

SOGE2005

**Proceedings of the Seminar of
Governmental Experts**

Bonn, Germany, 16 - 17 May 2005

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¹ On behalf of the European Community and its member States

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Introduction

Climate change has been called one of the greatest environmental, social and economic threats facing our planet. Scientific evidence suggests that a substantial part of the global warming that has occurred over the past 100 years can be attributed to human activities.

During the past century, the Earth's average surface temperature rose by about 0.6° C. The Intergovernmental Panel on Climate Change's (IPCC) in its second and third assessment reports, noted that only substantial cuts in emissions will allow atmospheric greenhouse gas concentrations to stabilize at a level that would "prevent dangerous anthropogenic interference with the climate system", in order to achieve the objective of the United Nations Framework Convention on Climate Change (UNFCCC), as stated in its Article 2.

The Kyoto Protocol to the UNFCCC marks a first step towards addressing the serious global threat of climate change. In meeting their commitments under the Convention as well as under the Protocol, countries are taking serious steps to address their own greenhouse gas emissions, and to adapt to the effects of climate change.

In an effort to maintain momentum in dealing with the threat of climate change and its effects, Parties at the tenth session of the Conference of the Parties to the UNFCCC agreed to discuss actions relating to mitigation and adaptation that can assist them to continue to develop effective and appropriate responses to climate change; and policies and measures adopted by their respective governments that support implementation of their existing commitments under the UNFCCC and the Kyoto Protocol.

To this end, and as requested by the Conference of the Parties, the secretariat organized a seminar of governmental experts in Bonn, Germany from 16 to 17 May 2005, in conjunction with the sessions of the subsidiary bodies of the Convention.

The secretariat was also requested to make the proceedings available to Parties for their consideration. This document presents those proceedings.

To view and listen to the full proceedings of the Seminar in English or in original language, please open the UNFCCC web site <unfccc.int>, select Meetings from the left hand navigation and click on COP/SB Archives and then select seminar. All electronic files are also available on CD-ROM.

Seminar of governmental experts

1. Without prejudices to any future negotiations, commitments, process, framework or mandate under the UNFCCC and the Kyoto Protocol, the Conference of the Parties requests the secretariat to convene a seminar of governmental experts in order to promote an informal exchange of information on:
 - (a) Actions relating to mitigation and adaptation to assist Parties to continue to develop effective and appropriate responses to climate change;
 - (b) Policies and measures adopted by their respective governments that support implementation of their existing commitments under the UNFCCC and the Kyoto Protocol.
2. All UNFCCC Parties shall have an opportunity to make a presentation at the seminar.
3. The seminar will be co-chaired by one expert from a Party included in Annex I to the Convention and one expert from a Party not included in Annex I to the Convention, who will be selected by each group respectively.
4. In convening the seminar, the secretariat will consult with the Presidency of the Conference of the Parties and will act in accordance with the following guidelines:
 - (a) The seminar will have one session, which will be held back-to-back with the meeting of the subsidiary bodies of the Convention in May 2005
 - (b) The secretariat will make all necessary efforts to finance full participation of developing countries' governmental experts in the seminar
 - (c) Participants may bring to the attention of the seminar publications offering supplementary data in support of their presentations. The secretariat is invited to place on its web site the texts of presentations and the supplementary data
 - (d) Proceedings of the seminar will be made available by the secretariat to Parties for their consideration, bearing in mind that this seminar does not open any negotiations leading to new commitments.

Source: Document [FCCC/CP/2004/10](#), annex II

Organizational matters

The seminar was held on Monday 16 and Tuesday 17, May 2005 at the Hotel Maritim in Bonn, Germany. It consisted of an opening session and two three-hour sessions from 10 am to 1 pm and from 3 pm to 6 pm each day, (four sessions in total).

The seminar was co-chaired by H.E. Mr. Masaki Konishi, Ambassador for Global Environmental Affairs, Japan, and Mr. Chow Kok Kee, Director General, Malaysian Metrological Service, Malaysia. They were selected by the groups of Parties included and not included in Annex I to the Convention, respectively.

The opening session was followed by presentations from Parties in segments of four presentations followed by question and answer periods facilitated by the co-chairs. Presentations were limited to seven minutes to enable the widest possible participation and discussion. A total of 27 government experts made presentations and representatives of three non-governmental organizations made statements.

Each of the four presentation sessions concluded with a general discussion among participants. These discussion sessions focused on the two main themes of the seminar and input provided by the presentations.

The seminar was open to attendance by governments and observer organizations. Experts were invited to make presentations and to provide the secretariat with abstracts of these presentations in advance. All presentations, abstracts and supplementary information are available on CD-ROM or at <unfccc.int>.

Participating countries and non-governmental organizations

(i) Experts from the following 26 countries made presentations at the seminar:

Albania	Germany	Peru
Argentina	India	Republic of Korea
Australia	Japan	Saudi Arabia
Brazil	Mexico	South Africa
Canada	Morocco	Switzerland
China	Netherlands	Tuvalu
Finland	New Zealand	United Kingdom of Great Britain and Northern Ireland
France	Norway	United States of America
Mali	Papua New Guinea	

In addition, a presentation was made by an expert from the European Commission.

(ii) Participants from the following non-governmental organization and constituencies spoke at the seminar:

- Mr. Nick Campbell of the International Chamber of Commerce, speaking on behalf of the business and industry non-governmental organizations (BINGOs)
- Mr. Sanjay Vashist of Climate Action Network International, speaking on behalf of the environment non-governmental organizations (ENGOS)
- Mr. Salimul Huq of the Bangladesh Centre for Advanced Studies, speaking on behalf of the research and independent non-governmental organizations (RINGOs)

Opening Segment

OF THE SEMINAR OF
GOVERNMENTAL EXPERTS

The seminar began with a short
opening segment comprising the following:
(Monday 16 May)

Opening statement
by Ms. Joke Waller-Hunter
UNFCCC Executive Secretary

Host-country welcoming address
by H.E. Mr. Jürgen Trittin
Federal Minister for the Environment
Nature Conservation and
Nuclear Safety of Germany

Statement
by H.E. Mr. Ginés Gonzáles García
President of COP 10

Opening Statement by Ms. Joke Waller-Hunter, Executive Secretary, United Nations Framework Convention on Climate

It is with great pleasure that I welcome you to this Seminar of Governmental Experts, which the secretariat has organized at the request of COP 10. It is the first of its kind in the UNFCCC history. Time will tell if it will be remembered as an historic event.

After the entry into force of the Kyoto Protocol earlier this year, it is indeed an opportune moment to look at actions taken, underway and planned to implement the Convention and the Protocol. Based on the abstracts - which I have read with great interest - I expect that we will be informed about a broad range of approaches that Parties have taken, reflecting the diverse realities in different countries. This seminar provides an opportunity to discuss the approaches that have been implemented and to better understand the reasons for differences, including the social and economic factors that are so often the crucial policy determinants.

The seminar takes place against the backdrop of continuously increasing concentrations of greenhouse gases in the atmosphere and of mounting evidence of their adverse impacts, underlining the urgency of action to make progress towards the ultimate objective of the Convention. This is a unique occasion for enhancing our common understanding of how action relating to mitigation and adaptation in different parts of the world, at the global, regional and local level, contributes to that common objective, and how these different pieces fit together and maybe where there are missing elements.

