

Stakeholder Consultation on Analyzing Issues and Options for Implementing NAMAs: A Developing Country Perspective

**Magnolia Hall, India Habitat Centre, New Delhi
11 august 2011**

PROCEEDINGS

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Proceedings of the Stakeholder Consultation on Analyzing Issues and Options for Implementing NAMAs: A Developing Country Perspective held at Magnolia Hall, India Habitat Centre, New Delhi, on 11 August 2011

WELCOME ADDRESS: DR. ARABINDA MISHRA, TERI

Welcome to this workshop on “Stakeholder Consultation on issues relating to implementing Nationally Appropriate Mitigation Actions (NAMAs)”.

I take the opportunity to express our pleasure in having all of you here with us in this workshop. This workshop is important for us because it is a key component of one of the projects that we are currently conducting. It is in this context I am greatly pleased to welcome the Honorable Aslak Brun, Minister Counselor Royal Norwegian Embassy in India. We are delighted to have him and his colleagues from the Embassy here with us. Their presence is particularly important because their support has been the key driving force behind this project and in fact, behind a range of studies that we are currently undertaking under the very ambitious program Norwegian Framework Agreement with TERI, requiring substantive institutional support to carry out some very important studies on the themes of clean energy security and climate change.

To give you some idea this agreement came into being in the middle of 2010 and after receiving the Government of India’s approval we’d launched the NAMAs study under this program. We have just completed a year’s tenure under the study, and will be sharing some outputs to give you a flavor of the kind of deliverables being expected from the difference studies under this program. This particular workshop is linked to one of the project activities under the theme of climate change.

To give you some background the climate change theme has three areas under which we are carrying out studies under the program:

1. One relates to climate modeling activities.
2. The second relates to our study on NAMAs and trying to understand the significance of “national appropriateness” when referring to NAMAs; how developing countries’ preparedness may be assessed for NAMA implementation and how we link domestic mitigation action with the international architecture on climate change.
3. The third study relates to activities that can catalyze business action on climate change.

I take this opportunity to welcome our three international collaborators: Professor Morrow Gaines Campbell III Vitae Civilis from Brazil, a very senior experienced dignitary, Ms. Anya Boyd, University of Cape Town, South Africa and Dr. Teng Fei, Tshingua University, China, who have been with us for the past two days discussing ways in which to take the TERI projects forward and giving their inputs on key methodological issues. Also, our Norwegian partner from CICERO, Dr. Nuws Alsen a Researcher who is also collaborating with us and could not make it today - at some point of time we will have an exchange of views with him.

This truly international effort of putting together the developing country perspective on how NAMAs are shaping up is very important because there is really no literature and no research on such a crucial issue. At some point of time NAMA implementation is going to be of critical concern for country governments, due to the following:

1. The kind of development seen at the sub-national level in many countries, where a federal national like India has sub-governments taking up key positions on the mitigations issues. In such cases, it is important to understand and assess how these are aligned with national priorities, as well as, national positioning on mitigations at the international level. Therefore the term “nationally appropriate” should be discussed in the national differentiated context rather than in the uniform context.
2. Factoring in dynamism that is being experienced currently in many emerging developing economies – including rapid economic growth.

“Nationally appropriate” is at the core of this entire set of project activities towards understanding national context and identifying criteria to define appropriateness of mitigation actions. Our aim is to come up with a framework or tool that will enable decision makers to understand what mitigation actions should really be taken forward into the implementation stage and therefore to develop capabilities accordingly.

Questionnaires are also being circulated for inputs from the participants.

Our expectation from this workshop is that we get some key inputs from participants, which will feed into the research study so we urge you to kindly give your inputs to the discussions tabled for the rest of the day.

I request Honorable Counselor and Minister of the Royal Norwegian Embassy to deliver his remarks.

SPECIAL REMARKS: MR. ASAK BRUN, MINISTER COUNSELOR, ROYAL NORWEGIAN EMBASSY, INDIA

Mr. Mishra, distinguished scientists welcome to those who come far from Brazil, China, and from South Africa, ladies and gentlemen. I’m very happy to be invited to this important workshop and TERI has always been a very important partner for us at the Embassy. And Thank you for your kind words about Norway and Norwegian Embassy and Norwegian government officials. We share our ideals with TERI and we will continue to be a strong and reliable partner to TERI also in the future.

The topic for this presentation is both timely and important – to design responses to climate change that are appropriate and specific, in the national context. This is the central question in our continued efforts to strengthen international climate change architecture. It will also be the central theme in South Africa-Durban in months to come.

We all realize that there is no one-size-fits-all solution and so the open discussions we will have today will be crucial to the further understanding and analysis of these issues.

Obviously these are challenges that go beyond national borders, which can be addressed globally and tackled locally. One such issue that Norway puts great emphasis on is access to clean energy in developing countries, an area that India and Norway are cooperating on closely, as well as, on a range of other projects with regard to climate change adaptation, agriculture and water resources, carbon capture and hydrogen energy production, and also, an environmental film festival. Several projects are under implementation and showing good results.

Norway's main international efforts are in the Red Plus agenda with Indian and International negotiations on a new global climate change agreement. In 2007, the Prime Minister of Norway, Mr. Jens Stoltenberg, launched Norway's International Climate and Forest Initiative (NICFI) with USD 400 million. The aim of this initiative is to reduce emissions from deforestation and forest degradation in developing countries and is already producing very positive results across Latin America, Africa and Asia.

Norway is also supporting a wide range of innovative projects implemented jointly by Indian and Norwegian institutions, with particular focus on areas of climate change adaptation, biodiversity conservation, renewable energy and the clean development mechanisms (CDM).

Some examples include climate change impacts on river basins, adaptation of rice growing areas to climate change, recovery of alternative fuels and treatment of organic hazardous wastes. New projects on extreme risk vulnerability and adaptation have been prepared by TERI in collaboration with Norwegian institutions and expected to be implemented soon. All these initiatives by India and Norway are examples of sound Nationally Appropriate Mitigation Actions (NAMAs) and we hope there would be many more in the time to come. My colleagues will be here throughout today and we are very eager to learn your views on the subject. I wish you the very best of success and thank you very much.

MODERATOR: Thank you, Mr. Brun.

SESSION 1

PANEL DISCUSSION: WHAT DOES "NATIONALLY APPROPRIATE" IN NAMA MEAN?

CHAIR: MR. PRODIPTO GHOSH, DISTINGUISHED FELLOW, TERI

Good morning and welcome to this first substantive session. We have with us two survivors from the list: Dr. Teng Fei from the Tsinghua University and Mr. Tirthankar Mandal from Climate Action Network South Asia to give what I hope would be radically different perspectives so that we can have animated discussions after their presentations.

The term NAMA occurs in Para 1 b-2 of the Bali Action Plan. Prior to this document there was no such concept and what Para b-2 says: This is Nationally Appropriate Mitigation Actions in the context of Sustainable Development. So the term NAMA is inextricably linked up with two concepts – Nationally Appropriate and Sustainable Development.

It would seem to me that Nationally Appropriate relates to actions in the context of sustainable development which are relevant to the developing party concerned. There is, of course, a need for

clarification of the relationship between nationally appropriate and sustainable development but there are also other institutional and process related issues involved.

1. Who determines the yard sticks or criteria for sustainable development? E.g. with respect to CDM, there was an aggressive move by Annex I parties that sustainable development criteria should be set internationally. The debate was ultimately settled in favor of a developing countries point of view that sustainable development criteria would be set nationally.
2. Secondly, which is the institutional mechanism in a country that determines something is nationally appropriate – NAMA is nationally appropriate. With respect to CDM the question of whether the particular project proposal is consistent with the countries' perception of sustainable development is driven and determined by the designated national authorities (DNAs). In the discussions up to Cancun, there has been no discussion on institutional structures and who determines what is nationally appropriate.
3. Is there any scope for third party international review of what is nationally appropriate? Whether the criteria for sustainable development are nationally appropriate? The bare language of the BALI Action Plan certainly gives no room with respect to such a premise.
4. Subsequent to BALI in the Copenhagen Accord, we have language, which relates to international consultation and analysis with respect to NAMAs. What is the scope of international consultation analysis? Durban says it would be a technical review. Would a technical review relate to whether the mitigation targets a goal of that particular NAMA or whether a national MRV has been conducted, correctly?

These are all difficult questions and there is certainly a knot of divide with respect to mere perception on these questions. In general the South would like to keep these questions completely outside the purview of any kind of international documentation or review, whilst Annex I countries would like these issues placed in the context of each NAMA in the International Domain.

I would first give the floor to Prof. Teng Fei of Tsinghai University. The Tsinghai University is one of the China's premier Technical Universities and TERI-Tsinghai University have a long history of collaboration.

PROF. TENG FEI, TSINGHAI UNIVERSITY, CHINA

Thank you. I would like to thank TERI for inviting me to not only for this workshop but also for participation of this very important project for NAMAs because since Bali, NAMA has been the key words of negotiations in the current trend. Although we have spent more than four years in the negotiation there is still no clear understanding of what constitutes a NAMA.

What is a Mitigation Action and what is Nationally Appropriate?

Firstly, what will the scope for NAMAs be? Scope of NAMAs in this context means what would their coverage be? Statewide actions can also be considered as NAMAs or sector-wise programs and program-wise by project actions? Actions imply that there should be some actors for taking up these actions. E.g. the government for policy actions. In the context of project owners, private companies could be the actors, and citizens of communities etc.

So what is meant by actors of a NAMA? What is an instrument? What is meant by actions? This implies a set of decisions that could be a policy measure or a business decision or an investment decision. It could also be behavioral decisions taken by the consumers. In this regard, what instruments could be considered actions?

Last but not least, how can we distinguish between a NAMA and a quantified emission reduction and limitation objectives of an Annex I country?

What is the legal measure of NAMA? Whether or not action is binding is clear, however, whether the output of the action is binding or not, is still unclear. Most developing countries think actions, and the corresponding actors, are voluntary i.e. not binding.

Post Cancun, there are some new legal consequences of considering an action as a NAMA. Actions are initiated in an international context and this leads to some legal obligations/consequences.

NAMAs linked to the carbon market have found some deterrents in that some developing countries, including China, are against generating credits from NAMA as offsets.

Traditionally, the most commonly agreed upon NAMA is the internationally supported NAMA, meaning those actions supported internationally, in terms of technology, finance and capacity building. There is always linkage between NAMA and support and that implies that every NAMA should have MRV criteria.

There is no clear definition for NAMA at this moment and I would like to provide some analytical insights of my own and observations from countries' submissions and from parties' submissions. These observations are from the BASIC countries' submissions.

