Actions taken by a country without any external support,
- b) **Supported NAMAs:** Additional actions supported and enabled by technology, financing and capacity building and,
- c) **C-NAMAs:** further actions supported by means of carbon markets.

Clearly thereby, some NAMAs would be classified into more than one category. Agreement on the nature of NAMAs and the means to support them still eludes negotiators. It is difficult to define a boundary for NAMAs as any action that contributes to mitigation can be packaged as a NAMA. The factor that is paramount in deciding whether an action can be a NAMA is the appropriateness of that action within the national context. It gives an impression that a global problem is being addressed at the national level and not at the global level. Such an interpretation is partially true. By agreeing to the concept of NAMAs, developing countries have acknowledged that they, as have AI countries, need to contribute to mitigation. These contributions, however, must be “nationally appropriate” i.e. they have to acknowledge the development needs and demands of the country. The immediate national priorities will tend to override important problems, unless tackling important issues addresses urgent demands as well. National appropriateness allows a country to define for itself how it aims to undertake mitigation measures while also addressing its immediate challenges.

Framework to support implementation of NAMAs though is still under formulation. Carbon markets in the form of the CDM have been instrumental in initializing mitigation in NAI

countries. Nevertheless its role for supporting NAMAs is in early stages. The following section throws light on the role of carbon markets in promoting mitigation in NAI countries.

2.2 Carbon markets in developing countries: Current state of discussion

The Kyoto Protocol laid the foundation for what we now know as carbon markets. The creation of Emission Trading System (ETS) in different Annex I countries and the development of project based mechanisms such as the CDM and Joint Implementation (JI) have been the building blocks for carbon markets under the Kyoto framework. The overall objective of these various mechanisms was to reduce emissions while also providing flexibility to AI countries in meeting their Kyoto targets.

The CDM was intended to reduce emissions in developing countries at a cost lower than that in developed countries while also enhancing the transfer of more environmentally friendly technologies to developing countries as a means of promoting sustainable development. The CDM has been fairly successful in stimulating green investment but has benefited only a small group of developing countries. Critics also argue that CDM does not lead to emission reductions per se but rather that it only leads to the relocation of emissions.

Developing country experiences evidence that such project-based mechanisms, while useful, will neither tap into the inherent potential for emission reduction effectively nor provide the scale of reductions needed to tackle climate change. It is also being observed that the structure of the CDM is not capable of matching up to the large number of projects in the pipeline originating in different countries. The CDM has also been unable to meet expectations with respect to promoting sustainable development and transferring technologies from developed to developing countries. These and other factors, such as project delays, excessive bureaucratic procedures, issues of windfall profits and the suspension of Designated Operational Entities (DOE), have led to the rethinking on the best way forward for enhanced mitigation in developing countries. A range of proposals for this have been proposed by the negotiating parties as well as by various research organizations. They include, but may not be limited to:

1. **Reforming the CDM**
2. **Expansion of the CDM scope**
3. **Programmatic CDM**
4. **Sectoral CDM**
5. **Credited NAMAs**

Answering the question “*What next?*” is a complicated and intertwined task. In general, there is a lack of consensus on what the central mechanism to upscale mitigation in developing countries should be. The first three options listed above try to answer how the CDM will operate in the future while continuing to improve its existing operational structure. The last two options are witnessing heated debates with varied views. Both of the latter would possibly need a new implementation mechanism. Unlike developed countries, the sectoral

approach has found little acceptance in developing countries (Oliver and Ellermann, 2010). NAMA is more widely accepted, but the question of its institutionalization remains.

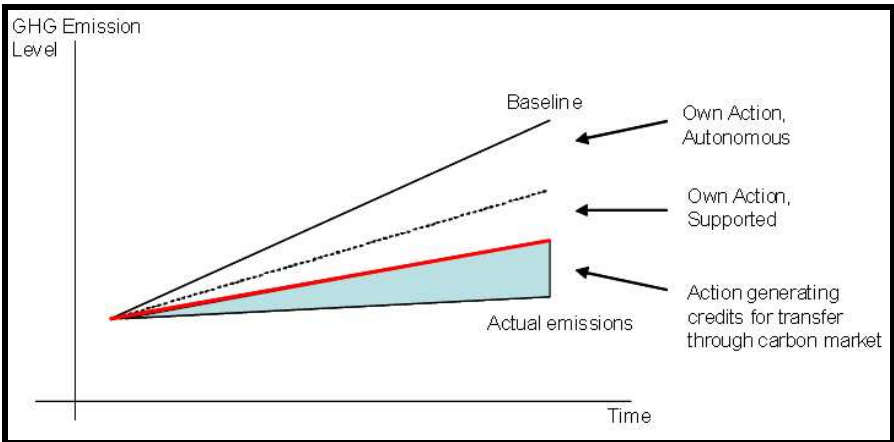
It has also been argued that preparing sectoral NAMAs is the way forward for a sectoral approach in developing countries, and that sectoral crediting will become more important in the immediate post-2012 period (Helme *et al.* 2010). However, in the run up to the COP 15, India maintained its opposition to sectoral crediting, both as part of NAMAs and otherwise, as it felt they are in contravention of the principles of the UNFCCC and that it aims to put commitments on developing countries (MoEF 2009). This difference in perception makes it imperative that the question of how sectoral approaches or any other future carbon market mechanisms are to be treated within NAMAs – if they are to be at all – is also addressed.

The Cancun Agreements (Decision 1/CP.16), under paragraph 80 “*decided to consider the establishment...of one or more market based mechanisms to enhance the cost-effectiveness of, and to promote, mitigation actions*” (UNFCCC 2010) and thus paved way for considering NMBMs. A set of considerations have also been taken into account while suggesting the establishment of these mechanisms. In response hereto, a number of parties submitted their views on the elaboration of market-based mechanisms. Crediting and trading have been proposed as the two possible bases for NMBMs. Submissions from the AI parties, in general, referred to sectoral approaches as a way forward for emerging economies. NAI countries submissions are mixed in nature – a few even expressing their opposition to any NMBMs. No substantive discussion on NMBMs has been undertaken within the negotiations post COP16.

2.3 Integrating NAMAs and Carbon markets: Setting the context

Both NAMAs and NMBMs are still under a state of flux. The discussion and implementation of NAMAs is at a relatively much advanced stage compared to NMBMs. Unlike NAMAs, there is no framework on what type of NMBMs will exist in future. C-NAMA has been proposed as one of the NMBMs. It brings the discussion on NAMAs and carbon market to a common reference point. The European Commission has thereby proposed a structure for C-NAMAs to operate under (Figure 2.1).

Fig. 2.1 Developing country emissions



Source: European Commission 2009.

As per this structure, the NAI countries will take certain mitigation measures as per their own capabilities (autonomous). Any action beyond this level will receive support. If these supported actions reduce emissions beyond the agreed targets then they can be issued carbon credits. These carbon credits can be sold to get additional support. The proposal has so far received mixed responses.

Establishing the respective modalities and procedures for C-NAMAs or any other NMBM will take time. It is safe to say that it will not be possible to have a NMBM operational in the short term. The role of carbon markets to support NAMAs therefore will only come into being in the medium to long term time horizon only. It has also been pointed out that NAMAs can have far greater mitigation potential than the CDM and also seem to be reaching countries that have not benefitted from the CDM (Wang-Helmreich *et al.* 2011). On the surface, NAMAs are better placed to address the challenge faced on the time as well as the geographical dimensions compared to the CDM. The following section explains why certain themes were selected to guide this study.

3 Defining the study themes

3.1 Objectives of NAMAs

The ultimate objective of the Convention as defined in its Article 2 is to “*achieve ... stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system*”. Article 12 of the Kyoto Protocol defines the purpose of the CDM as a means to assist NAI parties in “*achieving sustainable development and in contributing to the ultimate objective of the Convention.*” In addition it is intended to assist AI parties in achieving “*compliance with their quantified emission limitation and reduction commitments*” as defined under Article 3 of the Kyoto Protocol. Based on the text one can identify three objectives for the CDM; a) assisting NAI to achieve sustainable development b) contributing to the ultimate objective of the Convention which is to stabilize “*greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system*” and c) assisting AI in complying with their emission reduction commitments.

By providing Certified Emission Reductions (CERs) at a cheaper price, the CDM is, to a greater extent, meeting its second and third objectives. However, the sustainability aspect of these offsets is often questioned, primarily due to a large number of CERs being issued to industrial gas projects that are not seen as additional.⁴ Sustainability, unlike emission reductions, is difficult to quantify particularly because it is local in nature and the defining characteristics of sustainability are not internationally agreed upon. It is difficult for investors and businesses to incorporate the sustainability dimension into their balance sheets whereas the emission reduction aspect is relatively easier to grasp. It should therefore come as no surprise that the projects with large sustainable development and higher abatement costs fail to attract market investors (Sterk, 2010). This mismatch in the dual objectives of sustainable development and emission reduction is the *prima facie* reason which has led to the imbalance that CDM is currently grappling with.

Paragraph 1(b) of the BAP refers to “*enhanced ... mitigation.*” Paragraph 1(b)(ii) further contextualizes NAMAs “*in the context of sustainable development.*” The text implies that the prime objectives of NAMAs should be to achieve greater emission reductions (*enhanced mitigation*) and mainstream sustainable development (*in [the] context of sustainable development*). Enhancing collaboration by means of support and promoting transparency by means of MRV are also important elements.

Sustainable Development has been defined as too amorphous to be clearly defined and as facing problems in finding political entry point (Drexhage and Murphy, 2010). Although, CDM has provided market players and decision-makers with an enlightening view into promoting sustainable development, a basic principle for incorporating sustainable development into market mechanisms still eludes researchers and market players alike. In the absence of such a guiding principle – one which encapsulates country context variations – sustainable

⁴ I.e. they would have happened anyways and do not need support.

development cannot seem to be objectively incorporated into NAMAs. No doubt that it provides each country the flexibility to come up with its own definition of sustainable development – a much easier task – but it will also lead to an incoherent and chaotic definition of sustainable development. Such a divergence has often been witnessed regarding the sustainability of options such as nuclear power and carbon capture and storage. This dilemma forms the basis for selecting this topic as a research theme.

3.2 Enhancing mitigation by NAMAs

To limit the global temperature rise to 2°C or less in the 21st century the global emission level needs to peak before 2020 at an emission level of approximately 44 gigatonnes of carbon dioxide equivalent (GtCO₂e). The BaU scenarios based on the Copenhagen Accord Pledges could possibly reach 56 GtCO₂e in 2020, but if stringent actions are taken then it is possible to bring the emissions in 2020 to 49 GtCO₂e (UNEP 2010). The emission reduction pledges after the Cancun climate conference continue to fall short of keeping the temperature increase below 2°C. Further, the emissions are at an historic high despite the recent financial crisis, primarily because of a slow increase in energy efficiency in countries and/or due to slow decarbonisation trend (Höhne *et al.* 2011). Clearly the world needs to get ready for steeper emission cuts post 2020.

CDM has been instrumental in spreading awareness about climate change and mitigation in developing countries. A total of 134,285 million US\$ has been invested in registered CDM projects till date. A major chunk of this investment has gone to wind (35.8%), hydro (29.3%) and fossil fuel switch (8.4%) projects. On a country basis China (68.5%), India (15.8%) and Latin America as a whole (7.2%) have been successful in attracting investments (CD4CDM 2011). More than three quarters of the registered projects originate in China, India, Brazil and Mexico.

Whether NAMAs will be able to scale up mitigation efforts or not will depend on the level of support made available and the type of collaboration established between AI and NAI countries. The BAP mentions “NAMAs ... supported and enabled by technology, financing and capacity-building” while also emphasising the Measurable, Reportable, Verifiable (MRV) aspect. The support can be provided up-front or it could be linked to the performance of a NAMA (post-implementation) (Jung *et al.* 2010a). Some studies have been conducted in the past (Levina and Helme 2009; KPMG 2010) that study different aspects of NAMA financing. Sterk (2010a) also delves on the technology transfer aspects related to NAMAs. Clarity on linking support with the action will be important to avoid overlap with development aid. Although crucial, there is lack of agreement on how NAMAs can be supported. This section has therefore been selected to identify the bottle necks to reach the agreement in this regard.

3.3 NAMAs and Carbon markets

NAMAs are increasingly gaining ground as the means to enhance collaboration between AI and NAI countries for enhancing mitigation in NAI countries. They have also gained greater support in NAI countries. India and China though, are of the opinion that an action can be categorized as a NAMA if it receives support that is “new, additional, adequate, predictable and sustained”. Van Asselt *et al.* (2010) in a review of this argument, points towards NAMAs

being referred to as “enhanced” actions by India, thus excluding unilateral actions. This positioning limits the ambit of NAMAs to supported and C-NAMAs only. Further, China and India have maintained that NAMAs cannot lead to crediting.⁵ Brazil has also been reported to be opposing the crediting of NAMAs. Nevertheless not all developing countries share this view and some countries, including South Africa and South Korea are conditionally open to NAMA crediting.

It is often argued that larger developing countries should now go beyond the CDM to NMBMs so that mitigation can be enhanced in these countries while also giving space for other NAI countries to get greater access to the CDM. The majority of submissions on NMBMs refer to the concept of sectoral crediting/trading. C-NAMAs as a concept has found backing from countries such as South Korea, South Africa and Indonesia but has failed to strike a chord with other large developing countries (Sterk 2010a). As outlined above, even if the applicability of C-NAMAs is kept limited to the big players in CDM (i.e. EU from demand side and China, India and Brazil from supply side), differences exist in how NAMAs can be categorized. Van Asselt *et al.* (2010) in their study also point out that whether NAMAs can be credited or not needs to be studied in much detail. NAMAs also garner greater traction in these countries and it might be worthwhile to study the possibility of matching NAMAs with carbon markets.

Recent studies indicate that NAMAs are finding ground in countries that could not benefit much from the CDM (Wang-Helmreich *et al.* 2011). The sixteen NAMAs that have been analyzed have been found in countries other than India and China. The transport and building sectors combined account for five of the sixteen NAMAs. The study, while acknowledging that these NAMAs were at early stage of development, compares their spread with the current spread of the CDM project activities and suggests that NAMAs can reach new countries and all sectors. These are encouraging signs and it would be worth revisiting the landscape to see how the distribution of NAMAs fares once major developing countries engage herein. Whether NAMAs can address issues such as these will define its attractiveness to carbon market investors. It is for these reasons that this theme has been identified for further research.