I am pleased to see that so many have been able to join the seminar. The secretariat has done its utmost to raise funds for participation of eligible countries. I would like to acknowledge the support from our host country, Germany, both for the facilities and to fund participation. Thanks to this and to other generous contributions to the Trust Fund for Participation, it has been possible to fund one participant from eligible Parties. Regrettably, resources were insufficient to allow funding for a second participant from the LDCs and the SIDS.

The seminar is placed in the hands of two very distinguished Co-chairs, which you have selected. They are H.E. Mr. Masaki Konishi of Japan and Mr. Chow Kok Kee of Malaysia. I now declare the seminar open and ask the Co-chairs to take over

**Host country welcoming address by H.E. Mr. Jürgen Trittin,
Federal Minister for the Environment,
Nature Conservation and Nuclear Safety of Germany**

Joke Waller-Hunter,
Ginés González García,
Mr Chow, Mr Konishi,
Ladies and Gentlemen,

If we want to talk about the future of climate protection, where else should we do this but in Bonn? Not just because of the lovely surroundings. People here concentrate on what has to be done and on how to accomplish it together. This was already true during Bonn's half century as capital city. The provisional arrangement was not relevant, what mattered were results.

As a UN city, Bonn continues to uphold this tradition. This is why conferences in Bonn have often achieved amazing results.

In summer 2001, we were able to accomplish in Bonn what we did not finish in The Hague. We concluded the 6th session of the Conference of the Parties with a result, even though many saw the withdrawal of the USA as marking the end of the Kyoto Protocol. Today we have an internationally binding agreement for limiting greenhouse gas emissions. Bonn 2001 laid the groundwork for this.

This spring at the Commission on Sustainable Development we agreed on measures to provide 1 billion people with access to clean water by 2015, thus helping to overcome poverty and underdevelopment. This would have been inconceivable without the preparatory work of the 2002 Bonn Conference on Freshwater.

Also in Bonn, at the renewables2004 Conference last year, joint exertions led to countries, international organisations and financial institutions promising measures geared to increasing the use of renewable energies. This will save 1.2 billion tonnes of CO₂ each year by 2015!

I hope the spirit of Bonn will prevail at this seminar. We need common solutions for the most serious environmental challenge of our time. Climate change is already a harsh reality. Climate change already claims human life and burdens us with heavy costs. Climate change is a massive obstacle to development. And the very countries least responsible for climate change are the ones which suffer most from it.

We must prevent the global temperature from rising by more than 2°C compared to pre-industrial levels. A global warming of 2 degrees or more increases the likelihood of disastrous and irreversible damage: Can you imagine a world without the Amazon rainforest or the Greenland ice sheet? The glaciers in Europe's Alps will dwindle to nothing if global temperature rises by 2 degrees. But can any of you imagine what will happen if the Gulf Stream shuts down?

This is where adaptation reaches its limits. It becomes simply unaffordable. We must avert this. We must take preventive action.

If we want to stay below 2°C, we must halve global greenhouse gas emissions by the middle of this century. Therefore everyone must contribute to solving this global problem, in accordance with their responsibilities and capabilities. Kyoto was the first important step towards this. Above all, we must ensure that the climate process continues beyond 2012. This was emphasised once more by EU heads of state and government at their spring summit. They noted that to achieve this, industrialised countries must save between 15% and 30% of their greenhouse gases by 2020.

The 10th session of the Conference of the Parties chaired by Ginés González García reminded us that every debate on further development must begin with a review of implementation of climate commitments. This highlights the major advantage we enjoy compared to the pre-Kyoto era: Our growing wealth of experience helps us to practice efficient climate protection. In Europe today, a tonne of CO₂ has a price – through emissions trading introduced by the EU.

Today we know: Climate protection is not only a challenge. Climate protection is an opportunity for modern technology – an opportunity for increasing competitiveness. The cap and trade system has proved successful. Through flexible mechanisms it is already beginning to steer investments in the right direction - especially with clean development activities.

Today, alongside traditional foreign direct investment, alongside development assistance, billions are invested in modern climate-friendly technologies. All countries, but especially developing countries, will benefit from this!

Why should they have to tread the same long and mistaken path of obsolete, carbon intensive technologies which industrialised countries took? Is it not wiser to invest directly in climate-friendly development? It is certainly more cost-efficient. It is clear: economic development and climate protection can go hand in hand! Through renewable energies, for example, poor, rural regions can also gain access to modern, low-cost energy without burdening the climate. In times of high raw materials prices, resource efficiency provides a competitive edge.

We do not have much time to create adequate framework conditions. Each year without mitigation measures is a year which drives the human and financial cost of adaptation steeply upwards. COP 10 in Buenos Aires transferred today's debate to you, the government experts, so that you can conduct an open discussion based on your expert knowledge. Use this freedom to jointly consider the political framework conditions needed to achieve climate protection swiftly, fairly and comprehensively. Climate protection must not end in 2012. Companies and investors want to plan beyond 2012. Without a continuation of the climate process, the clean development measures now initiated will have no future after 2012.

We must send a signal to companies and civil society very soon, that Kyoto was the first of many steps. The next Climate Conference in December in Montreal must decide on starting concrete negotiations. You can provide a good and sound basis for this.

I wish all of us at this seminar here in Bonn fruitful and result-oriented discussions.

Statement by H.E. Mr. Ginés Gonzáles García, President of COP 10

(For English version consult CD-ROM or website)

Es la tercera vez consecutiva que tengo la responsabilidad de abrir un encuentro clave para el futuro del régimen climático, en mi condición de presidente de la COP 10.

Buenos Aires, Kyoto y Bonn constituyen escalas de lo que debe ser una acelerada marcha hacia la resolución del problema del cambio climático global.

Sin embargo, no quiero dirigirme sólo a las autoridades políticas, negociadores y expertos que participan recurrentemente de estas sesiones.

En la sociedad global de nuestros tiempos son los ciudadanos de cada una de las sociedades nacionales los que tienen la responsabilidad última de nuestro destino común, y a ellos quiero también dirigirme.

Deben saber que se ha hecho mucho para encontrar una solución, pero hoy, por diversas razones, no estamos haciendo todo lo posible.

Las dudas, la mezquindad, la desconfianza o la miopía, dificultan la tarea.

La consolidación del régimen climático internacional es un proceso continuo que nos presenta nuevos desafíos y potenciales abismos.

Los acuerdos alcanzados en torno del Protocolo de Kyoto, en el pasado y los que hicieron posible su vigencia actual, representan logros extraordinarios.

Pero estamos convencidos que tenemos que seguir progresando con la mayor urgencia y todos debemos intensificar nuestros esfuerzos en materia de mitigación, en la medida de nuestras posibilidades.

Hoy enfrentamos el desafío de concebir y construir en común las futuras arquitecturas post Kyoto, mientras subsiste una línea de partición del régimen internacional, pues los Estados Unidos y Australia están fuera del Protocolo y pueden elegir seguir estándolo, un hecho que las negociaciones multilaterales no han tenido la capacidad de tomar plenamente en consideración.

De modo que nuestra primera obligación es desarrollar un régimen que sea aceptable para todas las Partes y que tenga una perspectiva de largo plazo.

Para hacerlo es preciso que nos tracemos un camino de evolución gradual del régimen climático, práctico a la vez que viable, que debe estar constituido por acciones concretas y acuerdos efectivos.