1. Brazil's submission shows a nationwide reservation from EU target's that are binding, with some subtle central actions from the forestry sector and the energy sector.
2. South Africa shows a nationwide reservation also from the EU target.
3. In India, there is a nationwide energy intensity target.
4. China has a mix of a nationwide carbon intensity target and also sectoral targets like renewable energy share.

These submissions by BASIC countries, after Copenhagen, as mitigation actions are not purely NAMAs.

It is apparent that coverage is the origin nationwide figures for quantified emission reductions, limitations and objectives. E.g. if you put some emissions of BASIC countries in this figure, in the slide for Brazil and South Africa we have nationwide deviations from BAU targets, which may not be interesting as NAMAs. For India and China there are nationwide intensity targets stressed by carbon intensity or energy intensity. Brazil and China also have quantified targets, sector-wise.

It is clear that the BASIC countries will have to develop detailed actions on the current targets submitted to the UNFCCC. A detailed action means both at the policy level and at the concrete project level.

The target is something not manipulated and there is need for a detailed NAMA in the next step, to further develop a concrete action i.e. to translate targets into visible actions.

From research perspectives and my personal view, we can use emissions in different ways. The first is to use these in the form of indicators to prioritize mitigation actions, implying more or less. Some actions are more appropriate than others, which mean multiple actions have been prioritized from an already prioritized list of possible actions.

There is another way to consider these propositions as measures and as a label. Using these labels on some actions tells us whether or not the said action is a NAMA.

The legal sequencing of the international reflection on NAMAs is quite important. We have different means to put these NAMA labels on the various actions. If you report this in the registry, it is generally considered a NAMA, and the registry will be considered as a type of channel to put labels on actions and garner relatively quick international support.

Another good vehicle is National Communications or NATCOM. The benefit to countries who submit such communications is that the kinds of NAMAs described will be recognized by international communities, however with costs.

According to the Cancun Agreement, those kinds of actions are subject to ICA, and domestic actions should be domestically MRV-ed. Whether or not there will be consequences from ICA is an important issue, which will impact whether or not a country will put a NAMA label on some of its actions and communicate those through the NATCOM.

I believe there are many questions generated by negotiations and most of them still remain open. A NAMA is distinct from concise emission reductions in its main objective but how...? The answer may lie in the provision of incentives and that concludes my presentations.

MR. PRODIPTO: Thank you for working on many of the important conceptual issues surrounding NAMAs and nationally appropriated and so on.

MR. TIRTHANKAR MANDAL, CLIMATE ACTION NETWORK, SOUTH ASIA

My presentation has two parts: What is nationally appropriate and then how can we apply this in the context of Indian policy making scenarios, basically in the energy sector. There other is that a NAMA is actually seen as a bridging mechanism between developed and developing country actions, respectively.

A developed country action is basically in terms of support for finance and technology, whilst a developing country action has been basically implementation of various country-specific emission reduction actions or policies.

NAMAs are located nationally and the appropriateness is nationally determined, potentially by the national government but with respect to some comparison. The basic components of ICA require a

harmonized structure for NAMA assessments, which will have comparability within the developing countries. The problem is that who will actually develop those guidelines?

Will they be developed under the constraints of a multilateral framework a completely different kind of set-up? This is where the hard dynamics of the developed and developing countries will be sorted out. There is kind of convergence among NAMA issues among developing countries but for obvious reasons developed countries actually diverged from that kind of alignment.

In the context of India, for example, eradication of poverty and energy access can be the guiding principles for developing NAMA. Around that issue we can actually develop criteria which will fit into and qualify for a NAMA. Next is the question of inclusive growth, when the whole structure is determined by the bottom-up approach. Finally an action must qualify under low carbon development or low carbon emission strategies.

What could the possible illustration for NAMA be, if a developing country is getting support from the international zone? What is developed country is going to do in this framework? The developed country is actually providing finance and technology support for deviations from the BAU case.

But the way the NAMAs have been conceived and the way the discussion is evolving, it seems that actions are arrived at with respect to the gap developing countries have with developed countries. These are being parked as part of the requisites of NAMA. That should not happen i.e. a developed country should not part its responsibilities for developing countries. This is crucial distinction, which needs flagging.

In this respect what are the issues we need to resolve immediately, until Durban? How do you actually develop guidelines, which will determine what or what isn't a NAMA? As Prof. Teng Fei has rightly pointed out, it can prepare a priority based on priorities.

How can we actually define or try to define national appropriateness in the Indian context? India has huge energy poverty and energy access remains the major concern. Based on the current state of energy access in India, if you compare the National Action Plan on Climate Change, it actually targets 15% of renewable energy in the total energy leaks by 2020. There is a huge possibility of providing energy access through renewable energy and to claim this as part of a NAMA program.

Energy efficiency could be achieved in two ways. One is to reduce T&D losses and the other is to employ energy efficient utilities. In both cases, a program may be developed to qualify as a NAMA. Scopes in the current 12th year plan may be linked in accordingly, such as, enhanced growth, skills and faster generation of employment, market development. All of these can form part of an overall energy efficiency and energy access plan.

That is all. Thank you.

CHAIR: Thank you, Mr. Tirthankar, for a wide ranging presentation, which covered conceptual issues, certain principles and certain decisions, which need to be taken immediately. The floor is now open for comments and questions.

QUESTION: What I gather from this assertion is that whatever is needed to maintain the 2 degree C is to be done by Annex I countries, and whatever developing countries do is over and above that.

REPLY: The 2 degree target is for all countries but in the current situation whatever pledges have been made from Annex I parties added to whatever developing countries have voluntarily put on the table, we do not have a match for the 2 degree pathway.

There is gap already, even with the highest range of pledges from Annex I countries and you cannot actually burden the Non-Annex I countries. Discussions in various sector working groups are actually saying that Non-Annex I countries have to do more, specifically the bigger emerging countries. So the implication is that once all countries have made their voluntary pledges. Whatever the gap is in Annex I countries must raise their views.

QUESTION: I am Dr. Ramesh Jalan from UNDP. Prof. Fei when we talk of appropriateness, there should be one "appropriateness" i.e. there cannot be appropriateness for international reflection and you cannot have appropriateness for national reflection. It gets confusing.

When we talk of nationally appropriate you must look at national interests. We need to reflect more on that and if something is nationally appropriate it should be internationally appropriate also. It should not be other way round. We have certain other categories which are of international reflections. This would lead lot of duplicity in the work that the national authorities would be doing.

Secondly, regarding energy efficiency related to T&D loss, which has been re-named Aggregate Technical and Commercial losses (AT&C). If illegal tapping and theft are reduced, losses due to electricity T&D would reduce substantially Thank you.

QUESTION: Navroz Dubash from Centre for Policy Research. I also want to pick up on this theme on appropriateness and actually wonder whether these are two different definitions that you actually given. Whether they are actually linked or have to be linked and in the sense two sides of the same coin. And one is sort of domestically focused perspective and one is non-internationally focused, where in fact, we need both. So I want to ask you to refine that. Is that something about decision making process country that would go through and define what is appropriate? That might lead to distinction between the national perspective on what is appropriate and what is appropriate to project internationally.

Can you give some examples of circumstances where the two might not actually be the same? Then we can figure out whether those two definitions are in fact two aspects of the same concepts. On the T&D losses, the point is that Tirthankar had expanded his definition of what Dr. Jalan has said, which is that even if you reduced those T&D or AT&C losses you actually see it is not a mitigation action i.e. electricity is being used of that 30-40-50% which comprises "losses".

Transmission losses are probably may 10-12 may be 15% but the rest is actually being used.

TENG FEI: I don't think that we need to introduce some international evaluation for those things. I largely agree to that nationally appropriate means whether or not action is appropriate and it is national decision. It is also domestic decision – and it is not international decision.

For the second question I would like to use the policy cycle as example. Every policy has set of actions and has cycle. First you design your policies and then you implement your policies – you evaluate your policies and for the appropriateness the design phase is a national decision. When the implementation happens it is also national decision. The problem is that generally the evaluation process is the domestic process for evaluating policies but when you report those actions through international contacts, you introduce international evaluation and also some sort of assessment on the policies side.

When you introduce the idea of ICA and there are international interventions through the ICA, there is bound to be some review process the domestic decision making process. My personal view is that these kinds of decisions exist and that the intention is to establish a firewall to prevent the policy making process from international interventions.

Also, because international interventions never happen on Annex I countries, there is no international assessment at this moment on the adequacy and appropriateness of mitigations actions and mitigation policies in developed country parties.

But there is also voice from developed countries like US- to ask for some party involvement or party consultation. But if you involve the party just like WTO has done and so that means some cans of international intervention on international pressure. And only on domestic or policy making process. And so whether or not for ICA should involve the parties as part of the consultation process in the future because in fact they are very important implications on the domestic decisions making process and on the definition of national appropriateness.

CHAIR: Thank you, sir and this is actually a very comprehensive and useful explanation. The language in Cancun does not close doors for international review of appropriateness for adequacy. Developing countries will have to remain vigilant that the process of ICA and process of MRV does not in fact escalate to point where the policy decisions of developing countries are subjected to second guessing by the international community and in particular by their developing countries partners.

MR. TIRTHANKAR: In terms of energy and T&D losses, even if it is 10-15% of the energy which is actually due to losses and rest due to commercial losses from theft and illegal access to the grid, the point is that even if one set of policies is for reducing losses, there should be one other set of policies which would be to actually tap commercial losses plus it has to be chalked up with those efficiencies and gains which will actually tune to 10-15% of losses. And so it can qualify as part of an overall NAMA system.

It is actually the amount of energy that you save through these policies, implementation plus restructuring of the distribution.

Efficient utilities should actually play major role.

QUESTION: This is Vishal from ICF. Are there some elements that have to be decided on first, in order for progress on NAMAs to happen? Significant parts of the international agreements still being discussed and debated. This debate on NAMAs will potentially continue in isolation of other facts.

Secondly, while I know the discussion is focused on mitigation, are there any linkages being discussed with adaptation?

Thirdly, I would like to get your views on India and China, regarding the domestic political process and where you see “internationally appropriate” being discussed within the political process. Also, does the political process really have the capacity to be able to determine what is “nationally appropriate”?

REPLY: The first question regarding current negotiations is largely focused on MRV issues instead of NAMA issues. From my personal viewpoint, we need to make the distinction between supported NAMA and supporting NAMAs through the carbon market and believe that the registry should be the focus of negotiations.

For the second question, in China we have a bottom-up political process at the state level, and at national level we have various Five Year Plans (FYP). Each FYP is designed and proposed by the state consul and then passed by the People’s Congress. These make legally binding documents and the FYP is further elaborated into different sectors of FYP, in different provinces or local governments. Finally, they are translated into concrete programs of projects through the ministries or local governments’ policies and matters.