3.4 Credited NAMAs and their interaction with existing institutions

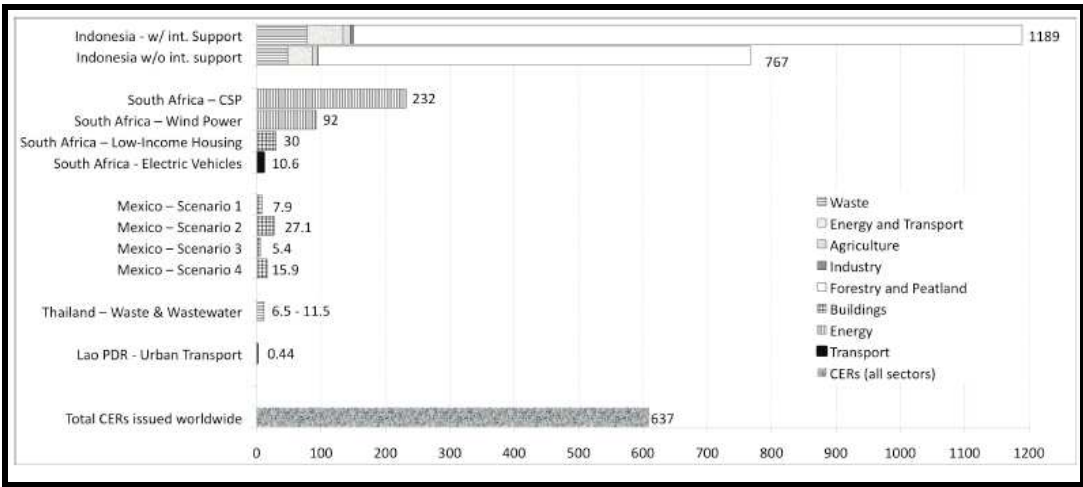
North (1990) argues that institutions can be deliberately created or they may simply evolve over time. Their evolution, though, is motivated by the need to solve the problems faced due to human interaction with previous institutions. As institutions do not work in isolation, no new institution should lead to conflicts with the requirements of existing institutions. Further, past institutions have influenced current institutions and the latter will go on to influence institutions of the future. Thus in the context of NAMAs, changes in one institution will therefore change the path followed by future institutions.

NAMAs will be country dependent. National institutions will therefore play an important role in defining and implementing NAMAs. Despite the strong national appropriateness aspect of

⁵ Based on author’s interaction with Indian and Chinese negotiators.

NAMAs, it cannot be ignored that they have come into being to address a global problem, and that they would be influenced by international developments also. This influence may – depending on the size of the NAMA – be a two way interaction. Especially if the NAMA under consideration is a C-NAMA as it will have interactions not only with the mitigation efforts needed elsewhere but, also with how much finance is left available for other NAMAs and its influence on the price of carbon. One NAMA alone may not be large enough to influence so many different aspects. However, provided that a handful of NAMAs may lead to greater emission reductions by 2020 than the CERs issued to date (Figure 3.1), it is important that this possibility is not ignored.

Fig. 3.1: Estimated Cumulative Absolute Emission Reductions from NAMAs until 2020 and Total Cumulative CERs Issued Worldwide until June 2011 (in Mt CO₂-eq.)⁶



Source: Wang-Helmreich *et al.* 2011.

From a market perspective, the interaction of NAMAs with other domestic and international policies has also been identified as a contentious issue in the past (Pahuja and Linnér 2010). Sterk (2010a) has further delved into the question of boundaries and overlap with respect to C-NAMAs and the CDM, and suggests examining specific cases of NAMAs to identify compatibility or interference with carbon markets. Assuming that NAMAs can be credited, the next question to be addressed is whether these credits would be used to meet developed country targets or the voluntary in-house targets of developing countries (Upadhyaya 2010).

Furthermore, a central body – in addition to national level bodies – that acts as a common reference point for all C-NAMAs and provides oversight will be useful. The CDM-EB played that role for the CDM. It is possible that CDM-EB can play the same role for C-NAMAs; but the question is whether the CDM-EB has the capacity to perform such an additional task? This section will therefore deal with the question of co-existence and the lessons that the CDM provides for NMBMs.

⁶ The Mexican NAMA proposes four different scenarios of the same activity. It involves boosting existing support programmes that provide subsidies for energy efficiency measures in low-income housing and credit lines for new houses that use sustainable and energy efficient technologies. The various scenarios involve options such as including more houses, technology up-scaling or a combination of the options available.

3.5 NAMAs in national context

National government involvement in the CDM was determined by how the role of the DNA was defined. A strong DNA would set the tone to take up stronger mitigation actions, whereas a non-interfering DNA may allow companies to decide on the kind of actions they want to propose for claiming CERs. Overall, the framework for companies to design and define their CDM project activities is provided by the host nation DNA. Similarly, the sustainable development of a country is defined by the DNA. A project failing to meet the sustainable development indicators of a country may not obtain the host nation's approval. The emission reductions achieved by the project activity – i.e. the other objective of the CDM – is decided by the CDM-EB at an international level. The performance of the CDM regarding these sustainable development prerogatives, as discussed previously, is seen to be subjective. Anything decided upon at the national level may or may not meet international expectations.

The term *national appropriateness* has been used extensively in the climate change discussions after COP13. Although it is possible to define what national appropriateness implies, it is not possible to reach common national appropriateness metrics for different countries. As an analogy, the term serves as a prism between countries and the actions that are needed from them to tackle climate change. The prism serves as a context that allows countries to look, interpret and communicate the actions that can be taken by each without affecting the national prerogative.

The term is useful at the national level as it takes into account equity concerns and the respective capabilities of countries, and complies with the principle of Common but Differentiated Responsibilities (CBDR). At an abstract level, it sets out the boundaries of the climate change debate and its implications at the national level, giving countries the space to define what they can contribute. It also makes countries define national solutions to a global problem. Therefore, it is important to define ambitious national solutions and also to understand what the term *appropriateness* entails and what its relevance is in the national context.

Different countries will have their respective definition of what is implied by national appropriateness. It is thus expected that no common appropriateness metric will be agreed upon. Further, there can be only one single definition of a country's *national appropriateness*, which will be defined by the country itself. There should be little objection to such a proposition, but is it still possible to meet some sort of *global appropriateness* in the context of climate change? Would the carbon market be flexible enough to take into account different nationally appropriate contexts and provide a common governance structure and uniform quality benchmarks to all? It is these issues which informed interactions with stakeholders in this study.

In the next section the outcomes of these engagements are outlined.

4 Results of the expert interviews

4.1 Objectives of NAMAs

A standard definition of NAMAs is still to be agreed upon. The primary objective of NAMAs is often identified as mitigation but there is no formal agreement on this. Part of the reasoning is that building national appropriateness into NAMAs understandably involves a varied approach from country to country. This lack of coherency in NAMA design also explains why it is often difficult to have a global objective for NAMAs which can satisfy different national contexts. The NAMAs submitted to the UNFCCC by a number of NAI countries have therefore been varied in nature. Nevertheless, to understand the relative impact of one NAMA with respect to another, particularly from a market perspective (and in terms of both emission reductions and sustainable development achieved), a common reference point – in terms of the impact made – would be needed.

The agreed definition of NAMAs will also influence the expectations of the stakeholders from the NAMAs. NAMAs are expected to contribute towards mitigation, but they cannot be seen as independent of a developing country's national priorities. Very frequently these priorities are related to issues such as energy access, poverty alleviation and economic growth. The questions that immediately follows is which objective should have priority or how to ensure that multiple objectives are achieved simultaneously. As has been discussed earlier, the unquantifiable objective, i.e. the sustainability aspect, is prone to subjectivity and addressing it "...objectively is the biggest challenge..."⁷ for NAMAs. Without resolving this issue there is a "...higher risk that crediting NAMAs may replicate the problems of the CDM..." in terms of resolving sustainability.

Guiding questions: What should be the guiding objective for NAMAs? How can sustainability be objectively incorporated within NAMAs?

4.1.1 Perception of respondents⁸

The following section highlights the most frequently proposed views of respondents in relation to the objectives and sustainability aspects of NAMAs.

1. Mitigation as a key benefit of NAMAs and not only as a co-benefit

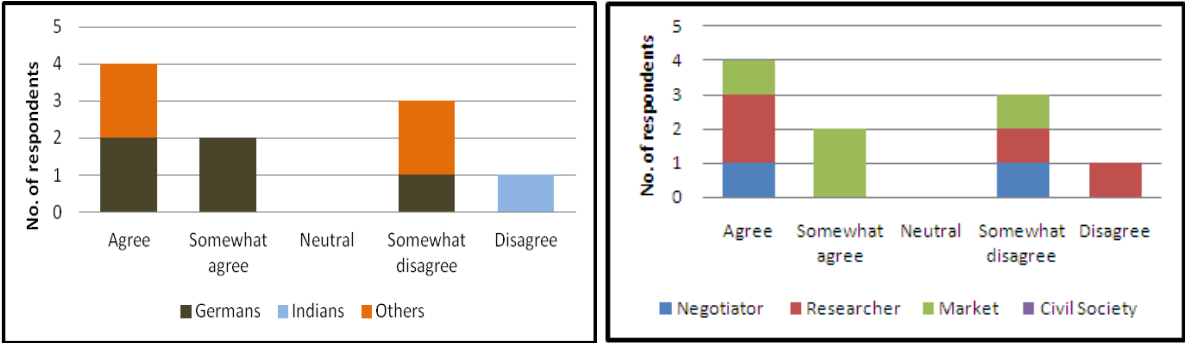
Having mitigation as a key benefit and not as a co-benefit gives a mixed picture as depicted in Figure 4.1.a. Most German respondents felt that mitigation should be the key benefit from

⁷ The text in quotation marks ("...") in section 4 and 5 denotes direct quotes made by the respondents. The quotes have not been referenced to specific persons so as to maintain anonymity.

⁸ Respondents here do not refer to all the interviewees but to the interviewees who echoed the particular line of thought. For example: in analysis of Figure 3b the term 'respondents' refers to those interviewees who, while discussing the theme on objectives of NAMAs, put forward their views on incorporating sustainable development objectively in NAMAs.

NAMAs whereas the only Indian who responded to this statement strongly disagrees with such a proposition. The other country respondents are somewhere in between. Factors such as sustainable development, national developmental objectives and poverty reduction, which have strong national context attached to them, are frequently referred to as the key benefit instead of mitigation. An even more fragmented distribution is witnessed from stakeholder perspectives.

Fig. 4.1.a Mitigation should be key benefit of NAMAs and not co-benefit



Country perception

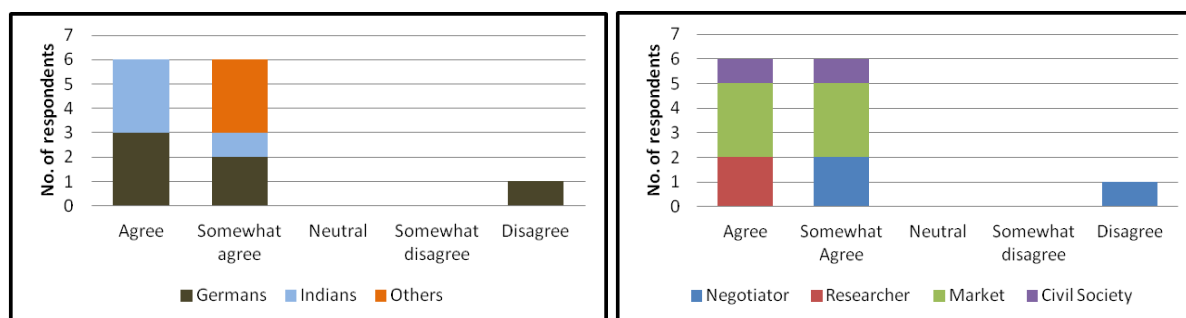
Stakeholder perception

Mitigation is seen as more important than the sustainable development aspect of NAMAs from an AI perspective. Even if a NAMA only builds institutional and technical capacity in the short term, mitigation is strongly expected in the medium to long term. It is hoped that NAMAs will be a “...transformative mechanism...” in the long term. Achieving this is possible, provided there is a greater “...focus on [the] long term reduction in emission abatement cost instead of reduction achieved per unit of money...” On the other hand having a narrow focus on mitigation “may not lead to Low Carbon Development” as the development part may get neglected. From an investor’s perspective, knowing if a NAMA will lead to enhanced mitigation or not is crucial but other respondents think that “...starting the discussion with emission reductions as the primary benefit and national benefits as the secondary benefit will work only to a limited extent...”

2. Sustainable Development should be incorporated objectively in NAMAs

Incorporating sustainable development within NAMAs is a view agreed upon by a number of respondents as shown in Figure 4.1.b. From country perspective majority of the Indian respondents agree to this viewpoint, the German responses are more spread out but overall the disagreement is minor in this case. Also a greater percentage of Indians shared their view on this topic which may imply that they see it important to bring sustainability aspect into NAMAs. From researchers perspective it is important but it is the market players who are far more supportive of sustainable development being objectively incorporated within NAMAs. A greater percentage of negotiators presented views on this aspect.

Fig. 4.I.b Sustainable Development should be incorporated objectively in NAMAs



Country perception

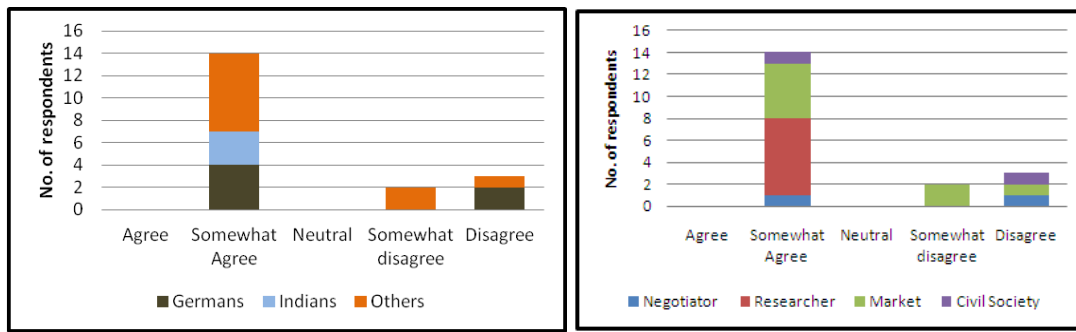
Stakeholder perception

While acknowledging that it is probably very difficult to agree on a global definition of what constitutes sustainable development, a sizeable chunk of respondents were of the view that it should nevertheless be incorporated objectively in NAMAs. The market respondents' greater enthusiasm to incorporate sustainable development objectively in market may reflect the complexities they face in dealing with the same under the CDM. Some of the respondents do hold the opinion of not putting too much focus on sustainable development for the fear of diluting the emission reduction focus. It was suggested that if the "...lobby groups have less influence..." in the process then it will not be necessary to incorporate sustainable development objectively in NAMAs. "...Offsets [be provided] only for projects with high sustainable development..." are also seen as the way forward.

3. Possible to define Sustainable Development criteria/metrics

When further probed about the possibility to define a criteria/metrics to measure Sustainable Development, the number of respondents increased but the responses were more circumspect. Defining a criteria or a set of metrics for NAMAs, as shown in Figure 4.I.c is somewhat agreeable by a large number of respondents, half of which are from countries other than India and Germany. Indian respondents share same sentiment whereas the German respondents are somewhat divided in their responses. Interestingly, all the researchers making this statement agree to its possibility with conditions. The market respondents have mixed sentiment on the topic. A certain degree of resignation is palpable and a small section of all stakeholders (sans researchers) do not think that it is possible to agree on any such criteria. It can be inferred that, in general, there is a cautious optimism about possibility to define sustainable development criteria/matrix, especially amongst researchers.