Para despejar las dudas y atenuar la desconfianza recíproca, necesitamos en primer término completar y empezar a ejecutar el Programa de Trabajo de Buenos Aires sobre Adaptación y Medidas de Respuesta, para hacer frente a los efectos adversos del cambio climático global que ya son inevitables.

Para ello es preciso reconocer que los impactos del cambio climático son de naturaleza múltiple y compleja, por lo cual es necesario que ese programa comprenda un régimen de asistencia para la adaptación y ayuda para desastres provocados por el cambio climático, que tome en cuenta sus diversas dimensiones.

Si del Programa de Buenos Aires se deriva un régimen para la adaptación comprehensivo y eficaz, su materialización permitiría atender la preocupación central de un extenso número de países en desarrollo, que consiste en asegurar una participación significativa de los países industrializados – financiera y técnica- contribuyendo a la gestión de los problemas derivados de los impactos del cambio climático global.

En este sentido, la discusión de una agenda de mitigación para el escenario post Kyoto debe recoger la preocupación de los países en desarrollo en materia de adaptación.

Pero, el fortalecimiento de la confianza que aseguraría un compromiso efectivo de los países en desarrollo en el largo plazo, no se agota con una fluida negociación sobre los mecanismos financieros para la adaptación, aunque esto sea imprescindible.

Los países más prósperos deben asimismo concretar sus promesas y proveer recursos para los diversos fondos creados para atender distintas cuestiones vinculadas con el cambio climático.

Otra preocupación no menor en esta materia incluye precisamente el apoyo efectivo para el Mecanismo para un Desarrollo Limpio y no sólo en lo que se refiere sus necesidades operacionales corrientes.

Las negociaciones que habremos de poner en marcha deben evitar el retroceso en el mercado de carbono, asegurando su existencia de largo plazo, a la vez que deben contribuir a remover las barreras que limitan la plena articulación del Mecanismo de Desarrollo Limpio con los sistemas de comercio de emisiones regionales o nacionales.

Es preciso asegurar que el desenvolvimiento del Mecanismo para un Desarrollo Limpio contemple de manera efectiva la dimensión tecnológica de los proyectos, evitando la persistencia de incentivos perversos y la concentración de iniciativas en unos pocos países.

La demostración de la voluntad política imprescindible para la concreción de decisiones sobre estas cuestiones es clave para eliminar la desconfianza y facilitar la participación de los países en desarrollo en las futuras arquitecturas post Kyoto.

Esas señales son también imprescindibles para permitir que la consideración de las opciones de diseño del régimen futuro, incluyendo los diferentes niveles y tipos de compromisos, reciba aportes sustantivos de los países en desarrollo.

El compromiso de los países en desarrollo estará inevitablemente asociado a la posibilidad de asegurar el desarrollo sostenible y a la incorporación de tecnologías destinadas a disminuir la intensidad energética de las actividades económicas sin limitar el crecimiento y la inclusión social.

La transferencia de esas tecnologías dirigida a la mitigación es una cuestión clave y debe constituir un núcleo esencial de los mecanismos orientados a permitir una mayor participación de las Partes no incluidas en el Anexo I, en particular de las de mayor desarrollo relativo. Al mismo tiempo, los países que la hagan posible deberían obtener una consideración mayor expresada en sus compromisos futuros.

Aún cuando la arquitectura que se proponga -para intensificar al máximo las acciones de mitigación- sea extremadamente flexible, es muy difícil que haya una fórmula que deje plenamente satisfechas a todas las Partes, pero lo que aquí está en juego es el destino común, de modo que todos habremos de ceder algo para asegurar el futuro.

Es esencial que la Unión Europea, Japón, Canadá y otros países desarrollados continúen liderando los esfuerzos en el marco del Protocolo de Kyoto, pero debemos permanecer abiertos a todas las alternativas en la búsqueda de soluciones.

Aunque tengo plena consciencia de la complejidad de la tarea por venir, estoy convencido que es posible encontrar soluciones de consenso y acelerar nuestro paso.

La humanidad ha enfrentado exitosamente en otros momentos situaciones límites; debemos recordar la generosidad, la inteligencia y la perseverancia puestas en juego para lograrlo. No se nos pide menos hoy menos que entonces.

Session One

PRESENTATIONS OF EXPERTS
IN CHRONOLOGICAL ORDER

(Monday 16 May am)

China

Brazil

Switzerland

United Kingdom of

Great Britain and Northern Ireland²

Question and answer session

² On behalf of the European Community and its member States

China

Presented by Mr. Feng GAO,
Deputy Director-General
Department of Treaty and Law,
Ministry of Foreign Affairs

Abstract

China is vulnerable to climate change. The Chinese Government attaches great importance to climate change and has taken many measures to address climate change. These measures include adjustment of industry and energy structure, promotion of energy efficiency, energy saving, development of renewables, increasing forest carbon sinks, etc. However, China is a developing country with low per capita income. China's development, urbanization, growth of population and high proportion of coal in the energy mix will unavoidably make its efforts to reduce/limit GHG emissions more difficult without efficient international technological cooperation. China urges the international community to engage in practical technological cooperation in the future so as to combat climate change effectively and promote global sustainable development.

Presentation

China's view on future climate change negotiation and measures to address climate change

Dear Co-Chairs, ladies and gentlemen, good morning!

First of all, on behalf of the Chinese delegation, let me express our appreciation to the secretariat for its effort in organizing this meeting. The Kyoto Protocol entered into force on 16 February 2005. This is very encouraging. This also reminds us of the issue of how the Annex I Parties will meet their emission reduction targets under the Protocol.

Until now, although the overall emission from Annex I Parties has decreased, it is mainly due to the economic decline in EIT countries. The overall trend of increase in GHG emissions in developed countries is not effectively curbed. This makes us concerned about whether the Protocol targets can be met. We hope that countries with high emissions can adopt effective measures so as to lower the high per capita emissions and fulfill their commitments under the Protocol. Compliance with the Protocol by developed countries will have great influence on the future of climate change actions.

Now I will briefly introduce the impacts of climate change on China and policies and measures taken by the Chinese government in response.

Climate change is a common challenge faced by the whole world. It is particularly true for China given its fragile eco-system, which is highly vulnerable to adverse impacts of climate change. The economic development level of China is still low. In 2002, the per capita GDP in China was 1090 USD, only about 19% of the world average. The rural population accounts for about 60% in China. The population growth and increasing urbanization will unavoidably increase the overall demand for energy.

In China, 67% of the total primary energy consumption is coal. Due to constraints in the availability of resources and market scale, China will still have to use large amount of coal for energy supply for a

long time. This will keep the energy intensity of China's economy relatively high, making it harder for us to slow down the increase in GHG emissions.

China is in the middle stage of industrialization. The process of urbanization will continue for many years to come. Constrained by its economic development level and difficulties in upgrading technology as well as the influence of the industry distribution caused by globalization, the energy efficiency in China is still quite low. The task to improve it is tremendous.

The development history and trend of many countries around the world show that lifting the current level of technology and consumption in China to that of the developed countries leads to a higher level of energy consumption per capita. There is no precedent in the world yet that a country with high GDP per capita can maintain low energy consumption per capita. China is facing the challenge of creating a new sustainable way of production and consumption.

As a developing country vulnerable to the impacts of climate change, the Chinese government has attached high importance to the climate change issue and adopted proactive measures.