I have also seen that there need to be some kind of institutional reforms or new institutional arrangements within the countries E.g. we didn’t have the department of climate change before 2006. After 2006 we have introduced this new department of climate change into the NDRC (National Development and Reform Commission), which is the national policy co-ordination ministry. Therefore new governance structures may be required for the issue as a whole. Thank you.

TIRTHANKAR: On the question of national appropriateness and the political process, in India there is actually now for the development of some basic ground works. E.g. the 15% renewable energy policy by 2020 and the various state action plans on climate change.

There has to be some international incentivisation and some signal from the international process showing the kind of support one might get if from implementing a particular type of action. Also, the Low Carbon Development Plan, conceived by the Planning Commission. They recently published an interim report and NAMAs could very well be a subset of the whole plan.

It is true that the political process is slow, mainly because it is not yet in the mainstream.

Regarding the adaptation of NAMAs I think our National Adaptation Program has now been proposed. A NAMA is specifically for mitigation actions, which have the ramifications on adaptation actions as well.

CHAIR: Thank you. The National Missions, all of which have been approved by the PMCCC (Prime Minister’s Council on Climate Change) and the 12th FYP, are right now in the process of preparation.

Each of the working groups preparing the 12th FYP are taking on board the National Action Plan on Climate Change (NAPCC) and the Missions and incorporating those actions, policies and regressions into the 12th FYP proposal.

Ultimately the Plan document is approved by the cabinet and by the National Development Council which is, politically, more representative than Parliament because it comprises participation by the Central Government as well as the state governments. Ultimately the Plan is implemented through annual budgets, which are approved by the Parliament. So the question is about whether Indian political process permits identification as nationally appropriate and I think that you know the debates in all these forums are extremely vigorous.

We have come to the end of our allotted time for this session. I would like to both the panel speakers for their excellent presentations and for their incisive responses to the question and comments. And to the participants for listening very intently and for their animated discussions session we had. Thank you.

NEHA: We shall break for tea.

SESSION 2

TECHNICAL SESSION: RESEARCH FRAMEWORK

MODERATOR: Dr. Arabinda Mishra will moderate the session and we have Dr. Navroz Dubash and Dr. Anand Patwardhan, who would be joining us from Mumbai.

DR. MISHRA: Thank you and welcome back. I take this opportunity to welcome Dr. Anand Patwardhan joining us from Mumbai. Thank you professor for agreeing to participate in this workshop. The other eminent panelist for this session is Dr. Navroz Dubash from the Centre for Policy Research.

PRESENTATION ON RESEARCH FRAMEWORK DEVELOPED FOR NAMA PROJECT: NEHA PAHUJA, TERI

Thank you Dr. Mishra. I will give a brief introduction to the project, its objectives, objectives how we have split it into various tasks and with whom we are collaborating as the project progresses. I will then go on to the interim findings and the kind of research framework we intend to develop.

Funded by the Norwegian government, the project has two components. One is NAMAs and other is REDD Plus. In the NAMA component we are trying to identify what constitutes the idea of a Nationally Appropriate Mitigation Action wherein we are focusing on national appropriateness and define how or what leads to national appropriateness.

The second component is to study the level of preparedness of developing countries and assess needs for capacity enhancement, in order to implement the NAMAs. Also to what extent regulatory, legal and institutional measures at the domestic level can strengthen them.

The next component is to analyze the international architecture for REDD Plus and its relevance for India.

However in this workshop we would primarily be focusing on the issues of NAMAs and our scope for the workshop would be on these three key areas. One is to develop the criteria for appropriateness and how we identify NAMAs in select countries.

We are actually focusing on Brazil, China, South Africa and India – these are the four countries we've selected to do case studies on, wherein we intend to identify potential mitigation actions and assess their appropriateness against criteria we developed in task one.

Once we have identified these potential mitigation actions we would certainly want to look at the preparedness level of the country and identify areas wherein the preparedness could be enhanced. We will also examine the international architecture and how it could be used to support some of the actions.

Now coming to content as we have discussed in session one, the issue of NAMAs was coined during BALI Action Plan and has opened many questions, which in turn, are open to many interpretations and new issues. These issues range from the level of support that would be required to the level of MRV that is warranted.

However in this project we are looking at NAMAs as mitigation actions, which are nationally appropriate. So the link between mitigation actions and national appropriateness is the link that we are trying to work on in this project. A presentation that I attended in Cancun highlighted that a good NAMA proposal should be developed within the country to be developed through a participatory process and that it should be able to organize local commitment.

It follows that we thought the key questions would be:

1. What is national appropriateness and how do we define it?
2. What is the process for identification of NAMAs?
3. How we can make the process more participatory in nature?

Before we go into the issues pertaining to NAMAs I would like to draw some analogies to environmental problems in general. Wherein it is well established that environmental problems are complex because they involve a high level of uncertainty and are political in nature. The same can be extended to climate change and especially to the mitigation, wherein there are debates on emission reduction targets for developed countries and what kind of actions developing countries could probably take.

In his work, Mr. Ramanathan highlights that the selection of appropriate mitigation actions especially for developing countries is complex. It also depends on how i.e. from an economic perspective or from an environmental perspective or from a social perspective. These are different parts of solving essentially the same problem.

Similarly we have various different mitigation options or choices but what is the best choice given the different perspectives and how do we select the most appropriate option?

Therefore what we have suggested for our research framework – that mitigation actions should vary from technological to behavioral options or combinations of those. Certain tools would be required to implement those mitigation actions. Further, it is well established that an action, which would be appropriate in one country, might not be appropriate in another country.

Could we make tool, which would help policy makers evaluate instruments before they make their choices and if so what would the role of other stakeholders be?

As there is no appropriate tool to evaluate climate policy instruments, we framed our research objectives in a way that would help identify the constituent elements of national appropriateness. Ideally, this should be common tool that could be used by all countries and so there is some level of similarity in approach. Also the tool should be applicable across multiple sectors and flexible enough to make it applicable in the future i.e. helping policy makers to make decision *ex ante*.

This tool is not an alternate to the normal policy process but rather a tool to inform the policy process. Further it came out in our discussions over last week that this tool will also be used to prioritize identified options of NAMAs and possibly, to classify the NAMAs.

E.g.a NAMA has good environmental benefits and co-benefits however it cannot be taken up upfront because of huge financial costs. We could then classify it as a supporting NAMA and it could go into the international register or whatever mechanism exists to make it evolve.

We are using multi criteria decision-making methods, which are or have been in use for wide range of environmental problems. Given the complex and multi-dimensional nature of the problem, we thought it would be an appropriate way to help solve the problem.

It is also a process or method, which would make it very participative for qualitative assessment, considering quantitative assessment might not always be possible. In our approach we said every country would set up a decision goal and that would help them identify mitigation options and develop in parallel, wherein we would select the criteria and that would be basically from expert consultations such as this one. A literature review and further consultations and interviews with various stakeholders would be done to determine the weights of the criteria that we have chosen.

Based on the aforementioned deliberations we would come up with a framework which could be used to assess the national appropriateness of these mitigation actions, and possibly, we may be able to prioritize these actions and come up with NAMAs.

In terms of progress we are basically at level one wherein we have done some literature review and some form of stakeholder consultation to be able to identify and select criteria. In the next step we would be looking to formalize this arrangement and go to the next level wherein we come up with the framework. The questionnaire we distributed earlier is a kind of step one piloting of what tools could be used or what criteria could be used.

In terms of interim findings we have done a literature review of what criteria have been used in the past to evaluate climate policies, in general. Basically these range in two categories – environmental effectiveness and cost effectiveness.

And many of the criteria try to consider how equity should figure in each action, both at the national and international levels, respectively.

Our first study was conducted in China, to assess mitigation priorities for China's energy sector. The criteria they used for mitigation potential ranged from local environmental impacts, to energy and resource efficiency, and economic costs to the availability of resources.

The most important consideration here was consistency with national development goals. Another study conducted by Mr. Ramanathan for India, selected appropriate mitigation actions that could be under the criterion that he developed. One of the more important criteria was national benefits and politico-social feasibility.

If we look into studies conducted for the developed countries, one study attempted to define national priorities and options in the energy sector, which would be then used for the National Action Plan for Greece. Most of the criteria used were on cost effectiveness and synergies with the other actions related to the life style.

Another similar study, which was done for eight countries evaluating the implementation of the EU-ETS in those countries, was essentially an exposé analysis. The 3 main criteria were environmental performance, cost effectiveness and feasibility of implementation and each had sub criteria ranging from political acceptability, cost efficiency and equity, to compliance, flexibility and financial feasibility.

There is also study that looks at the international regime and tries to suggest actions, which could be used for the aviation sector at the international level. Here, the distributional aspect has come out as a very important criterion.

As priorities differ from country to country and to country and level-to-level, the tool needs to be flexible and bring the local focus. These are studies, which clearly evaluated the effectiveness of certain policies but not necessarily, national appropriateness.

But it would differ from individual and from stakeholder to stakeholder and that is the reason we use multi criteria decision-making tools or models to come up with one framework. We hope the discussion would simulate our work further and we would be able to come up with some interesting findings.

CHAIR: Thank you, Neha. I now request Dr. Dubash to comment on the presentation and research framework in its entirety.

DR. NAVROZ DUBASH, CENTRE FOR POLICY RESEARCH

Thank you very much. This is a really useful workshop and this preliminary work that you have done in the public domain. This is also very timely discussion from the context within which I am thinking about these things.

There are two contexts that are relevant for me.

1. One is through the lens of the low carbon expert group that India has constituted which is discussed in the last session. These kinds of discussions are very much in play in that expert group in a cross cutting group that coincidentally both Anand Patwardhan and myself are part of.
2. The second is in the context of the IPCC where the chapter on national action plan for 5th Assessment Report is also grappling with these kinds of issues. I am associated with that part of the discussion.

I just have four or five points and I will try to go through quite quickly. The first is the idea of multi criteria decision analysis. This is actually good approach- framework is an appropriate one. The use of some kind of qualitative matrix along with quantitative matrix is also probably necessary, given the complexity of criteria that are being balanced.

This is something we are talking about in the expert group as well. I am not sure whether the waiting approach, which is what we used, is one of the options/variances of multi criteria decision analysis. Whether in fact the waiting ends up being worth the efforts is something that is not clear to me.

This has to be a very usable, low transaction cost, kind of device and tool. If you expect either broader-stakeholders to engage with this or you expect government officials to walk through this, it needs to be pretty robust, straight forward and something we can do quite quickly. The richness will come in the discussion without spending too much effort up front bogging it down with details that can and will be, contested.

