

Theme I: Institutional Issues related to Administering the Current Climate Regime

The first substantive area of CMRA analyzes the institutional issues associated with administering and operationalizing the FCCC and the Kyoto Protocol. With the FCCC in force and the Protocol in the process of ratification, both Annex I and developing countries are moving forward with the development and implementation of measures to meet their commitments. For Annex I countries, this includes not only the development of policies to reduce emissions from sources and enhance sinks and reservoirs, but also the development, transfer, and diffusion of environmentally-sound technologies, practices, and processes to developing countries.

Annex I countries can adopt a range of market-based and regulatory policy instruments to meet these commitments. Some are “market”-based in that they use economic forces to change behavior, while others employ the more traditional regulatory approach. Countries will generally adopt a mix of these instruments depending on national circumstances. The degree to which these instruments are effective in mitigating climate change will be a function of mix of the instruments adopted, the design and implementation of the policies themselves, and the institutional framework within which they must operate.

The Protocol’s call for the development of three interlocking mechanisms complicates the administration of the climate change regime and the development of national climate change policies. The clean development mechanism (CDM), joint implementation (JI) and emissions trading (ET) will allow Annex I countries to obtain some a portion of their required reductions through collaborative efforts with other countries. The role that the Protocol establishes for private sector in the development and operation of these mechanisms also adds complexity to the regime. Annex I governments are expected to adopt policies that will pass their emissions reductions commitments on to companies in those industrial sectors most responsible for the emissions. They are also expected to develop programs that will allow these industries to buy and sell emissions reduction permits on a global basis. The governments remain the responsible parties in the regime, however, and the system through which this trading will occur, while market oriented, will be constrained by domestic and international institutions established by these governments.

To explicate these complexities and their ramifications, the CMRA will explore two related sets of institutional issues: (1) the implications of the regime’s market orientation for the operation of the Kyoto mechanisms and the nature of measures that nations adopt; and (2) the implications of these measures and mechanisms for the balance between climate protection and sustainable development.

- CMRA Scoping Report

Session 2: International and National Implications of the Kyoto Mechanisms

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- Presenters: Dr. A. Atiq Rahman, Director, Bangladesh Centre for Advanced Studies
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- Dr. Naoki Matsuo, Senior Research Fellow, Institute for Global
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As the CDM, JI and ET are developed, institutional questions will need to be addressed concerning both interactions among the operational international rules and between these international rules and concomitant national rules. The development of these mechanisms and the market for ERUs will also raise a number of institutional issues about the mix of policy instruments that nations adopt, as each nation's institutional structure and experience, resource endowment, and level of industrialization will determine the mix of market-based and regulatory instruments that each nation that it adopts. The rules governing the operation of the CDM, JI and ET will also shape this mix.

Questions also exist about the applicability of the emissions trading model to the global scale needed to control GHG emissions. While considerable experience at the national level with the use of market-based approaches such as tradable permits exists, international tradable permit systems have been limited. The effectiveness of tradable permits in implementing national responsibilities to alter climate change is also not well understood. Finally, important questions arise concerning whether or not these mechanisms are to function as the primary means for the transfer of technology to developing countries and how technologies being transferred through these mechanisms can be screened to ensure their appropriateness and long-term effectiveness.

- CMRA Scoping Report

The Kyoto Mechanisms

Dr. A. Atiq Rahman

Director

Bangladesh Centre for Advanced Studies (BCAS)

Thank you, ladies and gentlemen. I understand we are talking about matters of institutions under the FCCC, particularly the Kyoto Protocol. I see many familiar faces, so my criticisms will be known to some.

Many of us have tried to de-link the Kyoto Protocol from the Convention, as if the Kyoto Protocol is independent, having its own independent entity and life. While true, we must remember that the Protocol is the daughter of the climate convention, and both the climate convention and the Kyoto Protocol have two clearly defined objectives. One is to reduce greenhouse gases to save the planet from the threat of climate change and global warming. The second is to assist in achieving sustainable development. This second objective is often forgotten. We tend to focus on the reduction of greenhouse gases no matter what the cost. As the debate goes on, people take their own positions, and the positions have very little to do with either the planet or the principles of the Convention or its Protocol, but are motivated by convenience.

If anyone reads the climate convention clearly, there are no two words like joint implementation anywhere in the climate convention. There are the words "singly or jointly", with a small "j". That is the word that has been taken over by some individuals and some states to mean that they can do things jointly. This idea of doing things jointly is very appropriate and suitable, required and necessary. But it depends very much on how we define it and how we go about it. Many of us who have been involved in the negotiations process have fought these words because, given half an opportunity, they would be perverted as and when required as a matter of convenience.

The critical question, however, is convenience for whom and what is the price we are will to pay for this convenience? The climate convention has defined some of these in terms of special needs. There are special needs like those of the vulnerable small island states reflected in such words like "low-lying areas." These are all meant to be a very positive, discriminating to the sort of concept of positive discrimination. Now this has again been used and abused in the process leading up to Kyoto.

Although there is Annex I and Annex II in the climate convention, Annex A and Annex B in the Kyoto Protocol, these annexes are not homogeneous. At one level, we have both the United States and Luxemburg in Annex I. They are very different economies. We have in Annex II both China and Bhutan. Again, these are very different sorts of countries. Similarly, the Maldives is on one side of this economic divide while Brazil and India is on the other. Mexico is still in Annex II, but the economic power of Mexico cannot be compared to the economic realities of others. So we have a mixed bag, making the common but differentiated responsibilities one of the key principles of the convention and also the Kyoto Protocol.

Coming straight into the mechanisms. Now, I think I have made my point clear that joint responsibility for saving the planet is primarily, according to the convention, the responsibility of Annex I countries. These countries were supposed to reduce their emissions through climate mitigation efforts and at the same time establish sustainable development principles and objectives through the convention and its subsidiary bodies

and protocols like the Kyoto Protocol. As we all know, there are three mechanisms in the Kyoto Protocol: the Clean Development Mechanism, Joint Implementation, and International Emissions Trading. Now, if you look at those, what it really says is that it is not cost effective to reduce all the greenhouse gases within the boundaries of the Annex I countries. Hence, we ought to go outside and do it in a cost-effective way.