China has set up the multi-ministerial national coordination committee for climate change. China has been making efforts to fulfill its commitments under the UNFCCC. China has submitted its initial national communication. The development of a national response strategy to climate change is underway which will guide the policies and measures for climate change for the next few decades. China has made the energy development strategy which gives priority to energy conservation, energy re-structuring to diversify energy supply, environmental protection and technology progress and innovation. The mid to long-term energy conservation plan has been published. Our objective is to reduce the energy intensity of China from 2.68 tce/10,000 yuan in 2003 to 2.25 tce/10,000 yuan by 2010 and to achieve energy saving rate of 2.2% per year. During 2010-20, we will try to further increase the energy saving rate to 3% /year and bring energy intensity down to 1.54 tce/10,000 yuan by 2020.

China has issued the Law of Renewable Energy, promoted renewable energy, supported utilization of new and renewable energy such as biomass, solar, hydro, wind and geothermal in particularly remote and rural areas. By 2020, renewable energy will contribute to 10% of the total energy consumption.

China has adjusted the policy for developing nuclear power and planned to speed up its development so as to improve the energy structure and reduce the growing demand for coal for electricity generation.

China has greatly promoted the policy of reclaiming farmland back to woodland, large-scale afforestation and reforestation which enhanced the removal of CO₂ by sinks.

Co-Chairs,

Facing the global challenge of climate change, international cooperation is indispensable. Priority areas of international cooperation for China are energy efficiency, renewable energy and nuclear power. In particular renewable energy and energy efficiency will be the long-term priorities. We are positive toward cooperation on R&D, introduction and deployment of energy efficiency technology, on related policy drive and capacity building. In renewable energy, we welcome developed countries' effort to promote technology transfer to China and localize the equipment production. Nuclear power is a clean energy. China is perhaps one of the most promising markets for nuclear power plants around the world in the next 20 years. We hope, through the introduction of Gw-scaled pressurized water reactor nuclear power technology, China can realize self-sufficiency in nuclear power.

Co-Chairs,

The above mentioned are the major action plans of China in energy sector in the next 20-30 years. These will safeguard China's energy supply security, be of strategic importance for sustainable development as well as addressing climate change. It is estimated that China needs to invest in energy sector at least 1200 billion USD in the next 20-30 years. Among which China needs to import key technology and equipment such as high efficient clean coal power generation, new generation of nuclear power technology, new automobile and electrical motor technology.

China is undergoing one of the biggest scale of energy construction in the world. In order to prevent it from being locked in the old technology, we urgently need a new mechanism for technology transfer. We need to carry out the rapid diffusion and deployment of existing technology, and accelerate the R&D and commercialization of future technology. The current systems dominating technology transfer and international investment present a lot of barriers to technology transfer and rapid dissemination of new energy technology. Whether we can break through these bottlenecks should constitute one of the criteria of judging the success in the future response actions to climate change.

Co-Chairs,

With the economic growth in China, the total GHG emissions have seen some increase. However, this is mainly the consequence of a huge population. In fact, the emissions from China is just emissions for survival, for meeting the basic needs of people. The per capita emission is still lower than the world average, far lower than that of the developed countries. China as a developing country will continue to adopt measures to address climate change according to its sustainable development strategies. We are willing to work together with the international community to actively pursue an effective solution, which suits each country's national circumstances and in the meantime can ensure energy security, economic growth and improving people's living standard under the framework of sustainable development. We will make our best effort, based on our national circumstances and capacity, to contribute to alleviating climate change.

Brazil

Presented by Mr. André Aranha CORRÊA DO LAGO
Head, Division of Environmental Policy and
Sustainable Development
Ministry of Foreign Relations

Abstract

Brazil is strongly committed to the Kyoto Protocol. After so many negotiations, after so many years, we have an instrument to respond to climate change in our hands. Now we must concentrate on results. We cannot allow the discussions on the future of the climate change regime be used to undermine the credibility of the Kyoto Protocol, especially regarding compliance and the Clean Development Mechanism (CDM).

Globalisation must become an instrument for disseminating patterns of production and consumption that are compatible with the international efforts towards mitigation of climate change. In this context, we are convinced that the potential of the CDM is immense: it can turn out to be one of the most effective means to avoid unsustainable patterns of production and consumption.

Brazil believes the CDM contains all the important elements that drive climate change negotiations because it:

- contributes to the fulfilment of the ultimate objective of the Convention;
- is a flexible mechanism that supports the fulfilment of Annex I countries commitments;
- engages developing countries in meaningful participation in mitigation efforts, which would not be economically feasible otherwise;
- can involve governments, civil society and the business community;
- allows people from developing countries to meet their legitimate aspirations of raising living standards in ways compatible with sustainable development.

Because of the CDM, projects that could not have seen the light of day have become a reality. Projects that bring a positive impact from the social, environmental and economic points of view, and may also significantly contribute to the transfer of technology and, even more important, to support the development of local technologies.

Until November 2004 we were still discussing the possibility of the entry into force of the Kyoto Protocol. Since February 2005, though, we have entered a new phase. Nevertheless, a new, pessimistic view of the Kyoto Protocol has gained momentum. We have changed the uncertainty regarding its entry into force for the uncertainties of the post-2012 regime. We do not use the expression post-Kyoto; we use post-2012. The best way to look at post-2012 is to ensure the success of the Kyoto Protocol and the CDM.

Presentation

This seminar has started with a positive note by having you as co-chairs. Brazil has strongly supported the realisation of this seminar because we are convinced that the best place for the dialogue on the effective and appropriate responses to climate change is in the context of the UNFCCC. Until November last year we were still discussing the possibility of the entry into force of the Kyoto Protocol. Since February of 2005, though, we entered a new phase.

Nevertheless, a new pessimistic view of the Kyoto Protocol has gained momentum. We have changed the uncertainty regarding the entry into force of the Kyoto Protocol for the uncertainties of the post-2012 regime.

Chairmen,

The discussions on the future of the climate change regime were driven by the fear that the Kyoto Protocol would not enter into force. Now, after so many negotiations, after so many years, we have an instrument in our hands. We have to concentrate on results.

Many actors are concerned about the climate change regime after the first commitment period, in 2012. Many discussions on the post 2012 are legitimate, and we welcome them.

But some of the discussions on the post 2012 are being used to undermine the credibility of the Kyoto Protocol, especially regarding compliance and CDM. We are facing a distortion of the negotiations process that has contaminated many important documents such as the Report of the Secretary General of the UN, Kofi Annan.

We are concerned, Chairmen, when we read in the report "In Larger Freedom: towards development, security and human rights for all" that the Kyoto Protocol "only extends until 2012". In the executive summary you can even read "the expiry of the Kyoto Protocol in 2012".

Brazil's position is clear: we have to work for the success of Kyoto. We have to work for the success of CDM. We have to work for the success of the Convention. We have to work, chairmen, for the strengthening and the integrity of the climate change negotiations in the multilateral sphere.

I do not reflect by my words only the position of the government. It is difficult to express for you the deep interest that CDM has generated in Brazil. Local communities, governments of cities and states, NGOs and the business community are debating with enthusiasm the prospects of CDM. But they are not discussing the future. They are acting in the present. It is clear for us that CDM is a cooperation instrument that is both brilliant and innovative.

Thanks to CDM, projects that could not have seen the day have become reality. Projects that bring a positive impact from the social, environmental and economic points of view.

The potential of CDM is immense: it can also have an impact on technology transfer and, even more important, in supporting the development of local technologies.