Ex ante is a way of looking at various policy options. *Ex post*, is much tougher. It also feeds into the discussions in the last session about whether developing countries would be opening themselves up to an ICA process that involves second guessing our domestic policies processes. Also, in doing a qualitative assessment of this, we need to identify how and where there is room for *anex post* review.

The second point is one of the scale and terminologies. This came up in the last session. Are we talking about national targets, NAMAs, an intensity target or some kind of target based on what BASIC countries have done? E.g. the PAT scheme I a policy approach within a larger package of policy, which is the National Mission on Enhancing Energy Efficiency (NMEEE).

Are you bundling together policies and actions where the government itself leads the action or something more multi-stakeholder driven, like a business action or a transparency based action. Getting the terminologies straight earlier is very important and something that we are currently grappling with in the IPCC context.

The next point is regarding scope and we certainly do not want to have a NAMA concept that is restricted in scope, particularly in developing countries, where a lot of decisions that will have climate

implications are actually be taken for non-climate reasons. That is as it should be but e.g. urban transportation and urban planning – all of these are actually going to have huge implications for future trajectories.

At the same time we do not want to only consider “outside” climate concerns although our decisions are part of the future climate trajectory. Therefore, how best can we manage questions of scope?

There are few different ways that have come out already in the discussions on how to define “appropriateness” and deal with it. Dr. Ghosh in his useful intervention spoke of summing up comments where he impressively said that appropriateness is defined procedurally. We have set of procedures on how we make decisions, if they have gone through those procedures, by definitions, they are appropriate. This project has a more substantive definition of procedures of appropriateness. The substantive definition of appropriateness has four or five of my criteria i.e. distribution, local environment etc. and we evaluate against each of these.

Is the basis on which the substantial framework, if we have one for appropriateness, an extension of the same framework as the one we use to project what is appropriate internationally? Or would we use an entirely different framework for that? The answer that question depends somewhat on what the ICA process will look like. If the ICA process looks like it is going to be one that second guesses domestic processes, then most countries would want to separate the two.

Further, countries will not sort be transparent about the framework if they feel they will open themselves up to scrutiny.

One has to be very careful in thinking about NAMAs to make sure you don’t lock in perverse incentives either from an Indian perspective or from the global mitigation perspective.

E.g. we don’t want the NAMA framework and its link to the international regime, through support via ICA etc. to create a situation where a country like India thinks twice about doing things that are domestically in its interest because they don’t want to open themselves up to scrutiny.

It might be good to think through what implicit incentive frameworks are embedded in this process. You also don’t want to create a discussion on climate policies and non-climate policies. Once you start putting things into those two pockets, you you risk creating all these kinds of incentives for gaming.

These are my reflections.

CHAIR: Thank you Dr. Navroz. May I now request Dr. Patwardhan to make his comments on the research framework and research objectives and also any other issues which he feels relevant.

DR. PATWARDHAN: IIT, MUMBAI

Dr. Navroz’s presentation was very useful and to my mind, covers all three major dimensions of the research framework. These are in my view effective attributes and then an evaluation paper. I do not

think at this stage that we need to worry about making the framework optimal but rather to look at it as a way of understanding available options.

I think the process issues are gaining importance because one cannot determine these *ex ante* on national appropriateness. The process is not just what we follow nationally, but also what happens internationally. If these NAMAs are going into a registry, then it becomes similar to the institutional set-up of CDM, where you have the Executive Board.

Multiple characteristics make a NAMA and in some way we have to engage the process by which we will determine what is nationally appropriate, a determination that might vary based on sector, as well as, methodology, when related to specific attributes. Professional attributes are also important.

What is the nature of NAMAs and how would they interpret the word action? It could be narrow or project specific, or based on environmental effectiveness or policies.

The second broad fraction is cost and I think one can think of NAMAs as low or negative marking for prompt action but the real question is at what point of margin it will serve the purpose?

The next dimension is the technology and the issue we are looking at is early state versus market ready technologies.

The final aspect is the most important one and this is the co-benefit, which is by definition of mitigation. In terms of NAMAs they are mitigations of primary incentives.

What is important is the degree to which we want to open up every action as a NAMA, or rather, say that we are looking at indicative action but appropriateness is critically independent of the co-benefits.

Thank you.

CHAIR: Thank you, Dr. Patwardhan.

QUESTION: During the last sixty years certain disparities have existed and continue to exist, even today. For example- even today 80% of the world's population rely on 80% of its resources in the income uses 80% of energy while the developing world to which there is reference is still making use of 20% of resources and 18% of energy so on and so forth.

How do we bridge this gap between the developed and the developing world in the use of these resources rather than vis-à-vis climate change?

REPLY: The idea looking at the problem of mitigation from a holistic perspective and having inputs from the social dimension as well as from the economic dimension is key here. This is what we tried to do, when we developed this framework.

COMMENT: I am from the German International Cooperation. If a national action is sustainable and there is a vast body of indicators on sustainability, then would also be okay i.e. sustainable, in the international context. The same goes for the discussion on internationally appropriate.

In a sense, you are adding a burden on one side – why not use the existing knowledge instead of making a completely new system? How much are sustainable development criteria used to evaluate nationally appropriateness? How do you use these indicators?

REPLY: In answering this question it is important to go back and remember where all these terms come from i.e. these are all politically compromised terms - appropriateness and sustainable development. Nitin Desai spoke earlier about how the term came to be. For that country to move ahead and pretend there was no trade-off between growth and resource degradation is wrong.

Equity is part of the sustainable development. Some degree of conditional growth was part of sustainable development and protecting the resources base (in the inter-generational sense) was part of sustainable development and so on. So they were very composed and now we are going through an exercise of decomposing appropriateness.

The trick is not to get too bogged down in meso-level constructs like sustainability but for each country to come with an agreement on the operational sub components of it. We shouldn't worry too much about a perfect match.

COMMENT: Navroz has said we should not forget the term we are using i.e. that it is something specific used in a particular context. Within that context, there is need to give that term operational meaning and that is the effort being discussed earlier. What is the necessity of having a process that the term we are using has already been a part of?

CHAIR: Thank you Dr. Patwardhan. How do you feel this resource disparity is going and to what extent, when we talk about global response to climate change?

And to what extent do you feel this existing disparity is going to compromise this process or influence this process influence country's positions. To what extent do you see the global in-equity sort of sterling action on climate change?

DR. PATWARDHAN: This is actually much broader question well beyond the subject matter. There is always at any point of time, inequity. Then the question is how it affects the current dynamic i.e. is it preventing us reaching a global agreement?

COMMENT: We can contribute to better and more far reaching effective mitigation from this project and I do not think we will run into resource-based disparity issues.

COMMENT: My name is Raman Mehta. Regarding the notion of preparedness and how we going to measure it: are there certain criteria that are country-specific?

Also Dr. Navroz commented that it is better to do it *ex ante* rather than *ex post*. Would you have set of *ex post* criteria to measure whether the NAMAs are indeed being implemented effectively, their impacts etc.?

COMMENT: One of the reasons why the concept part is important is because there will be some degree of variation, possibly within each sector, as well. A sector like energy is quite different from industry efficiency, electricity generation, and there are variations. That is one of the reasons why, having parity on process becomes important.

DR. NAVROZ: It is highly likely that the appropriateness will be different across different countries. The effort here is to develop a tool and I agree with this effort to develop tool that is flexible enough to cater to rather different contexts. We might have the tools to make qualitative judgments in a structured way, or quantitative judgments in structured way. The waiting system allows you to tailor, as well.

This kind of idea is compatible with the fact that nationally appropriate almost implies it has to be open to being tailored. Whether or not use the same criteria, depends on a bit on what the international framework looks like.

In terms of *ex post* the tool here is to help you decide among competing options and perhaps, to prioritize them. Would you use the same tool *forex post* analysis?

COMMENT: This can be referenced to the criteria. I go back to the definition of appropriateness and again feel that national and international definition only throw in a lot of confusion.

I wonder why countries would fear scrutiny. Are developing countries hiding something that they don't want to be scrutinized? Or is it cumbersome process? We need to understand that international scrutiny is very good and if we are doing things correctly what is harm of scrutiny?

COMMENT: The point of scrutiny really is that you do not want to have somebody second guess your judgment and funds allocation, and whether these appropriately balance local environment inclusion, carbon mitigation, energy security etc.

That balancing should be subjected to democratic accountability within the country. If you have international scrutiny they say this is a climate crisis you have 4% of global emissions and you have just promoted yourself to third largest emitter and we think you should be downgrading your concerns with regard to distributional consequences and putting more emphasis on carbon mitigation... The poor will be hurt more.

On the other hand, if you have to show that money has been properly spent, there is no real argument with that. The main argument is about so called unsupported actions. In terms of supported actions, it is just about making sure the money is well spent on the intended purpose.

COMMENT: As Navroz said the important thing is what is this scrutiny for? If you cutting an analogy with CDM you might say, well, anyhow from an Indian energy context compared to the Brazilian energy context... There is obviously some degree of comparability because they have to follow some methodology. The main issue of scrutiny has less to do with NAMA or appropriateness in itself, and more to do with what happens to the international process.

CHAIR: I don't have anything to add but what Neha had presented is really the outcome of those studies and I am party to that.

NEHA: We want the process to be nationally driven and so we have given a framework which is broad, yet specific. Broad in the sense it is common framework for our country and specific in the way you prioritize your national goals or democratic process.

I would also second Dr. Navroz that essentially the idea is to recombine it into sub criteria. Towards this end, it has to get operationalized and then it would become easier to define which is aspirational and ideational in nature, to be operationalized in true sense. I agree that we have to maintain the balance between an international commitment and our domestic processes but how could we do this?

COMMENT: To have clarity on what we are trying to achieve in this study is important and one main question is who the users of this decision framework are. Where does this framework actually fit in with international and domestic linkages? And at what stage do stakeholders fit into this particular framework? These details will add strength to the framework, more than any statistical analysis can.

Can the framework inspire confidence among the target group because this will add value to the decision making process. Being objective in addressing the concerns of different stakeholders is the basis for calls for scrutiny and monitoring compliance.

If we have an ounce of appropriateness that can encompass multiple criteria then we have achieved something concrete.

I like to thank both of our panel speakers and eminent commentators Dr. Navroz and Dr. Anand Patwardhan thank you for making from Mumbai.

With that we conclude this session and I like to invite all of you over lunch.