There is no question that economic cost-effectiveness is a dominant criterion for achieving reductions of greenhouse gases. However, if that is the only criteria, then we will not meet the clear objective of the two agreements. So the critical issue that has come up now, and will continue to haunt us, is how much of it is: how much of it can we do outside and how much of it can we do within our jurisdictional boundaries? Those of who were in NGOs initially floated numbers like five percent outside and ninety-five percent inside, and now I understand the language in the chairman's text is fifty percent outside, fifty percent inside. I cannot remember whether the number really exists. But that is the notional figure that is being floated around now. The question is, if there are no limits, then can economic benefits can transfer everything outside? This is not the responsibility of every other developing country today.

Now, how much can we transfer outside, how much can we keep inside, and how does it lead to economic efficiency remains a serious question. There are other forms of efficiency, such as technology efficiencies, human societal needs and efficiencies. These are not discussed. The holistic sustainable development question, which has three points of the triangle: social, economic and ecologic or environmental, gets lost.

Of the three mechanisms, the CDM is the farthest ahead in terms of discussion and debate right now. There have probably been about one hundred workshops of different shapes and sizes in different parts of the world on the CDM thus far this year. The reason why the CDM has gone so far is that under Article 12, the CDM has been given a certain shape where there are pretenses of some beginning or rudimentary fairness or distributive concepts. Just after the Kyoto Protocol was accepted, I did an informal survey among developing countries asking why they agreed to a document like the Kyoto Protocol. About seventy percent of the developing country delegates surveyed said that they supported it because there was money for adaptation under Article 12. So they thought there was money available.

Let me make one very simple, gross statement about the Third World concept of the non-Third World view on what the Third World is. The North crudely has accepted a concept of what they think a developing country is. They think they are all like the big ones, where the reduction potential is enormous and the market presents tremendous opportunities for multinational investors. These big countries include, for example, China, India, Brazil, and Argentina. There is also Mexico, which has already joined the OECD. South Africa is a booming one, an upcoming one. So countries that have a huge market potential and have reduction potential as well where multinationals and private companies can go to make some financial gains and at the same time, hopefully, reduce greenhouse gases. The Clean Development Mechanism has built in a tantalizing option where some GHG reductions are possible and some technology transfer is possible through projects. This makes it very attractive in the sense that there are projects that can be done.

Every time the debate between developing countries and the industrialized countries occurs, two phrases creep in. One is called "technology transfer" and the other is called "preferential financial transfer." Developing countries are arguing that the climate convention should be used to do economic justice and transfer of finance in a very unfair

previous world. Many say that the climate convention is a small piece of this economically unfair world, do not load the climate convention with all of the unfairness questions and bargain it so much that it dies. Alternatively, just focus on the piece that this mechanism can do. So that is the debate. There are not mechanisms or systems available in the World Bank that tends to do that.

For me, and for many others who are interested in this issue, climate change has drawn the largest number of multi-disciplinary researchers from across the world, both North and South, sometimes in a disproportionate way. In my own country, I am accused of wasting my time on this Northern, nearly failed concept of a convention where something can happen because it is basically a North-driven convention where South was supposed to participate. Now what we see through these three mechanisms, not only are they going to participate, they are going to do most of the jobs. They are going to solve most of the problems for the North, which is not going to do much because it is going to hurt them a little. So, it is a transfer, and what some people call the Clean Development Mechanism, others call the Carbon Dumping Mechanism. It should not be a Carbon Dumping Mechanism. It should be a carbon reduction, or Clean Development Mechanism. So we have the Clean Development Mechanism, the Carbon Reduction Mechanism, or the Carbon Dumping Mechanism. We have to see where we can best use it so that the Kyoto Protocol has a potential and the UNFCCC is not killed in the process with both additional burdens and the responsibility of taking on more than it should.

So this is the debate. How much can it claim? How much can it do? That implies the question of where is the money coming from? Who is holding the money? How is it going to be distributed? It is about two things: carbon reduction and finance. The demand for additional funding has come from the South, the demand for using cost-effective ways has come from the North. As I said, the North and South are not homogeneous. Argentina wants to be taking responsibilities because it sees that joint implementation and emissions trading can only be done among Annex I countries, and without jumping into Annex I it would not be able to buy into the action. So this is more about transfer of losses, and most developing countries are more interested in the funds for adaptation, which would come from the additional commission charged on the CERs that will accrue in the transfer process of the Clean Development Mechanism.

We held a meeting in Cape Town two weeks ago where CDM was discussed. Many of the issues that came up are basic, substantive issues of concern. One of the larger concerns is this whole concept of equity, fairness, and justice in the climate negotiations. How firm is it? The climate convention is supposed to be one of the few international agreements in which a group of countries has taken their own responsibility for their historical deeds. There are not many such agreements. There are no documents that I know of that has taken responsibility for slavery, colonialism, or unfair economic trends. This is one of the few documents where responsibility has been accepted, which may give rise to a new, future modality of global governance. This is a very serious issue as we look forward to a future world. The principle behind this needs to be explored, as does whether the different mechanisms can serve or cannot serve this principle.

The next thing is the question of baseline. Compared to what are we going to reduce? I think the scramble for manipulating the baseline has already begun. By playing with the baseline, you can show artificial reductions such that good things happen on paper but nothing happens to the planet.

The third issue is economic or financial transfer --- who transfers money to where, how, and how it is best done in the fairest possible way so that the clear objective of the convention is met. Sustainable development is a very complex concept and is very difficult to implement not knowing what it means in specific terms and how to operationalize it. This remains our challenge.