But we have to avoid the political manipulation of knowledge. In this context, I would like, Chairmen, to reiterate the importance Brazil attaches to the change of patterns of production and consumption with developed countries taking the lead. This is a guiding principle since Rio. But it has to be addressed not only in the context of our negotiations. It must also be applied to a wider context and particularly to globalisation. Sustainable development and globalisation must go hand in hand. Some industrialised countries believe that developing countries should have lower emissions. At the same time, they lead the globalisation process, which offers opportunities but is the most powerful instrument of dissemination of unsustainable patterns of production and consumption. Actions and words of developed countries should be coherent. And we expect them to concentrate on their commitments. We expect them to work hard for the change of their patterns of production and consumption, so that globalisation becomes an instrument of dissemination of patterns that are compatible with the international efforts towards mitigation of climate change.

During the preparatory process for the 1972 Stockholm Conference on the Human Environment, a number of delegates of developing countries struggled to obtain the recognition of the correlation between environment and development. This was the basis for all subsequent negotiations.

A Brazilian delegate, Ambassador Miguel Osório de Almeida said in 1971 “to be many and to be poor is offensive to the sights and feelings of developed countries. Most of their suggestions do not concern cooperation for increasing income, but cooperation to reduce numbers”. This was 35 years ago.

Chairmen,

I want to come back to the importance of CDM for Brazil. Brazil believes CDM contains all the important elements that drive climate change negotiations:

- it contributes to the fulfilment of the ultimate objective of the Convention;
- it is a flexible mechanism that supports the fulfilment of Annex I countries commitments;
- it engages developing countries in a meaningful participation in the mitigation efforts that would not be economically feasible otherwise;
- it can involve governments, civil society and the business community;
- it allows the population of developing countries to meet their legitimate aspirations of raising their living standards in ways that are compatible with sustainable development.

Climate change is one of the greatest challenges facing mankind. There is no single answer. There is no simple answer. But we are convinced that the Clean Development Mechanism can turn out to be one of the most effective means to avoid the patterns of development that have proved to be unsustainable.

We do not use the expression post-Kyoto. We use post 2012. The best way to look at post 2012 is to ensure the success of the Kyoto Protocol and the Clean Development Mechanism.

Thank you.

Switzerland

Presented by H.E. Mr. Beat NOBS, Ambassador
Swiss Agency for the Environment,
Forests and Landscape

Abstract

The world is vulnerable to the effects of climate change: so is Switzerland. During the 20th century, the observed increase in temperature in Switzerland has been more than one degree, well above the global increase of 0.6 degrees. Recent natural disasters resulting from extreme climatic events have caused high damages to property, infrastructure and – during the 2003 summer heat wave – to human life.

Therefore, we consider that national and international joint efforts need to be increased in order to protect human society from negative impacts of climate change.

Since the beginning of the international process to combat climate change, Switzerland has contributed to the establishment of the international institutions – the Climate Convention and its Kyoto Protocol - that allow us to cooperate in this field. We are convinced that a global problem such as climate change needs a robust common global response.

At the national level, Switzerland has undertaken a number of measures to reduce greenhouse gas emissions. These measures address all emitting sectors such as industry, transport, building, agriculture and waste. They address all gases. The main framework is the CO2 law, the objective of which is to reduce CO2 emissions by 10 % compared to 1990 levels.

At the international level and for the period after 2012, we advocate an international climate regime that promotes real and substantial GHG emissions reductions on a global scale. This regime should contribute to sustainable development and ensure the participation of all major emitters from both developed and developing countries, be cost-effective by using economic instruments, strengthen international cooperation and foster technology development and diffusion.

We are looking forward to engaging as soon as possible in a dialogue with all Parties to the Convention with the view to shape this regime.

Presentation (read from left to right)

<h2 style="text-align: center;">Switzerland</h2>  <p style="text-align: right; font-size: small;">SOGE, 6516-1705, Bonn, Germany</p>	<ul style="list-style-type: none"> Switzerland, as a Party to the UNFCCC and a member of the international community, has the willingness to cooperate with other Parties to tackle the negative impacts of climate change on a global scale Switzerland is vulnerable to climate change: <ul style="list-style-type: none"> Increase of temperature: <ul style="list-style-type: none"> In the world (20th century): +0.6°C In Switzerland (20th century): +1.3°C Increase of extreme natural events  <p style="text-align: right; font-size: small;">SOGE, 6516-1705, Bonn, Germany</p>
<h3 style="text-align: center;">Extreme weather events</h3> <ul style="list-style-type: none"> Summer heat wave in 2003 caused nearly 1'000 human casualties Extreme weather events over the last 20 years, such as floods, hurricanes, mud flows, caused damage costs of more than 3.8 billion Euros  <p style="text-align: right; font-size: small;">SOGE, 6516-1705, Bonn, Germany</p>	<h3 style="text-align: center;">Context of the Swiss climate policy</h3> <p>The Swiss climate policy is guided by the principles of:</p> <ul style="list-style-type: none"> sustainable development <p>and is based on :</p> <ul style="list-style-type: none"> The Swiss Federal Constitution (1999) The priorities of Swiss foreign policy (2000) The strategy for sustainable development adopted by the Swiss Government (2002)  <p style="text-align: right; font-size: small;">SOGE, 6516-1705, Bonn, Germany</p>
<h3 style="text-align: center;">Demonstrable progress in implementing the Kyoto Protocol</h3> <p>Main legal framework to cut energy related CO₂ emissions: CO₂ Law (2000)</p> <p>Additional specific measures (CO₂ and other greenhouse gases) implemented in the sectors:</p> <p style="text-align: center;">Energy Transport Agriculture Forestry Environmentally hazardous substances (HFC, PFC and SF₆)</p>  <p style="text-align: right; font-size: small;">SOGE, 6516-1705, Bonn, Germany</p>	<h3 style="text-align: center;">CO₂ Law (2000)</h3> <p>Objectives:</p> <ul style="list-style-type: none"> Legally binding reduction target for energy related CO₂ emissions: -10 % by 2010 compared to 1990 levels Sector targets for heat and process fuels (-15 %) and motor fuels (-8 %) by 2010 compared to 1990 levels  <p style="text-align: right; font-size: small;">SOGE, 6516-1705, Bonn, Germany</p>
<h3 style="text-align: center;">CO₂ Law (2000)</h3> <p>Instruments:</p> <ul style="list-style-type: none"> Voluntary agreements between the private sector and the government CO₂ levy on stationary fuels as of 2006, revenues fully redistributed to population and business community Climate cent on motor fuels privately levied by importers to fund project based mechanisms and mitigation projects in Switzerland and abroad (transport and buildings sector) Flexible mechanisms  <p style="text-align: right; font-size: small;">SOGE, 6516-1705, Bonn, Germany</p>	<h3 style="text-align: center;">Other important CO₂ relevant measures</h3> <p>Transport sector:</p> <ul style="list-style-type: none"> Heavy vehicle fee (2001) to promote modal shift Promotion of biofuels and natural gas as motor fuel (mineral oil tax reform as of 2007) <p>Energy sector:</p> <ul style="list-style-type: none"> Federal Law on Energy (1998) The national action plan « SwissEnergy »: 28.5 mio Euros p/y to promote energy efficiency and renewable energies Voluntary agreements to reduce energy consumption  <p style="text-align: right; font-size: small;">SOGE, 6516-1705, Bonn, Germany</p>
<h3 style="text-align: center;">Non CO₂ Gases</h3> <p>Agricultural sector:</p> <ul style="list-style-type: none"> Shift to integrated or biological farming Limited application of plant treatment chemicals Decrease of CH₄ and N₂O emissions by 10% from 1990 to 2000 <p>Waste sector:</p> <ul style="list-style-type: none"> Ban on landfills (2001) Decrease of CH₄ by 40 % between 1990 and 2000 <p>Environmentally hazardous substances (HFC, PFC, SF₆):</p> <ul style="list-style-type: none"> Restrictions of uses and promotion of alternatives based on B.A.T., better containment (2003)  <p style="text-align: right; font-size: small;">SOGE, 6516-1705, Bonn, Germany</p>	<h3 style="text-align: center;">Our vision of the future Swiss climate regime</h3> <ul style="list-style-type: none"> Work in the framework of the Swiss Energy Perspectives (2035-2050) Long term vision by 2050: The 2000 Watts society <p>Energy and climate policy guided by sustainable development strategy targets :</p> <p style="text-align: center;">1 ton of CO₂ per capita 500 watts from fossil fuels 1500 watts from renewable sources</p>  <p style="text-align: right; font-size: small;">SOGE, 6516-1705, Bonn, Germany</p>