BREAK FOR LUNCH

PANEL DISCUSSION: VIEWS FROM BASIC COUNTRIES

MODERATOR: In this session we have the views from BASIC countries on how they see NAMAs in international architecture. We have a set of country presentations from the respective team members. Sharing the dais with me is Prof. Gaines Campbell from Brazil, Ms. Anya from the University of Cape Town, South Africa, my colleague Neha Pahuja from TERI and Dr. Teng Fei from China. We start with Brazil, followed by South Africa, India and then China.

PROF. GAINES CAMPBELL, BRAZIL

Thank you, this is my third visit to India and in fact BASIC countries have been working together for so many years. In Copenhagen they became obviously much more visible and as they continue to grow, politically, economically, and so forth they will be more and more in front, which has both advantages and disadvantages.

Here is an attempt to show some of those similarities and differences. If we look at the cumulative historical emissions from 1850-2006 we can say Brazil, South Africa and India are very close. China is a little bit further down the line in terms of historical emissions, and all of them quite far from developed countries.

Looking at the most recent annual emissions, we begin to see what's happening in terms of the economies and growth of each one of these nations. China almost doubles in their emissions, India doubles, and South Africa stays with the same ratio. Brazil is now seven times in terms of current annual emissions. Looking at per capita emissions we see something that distinguishes at least one of the countries compared to the others that are factoring in the emissions due to land use change and forestry.

For Brazil, LULUCF represents around 57.4% and of those emissions, 22% are from agriculture and 16% from energy so that is where we might be looking at in terms of mitigation opportunities.

In terms of primary energy production the difference between non-renewable and renewable is not that far i.e. 47-50, with 20% distributed among the two.

Brazil's approach to climate negotiation is very simply the traditional, radical approach with regard to historic responsibility. We can dispute it but the way this is positioned sometimes, is not the most appropriate.

There are no quantified targets i.e. targets not for developing countries but for Annex I countries.

In November 2005 just before Copenhagen, Brazil was not stepping up and there was lot of pressure from social and civil society and even from business enterprises in Brazil for stepping out.

With regard to NAMAs, Brazil says actions resulting in direct emissions reductions are different and not to be confused with Annex I targets. I feel national and trans-national sectorial targets are inappropriate for developed countries, considering NAMAs are actions resulting in indirect emission reductions. Things have changed a little bit now, as we discuss unilateral NAMAs and supported NAMAs. MRV should be applied to both types of NAMAs and support national procedures.

Potential NAMAs for Brazil in one study estimated that PESO could reduce emissions by about 14% against BAU by 2020 in three sectors, including transport and power. There is also huge potential for reducing GHG emissions in forestry.

Thank you.

CHAIR: Thank you for your interesting presentation. We shall go to next presentation on South Africa by Ms Anya.

MS. ANYA BOYD, UNIVERSITY OF CAPE TOWN, SOUTH AFRICA

Good afternoon, I'm going to talk today very briefly about work we have been doing at the Energy Research Centre at University of Cape Town related to NAMAs. Firstly, I am going to set the context

around the climate and energy policy and how South Africa started to show initiatives and parameters for mitigation, which is still very limited, unfortunately.

We have divided the functions into four groups and we realized the reason for this was actually the NAMA work we are doing. It is one of the first opportunities that actually works with all research teams because we realized the cross linking of energy poverty in the development team. We need to be talking to them to address poverty, in sustainable development issues and NAMAs.

The energy modeling team has been helping us with some technical exercises on CO2 savings, and the energy efficiency team was helpful in starting discussions around MRV.

The energy, environment and climate change team is leading the discussion on how NAMAs might be framed in the South African context. South Africa is a big emitter from the bottom of Africa and we have probably the most interest, the most responsibility to actually do something about mitigation.

We have coal abundantly and so the majority of our electricity is generated from coal. Basically, our emissions globally are very low although we have high energy intensity and this is because of energy generation from coal. We rely on coal very heavily and this makes it very difficult to shift to anything else. So the energy sector is where we are fixing our attention and therefore on NAMAs development.

In terms of policy I have to say we are good at preparing policy although we haven't actually acted on them very much so far. We have new National Climate Change Responsibility Act and it has been passed and is in the green paper stage. It has been opened for public consultation at the end of last year and it is now turning in to white paper. Unfortunately there is little alignment between the green paper and white paper. We also have a renewable energy feed-in tariff that has been on the table for couple of years now, but isn't yet operational. A carbon tax discussion paper has been issued by the National Treasury and is currently in the discussion. The Industrial Policy Action Plan's one positive outcome is the South African Renewable Initiative. We also have an integrated resource plan, which is looking primarily, at electricity generation. The Renewable Energy White Paper 2003 has a wonderful target with 10,000 GW by 2030. Let us how that is going to happen.

The National Planning Commission has started looking at a low carbon economy and realizing how cross cutting the exercise is across different government departments. So we are hoping there may be an attempt for better coordination.

There has not been any progress in identifying mitigation opportunities in South Africa, however we have identified some opportunities for mitigations in a different sector to what was discussed in 2008. We also got over to Copenhagen where we committed to take nationally appropriate mitigation actions to enable a 34% deviation from theBAU baseline.

CDM activity has been very minimal in South Africa and we are not really relying on that for mitigation.

In Cancun, last year, we presented four potential NAMAs, which are not government endorsed NAMAs. It was based on testing designs and technical exercises on what NAMAs could look like. We therefore concentrated on Solar Power, Wind, Low-cost Housing and a NAMA related to electric vehicles.

The criteria we have framed the four NAMAs under are publicly available on the UNFCCC website. In Cancun, we presented a project, which we are working on called MAPS (Mitigation Action Plan Scenario).

ERC is also working together with four Latin American countries: Peru, Chile, Colombia and Brazil. We are looking at how these countries are approaching mitigation action, without a NAMA framework and at what institutional structures are making mitigation initiatives actually happen in each country.

In the South African case study, we were looking at four existing mitigation initiatives, including Bus Traffic and Transport System in Cape Town, Renewable Energy Initiative in which we are talking about low cost housing project and looking at actual implementation issues associated with getting this Mitigation Action implemented.

These are some of the main highlights of the June 2011 National Planning Committee Diagnostic Report. This report was released in South Africa recently and highlighted the key issues and objectives wherein they are quite similar to other developing countries, such as, eliminating poverty and reducing inequality, improving infrastructure and the current resource intensive economy which needs shift.

In South Africa we have been very good at identifying areas for mitigations but in terms of implementation and operationalization, we are very weak.

We always need to split up the international role and the domestic role in NAMAs.

We feel that the current focus on NAMAs needs to look at Sustainable Development, which is almost interchangeable with "Nationally Appropriate" and we want to make sure this brings in development.

CHAIR: Thank you for this comprehensive presentation. We will now move on to India presentation.

MS. NEHA PAHUJA, TERI, NEW DELHI

Thank you. The fact is that this is not far different from what Prof. Gaines had presented earlier on the Brazil position.

If you the development indicators we would require to grow rapidly given our sustainable development goals such as electricity for all by 2012. And the challenges that we have e.g. 470 million people living without electricity, which covers mostly 8% of the total world's population. It is essential that our GDP grows at 8-9% every year for next 20-25 years.

Comparative pictures of India's emission profile between 1994-2007 reinstates that may be at the absolute level our emissions have increased, however, the per capita emission would always stay below the global average. This leads to the aspiration goal which was set earlier in NAPCC that our emissions would never go beyond developed country emissions.

This tries to map what policies existed before 2005, which had some kind of climate focus. In addition to that we have recently taken some initiatives and this list was prepared by MoEF wherein they decided

what kind of initiatives were taken very recently after Copenhagen. In this it was highlighted that climate change policies are the driving force.

NAPCC was launched in 2008 with eight core missions, and long-term vision of convergence of per capita emission. In addition to that we gave our Copenhagen Pledge of 20-25% energy intensity target and also set up a low carbon committee, which is looking into how we can achieve this target.

It would be bottom-up pledges for all countries or non-Annex I countries and some targets for Annex I countries. There is uncertainty about the carbon market mechanisms and certainly there is no progress on definition of the issues. If you see what India has been saying it is quite similar to the views of other BASIC countries i.e. that the actions should be voluntary and legally non-binding and should be guided by the developmental priorities of India.

And also there is lot of focus and emphasis on public funding rather than private sector funding. However what is unclear is how it would link with other multi lateral mechanisms, which are being talked about, specifically those related to technology transfer and finance. What are these linkages with other mechanisms, the Green Climate Fund, technology mechanisms, existing CDM based market mechanisms etc.?

CHAIR: Thank you Neha. The final presentation is on China by Dr. Teng Fei.

DR. TENG FEI, TSHINGUA UNIVERSITY, CHINA

I will focus on China's position in the negotiations on NAMAs and it is quite clear and we also share a lot of common points with other BASIC countries, especially on climate change issues with international cooperation.

And that kind of cooperation should be carried by convention and plan and also especially carried by Common But Differentiated Responsibilities (CBDR). China's position on the nature of NAMAs is that it should be coordinated under the goals of sustainable development with poverty eradication. We think that NAMA is distinct from the mitigation actions of Annex I countries in terms of magnitude.

Linkages between NAMA and support are key in the negotiations. The first thing is that a NAMA by a developing country is on a voluntary basis.

China has submitted its communication in terms of mitigation actions after Copenhagen. The first component is the carbon intensity target and China's launch of lower carbon intensity emissions, with 40-45% by year 2020 to 2005 levels.

The renewable energy share has new fuels that not only includes renewables, but also includes nuclear. So the share of new fossil fuels in primary energy consumption will be increased from about 8% from this year to 15% by 2020. China would like to increase forestry coverage by 40 million Ha, which is equivalent to an increase in volume by 1.3 billion cubic meters by year 2020, compared to 2005 levels.

The table summarize which policy instrument has been used in China for Mitigation Actions. We have standards and regulations and to improve energy standards, labor and benchmarking and also to improve so called energy conservation.

China is also introducing many programs in five provinces and eight cities towards low carbon development.

China has achieved its energy intensity improvement target by about 19%, which is quite close to the 20% target in five years. Also if you translate that kind of improved energy intensity to energy savings, emission reductions are equal to 1.4 million cubic meters equivalent.

We think that nationally appropriate means they should be consistent with national strategies for sustainable development and priorities set out by developing countries. Transparency is only part of the whole solution package and if they want the negotiation on NAMA move forward they need to show comparable progress in KP and also 1-B-1 and LC to make sure that we have a balanced package.

At this moment the People's Congress is approving the Plan. Different ministries and different government departments are in process to translate this kind of nation wide Five Year Plan (FYP) into their sectoral or provincial plan. The FYP will have detailed programs and action is emerging from these. We believe that before the end of this year most of the detailed FYP will be finished.