Fig. 4.1.c Possible to define Sustainable Development criteria/metrics



Country perception

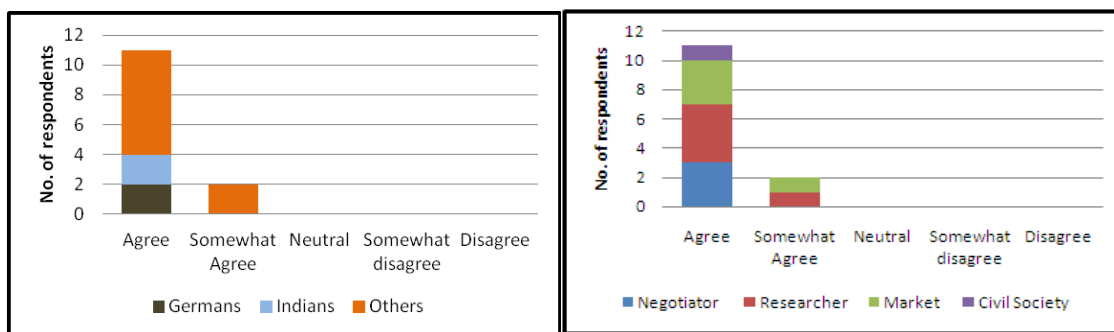
Stakeholder perception

Agreement on what should define sustainable development on a global level is difficult as it is context specific and subjective in nature. Agreeing on a broad definition or set of criterion has proved elusive till date. Two measures have been pointed in this regard: "...a) Output based approach [(based on impact of the project) and] b) Input based approach [(based on support provided to the project)]..." Another way suggested is to enhance capacities of Designated National Agencies (DNAs) to define and measure respective Sustainable Development. It is "...somewhat difficult to ensure..." that all reductions lead to sustainable development. Reaching a breakthrough to make sustainable development operational in NAMAs can be a "...tricky..." endeavour but if such a breakthrough is achieved then sustainable development may very well be able to "...act as the gelling agent for finance and benefits..."

4. NAMA objective should be country dependent

Having country specific objectives garners high agreement and invokes greater response from non-Indian, non-German participants in Figure 4.1.d. The negotiators strongly believe in such an approach. Both market and research group also share the same perspective on having country specific objectives. It can be easily inferred that there is a high agreement on national circumstances being crucial for defining objective for NAMAs.

Fig. 4.1.d NAMA objective should be country dependent



Country perception

Stakeholder perception

Defining NAMA objectives is seen as a "...host nation prerogative..." NAMAs need to fit in with the development priority of the country. Should these objectives be defined separately for each NAMA or should be defined once for all NAMAs though needs to be seen.

4.1.2 Other key points⁹

Relation with LCDS:

Linking NAMAs with Low Carbon Development Strategy (LCDS) of a country is seen important. The LCDS are seen as providing guiding objectives to NAMAs which will act as the “...implementation arm...” to achieve those objectives. Sustainable Development of a country can be defined by the LCDS so that all the different NAMAs being proposed by a country refer to the same definition of sustainable development. The task is not easy but it will be “...beneficial to align NAMAs...” to the country’s development plan and its sustainable development priorities.

NAMAs and Millennium Development Goals (MDGs):

As NAMAs can be cross cutting across various sectors so it is important that they do not have conflicts with other environmental goals. “...Reconciliation of NAMAs with MDGs...” is seen as important to avoid future complexities that may come into being while implementing NAMAs. National Governments are expected to play a crucial role to achieve the same. At the minimum it is hoped that the NAMAs should not harm sustainable development. Nevertheless, it is cautioned that putting too many requirements on NAMAs may hamper their development.

Achieving sustainable development problematic while reducing emissions:

It is hoped that NAMAs will provide a better way of addressing sustainable development requirements at design, implementation and outcome phase of activities aimed at emission reductions. Some of the respondents do not see any problem in achieving sustainable development for unsupported and supported NAMAs as they do not involve transfer of GHG reductions. For C-NAMAs, the opinion is very much in formative phase. There is a fear that the problems faced by the CDM may get extrapolated in C-NAMAs as the size of the measures to be undertaken is much larger. The profit orientation of private players makes it difficult to factor sustainable development aspect in the investment decisions. Nevertheless, some pockets of the market do see sustainable development acting as selling agent between for finance and benefits to reach the NAMAs.

4.2 Enhancing mitigation by NAMAs

NAMAs provide opportunity to go beyond project by project basis to a more sustainable and long term strategy for enhancing mitigation in developing countries and paving way for greater collaboration. BAP envisages support in terms of technology, finance and capacity building. Ambitiousness of NAMAs and the support available is a two way street. A greater collaboration can be reached provided “...stronger incentives on both sides exist...”

⁹ The other key point section(s) refers to a perspective that was neither one off, nor is shared by a larger number of respondents to possibly reach a conclusion. These views should not be seen as reflecting a largely held view/notion. This sub-section is an attempt to bring the fringe points in front of the reader so as to get a bigger picture of the discussion on various study themes.

Guiding questions: How effective can NAMAs be to enhance mitigation? What is the best way in which NAMAs serve as a platform for greater collaboration between developed and developing countries? How can NAMAs help create conditions conducive for developing countries to go beyond offset based regimes?

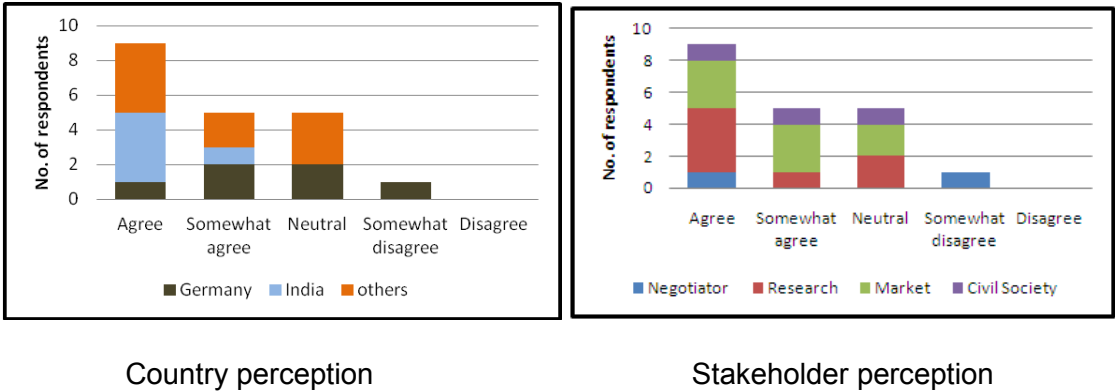
4.2.1 Perception of respondents

The following section highlights the views of respondents on various aspects of NAMAs mitigation potential and means of support available.

1. NAMAs will be more effective tool to enhance mitigation than CDM

The respondents were optimistic of NAMAs leading to enhanced mitigation as shown in Figure 4.II.a. Majority of Indian respondents share this view with a greater agreement whereas responses from the German respondents are spread. Respondents from other countries are also positive towards the mitigation potential of NAMAs. The disagreement over the proposition is not strong. Although a greater number of market respondents expressed their views on this proposition but the researchers have greater trust in effectiveness of NAMAs.

Fig. 4.II.a NAMAs will be more effective tool to enhance mitigation than CDM



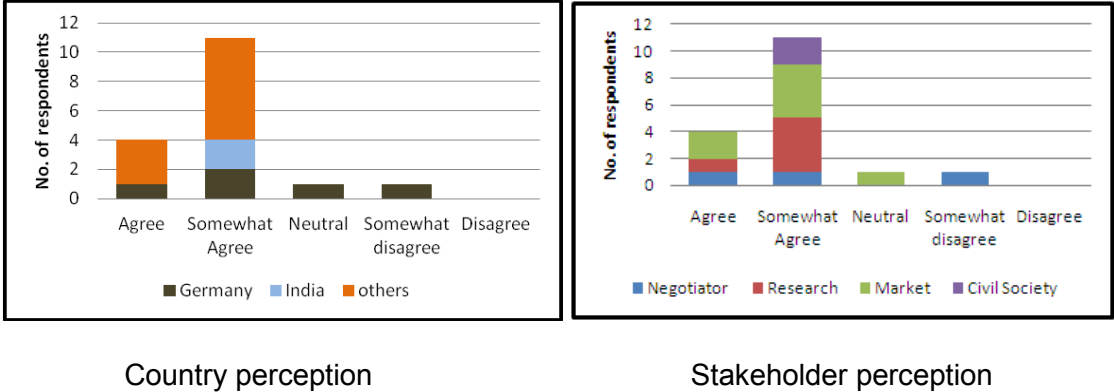
The expectations are not only in terms of enhanced mitigation but also to “...create capacity, develop institutions and increase efficiency...” Although effectiveness is NAMA specific but the support (both how and who) is also seen as one of the important factor to influence the efficacy of NAMAs. Domestic policy environment is also seen as a contributing factor. NAMAs are seen as having potential to enhance mitigation by: “...a) providing recognition to NAI actions; b) increasing avenues for technology transfer and funding; and c) shifting the focus towards investment based regimes...” Some of the experts though think that the state of current negotiations on NAMAs is not advanced enough to reach any conclusive statement on efficacy of NAMAs.

2. NAMAs can enhance financial collaboration between AI and NAI countries

Respondents felt that NAMAs can enhance greater financial collaboration amongst AI and NAI countries. The responses from German respondents were mixed. A large number of respondents from other countries shared this viewpoint. Market respondents and researchers were most optimistic about efficacy of NAMAs to enhance financial collaboration. On a

whole, there is little, if any, disagreement on this point. The agreement to the proposition however, in a strong majority of cases depends on certain conditions/constraints as shown in Figure 4.II.b.

Fig. 4.II.b NAMAs can enhance financial collaboration between AI and NAI countries

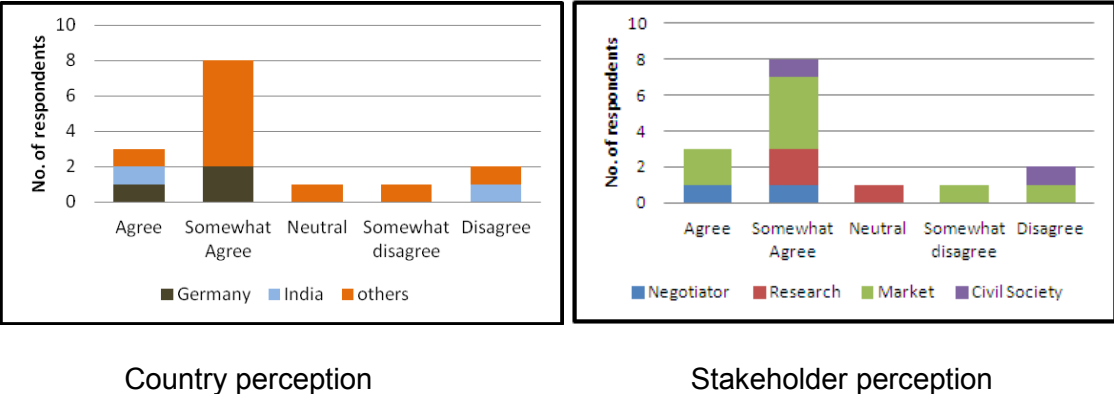


Financial collaboration is seen as “...counter piece...” to commitment of NAI countries to NAMAs. Private sector financing is seen as important but investment from carbon markets is expected only from middle to long term. Two reasons can be identified for limiting role of carbon market in NAMA financing. Firstly, market players do not foresee a “...great role...” for themselves in the current NAMA discussion. Secondly, there is a “...mismatch between when the finance is needed and when it will made available...” by means of carbon markets.

3. NAMAs can enhance technical collaboration between AI and NAI countries

Although the greater response continues to be of conditional agreement, the response though as shown in Figure 4.II.c, is much more spread out than compared to financial collaboration. There is a certain level of disagreement regarding the preposition expressed by experts who have been following the technology debate. German respondents – though few – are more sanguine about technical collaboration than their Indian counterparts. Respondents from other countries somewhat agreed to this aspect but some of them had concerns. Negotiators are surer about technical collaboration than the civil society on this preposition. Researchers are cautiously optimistic but it is the market respondents who have been most vocal and most optimistic on this point.

Fig. 4.II.c NAMAs can enhance technical collaboration between AI and NAI countries

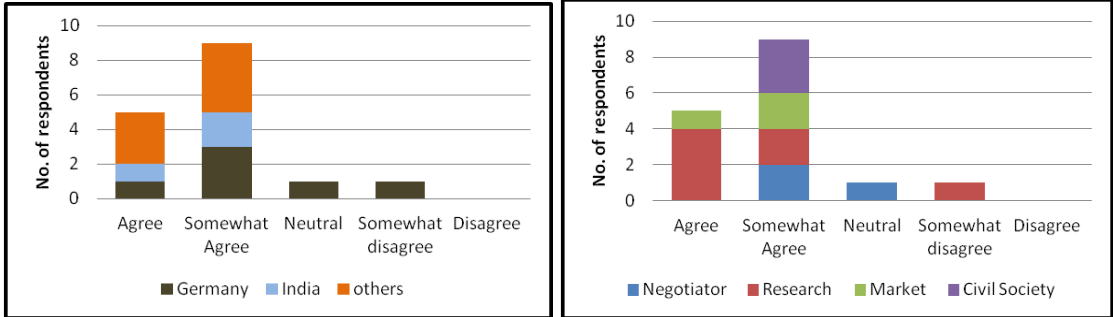


Technological collaboration is also expected to be enhanced by means of NAMAs. The views however, are far more spread than compared to financial collaboration. Respondents identified two key issues that inhibit technical collaboration: a) "...Cost of patents and related issue..." of ensuring supplier and implementer's sovereignty; and b) lack of agreement on "...definition of technology transfer..." Nevertheless very few respondents agreed with these points. Interestingly some technology expert in the sample size felt that financial collaboration is relatively easier to achieve whereas the financial expert express contrary thoughts.

4. NAMAs can take NAI beyond offset based regimes

Possibility of NAMAs taking NAI countries beyond the current offset based regime garnered positive responses in Figure 4.II.d. Lot of the responses though were conditional. Only one German respondent expressed her disagreement about the same. Researchers strongly felt that NAMAs could take NAI beyond offsets. Civil society and market players maintained cautious optimism about the same.

Fig. 4.II.d NAMAs can take NAI beyond offset based regimes



Country perception

Stakeholder perception

It was suggested that NAMAs can take the NAI countries beyond offset based regimes provided they do not lead to offsets. A number of respondents, particularly researchers, "...do not see NAMAs leading to offsets..." A clear line of distinction between offsets being transferable and NAMAs not being transferable is seen by some respondents. Supported NAMAs are surely seen as step forward because "...they will not create any offsets..." Some respondents felt that some role for the offsets will remain and can be accepted "...provided they can avoid carbon intensive lock in..." For others how MRV and double counting are dealt with will decide if NAMAs can take NAI beyond offsets or not.