The key question that comes along is how to institutionalize the concepts of capacity building within the government, the non-governmental and the private sector community. The private sector community is particularly critical to the implementation of the convention. I asked many of my colleagues at the Cape Town meeting in how many countries was there one person in the government who handles climate change. Eighty percent of the countries did not have a single person in the government who is dedicated to handling climate change. I have asked many ministers and secretaries if anyone in their government has read both the climate convention and the Kyoto Protocol, and many of them have responded negatively. So we have the problem of basic capacity within the developing countries. What little capacity that has been built within these countries has occurred within the research and non-government communities. These are people who are interested in the subject, can see the long-term implications of the issue, and became involved for a number of their own reasons. Many are future-oriented, which is not one of the strengths of developing country governments.

Let me now give you my nightmare and ideal scenarios. My nightmare scenario is that there will be a lot of CERs flowing, a lot of permits floating and hanging around in the air, a lot of money exchanged, but nothing happens to the planet. My ideal scenario is that every person on the planet will have equal economic rights and equal carbon rights at some future date, say 2101. The truth will most likely be somewhere between the two, but probably favoring the first. Another scenario that is not so nightmarish, but totally unfair financially and totally unacceptable, but probably more realistic, is, any future CDM transaction will happen between private entities where most of the game will be played by multinational companies who will transfer credits between their headquarters in industrialized countries and their subsidiaries in developing countries. In these cases, no body will know where the money has gone, what it was used for, and who, if any, is the beneficiary of any project. Carbon dollars will be floating around and transferred, but nothing will happen to sustainable development and only a little will happen to carbon. The truth must be better than this. We must work towards ensuring this, here through research, NGOs through shouting, and governments through trying to establish procedures and taking actions towards a better world that includes economic justice as well as ecologic justice.

A Portfolio of Domestic Measures in the Kyoto Regime: How can we develop advantages of each instrument?

Dr. Naoki Matsuo
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The theme of this talk is on the portfolio of domestic measures that can be used in the Kyoto regime and how we can develop the advantages of each instrument.

First, we must characterize the measures. Usually, the portfolio of measures is characterized by three kinds of measures:

- regulation, or command-and-control measures;
- voluntary agreements; and
- economic instruments.

The more important characterization, however, is in the scope of the measure. This scope could be nationwide, region-wide, sector wide, etc. This quality is very important, and must be identified.

A second point is how to put the right measure to the right sector. This requires looking at the merits and demerits of each measure

How to make a portfolio of measures.

The third point is how to incorporate other policy objectives. Each measure has many different policy objectives. The identification of policy objectives other than climate change is very important in the real world. We tend to think of only climate change, but there are many policy objectives and climate change may be only a minor issue.

Figure 1 outlines the source coverage of domestic measures. The three basic categories of domestic measures are regulation, voluntary targets, and economic instruments. Regulations most commonly target element technologies by using standards of some type, although they might also include a cap on fuel or cap on emissions. They generally apply to the entire sector and are not tradeable. At the nation-wide level, quantified emissions limits or targets are a form of regulation. Internationally, the EU bubble is a form of regulation that applies to a group of countries. While voluntary agreements are occasionally applied to element technologies, they more commonly applied to firm and sectors. For economic instruments, such measures as subsidies tend to be applied to element technologies, while energy taxes are applied to types of fuels. A carbon tax is more broad, generally affecting entire economic sectors, while a domestic emissions trading system will generally have nation-wide coverage. The Kyoto mechanisms are forms of multilateral economic instruments.

We should now consider the advantages of each category. Regulations and subsidies target well-known specific technologies, and governments should have detailed information on these technologies. Voluntary approaches are easier for industry to accept, but their effectiveness depends on the prevailing corporate culture and approach design. Thus they very much depend on national circumstances. The advantage of a fuel tax is that it can target a specific fuel or type of energy use. A carbon tax, however, has a wider coverage and tends to have a lower economic cost. A domestic emissions trading system

also has wide coverage and lower economic costs, and provide an emissions cap within certain sectors. It also provides a certain amount of risk control in a dynamic and liberalized economic market. This is very important in comparison to tax measures.

It is important to consider the implication of interactions among the mix of policy options. An example of this can be seen in Figure 2. Regulations, subsidies, voluntary agreements, energy taxes, emissions trading and other policies all affect, to some extent, the business sector. However, specific sectors, such as the residential or transportation sectors, are affected differently by the different measures. However, they tend to interact with each other. For example, as can be seen in the case of the United Kingdom, voluntary agreements, energy taxes, and a domestic emissions trading system interact with each other. So we must consider or design the interaction of these measures.

We must also consider the mix of objectives of a given policy. For example, as shown in Figure 3, if we consider a tax on energy, we must also consider the implications for climate policy, energy policy, taxation policy, industry policy, and diplomatic policy. Furthermore, within each policy we have a number of different objectives. For example, within energy policy, market organization is very important, as is energy security, the protection of the coal industry, promotion of renewable energies, and others. So there are a lot of objectives that can interact with and make a contribution to the design of an energy tax. So we must think of those issues that are outside of the issue of climate change when designing climate change policies.

Similarly, we must assess the impact of climate change policies on these other areas and objectives when considering the effectiveness of the policies. For example, we must consider the impact of an energy tax on GDP, liquidity, administrative costs, possibility of market failures, and others. Industrial competitiveness is also very important. These are all general factors that must be considered when designing climate policy measures.