Thank you.

CHAIR: Thank you. We have heard four excellent country-specific presentations. So the floor is open for reactions comments from the audience.

COMMENT: Decision-making is always has been problem and JP Morgan Bank gave one solution: he locked the Bank managers in a room. There is no water, no food and lit is locked from outside. He said till the time you have the consensus decision I will not open the door. And this system really worked very well came up with one of the largest banks in the world.

Now my question is for policy makers. Have you found any other method?

REPLY: The photograph that was there in Gaines first slide had the BASIC leaders together and you could almost sense the tension in that picture.

GAINES: You know the UNFCCC process is by consensus and that what makes negotiations very difficult but it doesn't make it impossible. The results of a successful negotiating process is to actually bring everyone on board.

COUNTER: There is lack of decision. The US economy was downgraded because political system could not arrive at a consensus. I feel if the climate world also will not come to consensus until we downgrade ourselves.

COUNTER: I think in the sense downgrading has already occurred, if we go by the scientific evidence. It is not as simple as a decision making exercise but that a universal consensus is required in this case.

COUNTER: I would like to know if the BASIC countries are preparing common approach?

COMMENT: One of the observations from NAMA workshop held earlier is that developing countries okay it is difficult to design our NAMA because we don't know we have no ideas about skill and channel for me. And developed countries argue that we have no idea about what is the best solution. So there is some kind of deadlock and also in the NAMA negotiation. One possible observation from that workshop at least for basic countries is that we are considering serving this deadlock via a bottom up approach and then to frame it as common approach to give back better deadline to the decision making process.

COMMENT: We should not forget that BASIC is part of G-77 and a common approach could be interpreted as something different for G-77 and would be very risky.

COMMENT: The common notion behind an Annex I country, is to meet their emission caps. What would be similar push for Annex I country to fund NAMAs in non-Annex I countries?

REPLY-NEHA: I think the origin of discussion on bilateral NAMA and was in the context of bilateral off setting. In the sense wherein there is no agreement on global MRV framework and so two countries could get into framework and decide on some criteria or some framework that the two countries agreed on and undertake little flexible. But certainly doable offset mechanisms and so that was the origin of bilateral NAMA if I am not wrong.

Certainly unless there are the ambition level at the global level is high there is no point in taking or getting off set mechanism for having new market mechanisms in place. Because that would and there is certainly danger of influx of carbon credits and that would have implications on carbon pricing also.

Therefore the merit is in actually going forward with a pleasant review system, which should be looked at as an exercise to build trust amongst countries.

COMMENT: If I may ask Ms. Anya to stress little bit more on how they think NAMAs have been identified through their modeling exercise? Whether they also looked at the current policies for overlaps or, depending upon this exercise you are going to recommend some policy changes?

ANYA: The four NAMAs we proposed for model exercise were based on projects that would work with the existing institutional framework. There may be capacity lacking, we have to look at what are their policy drivers supporting it. E.g. the low cost housing project was interested in the Development Bank of South Africa to support that project.

COMMENT: I want to know something that came out very significantly from your presentation regarding similarity and differences when we look at the BASIC grouping. I feel that it is more out of common consensus that we have this BASIC grouping rather than a common approach.

Is there risk? How do you see the situation evolving, Mr. Gaines and probably also Dr. Fei?

The China case is a different story altogether and the priorities are entirely different.

With tensions probably persisting over next 4-5 years how do you see these tensions coming down to the BASIC groups?

REPLY: I'm not sure whether I understood the question but if your making some sort of reference to governance structure within the respective country; I listened to Mr. Teng Fei. Meeting the demands of Parliamentarians is not uniform and not an easily controllable process.

COMMENT: I never said it is confusing but I am raising issue. But put it very bluntly how the differences in governance structure in the different countries affect or likely to affect in the future – the common positioning or the perception of common positioning at least that we find among the basic groups. That is the blunt way in sort of manner we have already identified the governance mechanism.

DR. TENG FEI: The most successful period for China to implement energy efficiency policy was in the period of central economic planning because that time that government had a very strong control on the energy supply. However, central economic planning may not be good for the environment of the country. So after 1980, China's shift from a centrally planned economy to a market based economy saw less and light control on the whole economy and also on the energy sector. Most of the energy market has been liberalized and at this moment, the price is based on supply and consumption.

I agree that our political scene is quite different in different countries but I don't think that kind of difference can have some serious impact on the future comment and ground of common positions of these countries.

China's GDP per capita is lower than Brazil's and South Africa's. Also China may have higher GDP and higher capture and per capita emission than India. India also provides a unique and very important experience in terms of its low carbon development, for other developing countries.

ANYA: I actually wanted to say that we could pioneer low carbon development.

You are asking why we feed domestically funded NAMAs - there is another approach. The South African approach is based on mitigation initiatives happening.

CHAIR: That comes to end of the session and thank you all and we can wind up the session. It has been interesting set of presentations followed by discussion where we got to understand the country context in which we will be discussing the relevance of NAMAs and the implementation related issues.

So how do we balance that ambition of having a harmonized framework but at the same time capable enough of capturing circumstances: I think that is challenge that we have to consider.

Something that Dr. Teng Fei very rightly said that when we are talking about NAMAs it has to be in broader context and shouldn't be considered in isolation of what is going to happen at the scale of the international architecture in it is entirety. You cannot simply pick up NAMA as entity and think of attempt to identify criteria that can fit into the decision making process - essentially, the background or

overall context of how the international regime is evolving. And that needs to be kept in mind while we are considering the criteria at the national level.

What Neha presented is also brings significant dimension to this entire study. It is the multiplicity of action and is the range of actions that are happening at the country levels in the developing country. And something that probably came out later in the discussion is also things happening at the sub national level.

The South Africa presentation also brings out the importance of the temporal aspect and the long term climate scenario and mitigation scenario that are being attempted.

So these four presentations bring out different insights and future challenges.

Thank you.

TEA BREAK

MODERATOR: Welcome back. This session will have Dr. Prodipto Ghosh as chairperson and Mr. Ramesh Jalan from UNDP, Mr. Joshi from ABS Infrastructure and R. V. Anuradha from Clarus Law Associates.

CHAIRPERSON: DR. PRODIPTO GHOSH, TERI, DELHI

Welcome to the final session of this seminar. We will start with Prof. Anuradha and she will give a presentation on what nationally appropriate in NAMA entails, from the legal perspective.

R.V ANURADHA, CLARUS LAW ASSOCIATES

I quickly emphasize what the Cancun Agreement talk about i.e. the need for NAMA. The session we had just before this indicated what different countries are doing. There were lot of commonalities and were also difference in the diverse approaches in trying and achieving what our country perceives as NAMA and how it would attempting to implement it. None of the countries are really apart from implementing programs and apart from also having some kind of methodology for assessing emission reductions.

There has not really being too much of clarity on criteria for measuring NAMAs or any kind of universal understanding of what these would really be. Do we really need to define what is nationally appropriate? Wouldn't that then dilute the very concept of what nation deems as appropriate?

The whole concept and package of obligation that seems to be emerging is that developing countries would voluntary provide the information on a NAMA that is required to be measured, reported and verified at the national level.

Ensuring periodical national communiqué based on a format should be notified and these will be what are subjected to ICA, instead of really defining a NAMA. I firmly believe it should not be defined.

I would really focus really on possible legal implications of what MRV would be at the international level. Also what the ICA for a NAMA, which is not supported by international funding, could be. The various

open issues that do emerge which will need to be resolved for getting clarity on the legal impact and obligations. This would really hinge on the framework and guidelines on the MRV and ICA that is developed. There has been lot of debate on whether this is going to be aimed purely at the purpose of transparency – for exchanging information. Or would it have deeper implications in terms of impact of the analysis of the MRV or the ICA that is undertaken.

Technical experts envisaged at both stages there could be a mandate. What would the role of summary report be i.e. that is supposed to emerge from the entire process of ICA? That is unclear as well.

There are several safeguards that are highlighted through out in at least key paragraph of the Cancun set of agreements and it talks of non inclusiveness and non punitive and full respect for national sovereignty. The extent to which the legal impact of these terms will actually get reflected in the institutionalization of entire process will also be critical. Conceptually, no country would have an objection to pure transparency obligations.

Most conventions and treaties work on principles of information exchange, and there are very detailed notification processes, and periodical reviews as well. The objectives of a particular process define the nature of the institutional mechanisms and the actual impact of the entire processes that it would have on particular country.

Interestingly, the WTO is an entirely member driven exercise i.e. there is really no role for outsiders.

The secretariat report also contains some amount of assistance and primarily it is factual. The purpose of the report is to provide a basis for the entire WTO members which is the governments to sit together and analyze a country's practices to assess whether the country's practice is in compliance with the entire set of WTO agreements.

It is an entirely detailed session where there are written questions that were sent to the members in advance and therefore the members gets chance to respond to it in detail. There are supplementary questions and these are all recorded in the minutes of the process and then final report of the entire Trade Policy Review (TPR) comes out.

The frequency of holding TPR is also based on the size of the economy and trade flows.

The purpose of TPR is not really to get into violation and non-violation but it is simply to assess performance of country vis-à-vis its laws and policies and simply recorded and obtain clarifications from country. And the other critical point is that apart from the fact there is secretariat, which is employed for the purpose of fact finding and writing really massive reports.

There are no other external technical experts or any other external entity involved in the process. Then we come to the process of notification and the discussion mechanisms that are provided in the subsidy agreement or SPS and TBT agreements. This process is mandatory for any country seeking to provide subsidies in any sector - be it WTO consistent. There are number of subsidies which can be WTO compatible and there are some which are grey areas and can be challenged.

It is simply notification process and again it is supposed to be supplemented through a Q&A session at the subsidies committee meeting. This process is entirely member driven confined to membership. The notification discussion process under the SPS and BT agreement also works on similar grounds. Can these be tools to enforce implementation of agreement –‘yes’ there have been several cases where particular member subsidy and if it was found to raise certain doubts or questions. The Q&A process scrutiny process through the discussion has actually often pre-empted the dispute at the WTO by allowing the other men to structure it such a way that would make WTO compatible.

So to large extent the entire process has ensured strengthening of the system rather than necessarily any kind of external intrusion of questioning of country’s policy. If we look at what the actual UNFCCC and even the CBD provide for, they do talk of technical bodies such as SUBSTA which are again meant to comprise of government representatives with the role of assessing the type that has been taken, in accordance with the provisions of the convention. For instance reporting exercise. It is supposed to be driven by the experts of SUBSTA but they don’t have rights to start questioning country’s practices.

The reason I emphasize this is because this is what is going to be the nature of assessment emerging from the MRV and ICA processes.