4.2.2 Other key points

Collaboration country and design specific

The national conditions of NAI countries were identified as the most crucial factor in influencing the collaboration. Design aspects are also expected to play an important role but as the "...design aspects are still modifiable..." to a certain extent, therefore the national circumstances hold far more importance from market perspectives. Although the countries with strong economic factors will attract the market, but for investors the "...countries that have climate change at top of their agenda..." (For ex: those involved in Cartagena dialogue) are preferable for collaboration.

Difficult to incentivise private players without offsets

The private sector respondents rue the lack of clear signals about their role in implementation of NAMAs. It was pointed out that there is “...not enough clarity...” on what can be the alternative for private sector engagement outside the offset based arrangements. Many respondents felt that it will be “...difficult to incentivise private sector without the offsets...” but opening up of a new market might provide an incentive for private sector participation. Using “...public finance as a catalyst...” for private finance has been suggested. The market though is expected to play a greater role from middle to long term, once the effectiveness of NAMAs has been established.

Collaboration dependent on how support is provided

Although NAMAs are seen as more effective for collaboration than the CDM, yet how the support is provided will be equally important. How the key players decide to fund a NAMA will impact the performance of the NAMAs. Need for a criteria or guideline which establishes a link between the finance and action is also recognized.

Need for NMBM

Some of the respondents felt that it is better to have only two types of NAMAs: unsupported and supported. This view was particularly strong amongst respondents from NAI. It was indicated that having C-NAMAs in place can divert the money available to a selective set of NAMAs that are capable of generating offsets. Further, the current targets of AI countries are not seen as serving the case for a NMBM as the CDM itself is expected to meet the offset demand.

4.3 NAMAs and Carbon markets

CDM had no reference point for guidance on how to internalize environmental externality in developing countries. Still CDM has been successful in showcasing that even developing countries can contribute to mitigation measures. NMBMs will do good to learn from how CDM has operated. Based on these learning, attempts have been made to conceptualize the relationship between NAMAs and carbon market– atleast in theory – by means of C-NAMAs. On a practical basis though, it remains unclear (Sterk 2010a). Various factors need to be taken into account to ensure that C-NAMAs do not face the problems faced by the CDM.

Guiding questions: Are carbon markets compatible with NAMAs? What parameters can define compatibility of carbon market with NAMAs? What are the problems/opportunities for credited NAMAs and their linking to existing carbon markets? Why there is difference in different countries views against/for crediting NAMAs?

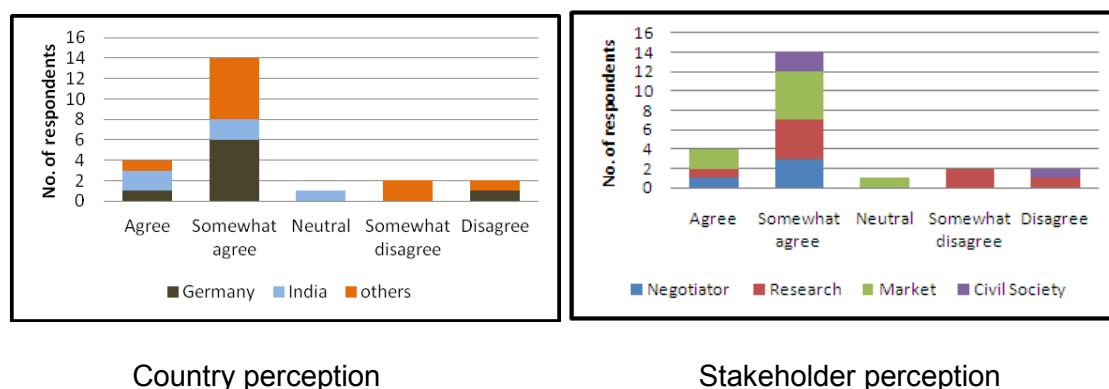
4.3.1 Perception of respondents

Respondent views on compatibility of NAMAs with carbon markets and the factors defining this compatibility is the focus of this section.

I. NAMAs can be compatible with carbon markets

A large number of respondents felt comfortable expressing their views on compatibility of NAMAs with carbon markets (Figure 4.III.a). Most of these respondents felt that compatibility can be achieved provided certain conditions are met. This sentiment is equally strong in respondents from Germany and other country respondents. Though the sample size of Indian respondents was small, still most of them also do not see any reason for disagreement on this point. But this agreement is not unconditional and certain parameters need to be met before NAMAs can be made compatible with carbon markets. From a stakeholder perspective, market players and negotiators are comfortable with compatibility of NAMAs and carbon markets. Researchers and civil society are still cautious about the same.

Fig. 4.III.a NAMAs can be compatible with carbon markets



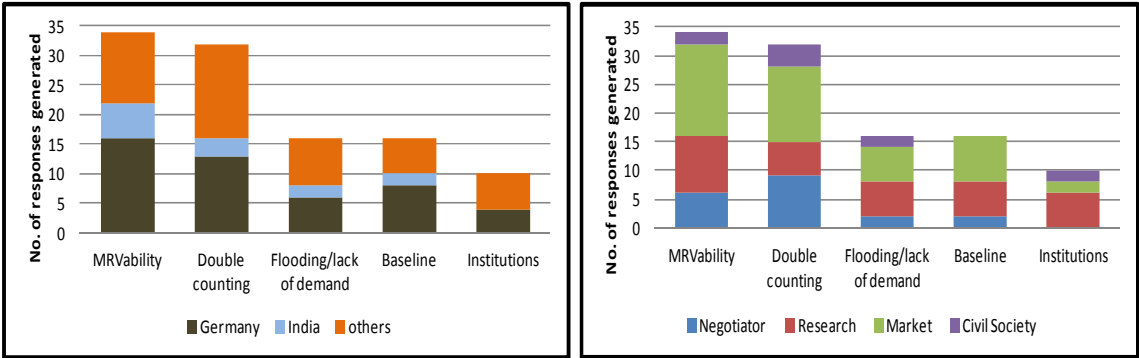
Compatibility of NAMAs with carbon markets is seen as contingent on a number of factors and conditions. “...Not all the NAMAs...” are seen as satisfying the needs of carbon market. The compatibility of a NAMA is seen inversely proportional on the “...uncertainty level of the data...” made available by a NAMA. Establishing a “...uniform MRV system...” and addressing the “...double counting...” will definitely go a long way to establish the compatibility. “...Inter-related factors...” such as high emission reduction targets, cutting the host country’s emissions and providing a competitive price for C-NAMAs are also seen as secondary factors defining the compatibility. There is a greater consensus that rules need to be defined clearly from the very beginning to facilitate the abovementioned interaction.

2. Parameters key to NAMAs compatibility with carbon markets

Respondents were further asked to list up to three parameters that should be addressed to ensure that NAMAs are compatible with carbon markets. A total of 69 responses were received across eight such factors. The top five of these factors have been provided in Figure 4.III.b below. Amenability to MRV and risk of double counting received a total of 35 responses (i.e. more than 50%). Lack of demand, possibility of flooding due to a supply surplus, baseline definition and additionality are also seen as important factors. For the German and Indian respondents, MRVability comes across as the most important factor. From a stakeholder perspective, it becomes clear that for market players MRVability and double counting are the two major factors, as is reflected below. For representatives of the research community, MRVability ranks high among the various concerns, but views are spread more widely across different factors and therefore it is more difficult to pinpoint which factor is of utmost importance to them. For negotiators and civil society, finally, double counting is again the key.

The other three factors that the respondents pointed to were the possibility of flooding the market because of oversupply of credits, baseline definition and institutions. Among negotiators, however, these were not perceived as areas of concern. At least one respondent felt that flooding was not a concern at all from an economic perspective.

Fig. 4.III.b Parameters key to NAMAs compatibility with Carbon markets¹⁰



Country perception

Stakeholder perception

As is evident from Figure 4.III.b, MRVability and double counting are the two most important parameters that define compatibility of NAMAs with carbon markets. Although MRVability might be different for different countries, the openness of the implementing government in maintaining transparency, as well as the category of NAMAs (Section 2.1) can define the attractiveness of a NAMA. Creating “...liability for the verifiers...” was also suggested to enhance MRV. It was suggested that double counting can be addressed if NAMAs do not lead to offsets or if “...existing CDM projects can be carved out from the proposed NAMAs...” Institutional infrastructures at both “...national and international level...” underpinned by centralized accounting principles within UNFCCC framework is also seen as an important parameter.

4.3.2 Other key points

Current AI targets not stringent enough

Threat of flooding the market due to lack of demand from AI countries or oversupply of credits by means of C-NAMAs is seen as a possible obstacle to making NAMAs compatible to carbon markets. Further, the respondents generally express a desire to see stronger emission reduction targets. Developing countries are concerned about losing low hanging fruit within their jurisdictions, and NAI respondents felt that it is not appropriate to talk about the mechanisms before having targets for AI in place. Much of the focus on offsets is also seen as diverting attention from emission reductions to markets.

Causality can be a problem

¹⁰ For interpretation of scoring please refer to the scoring for key factors within the note on the categorization of responses.

NAMAs are seen to be policy driven. Establishing the causality between policy driven NAMAs and the emission reductions achieved is seen as challenging and difficult to attribute clearly under a NAMA but it only seems to have been explicitly noticed by a small number of researchers. The ability to measure and quantify the impact of a NAMA will be the key to stringent MRV. A certain degree of uncertainty and complexity when establishing causality is likely to be inevitable.

NAMAs may address regional distribution

NAMAs are seen as slightly better placed to address the regional distribution aspect currently being faced by the CDM. Confidence in their ability to do so is not too high, however, and there also appears to be a sense that this objective may only be achievable over the long term.

Reasons for difference in countries' views on C-NAMAs

The recent submissions to the UNFCCC on the NMBMs suggest that AI countries in general see sectoral approaches as the way forward for the NMBMs, whereas the NAI do not see any one mechanism or lack of it as the way forward (Point Carbon 2011). Differences remain about the use of C-NAMAs as the way forward to enhance mitigation in developing countries, and its proponents and opponents exist in both AI and NAI countries. It was also indicated that C-NAMAs can lead to sectoral/bilateral mechanisms which aren't truly international. Retaining the multilateralism of these mechanisms has also been underlined. AI countries want low cost options and get additional NAI commitments. NAI countries, while maintaining that the demand for credits is not large enough to spend negotiating capital on NMBMs, felt that having greater access to offsets would be a disincentive for AI to take domestic actions.

When inquired about specific countries' differences regarding crediting of NAMAs, respondents expressed a spectrum of views. China and India (which have benefitted more than other regions from the CDM) are in favour of its continuation, but not in favour of NMBMs, as they are concerned about losing low hanging fruit. They are also concerned that agreeing to NMBMs will be followed up by subsequent demands of mandatory commitments, which they are not prepared for. China has already included CDM in its development plan, and so C-NAMA does not look attractive to it. Tuvalu and some Small Island Developing States (SIDS) are concerned about the environmental credibility of NMBMs. Some NAI are opposed to markets in principle whereas others want to stick to a common position.

South Africa and South Korea, in particular, are seen as playing a largely constructive role towards NMBMs. South Africa is perceived as unafraid of NMBMs, whereas South Korea as well as Mexico is seen to be preparing for greater mitigation action in the future. South Korea is on the verge of becoming a developed country and therefore is seen as more interested in NMBMs. The European Union, as a hub of the global carbon market, wants a single carbon price. The European Commission is of the view that global regime can be brought only if the players can interact, and that can be achieved by developing and strengthening connections. Hence, the EU supports any option that builds on the experience gained and paves way for a unified carbon market.

Although NAMAs are seen as a way forward for improved finance transfers to the developing world, whether carbon market should be part of the pledged funds of USD 100 billion per year differs from party to party. Enhancing trust on a broader level can definitely help to

move the discussion forward. There is also the perceived dilemma that if C-NAMAs come into being, then funds will flow to them and not to the other NAMAs, but if there are no C-NAMAs then the role of the private sector might be limited.

4.4 Credited NAMAs and their interaction with existing institutions

If established, C-NAMAs will aim to achieve the same objectives that the CDM strived for. The ambit of C-NAMAs would be much larger than that of CDM project activities, as it will go beyond the current project-by-project approach. The current political situation indicates that a transition period will be needed post-2012. This transition period might also be used to operate CDM and any NMBMs together and to ensure a seamless transition to the more effective mechanism with CDM being limited on basis of project type or geographic boundaries. To ensure confidence in the market, it is important that potential conflicts between multiple mechanisms are minimized. Such conflicts may, however, be NAMA specific and may pose unforeseen challenges. Is it possible to identify these conflicts beyond those already recognized? The CDM-EB has been successful in improving its performance over last one year, but NAMAs require different capacities that will be hard to provide absent greater resources.

Guiding questions: Assuming that credited NAMAs are the way forward, then what will be the interaction between NAMAs and institutions – both existing and emerging? What possible institutional conflicts could NAMAs lead to? Can NAMAs and the CDM overlap or do they need to be mutually exclusive in terms of sectors and gases to be covered? What lessons from the CDM experience can be used for governance of NAMAs?

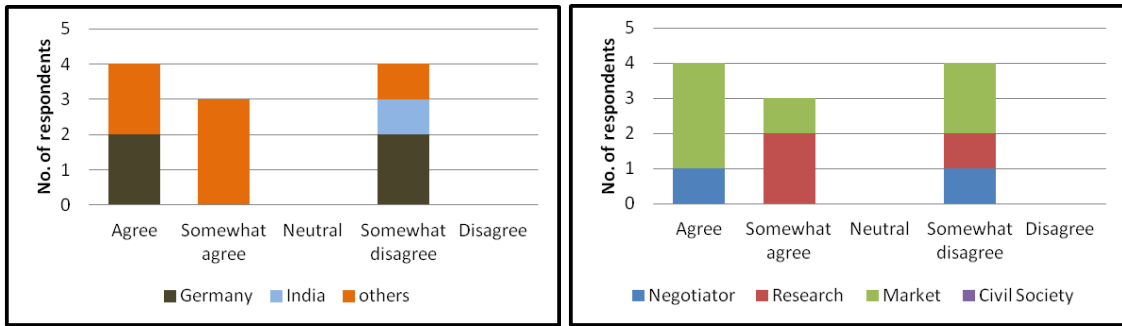
4.4.1 Perception of respondents

There are a number of lessons that the CDM can provide for the governance of NAMAs. This section tries to identify some of these lessons along with the views of respondents on interaction of C-NAMAs with existing institutions.

I. CDM and C-NAMAs cannot operate within same boundaries

Establishing some sort of demarcation between CDM and C-NAMAs seems helpful to avoid double counting. Respondents from Germany hold diverging views on this issue (Figure 4.IV.a). The proposition does not evoke much reaction from Indian respondents. Respondents from other countries agree to have boundaries in place, however. From a stakeholder perspective, the issue attracts responses primarily from market players and researchers. The market players felt strongly about having boundaries in place to differentiate between CDM and C-NAMAs.