<p>UN's vision of the future international climate regime 1</p> <p>"We must develop a more inclusive international framework beyond 2012, with broader participation by all major emitters and both developed and developing countries, to ensure a concerted globally defined action, including through technological innovation, to mitigate climate change, taking into account the principle of common but differentiated responsibilities"</p> <p>Kofi Annan, UN Secretary-General "In larger freedom: towards development, security and human rights for all", 21 March 2005, p. 20.</p>  <p style="text-align: right;"><small>SOGE, 6516-1705, Bonn, Germany</small></p>	<p>Our vision of the future international climate regime 2</p> <p>Switzerland is in the process of considering the future international climate regime but has not yet determined its official position.</p> <p>However, the possibilities of our vision of the future international climate regime might include the following considerations</p>  <p style="text-align: right;"><small>SOGE, 6516-1705, Bonn, Germany</small></p>
<p>Our vision of the future international climate regime 3</p> <p>Long-term goals should be :</p> <ul style="list-style-type: none"> • To decarbonise our economies and our lifestyles • To generate social and economic co-benefits • To use environmentally friendly technologies • To achieve a worldwide GHG emission reduction by 2050 of 50 to 70 % compared to current levels  <p style="text-align: right;"><small>SOGE, 6516-1705, Bonn, Germany</small></p>	<p>Our vision of the future international climate regime 4</p> <p>The climate policy should take place within a framework that :</p> <ul style="list-style-type: none"> • Ensures sustainable development • Makes use of the market forces while not penalising social and economic development • Provides incentives for domestic action and international cooperation • Promotes new and improved technologies for reducing Giga tons of GHG emissions  <p style="text-align: right;"><small>SOGE, 6516-1705, Bonn, Germany</small></p>
<p>Our vision of the future international climate regime 5</p> <p>For the period post-2012 goals, Switzerland would support an international climate regime that is framed by the following features :</p> <ul style="list-style-type: none"> • It is environmentally integer • It contributes to sustainable development of all countries • It is fair and equitable • It strengthens international cooperation, including technology transfer • It is conducive to domestic action  <p style="text-align: right;"><small>SOGE, 6516-1705, Bonn, Germany</small></p>	<p>Our vision of the future international climate regime 6</p> <p>More specifically, for the period post-2012, a regime might include:</p> <ul style="list-style-type: none"> • An agreement in which all Parties engage themselves to reach a common goal: to reduce globally GHG emissions taking into account national circumstances • An agreement that includes all major emitters • The continuation of the "Kyoto-like approach" with the use of targets and timetables and economic instruments (joint implementation, CDM, emissions trading) • Contraction and convergence • A multistage approach • Energy intensity objectives, promotion of technologies, sectoral measures  <p style="text-align: right;"><small>SOGE, 6516-1705, Bonn, Germany</small></p>

Proposed Next steps

- Open discussions among all Parties in the framework of the Convention on the future of the international climate regime



SOGE, 6516-1705, Bonn, Germany

United Kingdom of Great Britain and Northern Ireland

(on behalf of the European Community and its member States)

Presented by Mr. David WARRILOW

Head of Science Unit, Global Atmosphere Division

Department for Environment

Food and Rural Affairs

Abstract

The Climate Change Challenge

The EU holds the view that the impacts of climate change associated with a temperature increase of 2°C or greater, compared to pre-industrial levels, would be severe enough to be classified as dangerous. Recent scientific research has identified increasing risks above this level and indeed suggests that the risks of climate change may be greater than previously reported. Failure to limit climate change would increase the risk of severe negative impacts on all countries, and particularly on those developing countries most vulnerable to climate change impacts.

Technological options for reducing emissions at reasonable costs over the long term already exist and will be most effective if applied as part of a portfolio of options. For some options more work needs to be done to turn them into competitive market options. Delays in action would necessitate greater emission reductions at a later date to meet the same temperature target and would increase the costs and the risks of irreversible damage.

Presentation (read from left to right)

The challenge of climate change

Presentation on behalf of the EU

David Warrilow (Defra, UK)
SOGE
Bonn, 16-17 May 2005

How much is too much?

1-2 C Above pre-industrial	Major impacts on ecosystems and species; wide ranging impacts on society
1.5 C	Greenland ice-cap starts to melt (7m)
2-3 C	Major loss of coral reef ecosystem; considerable species loss; large impacts on agriculture; water resources; health; economies.
	General increase in droughts and extreme rainfalls as temperature increases. Up to 88cm sea level rise in next 100 years.
2-3 C ?	Terrestrial carbon sink becomes a source.
1-4 C ?	North Atlantic circulation collapses
2-4.5 C ?	West Antarctic ice sheet collapses (6m)

What does it mean for emissions?

Cumulative CO2 Emissions (GtC)

- 2030 to 2100 – IPCC and WRE scenarios
- 2000 to 2030 - IEA
- Up to 2000 - historic

Energy needs and emissions

- In the next 25 years 70% increase in energy demand predicted by IEA
- To be on track to meet a 2 C target global emissions need to be reduced by at least 15% by 2050
- Delay now requires greater reductions later
- **Challenge is to meet the growing demand for energy whilst reducing emissions to prevent significant damage from climate change**

Uncertainty, inertia and risk

Supporting material on the presentation from the United Kingdom of Great Britain and Northern Ireland can be found at: <unfccc.int>

Q&A

Question and answer session (Based on the presentations by China, Brazil, Switzerland, and the United Kingdom of Great Britain and Northern Ireland)

A complete coverage of the question and answer session that took place after the presentations by experts from China, Brazil, Switzerland and the United Kingdom of Great Britain and Northern Ireland on behalf of the European Community and its member States can be found at <unfccc.int>

The issues raised during the discussion included energy use efficiency, the need for energy as part of development, links between climate policies and sustainable development, problems and prospects for the use of the clean development mechanism, international cooperation in technology development, future emission reductions by developed countries, opportunities for adaptation to climate change, the future use of nuclear energy, and development of particular industries to address climate concerns.

One country highlighted its success in improving energy efficiency and conservation programmes and expressed its willingness to investigate opportunities for technology cooperation with other countries, such as China. Another wished to learn more about opportunities for international cooperation in technology research and development and how the international climate policies could support sustainable development policies.