These are issues, which perhaps need to be thought out little more carefully and we can use examples of what exists in other agreements to define the purpose the objective that is sought to be achieved and then outline the institutional mechanism through which the entire aspect can to be operationalized. Broadly these are the aspects, which I wanted to refer to here. Thank you very much.

MR. GIRISH SANT

As is happening in so many climate processes there are so many balls in the air that one is not clear which ball should be focused on and which is actually going to deliver things. So same thing seems to be happening on NAMAs.

Given the limited manpower that we a way to approach it could be to just focus on domestic policy. What is nationally appropriate? The answer is very clear - what is in the national plans. Obviously to improve the planning process, we have to be more consultative and so on.

Let us take the transport sector. In the transport sector in the low carbon committee it clearly says there are three stages of transport policies i.e. avoid, shift and improve paradigms, respectively. To avoid the transport by having industry located at better place and having urban design where people need less urban mobility to go to work. You shift to public transport lastly, to improve the device that is e.g. car, or scooter or whatever vehicle. These are three processes of reducing of carbon emissions that are completely consistent with energy security perspectives.

In power sector wherein we have low carbon there are some synergies in terms of energy efficiency some synergy in the areas of wind. But in other areas it can be divergent and the costs can be very significant. Clearly there are high costs associated with NAMA implementation.

So to summarize yes, there are some range of options within power sector and transport sector, which we have looked at where NAMA can be taken up. The larger public transport issue can be a domestic NAMA and in power sector they are very clear high costs for which the international community could provide support. If NAMA are non credited NAMA then Annex I countries need to clarify whether they are willing to support these.

The area of efficient appliances will be a big part of the power sector plan in the future. Due to the potential savings from super efficient appliances and processes, it is comparable to capacity addition from gas, nuclear and hydro put together.

Thank you.

CHAIR: Thank you for your presentation. You have mentioned two key things: one is that nationally appropriate is an integral part of the national plan. The fact is once it has gone through a domestic mandated political process you have set of nationally appropriate actions.

Another thing you said which is curious is that you seem to suggest that international funding is what donor countries are willing to support. Much of the discussions around the financial mechanisms have been to get away from the donors paradigm.

So a major part of the effort with respect to climate change funding has been evolved - a completely new paradigm by which the priorities for funding are actually determined by a balanced representation of developing and developed countries.

DR. RAMESH JALAN, UNDP, NEW DELHI

I feel that program like this is not complete without getting into the issue of knowledge sharing. It is the crux of NAMA design and implementation. I will be sharing to what extent UNDP has been working in this area to tackle various aspects of NAMA. The UNDP is under a program called Solution Exchange. In the last management meeting held in June UNDP, would like to transform its organizations to become global solutions.

We feel that Solution Exchange has been one of the most successful program that UNDP has ever run, and therefore would like to take it up at much larger scale. Presently we have communities of practice in various part of the world including Philippines, Cambodia Thailand, Bhutan and climate change is the youngest community.

We came into being in July 2009 and so far we have 2000 members who are members and practitioners, government officials, UN bodies etc. Every single member is personally interviewed by us.

We have been talking of various issues including NAMA and we have four action groups. One of the action groups relates to a compendium of climate responsible technology.

Let us examine the service, which we offer: query services with consolidated replies. This is our main offering to the community, with e-discussions on more specific topics and key consultations when we

have a request on draft policies by government. We have received consultation requests on most of the national missions and those inputs have gone into the drafting and finalizing of these missions.

To date we have completed close to 60 consolidated replies and I am briefly going to discuss the consolidated reply related specifically to NAMA. The consolidated reply on rural electrification and decentralized distributed generation by Mr. Kapil Mohan, from the Ministry of Power. We looked at RGVY electrification of 1,15,000 villages and what policy imperatives are required to ensure that this is achieved. We received an overwhelming response and in great detail regarding this program.

There are attitudinal changes and changes in mindsets and I believe NAMAS cannot be achieved until we change our mindset and our lifestyles.

We need to formulate our own development strategy and there was study done three years ago which has been updated now in 2010, where the sustainability index of various countries was formulated. In 2008 India was number one and today we are number one.

We wanted know from our members what criteria is used for selecting technologies that could be part of this compendium. As part of the 12th FYP we were requested by the Planning Commission to develop a mitigation strategy for climate change that should be the path of 12th FYP on the paper.

We posted the query of the water-energy nexus, on scaling up climate responsive technologies. We need to have business model for up scaling of renewable technologies. How does energy efficiency and carbon abatement and the enhanced use of ICT work?

The sale of 5 star air conditioners in India increased by 3100 % and it is not that people love energy efficiency. People love their energy bills going down and therefore sales have gone up. Many of these mitigation actions make excellent economic sense and therefore need promotion in a big way.

An NGO in Kerala gives loans for livelihood activities. For every Rs.10000 you take you are required to implant 100 trees. The interest rate you are charged is based on the survival of those trees. If all the trees survive you pay no interest. If 10% of your trees collapsed in the second year you pay 1% and if less than 60% of your trees survive, you pay 10%, which is the upper limit.

And it work miraculously well- in Kerala itself. And all the SHGs that took this loan 100% of them have survived. Incentives have to be innovative and we have to look at providing out of the box type of incentives. Reducing GHG emissions in livestock and this is another very important area for NAMAs.

We are working on the state action plans of various states, which include NAMA and NAPAs.

We are also working with the MNRE to develop Biomass as the 10th mission. The 9th mission is on the anvil that is on clean coal technology.

What can the community do to develop appropriate NAMAs? We have already taken up the first step in the questionnaire that you have filled this morning and by this evening we will be sending it to all our members. This could help engage NAMA dialogue amongst stakeholders. Thank you.

CHAIR: Thank you Dr. Jalan for your wide ranging coverage of UNDPs efforts in the direction of climate change and particularly, the innovative and interesting program on ideas for information exchange.

Mr. BALWANT JOSHI, ABS INFRASTRUCTURE

I am not climate change professional but a renewable energy and energy efficiency professional. I am involved with the implementation process. One is energy saving certificate (ES-Cert) mechanism, which is being developed by BEE, which is also called the PAT Mechanism. Secondly, we were involved from conceptualization to implementation with the renewable energy certificate (REC) mechanism. Third thing, which we were deeply involved in, was the implementation of the Jawaharlal Nehru National Solar Mission (JNNSM). The fourth thing, which we are again very closely involved, is the institutionalization of the entire DSA mechanism. How do you really get utilities involved in implementing large-scale demand side management projects? Each of these schemes has got some element of NAMA in it. That's fine. It was suggested I talk of implementation challenges in one or two of these schemes.

The first one is renewable energy certificate mechanism and which has been implemented with effect from 1st April 2010 and second one PAT mechanism (Perform, Achieve and Trade) mechanism. This is being implemented and the expected rules and regulations will be notified very soon.

We have done extensive research there are some schemes which are similar to PAT schemes but certainly the similarity doesn't progress beyond 40-50 %. And probably this is the only scheme which is very close to PAT scheme climate change agreement mechanisms within UK. But this is also significantly different and what we are trying to do in terms of PAT scheme.

In the first REC mechanism the renewable energy certificates will be issued for every 1000 units of generation while in the PAT scheme what is envisaged is that whatever is the over achievement beyond target the certificates will be issued and baseline will become very significant in the PAT scheme. But it is not prominent or it is not important in the renewable energy certificate mechanism. Measurement Reporting Verification Monitoring all these processes are extremely important in the PAT scheme. Those are relatively easiest trade forward in terms of the renewable energy mechanism. But one advantage which PAT scheme has got renewable energy certificate mechanism doesn't have, which is more fundamental in that the PAT scheme is national scheme.

The renewable energy certificate mechanism even though it is national scheme, depends significantly on the states' ability to enforce the renewable purchase obligation (RPO). The entire renewable purchase obligation within the country is dependent on the section 86 (1-E) which actually mandates the state to set the target for the renewable obligation and meet the target and if not met, to pay the penalties. So in terms of structure both the schemes have got their own drawbacks, as well as advantages.

Let us look at the legal background for both the schemes. What is the status? I feel the energy saving certificate scheme has learnt little bit from the renewable energy certificate mechanism and why? If you see the REC mechanism it is not actually legal instrument. It is regulatory instrument and it is driven entirely by regulations. There is no phrase Renewable Energy Certificate or anything called certificates in the Electricity Act 2003, which is driving the renewable energy certificate mechanism. But realizing this

the energy conservation act was amended and energy saving certificate has been made part of the energy conservation act very recently.

So the first REC instrument is regulatory compliance and energy saving certificate is statutory instrument and compliance is statutory. REC mechanism is compliance at state level and energy saving certificate mechanism compliance at the national level. Authority to levy penalties again one is at state level and the other is at the national level.

So the entire regulatory mechanism entire legal structure for the REC mechanism is by way of subordinate legislations, which are called regulations. Regarding institutional capability for design, development and implementation of the mechanism, being a national level mechanism we could probably ramp up the capacity for implementation. Today has got support of several hundred people by way of their own staff by way of staff within ESL that is the PSU created by the government of India for implementation of energy efficiency and by way of several consultants which have been engaged.

The compliance or enforcement mechanism for RECs is not as strong as would be in case of the PAT mechanism. One important point from probably from NAMA point of view whatever I have heard in today's discussions is how much time it took to design and develop these mechanisms.

We had started working on sometime late in 2007 on the REC mechanism, while the NAPCC and subsequent PAT schemes work started well into 2009. So any mechanism that we have to create to be implemented within the country is going to take at least 2-3 years before implementation.

Coming to the issue of financial constraints in these two schemes. REC scheme of course involved generation of electricity and generation from renewable sources, which are expensive.

In both the schemes it is expected that the private sector would play the role they would make investments and they would generate electricity and they would get REC and they would implement the energy efficiency mechanism and then they would achieve the same thing. So what is the kind of investment required in these two schemes? They are huge and in fact Mr. Girish in his presentation mentioned Rs.35,000 crore is equivalent to just 3500 MW of the solar subsidies. That is the reality. Huge amounts of financial investment are at stake in both the schemes.

But it's difficult even though both the schemes are part of the same Government of India, the same Ministry of Power, the legislations that are governing these two schemes are totally different, with no inter linkages. So if one has to make these two schemes work in tandem or the instruments of the certificates fungible between the schemes we would require more legal constructs.

So a totally different mechanism or monitoring entity has to be created for the MRV of the REC mechanism. Now this monitoring entity, which is a state, based entity, has been implemented by some states only and not by others.

Looking at specific energy consumption, in order to do MRV for these industry units, which are 600, the government is creating different institutional structures called DENA. That is Designated Energy Auditors.