Figure 1. Source Coverage of Domestic Measures

FLEXIBILITY

Category		Regulation	Voluntary Target	Economic Instruments
Coverage				
Element Technologies		Common	Occasionally	Subsidy Deposit
Firm Level	Fuel-Type	Cap on fuel or emissions	Common (by firm)	Energy tax (by fuel)
Economic Sector level		Cap (by sector)	Common (by sector)	Carbon tax ET in a sector
Nation-wide		QELRC	Occasionally	Domestic ET
Multilateral		Bubble	(Bubble)	Kyoto Mechanisms

Figure 2. Policy Options Mixes and Interactions

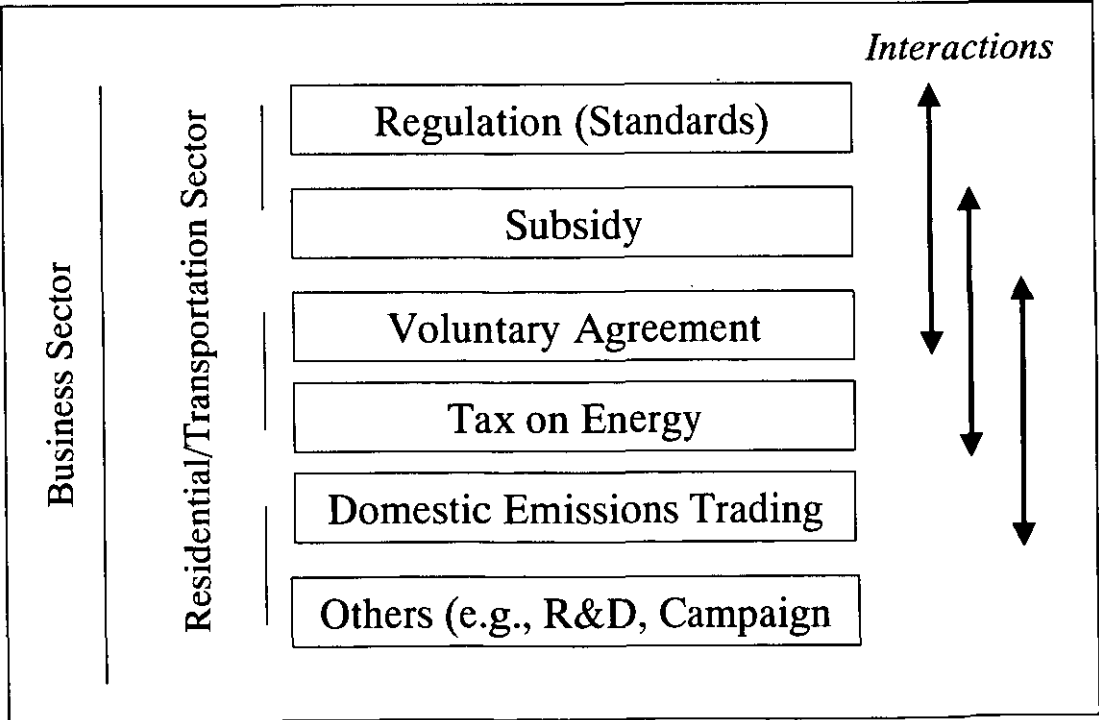
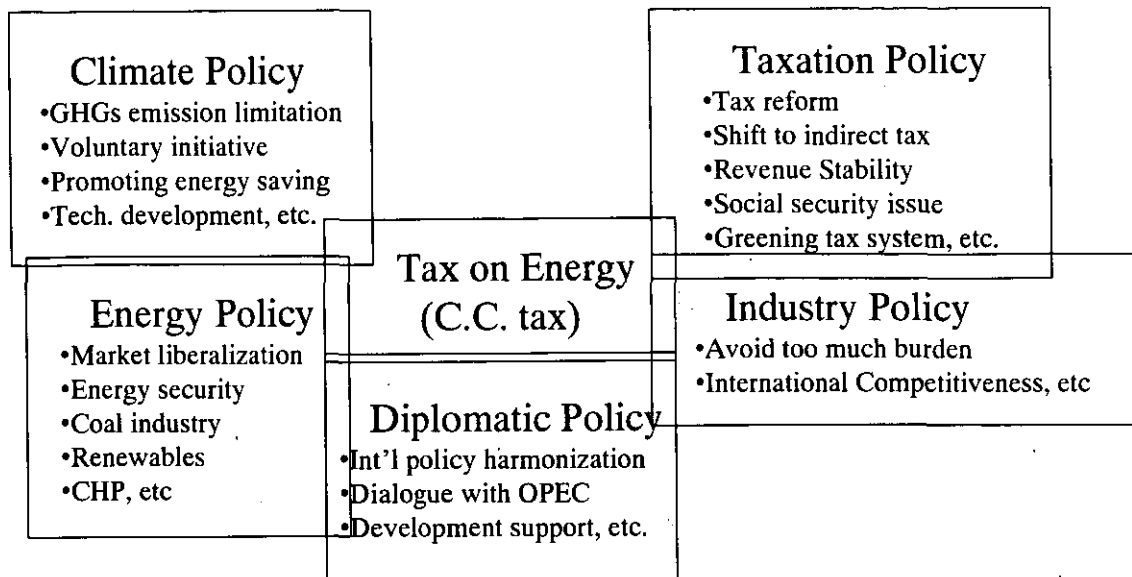


Figure 3. Objective Mix concerning Tax Measure



Two Schools in the Institutional Design of the Kyoto Regime

Taishi Sugiyama

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In this short presentation, we would like to make a distinction between the enforcement school and the management school in the Kyoto regime design. I suggest that those who advocate stringent enforcement favor, for consistency, the following elements: sanctions, universal and simple rules, market mechanisms, nation-wide emissions trading markets, and dismiss any discretion. The questions to this school include: of any national environmental numeric targets are enforceable in democratic process at all, if economy-wide emission trading is politically feasible.

We believe it is important to understand such logical links among the arguments and study the implications of both points of view in designing the Kyoto regime. It is our belief that the institutional design issues should be addressed based on the experiences with other international regimes.

Key Issues	Enforcement School	Management School
Role of Compliance Body	Stringent enforcement by sanction	Facilitation by consultation
Compliance Instrument	Penalties to Parties	Transparency and public pressure to Parties
Kyoto mechanisms, sinks, non-industrial CO ₂ emissions	Comprehensiveness to accomplish maximum environmental effectiveness	Flexibility, allowing temporal deviations to Parties in order to agree upon common ambitious goals.
Kyoto Mechanisms	Market mechanism to minimize the economic costs	Flexibility (same as above)
Discretion in interpreting sinks	Universal rule without discretion	Certain discretion for flexibility
Numeric target	The number which is exactly enforced	The national goal to which planning and implementation should be deployed
Favored domestic policy instruments	Economy-wide GHG trading system	Traditional environmental policies with some modifications
Implicit intermediate goal toward the final FCCC goal	Reduce total GHGs in cost-effective manner	Transform industrial CO ₂ emissions structure
Numeric commitments by developing countries	Prerequisite	Desirable but not prerequisite

Session 2 Discussion Summary: Institutional Research Questions Associated with the Kyoto Mechanisms

The starting point for the discussion during session 2 was the Scoping Report's core research question:

From an institutional perspective, what are the implications of this market-oriented climate change regime for operation of the Kyoto mechanisms and the mix and effectiveness of policy instruments adopted by national governments?