Several countries addressed the issue of access to the carbon market by developing countries as well as the efficiency of mechanisms under the Kyoto Protocol, such as the clean development mechanism (CDM) and Joint Implementation. Others commented on the role of nuclear energy in the post-Kyoto period.

One participant requested more details on Brazil's renewables programme and its impact on innovation and employment. Another emphasized the need to examine the risk of feedback, i.e. generating more greenhouse gas emissions in responding to some of the adverse effects of climate change such as building more dams to protect against sea-level rise.

It was noted that gross domestic product (GDP) and greenhouse gas emissions are still growing in developed countries as a group and that to limit temperature increase by 2 degrees, global emissions will need to be reduced considerably. In this regard, one participant asked how these countries intend to drastically decrease their emissions, and suggested that if they are unable to do so it would be difficult for the international community to find ways to decrease emissions and increase development. In response to the above-mentioned questions and comments, one expert on the panel noted that there was indeed a strong need for technology transfer to developing countries, and that obstacles to technology development and transfer need to be analysed before a successful climate change agreement can be built for the post-2012 period. He also noted that the use of energy sources by a country is driven by its need for clean energy irrespective of whether or not it is part of the clean development mechanism or not.

On the CDM in particular, another expert reiterated that, although it is not able to fulfil the ultimate objective of the UNFCCC entirely, it is the instrument, through which developing countries can benefit from the flexibility mechanisms under the Kyoto Protocol, and for this reason countries need to explore its enormous potential and the opportunities that it may present.

Another expert on the panel explained that his country, in delivering its reductions under the Kyoto Protocol, expects some contribution from the flexibility mechanisms.

In response to a concern by one participant that the panel did not address opportunities for adaptation, one expert on the panel explained that adaptation is "residual" and that if mitigation actions are effective, the need for adaptation should be small; in this regard, adaptation should be complementary to mitigation.

Session Two

**PRESENTATIONS OF EXPERTS
IN CHRONOLOGICAL ORDER**

(Monday 16 May am)

South Africa

Norway

European Commission¹

United States of America

Question and answer session

¹ On behalf of the European Community and its member States

South Africa

South Africa - Presented by Mr. Alf WILLS
Deputy Director-General
Environmental Quality and Protection
Department of Environmental Affairs and Tourism

Abstract

The themes to be addressed in the presentation are:

1. **South Africa's continued commitment to the UNFCCC and the Kyoto Protocol.**
Progress with regards to CDM issues will be addressed here.
2. **Land use, land use change and forestry and South Africa's vulnerability to the impacts of climate change.** The health sector, maize production, plant and animal biodiversity, water resources and rangelands have been identified as areas of highest vulnerability to the adverse impacts of climate change in SA. In addition, the character of South Africa's water, soil, geology and forestry resources mean that there is limited mitigation potential.
3. **Energy**
Energy Efficiency
This theme will focus on South Africa's energy efficiency strategy which contains a national target to be achieved by 2014, as well as practical examples of existing initiatives and projects on efficient housing, buildings and lighting.
Renewable energy
South Africa has set a voluntary target for renewable energy, and implemented several projects and initiatives in this area.
4. **Cleaner Production**
South Africa is in the process of finalising a Cleaner Production strategy that has potential to support mitigation efforts. In addition, the Air Quality Act (2004) provides a regulatory framework to set emission standards for local air pollutants and greenhouse gases that can regulate reporting.
5. **Research and development**
A number of research and development initiatives are in place to support implementation of the Convention. Among others, the Technology Needs Assessment is in progress, an Energy Research Institute is to be established and research on clean coal is being carried out.

Presentation (read from left to right)

<p style="text-align: center;">Input by South Africa on responses to climate change</p> <p style="text-align: center;">Seminar of Governmental Experts 16 & 17 May 2005, Bonn</p>  <p style="text-align: right;">1</p>	<p style="text-align: center;">SA's vulnerability to climate change impacts</p> <ul style="list-style-type: none"> SA & the poor, in particular, extremely vulnerable Climate change impacts threaten to undermine sustainable development <ul style="list-style-type: none"> SA's response strategy centers on sustainable development Most vulnerable sectors in SA <ul style="list-style-type: none"> Water, e.g. reduced average rainfall in west half of the country Health, e.g. more people at risk from malaria Agriculture, e.g. subsistence farmers more marginal Biodiversity, e.g. up to 60% loss of endemics in succulent Karoo  <p style="text-align: right;">2</p>
<p style="text-align: center;">Key Issues</p> <ul style="list-style-type: none"> CC happening and will continue SA contributes only 1.4% CO₂ to global total and therefore needs a global multi-lateral solution which <ul style="list-style-type: none"> Balances adaptation and mitigation Supports local and global sustainable development In SA adaptation measures a priority to address the vulnerability of the poor to CC effects The major potential for mitigation in SA relates to energy (currently, 93% of electricity generation from coal) <ul style="list-style-type: none"> Electricity generation and supply Transport fuels Mining, industry & household energy use & efficiency  <p style="text-align: right;">3</p>	<p style="text-align: center;">Current Adaptation PAM's</p> <ul style="list-style-type: none"> Sectoral programmes focused on poverty <ul style="list-style-type: none"> Landcare – transforms unsustainable agricultural practice Working for Water – alien plant removal to restore water Working for Wetlands – restoration of water sources Working on Fire – Fire control Rural economic diversification – ISRDS Adaptation technology research and development Potential for the use of LULUCF & sink strategies for mitigation are limited – LULUCF is a vulnerability & adaptation issue  <p style="text-align: right;">4</p>
<p style="text-align: center;">Current Mitigation PAM's: Energy efficiency</p> <ul style="list-style-type: none"> Energy efficiency contributes to sustainable development at the local and global scale Strategy: a national target for energy efficiency of 12% by 2015 <ul style="list-style-type: none"> Mix of economic instruments and regulatory tools, as well as energy management programmes Build on practical measures already in place <ul style="list-style-type: none"> Avoid 2300 MW by 2020 through efficiency measures (327000 tons of CO₂ was saved between 2001-2003) <ul style="list-style-type: none"> Efficient lighting initiative Energy efficiency in low-cost housing (CDM project validated) Demand-side management programme  <p style="text-align: right;">5</p>	<p style="text-align: center;">Current Mitigation PAM's: Renewable energy</p> <ul style="list-style-type: none"> Policy: voluntary target of 10 000 GWh renewable energy contribution to final energy consumption by 2013 <ul style="list-style-type: none"> to be produced mainly from biomass, wind, solar and small-scale hydro, bio-fuels etc. (both power generation & non power generation technologies) Equivalent to approximately 4% of projected electricity demand by 2013 Existing projects: off-grid solar, wind, Solar Water Heating <ul style="list-style-type: none"> Needs to be scaled up with additional R&D bulk renewables Need international support to meet incremental costs of implementation – <ul style="list-style-type: none"> contribute to new industries, create jobs, and assist in poverty reduction  <p style="text-align: right;">6</p>
<p style="text-align: center;">Current Carbon Finance PAM's: CDM in South Africa</p> <ul style="list-style-type: none"> Policy developed and published Established Designated National Authority in the Dept of Minerals & Energy (http://www.dme.gov.za) <ul style="list-style-type: none"> 9 CDM projects submitted to the DNA 21.9 MtCO₂ over the period 2005 to 2012 Actively engaging in carbon markets <ul style="list-style-type: none"> Emissions derivative trading Markets need certainty to secure carbon as a long term tradable commodity ie. Second commitment period for Kyoto (article 3.9)  <p style="text-align: right;">7</p>	<p style="text-align: center;">Current Research & Development</p> <ul style="list-style-type: none"> Technology Needs Assessment in progress National Energy Research Institute being established Research on clean coal & <i>in situ</i> gasification Solar thermal bulk renewable Long term sector level emission, adaptation & mitigation research and modelling Bio-fuel RD&D GHG inventory process Participation in the GEOSS programme  <p style="text-align: right;">8</p>