Fig. 4.IV.a CDM and C-NAMAs cannot operate within same boundaries



Country perception

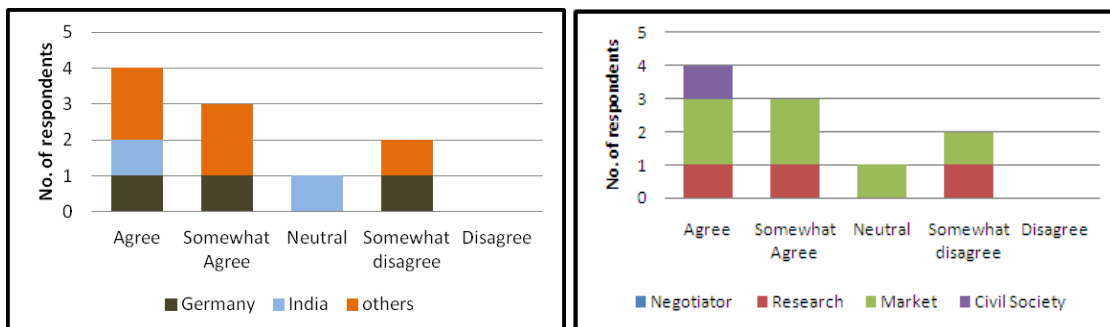
Stakeholder perception

Establishing clear boundaries between CDM and C-NAMAs (or for that matter any new NMBMs) is not seen as a popular option. Few respondents felt that demarcating between CDM and C-NAMAs at the sectoral level is a “...country decision...” On the other hand, a national government may not want to interfere with the market preferring instead to allow “...developers to choose where to go...” This may overall “...increase the uncertainty...” involved in the system. It has also been argued that the mechanisms can operate in the “...same sector, but with different objectives...” In such a case – it is suggested –the CDM would be limited to offsets and NAMAs would undertake mitigation and adaptation leading to an increase in sustainable development. The question of funding can be addressed in such a case if “...AI countries decide to invest in NAMAs to meet their funding obligations and in CDM projects to obtain offsets. A different market structure for different countries, without differentiating...” between NAI countries, was also suggested as way forward.

2. Conflicts possible between CDM and C-NAMAs

Figure 4.IV.b shows that there is a possibility that CDM and C-NAMAs can have conflicts. The respondents from countries other than Germany and India primarily share this view. Coincidentally, German and Indian responses, although in principle agreeing, are not quite as vocal on this issue. From a stakeholder perspective, it is the market players who find the question of direct relevance. Most of them foresee certain conflicts between the CDM and C-NAMAs. Civil society respondents also felt that there is potential for conflict, whereas the issue did not evoke responses from negotiators.

Fig. 4.IV.b Conflicts possible between CDM and C-NAMAs



Country perception

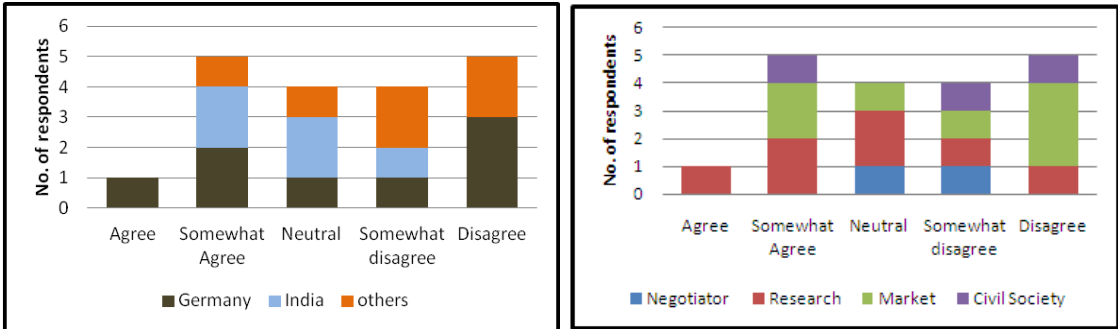
Stakeholder perception

Conflicts related to governance aspects are expected. Whether the structure to be followed would have a more hierarchical approach, or rather coexist in parallel with the CDM is unclear. A parallel structure is seen as "...competing in nature..." As long as the "...UNFCCC remains at the centre..." of the governance structure, there is less likelihood of institutional conflict. A shift towards more bilateral arrangements, however, is expected to fragment the market. As under the CDM, the conflict may also be NAMA-specific in relation to specific CDM project activities. Some respondents felt that double counting can be avoided but it would lead to "...increased transaction costs..."

3. CDM-EB is well equipped to handle C-NAMAs

Whether the CDM-EB is well equipped to handle C-NAMAs or not attracts a very high number of responses (Figure 4.IV.c). There is a greater sense that the CDM-EB in its current form is not well-equipped to handle C-NAMAs. Most of the respondents from Germany felt the need for a change in this regard. Indian respondents are slightly more optimistic about the role of the CDM-EB in its current form with respect to C-NAMAs. The responses of other respondents are differentiated, with greater inclination towards a body other than the CDM-EB. From a stakeholder perspective, the researchers overall seem somewhat positive regarding the proposition. Their slight optimism towards the CDM-EB is countered by tentative pessimism from the negotiators' and civil society perspective. Nevertheless, it is the market respondents who most strongly disapprove of the CDM-EB handling C-NAMAs.

Fig. 4.IV.c CDM-EB is well equipped to handle C-NAMAs



Country perception

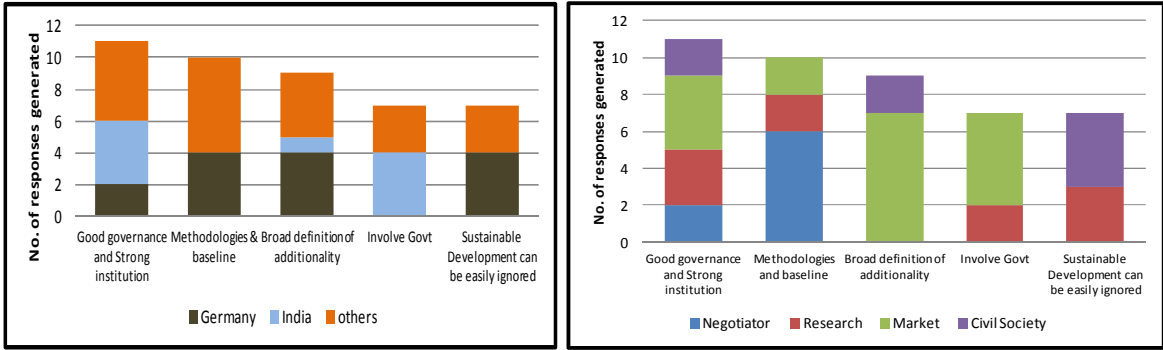
Stakeholder perception

In general there is a perception that the CDM-EB should not handle C-NAMAs for two main reasons. Firstly, the CDM-EB is seen as a "...highly technical body [with a] project-by-project focus [that may not be well suited to address the] broad socio-economic aspects..." associated with C-NAMAs. Secondly, it is argued that CDM-EB does not have enough capacity and resources at its disposal to take greater responsibility. Although some respondents were of the opinion, that if "...higher resources are made available..." to the CDM-EB, then it may also be able to address C-NAMAs, it is the former that underpins the need to create an institution of an entirely different nature. The "...conflict of interest..." within the CDM-EB – as its members are not employed full time and have so called vested interests – is also a concern. Having a common body to maintain oversight was also stressed in the same vein. Some respondents though, found it difficult to comment on the role of the CDM-EB, as its future is linked to the future of the Kyoto Protocol, whose basic survival is uncertain.

4. Lessons from the CDM for the governance of NAMAs

Interviewees were requested to share three key lessons from the CDM that may be of relevance to the governance of NAMAs. Not all the respondents felt comfortable answering this question. A total of 41 responses were received (Figure 4.IV.d). Good governance and strong institutions were seen as the most important lessons from the CDM, especially by Indian and third country respondents and also garnered response across all the stakeholders. Methodologies and baselines were seen as the second most important factor. This learning aspect was especially important to German and third country respondents. The negotiators came across as keen to acknowledge such learning. Having a broad definition of additionality was seen as the third most important learning component, and it found equal support from German and third country respondents. Not surprisingly, the market players favoured a broad definition, but surprisingly, amongst other stakeholders the only supporters of such a broad approach were to be found in civil society. Involving the government was seen as important from an Indian perspective. This insight was shared by the market respondents and to some extent by researchers. Interestingly, no negotiator or civil society respondent thought this to be an important lesson. The possibility of sustainable development being easily ignored is seen as an important lesson by German and third country respondents. It is also seen as a concern by both researchers and civil society respondents. In sharp contrast, the stakeholders who have the onus of agreeing upon and achieving the objective incorporation of sustainable development in the process, i.e. negotiators and market players, do not see it as a key lesson. For the negotiators, methodologies and baseline definition are the most important factors. For the market players, having a broad definition of additionality is the single most important factor, whereas it is difficult for researchers to agree on any one dominant lesson from the CDM for the governance of NAMAs.

Fig. 4.IV.d Three key lessons from CDM for governance of NAMAs¹¹



Country perception

Stakeholder perception

All in all, a number of lessons can be drawn from the CDM for the governance of NAMAs. Some of the lessons frequently identified have been shown in Figure 4.IV.d above. Some

¹¹ For interpretation of scoring please refer to the scoring for key factors within the note on the categorization of responses.

respondents favour a greater focus on sustainable development, whereas others felt that it is too difficult to work around, and offsets should be done away with altogether.

4.4.2 Other key points

I. Can CDM and C-NAMAs co-exist?

In the short to medium term, creating a NMBM with C-NAMAs may lead to a certain amount of overlap with the CDM. Some respondents – especially market players – were comfortable with such overlap, depending on how their boundaries are defined. The boundaries were suggested on the basis of sector specificity or according to the type of project activity (public vs. private). It is also suggested that the CDM and NAMAs may operate in the same sector, provided that their objectives – mitigation for the CDM and achieving sustainable development for NAMAs – are separate. Reaching such a distinction may not prove easy, however. There are concerns that a new mechanism may lead to two problems: a) an increase in offsets by proliferation of less stringent mechanisms, and b) markets becoming fragmented and complex to deal with.

2. Possible conflicts between existing and new market based mechanisms

Four possible conflicts are foreseen between new and existing market based mechanisms. These are double counting, fragmentation of markets, boundary issues and an increase in the supply of offsets. Each of these conflicts has the potential to lead to further problems, e.g. an increase in the supply of offsets may lead to flooding of the market and thus to a lower carbon price. Two of these concerns were also identified in Figure 4.III.b. Some of these points have been discussed elsewhere in the report. The fragmentation aspect is discussed in detail further below.

Some respondents felt that there will be no such conflicts. But a number of respondents are uncertain about the nature of conflicts between new and old market based mechanisms. Nevertheless, the conflicts foreseen depend on the kind of NAMAs proposed and the CDM projects already existing in a specific sector. An increase in administration and bureaucracy, for instance, is also seen as having the potential to hamper the functioning of different mechanisms. Governance issues may also be faced from time to time. Nevertheless, as long as there is a central body to provide oversight – such as the UNFCCC – these conflicts can be addressed.

3. The market will tend to be fragmented

Respondents felt that having NMBMs or an increase in bilaterally established approaches may fragment the market. Different categories of offsets may come into existence, making it hard to navigate the market. As a result, the transaction costs may increase and, more importantly, it may become difficult to keep in sync with the overall target. One analogy can be seen in the current shape of the voluntary carbon market, which is beset with a number of standards. The market may not remain fragmented on the supply side only, but may also become fragmented on the demand side, with buyers choosing which types of projects are acceptable and which are not. This may lead to a difference in the prices of available credits.

4.5 NAMAs in national context

The appropriateness of climate change responses is defined from a national perspective. It also seems difficult to approach the issue of appropriateness in isolation. The response to a global problem seems to be national and therefore varied in nature. There are concerns that exercising national appropriateness to deal with climate change will result in different contributions by countries, thus giving rise to free-riding behaviour at the national level. It is a subjective question and there is no universal answer to what is appropriate in different circumstances.

Guiding questions: What does appropriateness entail? What are the key factors that define appropriateness, and what kind of complexities may arise when different interpretations of appropriateness are applied in practice?

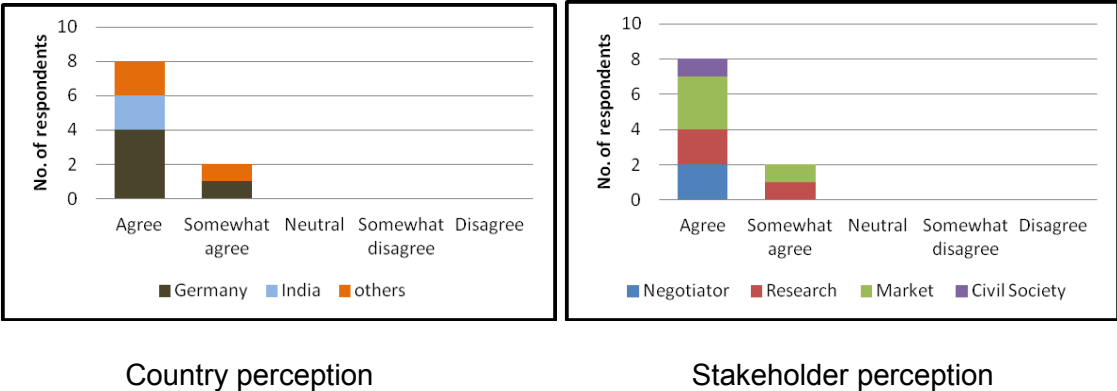
4.5.1 Perception of respondents

This section tries to give an indication whether it is possible to elaborate a common umbrella of parameters to bring together the respective national appropriateness definitions of different countries together in the quest to solve a global problem. The views shared by respondents on various questions related to the appropriateness aspect are presented below.

I. Country context important while defining appropriateness

A number of respondents emphasised the importance of the country context while defining appropriateness. The respondents from different country groupings, as well as from all the stakeholder groupings expressed no disagreement in this regard (Figure. 4.V.a).