Meeting participants raised the following issues and questions during the discussion:

- **What are the limits to the functioning of market mechanisms in the climate regime?** Tremendous uncertainties exist with regard to our understanding of both the functioning of global markets and international environmental regimes. The uncertainties increase exponentially when these are combined. It is essential that there be a better understanding of the limits in the functioning of these market mechanisms is needed if these mechanisms are to be incorporated effectively into the climate regime.
- **How can climate issues be incorporated into the corporate decision-making frameworks, particularly over the long-term?** All companies have frameworks through which they make their strategic decisions, particularly those concerning capital investments. These frameworks are generally quite sophisticated, and anticipate changing conditions over periods of twenty to thirty years. We need a better understanding of how these frameworks are used and how climate change factors can be incorporated into them, particularly given the long- and short-term uncertainties that associated with the ratification and implementation of the Kyoto Protocol. This is particularly important given the resources that the private sector commands. It was pointed out that the world's 100 richest multinational corporations are individually richer than world's 100 poorest countries, and the annual budget of Microsoft alone is bigger than that of Bangladesh and many other developing countries.
- **How do we invent or devising systems and rules for that are fairly strict and explicit, but at the same time can be applied in a meaningful fashion to a very diverse set of actors?** For example, how can a monitoring regime work given the differences between the private and public sectors? Can one monitoring regime work for both sectors? On the one hand, we need to develop a set of rules relating to GHG emissions that are relatively strict and therefore meaningful. On the other hand, there is a tremendous diversity in the national governments, government agencies, private entities, and other participants in the regime. An interesting research challenge is reconciling the need to have relatively strict rules with the need to have systems that can be applied or interpreted in a meaningful fashion to a very diverse range of players.
- **What are the implications of private sector involvement and the Kyoto Mechanisms for sustainable development?** Large-scale CDM projects in such sectors as the iron and steel industry in China and India are politically feasible because the actors and the financial costs and benefits associated with these projects are easily identified. However, they may also happen without CDM, as the people in charge can access resources outside the CDM. The people who need the help are those who do not have access to these other resources. For example, water pumps in India consume twenty percent of the electricity. A project that reduced this consumption would be

more sustainable in the long-run. However, because these pumps are spread throughout the country, it would also be less cost-effective and therefore less attractive to the investor. We need to gain a better understanding of the ramifications of these tradeoffs.

- **How would the Kyoto Mechanisms affect on-going development assistance? How will development projects change in response to these mechanisms?** A major concern of many developing countries is that CDM investment could result in a drop in other forms of development assistance. Current development assistance practices may also change in response to the implementation of the Kyoto Mechanisms. One approach to answering these questions would be to examine a number of current development projects in such sectors as energy and land use in light of the rules being proposed for the Clean Development Mechanism.
- **How can the distinction between the “Management” and “Enforcement” schools of rule-making improve our understanding of important differences among Annex I countries?** The distinction between the “Management” and “Enforcement” schools is intriguing and important. It would be useful to try to tie these distinctions to the different legal, cultural and institutional regimes within different Annex I countries. The United States, for example, could probably be put into the Enforcement school, while some other nations fall into the Management school. A better understanding of these distinctions could also illuminate private sector responses. There are many researchable questions here that could look at the institutional and cultural side of these two schools.

Session 3: The Climate Regime and Sustainable Development

Session Chair: Prof. Daniel Murdiyarso, Head, Global Change Impacts Centre for Southeast Asia (IC-SEA)

Presenter: Joyeeta Gupta, Institute for Environmental Studies, Vrije Universiteit Amsterdam

Taishi Sugiyama, Central Research Institute of Electric Power Industry (CRIEPI)

A second set of issues surrounding the FCCC and the Kyoto Protocol involves how the mix of market-based and regulatory measures adopted to implement these agreements could affect the twin goals of protecting the global climate and achieving sustainable development. While these two objectives are not necessarily incompatible, rules adopted and institutions created to implement one objective can create conflicts with the other. As the Kyoto mechanisms become operational and the “carbon” market emerges, forestry measures are particularly attractive to the governments and private companies of Annex 1 countries, and it is likely that the number of carbon sequestration activities will increase substantially as countries move forward to implement the FCCC and the Kyoto Protocol. Issues associated with this increase, as well as those associated with deforestation and land use changes, are of particular concern to developing countries. Differences among the Kyoto mechanisms and the market value of emissions reductions obtained under them could also affect the balance between emissions reductions and carbon sequestration activities, as could differences in the timing of the implementation of these mechanisms.

- CMRA Scoping Report

Sustainable Development and the Climate Regime

Dr. Joyeeta Gupta
Institute for Environmental Studies
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Ladies and gentlemen;

On my way back from lunch, I thought it would be a simple exercise to find this room. Instead I got lost in two different lifts going in a completely different direction. In trying to find this room, I asked a large number of people where the hotel was and where the fifth floor was. Everyone I asked pointed me in a different direction. This is, in brief, the problem with sustainable development as well. Nobody knows what it is and everyone is guiding everybody else in the wrong direction.

In this presentation, I will first talk very briefly about viewpoints on what is climate change and sustainable development. Then I want to focus on a few of the sustainable development dilemmas that developing countries have brought into discussions at a bilateral and multilateral level. In many ways, this is a naked version of what developed countries go through themselves. So you probably will have experiences in which developed countries have had similar experiences or doubts. The third issue that I will focus on is what the Convention and the Kyoto Protocol say about sustainable development. Then I will talk a little about the process of negotiating what is sustainable development in the climate change regime, which brings me to the process issues. If you talk about the mechanisms in the climate change convention, then there are certain processes involved, and who is controlling whom in those various processes becomes very important.