So the process of identification of units for audits carrying out their audits and carrying out surprise checks to check to ensure integrity of the schemes all form the part of the MRV mechanism. Another important aspect has been built into the MRV of PAT scheme. That is more of reporting but at the same time auditing. The institution of Chartered Accountants is being entrusted with the responsibility of reporting energy consumption and production numbers. So while first level of reporting it will not be simply reporting but audited reporting while auditing would have been done by certified Chartered Accountant.

Thank you.

CHAIR: Thank you Mr. Joshi. Now we have surprise and bonus. Mr. A B Chakraborty from ONGC, the moving spirit behind greening of ONGC. ONGC is India's most highly capitalized company and has highest market cap of Indian companies and has been at the forefront of CDM mechanism with large number of CDM credits. I invite Mr. Chakraborty to give his perspective on designing and implementing NAMAs for India.

MR. A B CHAKRABORTY, ONGC, NEW DELHI

I would be more focused on petroleum sector. Firstly the appropriateness of NAMA is to be seen from three important aspects. First is practicability: how practical it is for that particular industry? The second is economic benefits and the third and most important is what kind of technical transfer and financial benefits that can be given for implementation?

The petroleum sector is an upstream sector and gas flaring because of methane, a highly potent greenhouse gas (GHG) is not only seen here but all over the world. The second area is that of fugitive emissions. We have all read and heard about these but they are very seldom seen.

It was same case with us until 2007 when we came across USCPA they exposed us to YR techniques and technologies and we benefited a lot. Fugitive is one area, which can be attended to, and the emissions, which are recoverable by technological interventions, can go a long way in improving the bottom line for the company, as well as, covering management methane emissions.

This includes the directed inspection maintenance which can be hundreds and thousands of valves which in any leak over the period of time. My predecessor has already spoken and referred to PAT scheme and we also feel that setting industrial benchmarks for operation and processing to attain energy efficiency will go long way.

Yet another area for exploration is substituting conventional fossil fuel with cleaner fuels. While it may be difficult with some of the ideas, a beginning has to be made. We are already thinking of substituting natural gas with the solar power.

These are the broad areas, which can be considered in the near future or even in the long term. What is important is each project involves financial aspects as well as some sort of technological transfers and on a case-to-case basis, could potentially be linked with appropriateness.

Thank you.

CHAIR: Thank you Mr. Chakraborty. Now we can beam up Mr. Girish Sant.

Q&A: MR. GIRISH SANT

QUESTION-NEHA: My question is for Anuradha. What national circumstances or what nationally appropriate means, or how does the convention define – because a convention does refer four or five places- national circumstances, or special needs of the country?

ANURADHA: From the WTO perspective there are lot of references to national objectives and legitimate policy objectives. In the jurisprudence that has developed the WTO bodies have been very clear that it is as determined by the country.

CHAIR: I might also mention that national circumstance and nationally appropriate are actually very different contexts. In the climate change convention, national circumstance is actually mentioned in the context of country targets whereas nationally appropriate refers to whether the actions themselves are appropriate to country circumstance and policy interventions. So they are not actually interchangeable.

QUESTION TO ANURADHA: In the beginning of your presentation you made an interesting remark on whether we should be really going to this exercise of asking ourselves what is nationally appropriate. It also implied that it may not be proper or it may not be in the interest of particular country to really spell out what is nationally appropriate? Can you elaborate on this?

ANURADHA: The point I was trying to make was that we cannot have a universal definition of what a nationally appropriate mitigation action is. That necessarily has to be defined by each country. So essentially what each country reports as being appropriate to it, is its NAMA and that I cannot see non-controversial way of having universalized definition of this aspect. Again to take the WTO example- there are number of agreements under the WTO which do get into what could be legitimate policy objectives.

For instance when a country has the right to put in place sanitary measures or take technical standards and implement them, the agreements talk about pursuance of legitimate policy objectives and then provide an illustrative list. It doesn't try to define what each country's legitimate policy objectives should be.

We shouldn't venture into universalizing the definition. We should leave it for the country to determine.

QUESTION-CHAIR: Ultimately, I think that we have to look at nationally appropriate by way of same kind of analogy and I can give an analogy that. You know what is nationally appropriate. The way what is beautiful? You cannot define it and you cannot put parameters on it. Different people have different ideas of beauty and different countries have different ideas of appropriateness.

So just as you would not question somebody as to what is it that he sees in his wife that other people don't. Similarly, you would not actually ask a country they consider a particular action appropriate.

Now, Mr. Girish.

MR. GIRISH SANT: Yes definitely, this is a learning field and like India many other countries are actually learning. So what happens is with respect to urban design, things are to be evolved. There has to be mixed land use rather than segregating residential and commercial cities like Bombay.

We can obviously have taxation and a cost based regime. For example cars don't pay for use of roads, considering huge amount of expectation for maintenance of roads, the land occupied the roads so forth. Obviously that could be the issue of living and what I am bringing here many a times continues to get locked in the low orbit of the cycle.

Let us take example of freight in India. Today huge freight is on road, which is not the best thing that can happen. It needs 8-10 times more energy. Further, you need high capacity dedicated air corridors which is a huge investment and unless you are able to have that investment you cannot promote air transport because it will affect the economy adversely. So we have to facilitate other process and accommodate this where road-train transport will go down. This is a low orbit cycle we need to overcome.

My last comment is on what Dr. Jalan said: If you get the technology at low cost, then a large amount of appliances with super efficient savings are added. Just four appliances can save to the tune to 2000 mega watts each year to the country. There is enormous potential for such measures and where NAMAs could help design and implement them. Thank you.

CHAIR: Thank you Girish and your last example was very appropriate. That 35 watt fans that India should now be compulsory licensed technology for these 35 watt fans because at one point of time Anuradha and I were having an argument and she said that nobody ever invoked compulsory licensing in India since the discussion. I am glad to say that one pharmaceutical company has invoked compulsory licensing and next should be 15 starred fans.

COMMENT-JALAN: I have a comment on fans. When we look at energy efficiency we ignore material expense. When we have 15 fans you want more material, which require energy to produce. When look at energy appliances, we need to factor in optimizing material as well.

CHAIR: Thank you all and we have come to conclusions and let me thank all the panelists for an interesting session and all the participants for staying wake throughout the day. I will call upon Neha to announce cocktails.

NEHA: Thank you. I express my sincere thanks and gratitude to one and all. Thank you.

Annexure 1: Background Note

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Stakeholder Consultation on Analyzing Issues and Options for Implementing NAMAs: A Developing Country Perspective

Magnolia Hall, IHC, New Delhi

11th August 2011

Background

Effective climate regime cannot be realized if specific circumstances of countries are overlooked and competitive concerns continue to overshadow the need for global cooperation. For developing countries, therefore, the challenge is to design their responses to climate change that are appropriate to their specific national contexts. Paragraph 1(b)(ii) of the BAP calls for '*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 nature and scope of such actions, however, is closely interrelated to the international cooperation coupled with the national circumstances (or the idea of *appropriateness*).

Resource endowments; geographical, geo-political and demographic factors; institutional and technical capabilities, along with other criteria shall have a bearing on defining the contours of *national appropriateness*. However, there exist no objective criteria to assess whether a mitigation action is appropriate. In the discourse on technology, however, there exists a broad argument that for developing countries the *intermediate technologies* are the *appropriate technologies*. In the absence of objective criteria it is difficult to assess whether a mitigation option which is not appropriate today could become appropriate in near future for certain national or international push. In other words, there is a lack of tool to assess context specificity of *nationally appropriateness*.

The stakeholder workshop aims to discuss and identify constituent elements defining the idea of *national appropriateness* in the *Nationally Appropriate Mitigation Actions (NAMAs)*. Thereby, it aims to get different perspectives on constituting elements of an objective criterion for assessing *national appropriateness* of actions in given national contexts. We shall further use multi-criteria analysis methods for

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developing the framework, interim findings will be presented which will be modified on the basis of inputs received from the workshop and will later be tested in different developing country context. Further, views from different developing countries on the emerging international architecture on NAMAs will be presented followed by a discussion from various perspectives on the issues and options in designing and implementing NAMAs for India.

We cordially invite you to be part of the stakeholder workshop to be held on the 11th August in New Delhi in India. The detailed agenda is attached herewith.

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Annexure 2: Agenda

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AGENDA	
09:30 - 10:00	Registration over Tea/Coffee
Introductory Session	
10:00 - 10:15	Welcome Address, Dr. Arabinda Mishra, TERI
10:15 - 10:30	Special Address, Mr. Mr Aslak Brun, Minister Counsellor, Norwegian Embassy in India
Panel Discussion: What does 'NA' (Nationally Appropriate) in 'NAMA' entail?	
10:30 - 11:45	Chair: Dr. Prodipto Ghosh, TERI <ul style="list-style-type: none"> From policy-makers perspective: Mr. R R Rashmi, MoEF-India From research perspective: Dr. Teng Fei, Tshingua University From legal perspective: Ms. R V Anuradha, Clarus Law Associates From civil society perspective: Mr. Trithankar Mandal, CAN-SA
11:45 - 12:00	Stakeholder inputs on a Questionnaire over Tea/Coffee
Technical Session: Research Framework- 'NA' in 'NAMA' (interim findings and discussions)	
12:00 - 12:20	Presentation: Introduction to the project and research framework
12:20 - 13:15	Moderator: Dr. Arabinda Mishra, TERI Comments by: <ul style="list-style-type: none"> Dr. Navroz K Dubash, CTR Dr. Anand Patwardhan, IIT-Mumbai (video-conference)
13:15 - 14:00	Lunch Break
Panel Discussion: NAMAs in international architecture: views from BASIC	
14:00 - 15:30	Chair: Dr. Arabinda Mishra, TERI <ul style="list-style-type: none"> Brazil: Morrow Gaines Campbell III, Vitae Civilis South Africa: Ms. Anya Boyd, University of Cape Town India: Ms. Neha Pahuja, TERI China: Dr. Teng Fei, Tshingua University Open Discussion
15:30 - 15:45	Tea/Coffee Break
Panel Discussion: Designing & Implementing NAMAs for India: issues and options	
15:45 - 17:15	Chair: Dr. Prodipto Ghosh, TERI <ul style="list-style-type: none"> Civil society perspective: Mr. Girish Sant, Prayas Energy (video-conference) Learning's from UNDP's solution exchange: Mr. Ramesh Jalan, UNDP Experience Sharing: Mr. Bahwant Joshi, ABS Infrastructure Open Discussion
Concluding Remarks	
17:15 - 17:20	Vote of Thanks, Neha Pahuja TERI