Fig. 4.V.a Country context important while defining appropriateness



Any discussion of appropriateness is located in a national context – mostly unknowingly ¹² – primarily because appropriateness is never discussed as an isolated issue. A number of

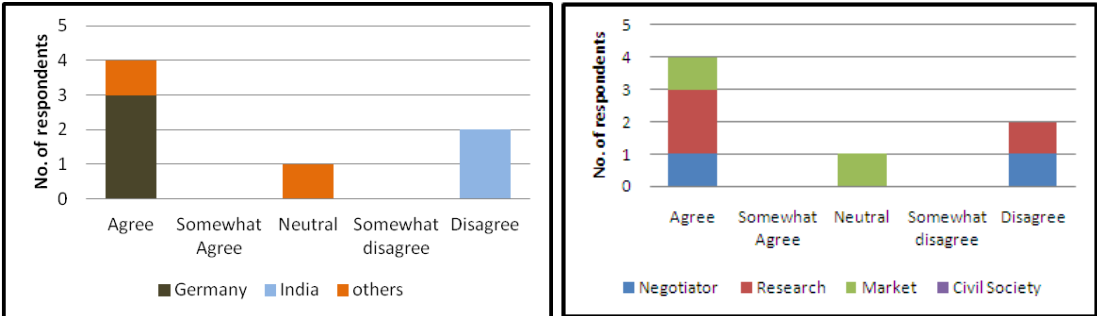
¹² Only one of the respondents made conscious note of appropriateness in national context and emphasized that appropriateness cannot be seen in isolation and that the discussion is inadvertently about National Appropriateness and not about Appropriateness. Nevertheless, to maintain uniformity across the interviews, the author persisted with the original question and

respondents refrained from defining appropriateness, as it was considered a nation's prerogative. Under this view, national governments are responsible to define their country's appropriateness. The question was "...complex to answer as it goes back to different interpretations of equity..." There was very little mention of anything that may refer to as appropriateness at a global level, for instance, contribution to the achievement of the 2°C temperature goal. It was cautioned that national appropriateness implies "...different speeds of effort and is hence dangerous for global climate mitigation..." including suggestions that national appropriateness should rather be understood in terms of climatic conditions and development levels. It was argued that in "...real policy terms nationally appropriateness will always have precedence over [what can be referred to as] globally appropriateness..." It was also pointed out that if an action is not appropriate at the national level, then it will not be considered appropriate at all.

2. Challenging to manage different interpretations of appropriateness

Only few respondents felt comfortable dealing with questions related to appropriateness. Nevertheless, the views on managing different interpretations of appropriateness presented different perceptions (Figure. 4.V.b). The German respondents felt that it would be challenging to manage different interpretations of appropriateness, but their view was opposite to the view held by Indian respondents. There were very few responses from other countries. From a stakeholder perspective, the civil society responses were missing. The split is more homogeneous from the stakeholder perspective.

Fig. 4.V.b Challenging to manage different interpretations of appropriateness



Country perception

Stakeholder perception

It is assumed that each country will have a single definition of national appropriateness. On a global level though, that would imply taking into account various national appropriateness definitions. Some respondents suggested that it may "...distort the competition [and lead to] trans-generational free riding..." if NAMAs are not effective enough. Different countries would approach the problem differently, and that may create short term winners and losers. Likewise, the "...task of a central body may thereby be rendered more complicated..." resulting in appropriateness being treated the same way sustainable development has been

noticed that the respondents while discussing about appropriateness, knowingly or unknowingly, referred to the national context.

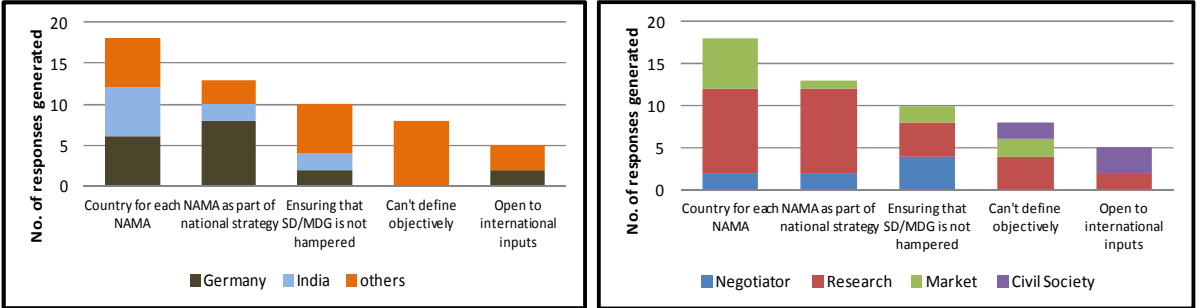
treated within the CDM. There is an alternative viewpoint based on the premise that NAMAs “...should be flexible and cannot be imposed...” and that it will not lead to any problems.

3. Criteria for the definition of appropriateness

Respondents were asked to define the key factors that they think can define appropriateness. Few respondents provided specific factors that can define a nation’s appropriateness. The development stage of a country is considered one of the most important factors for defining the national appropriateness. Some other factors suggested in this regard were – but are not limited to – energy security, economic status, lifestyle and the industrial structure of the country. Most of the respondents were not comfortable, however, defining specific factors of appropriateness. Nevertheless, an attempt has been made to cluster together different types of responses to the question of how appropriateness should be defined.

As shown in Figure 4.V.c, a country defining appropriateness for each NAMA is seen as the most likely way forward from a country perspective. NAMAs as part of national strategy are seen as the second most important factor, and attract support primarily from a number of German respondents. Not constraining sustainable development or achievement of the MDGs, at the very minimum, is also mentioned as being crucial to defining appropriateness. Most of the respondents from other countries, however, strongly felt that appropriateness cannot be defined objectively at all. Some respondents also suggested that there can be a small role for the international community to participate in the definition process.

Fig. 4.V.c Appropriateness aspect can be defined by^{13,14}



Country perception

Stakeholder perception

From a stakeholder perspective, the question garners maximum responses from researchers. They seem to suggest that countries defining appropriateness for each NAMA and defining appropriateness on the basis of a national strategy are almost equally important options going forward. From a market perspective, letting countries define appropriateness for each NAMA is considered the preferable solution. Negotiators, finally, imply that appropriateness should not hamper the sustainability aspect at any cost. The civil society

¹³ A respondent could give more than one answer.

¹⁴ For interpretation of scoring please refer to the scoring for key factors within the note on the categorization of responses.

responses are very few in number but they are more optimistic about having international inputs that are transparent and non-intrusive.

A greater role of national government is seen in implementing NAMAs. Both effectiveness and equity concerns were stressed. A country can define its national appropriateness for each NAMA individually, but this may lead to revisiting the national appropriateness aspect again and again (as has been discussed with regards to LCDS also). It was suggested that climatic conditions and development level of the country should be taken into account while defining national appropriateness.

Some respondents argue that defining appropriateness involves a lot of subjectivity and leaves lot of space to play around with the definition. One respondent was critical of the term and was of the view that national appropriateness "...does not add up to anything..." as no country, knowingly, will do anything inappropriate for itself. A limited role of international stakeholders was seen in "...defining the process..." for identification of national appropriateness indicators. In general, it was felt that "...going beyond adoption of guiding principles will be difficult..." at the international level.

4.5.2 Other key points

1. Different interpretation of appropriateness challenging for carbon markets

As it is a country prerogative to define the respective appropriateness, ideally there should not be more than one interpretation of (national) appropriateness. Therefore it is not correct to ask whether different interpretations of appropriateness will be challenging for carbon markets; perhaps the better way to frame this discussion would be to ask whether different (national) appropriateness definitions can be accommodated within a single carbon market. It was suggested that it may be difficult to integrate different definitions, but common MRV guidelines are seen by some as a potential way forward. Interestingly, some market players do not see a problem if a central body deals with the definition aspect. Absence of such a central body may not attract investors, and the credits generated may not be fungible across markets. Lack of central body may prompt buyers to start developing their own acceptable definitions and thus lead to greater fragmentation. Recognizing the unique characteristic of each NAMA is also suggested as a way forward.

4.6 Summarizing the responses

This study has assessed the relationship between C-NAMAs and carbon markets in order to understand whether NAMAs are a possible way forward for carbon markets or not. A stakeholder-based process served as the empirical basis for this assessment, offering a number of helpful insights into the various characteristics of this potential relationship. While in many cases the concerns raised were identical to those expressed in recent literature, a few new issues emerged through engagement with a diverse set of experts in the field.

Overall, country-dependent objectives are widely considered the most appropriate way forward for NAMAs. It is; however, better to have one definition of national appropriateness for each country so as to avoid confusion and a reopening of the debate on what determines national appropriateness for each individual NAMA. LCDS are seen as providing a common

reference point for different NAMAs. Although the objectives of NAMA should be country-dependent, it would still be important to reflect on the expectations of partner countries. In order for NAMAs to be truly effective, it will be critical for both country objectives and mitigation requirements to be met. Sustainable development, however, remains difficult to grasp. Agreeing on any single criterion makes it difficult to move ahead uniformly. Enhancing the capabilities of DNAs and following an indicator-based approach where possible may offer positive steps forward.

NAMAs are seen as a more effective tool than the CDM to enhance mitigation in developing countries. The two factors – in order of importance – that will influence the overall effectiveness of collaboration can be a proactive government in the country implementing a NAMA and the mitigation potential available within the context of that NAMA. Apart from the domestic policy environment, how and who provides support can also influence the efficacy of NAMAs. Although NAMAs are seen as well-placed to enhance both financial and technical collaboration, optimism about the former is greater than about the latter. NAMAs are also seen as better-placed to address the regional distribution of supported mitigation actions.

The compatibility of NAMAs with carbon markets is primarily contingent on the scope for quantification of the project/policy and the availability of data. Two factors that will be crucial to establish this compatibility are: a) establishing a uniform MRV system and b) addressing the risk of double counting. Having clear boundaries between the CDM and C-NAMAs, although both unpopular and difficult to manage, is seen as the most convenient way forward to allow different mechanisms to co-exist.¹⁵ Demarcation – if any – should be a national decision. Failure to define the boundaries clearly can lead to markets becoming chaotic and mechanisms with less stringent requirements becoming favourable.

Conflicts between the CDM and C-NAMAs are expected and can be avoided by having the UNFCCC serve as the common reference point for institutional oversight. The prospect of the CDM-EB also administering C-NAMAs evokes mixed reactions, with a greater number of respondents expressing concerns about the capacity of the CDM-EB in terms of: a) its ability to deal with broader socio-economic aspects and b) the resources at its disposal at this point of time. The need for good governance and a strong institutional framework are the two most important lessons inferred from the CDM for the governance of NAMAs.

The debate on the appropriateness of NAMAs is almost always approached from a national context. A country context is very important when defining the appropriateness of a NAMA. This process, very much like the definition of sustainable development under the CDM, is subjective in nature. It may hence be better to focus attention on the process used to define country-specific appropriateness rather than the substance of national appropriateness itself. Respondents hold opposing views on the challenges associated with different interpretations of appropriateness. The difficulty in integrating different kinds of NAMAs into a single carbon

¹⁵ A transition period wherein existing CDM projects are issued credits and new ventures are taken in form of C-NAMAs, can lead to a situation where a country may have CDM and a new mechanism running simultaneously. Overtime the market can shift to a new mechanism but during the transition period defining clear boundaries will be useful to cater to certain degree of overlap.

market is acknowledged. Again, however, the presence of a central body may serve as a suitable way forward to maintain an oversight.

Decision-making on the appropriateness of each NAMA at a national level or integrating NAMAs in a bigger national strategy – possibly a LCDS — is seen as the most promising approach to deal with the appropriateness issue. The international community can also play a limited role in defining the process for the identification of general national appropriateness indicators.

5 Analysis and way forward

5.1 Analysis

Objectives of NAMAs

NAMAs have generated substantial interest in both AI and NAI countries. The former are interested in NAMAs as these provide a more robust platform for developing country engagements, whereas for the latter NAMAs provide flexibility in designing actions as per their priorities. Here, the art lies in striking a balance that encourages local ownership at the implementation stage by meeting national priorities, and promoting support at the international level by contributing to the achievement of GHG mitigation. NAMAs should begin with national priority, to ensure acceptance by the implementing agencies and line ministries; and should end with a substantial contribution towards mitigation, based on the country context. Ensuring local commitment is important and has also been identified elsewhere, as one of the three issues that need to be addressed to make NAMAs work (Jung *et al.* 2010b). In the short term, this can be promoted by focusing on capacity building in developing countries to develop community/country ownership. In the medium to long term however, the priority should shift to actually realizing the mitigation potential of those NAMAs implemented. Needless to say, there can be NAMAs that provide mitigation from the outset, but such NAMAs can only be tapped into if the relevant country has the capacity to develop them in the first place.

National prerogative and link with LCDS

The objectives of NAMAs should be country specific, but the various NAMAs of any given country should not have conflicting objectives. A common definition of national appropriateness – although difficult to pinpoint at this point of time – could save much time and effort for NAMA developers. It is here that LCDS could potentially act as a solution. Having a LCDS in place at a national level can serve two important tasks. Firstly, it links the mitigation measures foreseen by the national Government with the future development plan, thus bringing climate change in the mainstream of national planning. Secondly, LCDS also communicates the commitment of a country towards addressing climate change “to the potential investors”. This can thus attract a greater flow of finance to a country as it will provide a consistent and predictable country guide in the form of LCDS. LCDS may also help to avoid future complexities, such as conflict with the MDGs, which may come into being while implementing NAMAs. Having a LCDS in place can be made a pre-requisite for supporting NAMAs in countries that already have multiple on-going NAMAs so that these do not have conflicting objectives. The adoption of a LCDS should not however be a requirement for LDCs.

Sustainability under NAMAs

Although the national prerogative will influence the sustainability of NAMAs strongly, it is still imperative that the global community starts working on integrating sustainable development objectively within a NAMA. The debate needs to go beyond defining frameworks for implementation, to preventing the fate of sustainable development under the CDM from

extending to NAMAs. It is unrealistic to expect that NAMAs will achieve mitigation “*in the context of sustainable development*” if what defines sustainable development cannot be agreed upon. On a broader level it was suggested that NAMA will have to – a) adhere to all the relevant legal aspects, b) meet the respective national criteria and c) comply with international safeguards. In effect, NAMAs, akin to the CDM will have to deal with the complexity of dealing with more than one objective. This complexity raises the fear that the problems faced by the CDM, especially on the sustainability of offsets, may get extrapolated especially in C-NAMAs as the size of the measures to be undertaken are much larger.

As has been stressed elsewhere in the report, the neglect of sustainable development is seen as one of the most important lessons learnt under the CDM for the governance of NAMAs. The fact that the actors who will make the rules (negotiators) and those who are supposed to abide by those rules (market players), are not overly concerned about sustainable development being ignored under NAMAs, is worrisome. Offsets for projects that lead to high sustainable development are suggested as a way forward. Although interesting as a proposition, it may be very difficult to implement such an approach due to the subjectivity associated with sustainability. Further, thresholds between low and high sustainability would also be needed. An input based approach has been suggested to measure sustainability. The CDM follows an output based approach. An input based approach for example may lead to investment based approach. It may be worthwhile to see if a mix of both approaches can be utilized to reach an agreed upon approach to measure the sustainable development achieved by a NAMA. Such an approach will go beyond just factoring emission reductions achieved by NAMAs. By no means is this an easy task and breaking down the policies to individual measures or to use qualitative indicators may help ease the quantification requirements.

Taking NAI beyond offsets

Having Government participation will also lead to greater accountability to actions being undertaken. NAMAs can help NAI countries to go beyond business as usual (pure offsets) by taking the mitigation from the project to the policy level. Greater efficiency can be ensured if NAMAs are not caught in the bureaucracy. Ideally the offsets should be accepted if they do not lead to carbon intensive lock in for the developing countries.