Views on Sustainable Development and Climate Change

A number of questions arise regarding the definition and nature of sustainable development. The first concerns whether sustainable development be defined objectively. A few years ago, Anna Agarwal argued that a country needs to be sustainable. In order to be sustainable within the country, you may need to make choices that others see as unsustainable. So there is no such thing as a sustainable development agenda that is common for all. This also means that, in the Clean Development Mechanism, for example, when we talk about a sustainable development project, there may be differences in perspectives between the host country and the guest country or investor country in what is sustainable development. The next question is whether sustainable development is something that needs to be decided for current generations or future generations. This is a very important issue for developing countries.

The third question that arises is whether a country needs to develop before it can indulge in sustainable development, or does development need to be redefined and then the development process made to conform to this new definition. In other words, do countries try to learn from the mistakes of others, and thereby avoid the sort of emissions trajectories that other countries have had, or is that just too expensive? This is something that keeps coming up in discussions with developing country negotiators and developing country industrialists.

The last question is whether climate change and sustainable development are viewed as the same or two different things. If a country takes any measures to reduce greenhouse

gas emissions, should this be viewed as climate change or sustainable development? We need to figure out a way to assess this.

Dilemmas Regarding Sustainable Development and International Negotiations

The second issue I want to bring up are the dilemmas of developing countries face in the context of international negotiations. One of the key issues of most developing countries now is how should they develop further, not just over the next ten years but over the next fifty years. If they are to invest now in clean coal technologies, does it mean that ten years down the road they will be regarded as the big polluters of the South? In a recent workshop in China, people from the Energy Research Institute and the State Planning and Development Committee stated that China's contribution to climate change will be the prioritization of large hydro-electricity and nuclear power, putting clean coal as a third priority. It became clear that they were willing to prioritize global issues over local and national issues. This raises important issues as to whether the choices they are making are more sustainable than the choices we would like them to make for climate change. It is not very clear for most developing countries what the trajectory should be in relation to energy and which trajectory is more sustainable than the others.

Developing countries must also figure out how to ask developed countries for assistance without losing complete control over their own national property. This is particularly a problem with the Clean Development Mechanism. If large numbers of investors are going to invest in afforestation projects, occupying land through ninety-nine year leases, they may lose some degree of control over these resources. These countries also face difficulties in asking and empowering their own private sector to solve public problems. This is a question that developed countries must ask themselves as well. Can we really expect multinational corporations to cooperate and solve the climate change problem?

The next question pertains to equity. How can developing countries ask effectively for equity? In international negotiations, equity is to some extent intertwined with the sustainable development concept. How can these countries ask for equity internationally when they are unwilling to adopt measures addressing equity within their own countries? This is another element of the sustainable development dilemma.

The last issue concerns how countries can seek short-term gains without risking long-term losses. These dilemmas are very present in most CDM negotiations or pre-negotiations, as CDM negotiations have not yet begun in earnest at the national level. They have begun at the international level, but my focus is on how national actors perceive the sustainable development and climate change agenda.

Definitions of Sustainable Development in the Climate Treaties

If you look at the Convention and the Protocol themselves, you will find that there is some degree of confusion concerning the way sustainable development is actually referred to in the text. For example, in the Preamble, there is a reference to the fact that, in order to develop sustainably, you need to have development first. The Objective says that you have to reduce greenhouse gas emissions in order to allow societies to develop sustainably. So there sustainable development is the result of reducing greenhouse gas emissions. Then somewhere in the Principles, the Convention says that each Party has a right to, and should promote sustainable development. Then you have the term "sustained economic growth" used liberally throughout the Convention. This is something quite different from sustainable development. Furthermore, in the Protocol, there is an implicit reference in the technology transfer provisions that environmentally-friendly technologies should be sold to developing countries in order to lead to sustainable development. Finally, the

Clean Development Mechanism tries to promote sustainable development in the developing countries. So we see that, within the Convention and the Protocol, it is not clear what is meant by sustainable development. It is not clear if it is an important starting point, or the result of dealing with greenhouse gas emissions effectively. This means that there is a great deal of ambiguity in defining sustainable development in the context of the Clean Development Mechanism.

Sustainable Development and the Negotiations Process

One might say that sustainable development is nothing that can be defined objectively. It is something that must come out of procedures. But there must be a process to allow countries to determine what sustainable development is for themselves. This brings me to the process of international law.

What you find in international law is that there are some explicit and implicit assumptions on the basis of which countries come together to negotiate. If, however, you look at modern environmental treaties, you will find that, in many cases, these explicit and implicit assumptions are not equally valid. Thus, the very fact that this process may help you reach a working definition of sustainable development may be questioned.

There are approximately nine explicit and implicit assumptions in the international legal regime. Some of these are particularly questionable at this point in time. If you look, for example, at the issue of common problem definition and you look at how countries are negotiating the climate regime, you will find that they are working on the basis of different problem definitions. Their perspectives on what it is that they are trying to solve is not the same. You also find that, although under international law it is assumed that countries send negotiators well-prepared to negotiate, this is not always the case. This means that trying to define sustainable development and the relationship between climate change and sustainable development will not be an easy task to resolve through the negotiations process, at least at this moment.

I would also like to raise the issue of institutional capacity. There is an assumption under international law that when countries come to some agreement, they will have the capacity to implement that agreement. Nowadays, we find that there are many capacity-building provisions to help countries develop ideas and concepts in order to be able to implement these agreements effectively. The reason I bring this up is that, if sustainable development and its relationship with climate change is not something that can be objectively determined, there needs to be a good process for working out these issues. But what you can see now in the current negotiations process is that it does not really allow for an effective exchange of ideas between people from different groups of countries. This is an important issue to be considered for further discussion in any institutional development framework.

The next point that I would like to raise is question of control over the mechanisms being developing in the climate regime. The Convention will gradually establish a large range of mechanisms to deal with the climate change issue. For example, does the Convention and Parties actually have control over the Global Environment Facility, or does the Global Environment Facility have ultimate control over the project that it implements. Over the years, this battle has been fought in the different subsidiary bodies of the Climate Convention, and we may have reached some degree of conclusion on this issue. But the term "sustainable development" will get a different content depending on what the body is that is controlling it.

It has also been argued that if the Climate Change Convention gives some responsibility to the Global Environment Facility, this would mean that, in the long term, the rest of the World Bank would also need to take these considerations into account in the implementation of their projects. As a result, the rest of the World Bank would gradually take sustainable development and the climate change issue into account when it subsidizes projects or lends money for projects in developing countries. This means that it cannot argue at some future time that these projects need to be considered separately. This is an argument made by some legal jurists, although others say that World Bank can view these two issues separately. The reason I bring this up is the World Bank has now established a Carbon Fund and is getting more actively involved in CO₂-reduction projects in developing countries. The issue then becomes who is going to control this. Is it going to be the Parties, who in the long term decide what is sustainable development and how it is to be interpreted in the context of their countries, or is it going to be the World Bank, the GEF, or whoever else is running the projects?

With regards to the CDM, it is not clear at present whether there will be bilateral or multilateral control of projects. People have talked about multiple approaches. Again, there is the risk that the issue of sustainable development will be ambiguous, and will be defined by people in the way that they see fit.

In conclusion, one could argue that climate change is gradually becoming no longer a law of environmental protection but may be moving towards becoming a law of investment. If this is the case, this investment must, in the long term, promote sustainable development. There are, however, many issues regarding how sustainable development is defined. We all know that the devil can cite the scriptures to suit his purposes, which means that the issue of sustainable development is an open-ended argument. As of now, anybody can cite sustainable development as a means for justifying any project under the climate change regime. This may be a very cynical way of viewing it, but when we are doing our concrete research projects, trying to examine the vast number of options in developing countries, we never come up, or at least I have never come up with a straight-forward answer regarding which projects are good for society in the local as well as the global context. All these issues basically mean that we need to develop two sets of rules about how to define the relationship between sustainable development and climate change, both at the substantive level and at the procedural level.

Must Developing Countries Commit to Quantified Targets?: Time Flexibility and Equity in Climate Change Mitigation

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One of the targets of this meeting is to think a little bit about the interactions between natural science and social science in the context of *climate change*. This paper shows one of the possible outcomes of this interaction. The purpose of this presentation and accompanying paper is to discuss in quantitative terms the argument by developing countries that they should not be required to adopt numerical emissions reductions targets. While I will not get into tremendous detail because of our time constraints, I think that this kind of quantitative approach supports the equity arguments being made by developing countries.

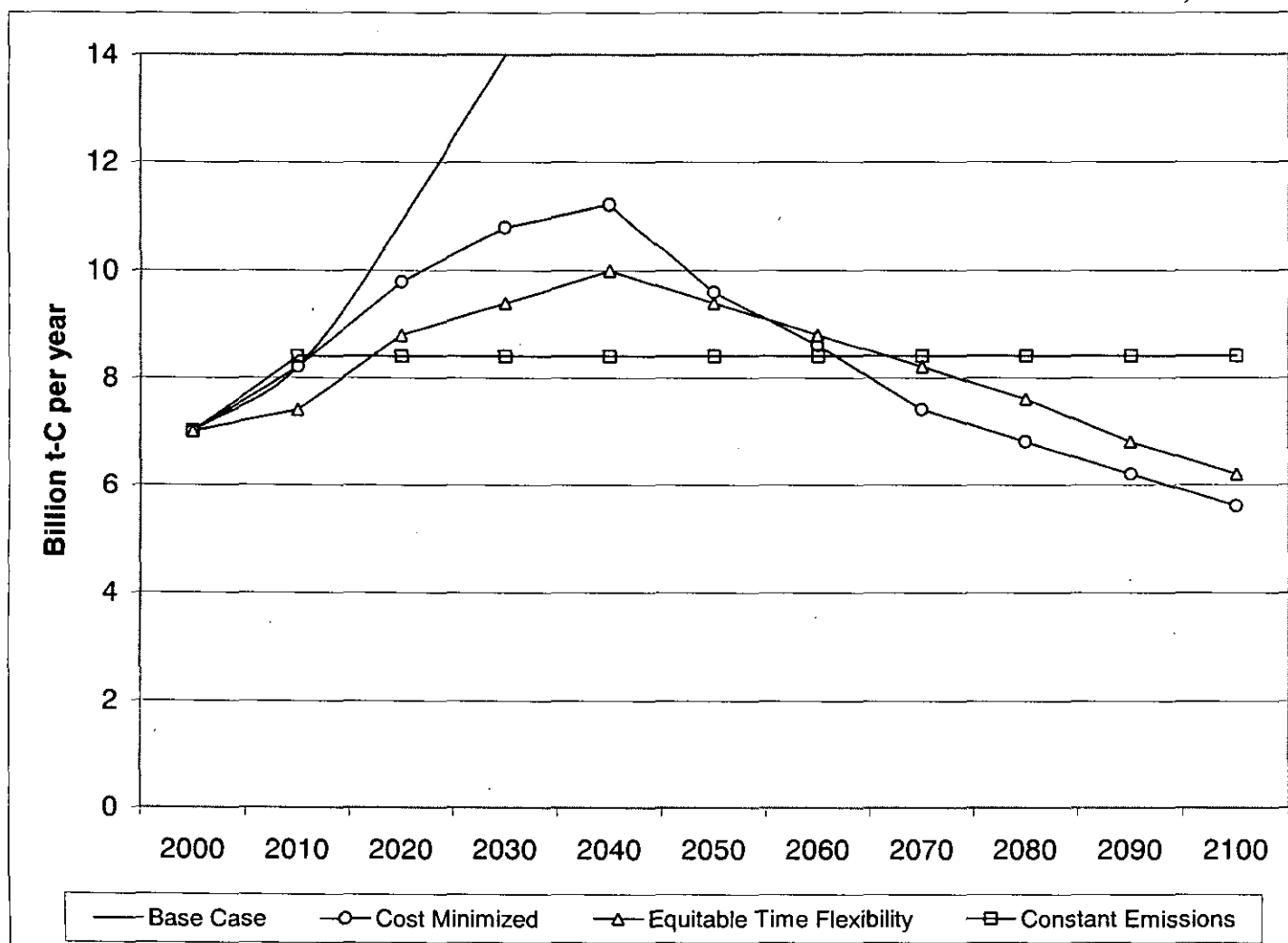
Figure 1 shows the results of an integrated assessment model of carbon emissions through 2100. The argument is often made that only cumulative global emissions matter for *climate change*, so *near-term emissions reductions* are not as important as the change in the global emissions reductions trajectory over the long term. Researchers from developed countries who are experts in systems analysis and economics generally make this argument, and are often more concerned with economic efficiency rather than equity. My purpose here is to take a different approach by translating the equity and sustainable development argument into quantitative terms.