NAMAs leading to enhanced mitigation

It is difficult to pinpoint any one factor that may be responsible for high mitigation expectations from NAMAs as compared to the CDM. A recent study by the Wuppertal Institute (Wang-Helmerich *et al.* 2011) also backs this expectation (see Figure 3.1). It estimates that the cumulative absolute emission reductions of eight NAMAs until 2020 can easily supersede the total CERs issued worldwide. Their effectiveness will be specific to individual NAMAs and would be dependent on the domestic policy environment and the support provided (including who and how) to them.

Support is foreseen in “...all possible ways...” Financial collaboration is seen as the counterpart to the commitment of NAI countries to NAMAs. Clarity on the sources of funding will be useful to kick-start the implementation of NAMAs and increase mutual trust. The prospects for integrating a NAMA with carbon markets are directly proportional to the certainty provided under the NAMA. Regarding the technical collaboration aspect, resolving the open questions

around patenting issues and agreeing upon a common definition of technology transfer hold the key to greater support. These issues have been under negotiation for a long time and need to be resolved as soon as possible. The two factors that will overall influence collaboration, in order of their importance, can possibly be a proactive government in the country implementing NAMAs and the mitigation potential available within a country.

Financing NAMAs

The role of the private sector in C-NAMAs urgently needs greater elaboration. If and to what extent carbon markets would be part of the USD 100 billion fund also needs to be agreed upon. Financing NAMAs by means of carbon markets will likely be limited for two reasons, however. Firstly, there is a lack of clarity on the role of market players in the current NAMA discussion. Engaging the private sector would be contingent on the ability to quantify mitigation under the project, but without offsets it will be difficult to incentivise the private sector. Secondly, carbon markets largely provide financing against the delivery of carbon credits i.e. *ex post*, whereas NAMAs – immaterial of being credited or not – will generally be policy instruments that would primarily need upfront financing. Without offsets it will be difficult to incentivise the private sector. Therefore a certain level of upfront support would be needed to kick start NAMAs and establish a robust MRV system that can meet the stringency level of carbon markets.

In effect it can be argued that NAMAs would be supported by public money *ex-ante* and private money *ex-post*. In the current financial crisis therefore, it will be important to devise a structure which attracts private investment *ex-ante*. Addressing the support aspect upfront and establishing the rules of engagement upfront in line with Emission Reduction Purchase Agreement (ERPA) might be the way forward. Ensuring that a creditable option will not *divert the support* from other types of NAMAs will help avoid the kind of geographical challenges witnessed under the CDM. The potential of NAMAs to attract new sources of finance is contingent on whether a loose (everyone defining their own rules) or a rigid (more CDM-like) market structure comes into being. Green NAMA Bonds have also been suggested as a way to attract investors who have a low appetite for risk (IETA 2011). A unified market though is not a possibility in the short term. In the longer term, the compatibility of NAMAs with the global carbon market will decide if the carbon price will be global or differential in nature.

Compatibility of NAMAs with Carbon markets

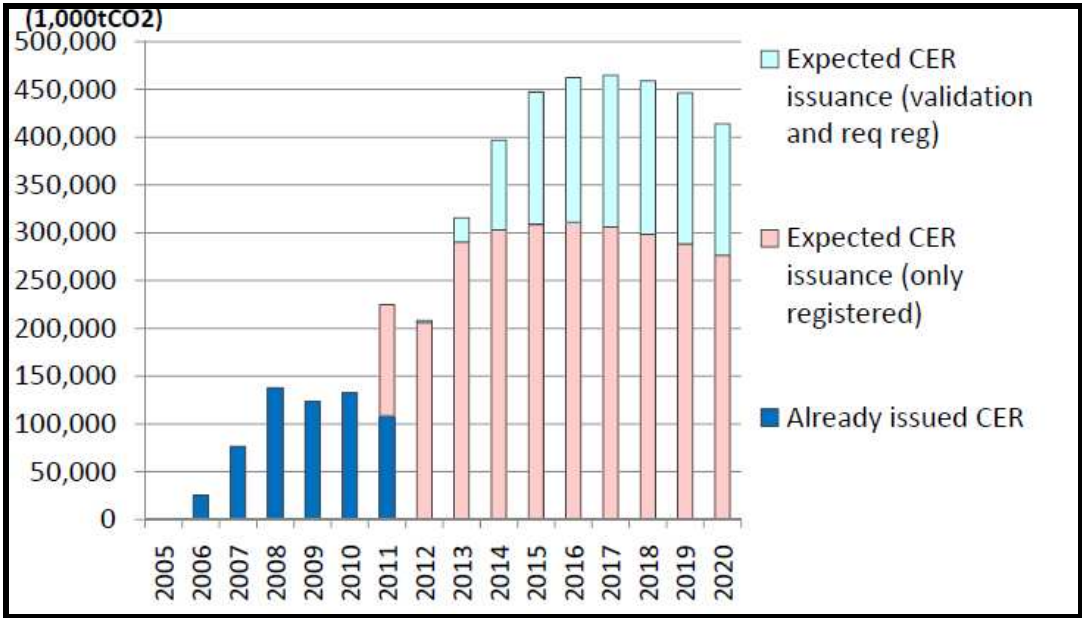
There is high agreement on the compatibility of NAMAs with carbon markets. Establishing a uniform MRV system and addressing the double counting problem are seen as crucial in this regard. Carbon markets need certainty and NAMAs with a high level of uncertainty will not be able to meet the requirements of the carbon markets. Data availability therefore, will be important in this regard. Credits from C-NAMAs need to be as robust as current CERs. Any future NAMA wanting to leverage carbon markets would *need to declare such intentions beforehand* and adhere to stringent MRV guidelines. This will increase transaction costs, but would afford no guarantee of obtaining credits. On the other hand, NAMAs will also be characterized by a high degree of sovereignty left to host countries, and this may affect the scrutiny of NAMAs. Defining clear rules will garner greater confidence. A NAMA will become eligible to get carbon credits once it meets its targets. It will therefore have an *ex-post* link with the carbon market that will convert supported NAMAs into C-NAMAs. Further, credits can only command a high carbon price if there is sufficient demand for them. It may be too

early to comment on how C-NAMAs will fare in terms of geographical distribution. It might be the case that countries that have performed well under the CDM may carry on their success within C-NAMAs as well, provided they are open to NMBMs.

Need for NMBM

Some respondents felt that the current targets of AI countries do not support the case for NMBM, including C-NAMAs. Part of the reason lies in the fact that CERs registered from the CDM are expected to increase and meet the demand in coming years. It is felt that if C-NAMAs come into being to cater for this demand, then there is a risk of flooding the market with an oversupply of credits. A presentation made by IGES during the Bonn Inter-sessional meetings in June 2011 indicated that 2.4 billion CERs will be issued between 2013 and 2020 (Figure 5.1) as compared to close to 640 million of CERs issued to date. Whether enough demand exists for this demand still needs to be seen.

Fig. 5.1 CER issuance – achieved and expected



Source: IGES 2011.

Further, the inability of parties under the UNFCCC to agree on an ambitious second commitment period under the Kyoto Protocol may further fragment the demand side from the short to the medium term, creating multiple price signals and failing to provide a positive signal to the markets.

Reasons for differences on C-NAMAs

Various factors influence the difference in views of the countries regarding C-NAMAs. The countries that have benefitted from the CDM prefer not to go ahead with the NMBMs as they do not want to go away from a structure that they are comfortable dealing with. Some parties are fundamentally opposed to market based approaches whereas some highly vulnerable parties are concerned about the environmental integrity of NMBMs. The EU supports sectoral approaches, and is not opposed to the option of C-NAMAs and would prefer to reach a single carbon market.

Making CDM and C-NAMAs co-exist

A country may continue with CDM project activities while deciding to partake in NMBMs. Whether the two mechanisms will cooperate or run into conflict with each other will be dependent on how the boundary and data aspects are dealt with. As NAMAs are sovereign in nature, the boundaries of C-NAMAs and, if needed, also that of the CDM would be decided upon by individual countries. Failure to define these boundaries can cause operations at the national level to become chaotic. In such cases, the eligibility of each C-NAMA or CDM project will have to be matched with a different buyer, as – to some extent – is the case with the current voluntary carbon markets. Generally, buyers will want to go for the mechanism that provides cheaper credits, whereas sellers would prefer a mechanism where prices being offered are higher and transaction costs are low.

Allowing developers to choose the mechanism they felt more comfortable with will increase the uncertainty involved in the system. There is also a risk of fragmenting the market from the supply side at the national level. Without a well-defined playing field, the option of co-existence tends to get more and more complex, and it seems better to define the boundaries from the very beginning. Failure to do so will fragment the market and generate a system whereby mechanisms will have lax conditions. Apart from boundary issues, double counting, fragmentation of markets and an increase in the supply of offsets are seen as the possible conflicts between old and new market based mechanisms. Two of these factors were also seen as key to the question of compatibility between NAMAs and carbon markets. Although not a panacea, a central body – such as the UNFCCC – that is mandated with providing oversight, would help address these conflicts.

Role of CDM-EB in managing C-NAMAs

The current CDM-EB does not inspire confidence, especially amongst market players. A new body to manage C-NAMAs is seen as important for two main reasons: 1. the limitations of the CDM-EB to technical constraints, and, 2. the lack of resources (both financial and human) available to the current CDM-EB. It is the former constraint that underpins the need for a new institution. The importance of good governance structures and a strong institutional framework to agree whether a NAMA is eligible for credits is also seen as the most important lesson from the CDM for the governance of C-NAMAs. Both these points underscore that the current *modus operandi* is in need of an overhaul, although there is an understanding that more than one mechanism can only operate if there is a central body to provide oversight.

Appropriateness remains elusive

Discussion on the appropriateness aspect gives rise to more questions and provides very few answers. Respondents, in general, found it difficult to share their views on the question related to appropriateness aspect. The appropriateness discussion is strongly attached to the national context, provides very little space for an outsider to contribute to the discussion and by default involves a substantial degree of subjectivity. There is concern that approaching a global problem with national level solutions might create free riders. Nevertheless, a country should preferably have only one definition of national appropriateness that is applicable to all the NAMAs. This observation links to the foregoing discussion on LCDS.

A greater role for governments in this process is generally affirmed, but how appropriateness should be defined in substance is still not something respondents agree upon. It might be better to discuss possible processes and overarching criteria that can help in the definition of

country-specific appropriateness. Respondents also highlight the contribution to sustainable development as an important element of national appropriateness. It is important to note that the respondents are not comfortable dealing with the questions related to appropriateness. It is an important research gap and needs greater scrutiny.

Managing varying national appropriateness

Views differ regarding the complexities involved in managing different perceptions of national appropriateness at the global level. Integrating different NAMAs into a common carbon market, with their respective national appropriateness metrics, may be challenging as each will differ in terms of national appropriateness. This complexity may be avoided by having common MRV guidelines and thus having the same level of accountability for all NAMAs or a common reference point in the form of a central body that can provide central oversight. It is difficult to specify how the variance can be dealt with as the discussion is in a flux. Some respondents though indicate that, it was a national prerogative only to define country objectives and so there is no complexity involved. Nevertheless, if the national appropriateness of a country is not thought to be ambitious and coherent enough then access to various demand centres might be limited. This might however, lead to unilateral actions and may prove contentious.

Importance of a central body

Two important points that are not frequently made, but were highlighted by some respondents are: a) the number and type of NAMAs to emerge in the future cannot be predicted. Systems are therefore deliberately designed to be responsive and not proactive and that NAMAs will continue to follow a learning-by-doing mode; b) Issuance of CERs by the UNFCCC attracts investment. The former implies that any NMBM should be prepared for unexpected developments and will have its own new problems. The latter indicates that from an investment perspective, having a central agency is important to inspire confidence in investors and to maintain transparency. In many ways, UN issuance is seen as akin to AAA rating issued by the rating agencies for the investors and business. CERs help investors mitigate; sovereign, foreign exchange, and counterparty risks associated with investments in developing countries (Edwards *et al.* 2011). Investors will continue to find the market attractive as long as it is centrally managed by the UN. Not everyone though buys this line of argument due to concerns about the additionality of the projects that are being registered.

The importance of a central body was also highlighted to deal with varying definitions of appropriateness in the context of C-NAMAs and ensuring fungibility of the credits. Having a central body administer and supervise a NMBM is thus important for more than one reason.

5.2 Conclusions

This study shows that NAMAs can certainly scale up carbon markets in developing countries post-2012, but this finding is contingent on a number of qualifiers. Firstly, without ambitious targets from Annex I countries and, in the absence of new demand centres, C-NAMAs may end up flooding the market and thereby result in lower carbon prices. Secondly, clarity on how to objectively promote sustainability by means of NAMAs is still largely absent. Thirdly, the role of the private sector in supporting NAMAs needs to be clearly defined, particularly on how to go ahead if emission reduction credits, which can be used as offsets, are not

generated. Lastly, a clear demarcation between different mechanisms is needed, and a new body that is not only competent in technical issues but also has socio-economic expertise is necessary to this end. In sum, C-NAMAs have the potential to support mitigation actions in developing countries, but they depend on greater political will to be effectively implemented.

5.3 Outlook

Areas of further research:

1. Quantifying or, at the very minimum, developing an agreeable set of criteria or metrics to measure sustainable development is pertinent to avoid the problems faced with this criterion during the operation of the CDM.
2. The role of private players in supporting NAMAs lacks clarity. Urgent attention is needed to define the expectations and role of the private sector in supporting NAMAs, specifically on; if and how carbon markets can be used to support NAMAs without credits.
3. The design aspects of NAMAs need elaboration. The possibility of establishing a fund to support stringent MRV of supported NAMAs so as to meet the requirements of C-NAMAs can make this option more attractive.
4. Defining and expanding upon the relationship between LCDS and NAMAs will be important to streamline measures at the national level.

6 References

- Bakker, S. and Huizenga, C. 2010. *Making climate instruments work for sustainable transport in developing countries*. Natural Resources Forum 34 (4): 314-326.
- Breidenich, C. and Bodansky, D. 2009. *Measurement, Reporting and Verification in a Post-2012 Climate Agreement*. Available at: <http://www.pewclimate.org/docUploads/mrv-report.pdf>.
- CD4CDM (Capacity Development for the Clean Development Mechanism), 2011. CDM Pipeline overview. Last accessed on 10th September, 2011.
- Drexhage, J. and Murphy, D. 2010. *Sustainable Development: From Brundtland to Rio 2012*. United Nations Headquarters, New York.
- Edwards, R., Caldecott, B. and Gray, S. 2011. *Signal failure? Real economy signals for developing country climate finance and the future of the Green Climate Fund*. Climate Change Capital, London.
- Ellis, J. and Moarif, S. 2009. *GHG Mitigation Actions: MRV issues and Option*. Working Paper, OECD. Available at: <http://www.oecd.org/dataoecd/36/45/42492615.pdf>.
- European Commission, (2009). *Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, Towards a comprehensive climate change agreement in Copenhagen*, COM(2009) 39/3. Brussels: European Commission.
- Fransen, T.; McMahon, H. and Nakhooda, S. 2008. *Measuring the Way to a New Global Climate Agreement*. WRI (World Resources Institute), Washington D.C.
- Fukuda, K. and Tamura, K. 2010. *An analysis of Non-annex I parties NAMAs: Challenges for designing international support and implementing an effective MRV framework*. Working paper, IGES (Institute for Global Environmental Strategies), Kanagawa.
- Glemarec, Y. 2010. *Financing the Transition to a Low-carbon Society*. Journal of Renewable and Sustainable Energy, 2(3):031013.
- Helme, N., Whitesell, W., Houdashelt, M., Osornio, J., Ma, H., Lowe, A. and Polzin, T. 2010. *Global Sectoral Study: Final report*. CCAP (Center for Clean Air Policy), Washington, D.C.
- Höhne, N., Hare, B., Schaeffer, M., Chen, C., Vieweg, M., Moltmann, S. 2011. *Emissions and CO2 concentrations at record highs: Developed countries ambition stalled while developing countries gearing up to act*. CAT (Climate Action Tracker).