In this study, the equity and efficiency dimensions of global time flexibility in GHG emission reductions were analyzed using an integrated assessment model. The study suggested that global time flexibility can be justified to some extent, which is consistent with earlier studies by Wigley et. al. However, it does not necessarily serve as a rationale for delaying emission reduction commitments by developed countries. For equity considerations, the time flexibility should be saved for developing countries, as early reductions by developed countries will ease the burden of developing countries both in terms of time and quantities of emissions reductions.

This equity-oriented argument is robust against time and spatial efficiency considerations, since the apparent benefits that might accrue to developed countries from delaying efforts to reduce emissions will by no means be transferred to developing countries for mitigation of and adaptation to climate change. This analysis supports the argument that the Kyoto Protocol should be allowed to enter into force without the adoption of legally binding quantified targets in the First Commitment Period by important developing countries such as China and India. Alternatively, a ten- or twenty-year grace period for developing country participation would be appropriate.

The purpose of this paper is to show that quantitative analysis can be used to support a different view regarding global GHG emissions and the Kyoto Protocol. I believe that there are many different views that supported by quantitative analyses such as this. It could be very useful to assemble these different views into a synthesis report that would be supported by quantitative analysis. I hope this paper suggests a possible outcome for this effort.

Figure 1. Four Scenarios of Carbon Emissions Through 2100



Session 3 Discussion Summary: Research Questions Concerning the Institutional Dimensions of Climate Change and Sustainable Development

The core research question described in the CMRA Scoping Paper is: *what are the implications of the emerging regime, and of the mix of market-based and regulatory measures adopted under it, in terms of climate protection and sustainable development?*

The discussion during the third session focused primarily on the issues related to the definition of sustainable development, the nature and role of capacity-building in sustainable development, and the potential interactions between the Kyoto Mechanisms and various aspects of sustainable development. The research questions that were raised during this session included:

- **Can we know whether or not sustainable development is achieved? Is it necessary to know this?** Numerous observers have described the range of attributes that can indicate if a certain degree or rate of development is sustainable. Given the difficulties associated with trying to define and measure sustainable development, would it be more efficient and efficacious to focus on an examination of these attributes and an inquiry into how these should best be addressed? One useful research effort would be to examine the Kyoto mechanisms in light of one or two key economic, social and environmental indicators to see what these mechanisms can or cannot achieve, as certain mechanisms or institutions may be better suited for fostering economic development, while others are better for promoting social development or environmental protection.
- **How can the concerns for economic efficiency and cost-effectiveness in GHG emissions reductions be balanced with those of equity and responsibility?** Annex I countries have the primary responsibility for reducing GHG emissions under the Convention, but many of the reductions will actually occur within non-Annex1 countries, which may have other concerns and priorities.
- **What are the conditions that seem to govern the degree of capacity that we find in different places and in different time periods?** Capacity is more than simply expanding materials and resources to those lacking them. It also includes institutional and organizational capacity, which makes it as much of a problem in the developed world as it is in the developing world. Institutional capacity includes the capacity of governments and other organizations to pursue public objectives coherently in way that minimizes or avoids the problem of capture or corruption. Organizational capacity is the capacity of organizations to develop or pursue coherent programs without being paralyzed by conflicting groups within the organization.
- **Why do some institutions and organizations seem to have the capacity to adhere to public objectives and avoided paralysis, capture or corruption while others do not?** One of the main lessons of the experiences of countries in transition is that a change in a country's basic legal framework will not bring about democracy if the country does not have the institutional and organizational capacity to manage this transition. This is a question not just for the climate regime but for the whole issue of sustainable development.
- **How can we build elements of capacity-building and technology transfer into the structure and systems of the Kyoto Mechanisms?** Developing countries accept the

principle of common but differentiated responsibilities, but understand that these responsibilities must be carried out in the context of their own national environmental and developmental priorities. This gives some credence for the argument that the countries themselves should be the sole judge of the sustainability of the project being proposed. There are real issues of governance associated with their ability to make these judgments. This brings in not only the question of the transfer of financial resources, but also technology transfer and organizational and institutional capacity building.

- **How might the operation of the Kyoto Mechanisms, particularly the CDM, influence national environmental priorities?** How might these national priorities affect the Mechanisms? For example, a substantial increase in the number of CDM projects in some developing countries could force host countries to choose between diverting scarce resources away from other important environmental priorities such as water pollution or toxic waste remediation or rejecting the CDM project. What would be the implications for sustainable development of these choices?
- **What criteria can be used in the context of the CDM that indicates whether or not a given project will contribute to sustainable development?** There is tremendous concern that, with the private sector involved in the development and implementation of CDM projects, these projects will become investment projects rather than development projects. The CDM is intended to foster sustainable development, which is more than simply the transfer of money. What are the three or four elements that CDM projects should contain to avoid this problem? What sort of capacity does a country need to ensure that the transfer of money does not simply become an investment?