- IEA (International Energy Agency), 2011. *Prospect of limiting the global increase in temperature to 2°C is getting bleaker*. IEA, 10 June, 2011 [available at http://www.iea.org/index_info.asp?id=1959].
- IETA (International Emissions Trading Association), 2011. *IETA response to the call for input to the AWG-LCA at CMP16 regarding new market-based mechanisms*.
- IGES, 2011. *Future perspective of CER issuance in the prolonged CDM*. Presentation made by Mr. Kentaro Takahashi on 7th June, 2011 in the side event – “Recapturing the Cancun Momentum: New Proposals for a Post-2012 Agreement and its Market Mechanisms”.
- Jung, M., Vieweg, M., Eisbrenner, K., Höhne, N., Ellermann, C., Schimschar, S. and Beyer, C. 2010a. *Nationally Appropriate Mitigation Actions: Insights from example development*. Ecofys, Cologne.
- Jung, M., Eisbrenner, K. and Höhne, N. 2010b. *How to get Nationally Appropriate Mitigation Actions (NAMAs) to work*. Ecofys, Cologne.
- KPMG, 2010. *Financing low-carbon investment in developing countries: Public-private partnerships for implementation of Nationally Appropriate Mitigation Actions*.
- Levina, E. and Helme, N. 2009. *Nationally Appropriate Mitigation Actions by Developing Countries: Architecture and Key Issues*. CCAP (Center for Clean Air Policy), Washington, D.C.
- MoEF (Ministry of Environment and Forests), 2009. *Climate Change Negotiations: India's Submissions to the United Nations Framework Convention on Climate Change*, Ministry of Environment and Forests, Government of India, New Delhi.
- North, D.C., 1990. *Institutions, Institutional Change and Economic Performance*, Cambridge University Press, Cambridge, UK.
- Okubo, Y., Hayashi, D. and Michaelowa, A. 2011. *NAMA crediting: how to assess offsets from and additionality of policy-based mitigation actions in developing countries*. *Greenhouse Gas Measurement & Management*, 11(1): 37–46.
- Oliver, P. And Ellermann, C., 2010. *Sectoral Maze*. *Trading Carbon*, 4 (4): 10-14.
- Pahuja, N. And Linnér, B. 2010. *NAMAs: Key to resolve open issues in negotiations*. CLIPORE Policy Brief.
- Point Carbon, 2011. *New market mechanisms: Any role for the UNFCCC?* Available at: <http://www.pointcarbon.com/1.1518132>.
- South Pole, 2011. *How to develop a NAMA by scaling-up ongoing programmatic CDM activities on the road from POA to NAMAs*. KfW Bankengruppe, Frankfurt am Main.
- Sterk, W., 2010a. *Nationally Appropriate Mitigation Actions: Definitions, Issues and Options*. Wuppertal Institute for Climate, Environment and Energy, Wuppertal.

- Sterk, W., 2010b. *New Mechanisms for the Carbon Market? Sectoral Crediting, Sectoral Trading and Crediting Nationally Appropriate Mitigation Actions*. Wuppertal Institute for Climate, Environment and Energy, Wuppertal.
- Teng, F.; Wang, Y.; Gu, A. and Xu, R. 2009. *Mitigation Actions in China: Measurement, Reporting and Verification*. WRI (World Resources Institute), Washington D.C.
- UNEP (United Nations Environment Programme), 2010. *The Emissions Gap Report: Are the Copenhagen Accord Pledges sufficient to limit global warming to 2° C or 1.5° C? A preliminary assessment*. UNEP: Nairobi.
- UNFCCC (United Nations Framework Convention on Climate Change), 2007. *Bali Action Plan*, FCCC/CP/2007/6/Add.1. UNFCCC: Bonn.
- UNFCCC, 2008. *Analysis of technology transfer in CDM projects* [available at <http://cdm.unfccc.int/Reference/Reports/TTreport/TTrep08.pdf>]. UNFCCC: Bonn.
- UNFCCC (2009a). *Ideas and proposals on the elements contained in Annex I of the Bali Action Plan, Submissions from Parties, Part I, FCCC/AWGLCA/2009/MISC.4 (Part I)*. UNFCCC: Bonn.
- UNFCCC (2009b). *Ideas and proposals on the elements contained in Annex I of the Bali Action Plan, Submissions from Parties, Part II, FCCC/AWGLCA/2009/MISC.4 (Part II)*. UNFCCC: Bonn.
- UNFCCC, 2010. *The Cancun Agreements: Outcome of the work of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention*, FCCC/CP/2010/7/Add.1. UNFCCC: Bonn
- Upadhyaya, P. 2010. *Is emission trading a possible policy option for India?* *Climate Policy*, 10 (5): 560-574.
- van Asselt, H., Berseus, J., Gupta, J. and Haug, C. 2010. *Nationally Appropriate Mitigation Actions in developing countries: challenges and opportunities*. Scientific Assessment and Policy Analysis (WAB) for Climate Change Report 500102 035, Institute for Environmental Studies (IVM), Vrije Universiteit Amsterdam.
- Wang-Helmreich, H., Sterk, W., Wehnert, T. and Arens, C. 2011. *Current Developments in Pilot Nationally Appropriate Mitigation Actions of Developing Countries*. Wuppertal Institute for Climate, Environment and Energy, Wuppertal.

Annexures

Annex I: Key discussion points/Questionnaire

1. Objectives of NAMAs

Guiding Question: What are the objectives of NAMAs?

Emission reductions and sustainable development served as the two guiding objectives for the Clean Development Mechanism (CDM). It is now being felt that, although the CDM has led to emission reductions, it has clearly not been able to promote sustainable development. As per the Bali Action Plan 1 (b) (ii), *“Nationally appropriate mitigation actions by developing country Parties in the context of sustainable development, supported and enabled by technology, financing and capacity-building, in a measurable, reportable and verifiable manner.”*The challenge for NAMAs therefore will be to mainstream sustainable development in a measured, reportable and verifiable manner while also ensuring emission reductions.

What should be the guiding objective for NAMAs? How can sustainability be objectively incorporated within NAMAs?

Interviewee’s initial views/suggestions/concerns:

2. Enhancing mitigation by NAMAs

Guiding Question: How effective can NAMAs be to enhance mitigation?

NAMAs as a concept have garnered greater acceptance in developing countries. Having freedom to define respective country specific action ensures that the sovereignty of developing countries is respected. To ensure that increase in global temperature remain below 2°C, it is important that there is greater collaboration for enhancing mitigation. Developing countries are taking measures to mainstream mitigation in their national planning, however, greater action on climate change calls for enhanced capacity building, collaboration in research, and development as well as investment in low carbon infrastructures.

What is the best way in which NAMAs can serve as a platform for greater collaboration between developed and developing countries? How can NAMAs help create conditions conducive for developing countries to go beyond offset based regimes? How can private sector be involved in NAMA financing?

Interviewee’s initial views/suggestions/concerns:

The linkages between NAMAs and the carbon market were introduced into the negotiations by Korea in its submission to the Ad-Hoc Working Group on Long-Term Cooperative Action (AWG-LCA) under the United Nations Framework Convention on Climate Change (UNFCCC)¹⁶. It has been argued that crediting NAMAs can enhance mitigation action in developing countries. The submission has been followed by the discussion on the subject of NAMAs leading to carbon credits. Some of the countries support the use of NAMAs for meeting Annex-I targets by generating emission reductions. However, Brazil and China have maintained a strong objection against crediting of NAMAs, whereas India and South Africa have remained silent on the topic¹⁷. These developing countries are important players in carbon markets, and it is important to understand their perspectives on the option of crediting NAMAs.

What parameters can define compatibility of carbon market with NAMAs? What are the problems/opportunities for C-NAMAs and their linking to existing carbon markets? Why is there difference in different countries views against/for crediting NAMAs?

Interviewee’s initial views/suggestions/concerns:

4. Credited NAMAs and its interaction with existing and emerging institutions

Guiding Question: Assuming that credited NAMAs are the way forward, then what will be the interaction between NAMAs and institutions – both existing and emerging?

North (1990)¹⁸ defines institutions in a society as the ‘rules of the game’, and states that institutions evolve in a path-dependent manner. This suggests that a change in one

¹⁶ Republic of Korea (2009): Submission by the Republic of Korea on Crediting Mechanism for NAMAs by the Parties Not Included in Annex I of the UNFCCC (Apr. 24, 2009). Online available at: <http://unfccc.int/resource/docs/2009/awglca6/eng/misc04p02.pdf#page=79>

¹⁷ Asselt, H. V., Berseus, J., Gupta, J. and Haug, C. (2010): Nationally Appropriate Mitigation Actions in developing countries: Challenges and Opportunities. Vrije Universiteit Amsterdam, at 9.

¹⁸ North, D.C. (1990): Institutions, Institutional Change and Economic Performance. Cambridge University Press, Cambridge, UK

institution would change the whole institutional network. However, any new institution aimed at reducing emissions should not hamper the functioning of existing institutions. It is therefore important to understand the impact of introducing new market mechanisms for combating climate change in order to take remedial measures. The interaction of C-NAMAs can be with institutions such as the CDM and European Union Emission Trading Scheme (EU-ETS). Its existence may also influence its role with existing governing structures such as CDM-Executive Board (EB), UNFCCC.

What possible institutional conflicts could NAMAs lead to? Can NAMAs and CDM overlap or they need to be mutually exclusive in terms of sectors and gases to be covered? What lessons from the CDM experience can be used for governance of NAMAs?

Interviewee’s initial views/suggestions/concerns:

5. NAMAs in national context

Guiding Question: What does Appropriateness entail?

NAMAs proposed by developing countries are varied and can fall into different categories. The variation in NAMAs can be accounted for by the varied interpretation of appropriateness. A certain action may be highly beneficial in one country, but may not be feasible in another. It is therefore important to identify the factors from a country perspective that determine appropriateness for the respective country.

What are the key factors that define appropriateness, and what kind of complexities may arise when different interpretations of appropriateness are applied in practice?

Interviewee’s initial views/suggestions/concerns:

Annex II: List of interviewees

S. No	Name	Affiliation at the time of Interview	Interview date
Structured Interviews			
1	Dr. Martin Cames	Oeko Institute, Berlin	09-03-2011
2	Mr. Manish Kumar Shrivastava	Jawaharlal Nehru University (JNU), Delhi	15-03-2011
3	Mr. Stefan Bakker	Energy research Centre of the Netherlands (ECN), Petten	24-03-2011
4	Dr. Asbjørn Torvanger	Center for International Climate and Environmental Research (CICERO), Oslo	14-04-2011
5	Mr. Harro van Asselt	Environmental Change Institute, Oxford	19-04-2011
6	Dr. Björn-Ola Linnér	Linköping University, Linköping	19-04-2011
7	Ms. Namrata Patodia Rastogi	Pew Centre on Global Climate Change, Arlington	21-04-2011
8	Mr. Konrad Raeschke-Kessler	Umweltbundesamt - Deutsche Emissionshandelsstelle (DEHSt), Berlin	26-04-2011
9	Mr. Alexander Vasa	Climate Policy Institute (CPI), Berlin	28-04-2011
10	Ms. Kim Carnahan	International Emission Trading Authority (IETA), Washington	03-05-2011
11	Mr. Jan Burck	Germanwatch, Bonn	10-05-2011
12	Mr. Konrad Von Ritter	KRITTER Advisory Services	10-05-2011
13	Dr. Imme Scholz	Deutsches Institut für Entwicklungspolitik (DIE), Bonn	11-05-2011
14	Mr. Wolfgang Sterk	Wuppertal Institute for Climate, Environment and Energy, Wuppertal	11-05-2011
15	Mr. Yuvaraj Dinesh Babu	Idea Carbon, Singapore	17-05-2011
16	Ms. Neelam Singh/ Ms. Kelly Levin	World Resources Institute (WRI), Washington	17-05-2011
17	Mr. Dipankar Ghosh/ Ms. Shivani Datta	Ernst & Young, New Delhi	18-05-2011
18	Mr. Naoyuki Yamagishi	WWF, Tokyo	24-05-2011
19	Dr. Prodipto Ghosh	The Energy and Resources Institute (TERI), New Delhi	26-05-2011
20	Mr. Daniel Klingefeld	Potsdam Institute for Climate Impact Research (PIK), Potsdam	30-05-2011
21	Mr. Matthias Duwe	Climate Action Network – Europe (CAN-E), Brussels	10-06-2011
22	Ms. Yuri Okubo	My Climate, Zürich	14-06-2011
23	Ms. Frauke Roeser	Ecofys, Berlin	24-06-2011

24	Dr. Eric Haites	Margaree Consultants Inc., Toronto	12-07-2011
25	Ms. Neha Pahuja	The Energy and Resources Institute (TERI), New Delhi	12-07-2011
26	Mr. Tirthankar Mandal	Climate Action Network – South Asia (CANSA)	14-07-2011
27	Ms. Miriam Faulwetter	Bundesministerium für Umwelt, Naturschutz und Reaktorsicherheit (BMU), Berlin	28-07-2011
28	Ms. Anya Boyd	University of Cape Town (UCT), Cape Town	04-08-2011
29	Mr. Martin Schroeder	KfW, Frankfurt	02-09-2011
30	Mr. Steven Gray	Climate Change Capital (CCC), London	02-09-2011
Unstructured Interviews			
U1	Ms. Niranjali Amerasinghe	Center for International Environmental Law (CIEL), USA	08-06-2011
U2	Mr. Richie Ahuja	Environmental Defence Fund (EDF), USA	10-06-2011
U3	Dr. Fei Teng	Tsinghua University, China	10-06-2011
U4	Ms. Anja Kollmuss	CDM Watch, Belgium	13-06-2011
U5	Mr. Friedel Sehleier	Deutsche Gesellschaft Fur Internationale Zusammenarbeit (GIZ) GmbH, Germany	15-06-2011
U6	Mr. Inchul Hwang	Korea Energy Management Company, South Korea	15-06-2011
U7	Dr. Payal Parikh	Climate-Consulting, Switzerland	16-06-2011
U8	Dr. Axel Michaelowa	University of Zurich, Switzerland	16-06-2011
U9	Dr. Ajay Mathur	Bureau of Energy Efficiency (BEE), India	17-06-2011