Future National PAM's:

- Finalising a Cleaner Production Strategy
- Air Quality Act passed in 2004
 - provides a regulatory framework to set emission standards for both priority pollutants including greenhouse gases
 - regulates reporting
- Investigate Public Transport measures. Eg. Taxi Recap & incentivise bio-fuel programme
- Clean fuel standards (eg. Euro 3 by 2008 & 4 by 2010)
- Building standard regulations to improve efficiency
- Energy Bill – legislation to regulate energy efficiency & renewable energy



9

Future multi-lateral process

- Climate change is a global problem and requires a unified global response and action
- SA committed to the multi-lateral process under the UNFCCC and the Kyoto Protocol
- Future Climate Change regime must include a strengthened Kyoto
- Future Climate Change regime must support sustainable development in all countries and:
 - Emphasises the principle of common but differentiated responsibilities
 - Requires Annex 1 (developed) countries to take the lead
 - Recognizes the unique circumstances and challenges faced by developing countries.



10

The way forward

- All nations to join and support the international effort to reduce greenhouse gases emissions
 - Given the vulnerability of the poor, largest emitters need to reduce emissions
 - Annex 1 Parties need to take stronger action
 - Full funding of agreed incremental costs (Art 4.3)
 - NA1 actions designed to support sustainable development
- All nations accept responsibility to deal with climate change within an inclusive multilateral regime balancing adaptation & mitigation
- SA committed to engage in the development of the future CC regime
- **Need Montreal Mandate to map out next few years of negotiations and to prevent stalling & add urgency**



11

Thank you



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Supporting material on the presentation from South Africa can be found at: unfccc.int

Norway

Presented by Mr. Harald DOVLAND
Deputy Director General
Ministry of Environment

Abstract

Norway's first measure to directly address GHG emissions was a tax on CO₂ emissions introduced already in 1991. This tax is still in force and today covers about 69% of the CO₂ emissions. In addition to the CO₂ tax, GHG emissions are controlled through a licence system under the Pollution Control Act, agreements between industry and the government, and taxes introduced to reduce methane emissions from landfills, and emissions of HFCs and PFCs. From 1 January 2005 an emissions trading system, very similar to the EU trading system, has been introduced for the period 2005-2007. The trading system includes CO₂ emissions from industries not subject to CO₂ tax and will reduce CO₂ emissions by about 1 million tonnes in the three-year period. Norway also has a comprehensive policy for energy efficiency and increasing the use of renewable energy sources, as well as for research and development. Special attention is paid to the prospects of carbon capture and storage in North Sea geological structures, as well as to hydrogen technology.

It has been estimated that by 2000, the total effect of these measures was a reduction in emissions of 8-10 million tonnes CO₂ equivalents, which implies that emissions would have been 15-20% higher without the measures implemented in the 1990s.

Norway's policy mix for the period 2008-2012 has not yet been decided. It is likely that the same elements as today (taxes, licences, agreements and emissions trading) will form the building blocks of the strategy, but the "strength" of the various elements will be further evaluated.

The results of the recent Arctic Climate Impact Assessment (ACIA) have given us further evidence that climate change is already taking place at an alarming rate, illustrating that more ambitious mitigation efforts are urgently needed. Scientific knowledge presently suggests that to avoid dangerous effects, the global mean temperature should not increase above 2 degrees. This should be used as guidance for our future work. Norway is convinced that governments now have to start serious talks about the future, taking into account the many ideas that have been presented by the research community. We believe that the following elements should guide our discussions on a future global climate change regime: Wide participation of countries; be perceived as fair by governments and private sector; be perceived to support sustainable development in all countries; not be overly complicated (need to monitor compliance). Differentiated commitments and the various flexibility elements (multi-gas, multi-year, market based mechanisms) in the Kyoto Protocol should be retained. In addition to controlling the level of emissions over the coming years, the future regime should include cooperation on adaptation and strengthened efforts on technology research, development and deployment.

Presentation

Experiences with policies and measures adopted and implemented

Norway started to introduce specific policies to control emissions of greenhouse gases in the early 1990s. The first measure to directly address GHG emissions was a tax on CO₂ emissions introduced already in 1991. This tax is still in force and today it covers about 69% of the CO₂ emissions. The rates vary with sector. The highest rate is presently about NOK 330 (USD 55 or EUR 40) per tonne of CO₂. It is applied to petrol and to activities on the continental shelf. In addition to the CO₂ tax, GHG emissions are controlled through:

- o a licence system under the Pollution Control Act,
- o agreements with industry,
- o taxes introduced to reduce emissions of methane from landfills,
- o taxes to reduce emissions of HFC and PFC, and
- o a system for emissions trading.

In the third national communication, we concluded that by year 2000, the total effect was 8-10 million tonnes CO₂ equivalents, which implies that emissions would have been 15-20% higher without the implemented measures. We are now in the process of updating the quantitative estimates for the fourth national communication.

From 1 January 2005 an emissions trading system has been introduced for the period 2005-2007 (covering about 10-15% of Norway's greenhouse gas emissions). The system is very similar to the EU trading system. Efforts are underway for linking the Norwegian system to the EU system to create a larger market. The trading system includes CO₂ emissions from industries not subject to the CO₂ tax and will reduce CO₂ emissions by about 1 million tonnes in the three-year period.

Norway also has a comprehensive policy for energy efficiency and increased use of renewable energy sources, as well as for research and development. Special attention is paid to the prospects of carbon capture and storage in North Sea geological structures, as well as to hydrogen technology. CO₂ capture and storage has been applied at a gas field in the North Sea for some years, depositing about 1 million tonnes of CO₂ every year. Significant research and development activities are underway. We consider carbon capture and storage to be a very promising technology with the potential to be an important mitigation measure.

Future challenges

Business-as-usual projections show increasing GHG emissions in Norway. Stronger policies are therefore needed. Norway's policy mix for the period 2008-2012 has not yet been decided. It is likely that the same elements as today (taxes, licences, agreements and emissions trading) will form the building blocks of the strategy, but the "strength" of the various elements will be further evaluated.

We do envisage that significant cuts in GHG emissions will be necessary in the coming decades. To stimulate our work on that issue, the Norwegian Government recently appointed a commission to consider how Norway could become a "low emitting society" with 50-80% reductions by 2050. It is expected that studying the possibilities for deployment of new technologies will play an important role in the work of the commission, which has been given 18 months to complete its work.

Importance of international cooperation and commitments

Norway considers climate change as the most serious environmental challenge that the world is facing. The results of the recent Arctic Climate Impact Assessment (ACIA) has given us a strong signal that climate change is already taking place at an alarming rate and that mitigation efforts are needed.

We do not today have a clear answer on what should be the future stabilization level of

atmospheric concentrations to avoid dangerous interference. It may take time before we have the final answer for that (and when we have the final answer it may be too late for us to prevent dangerous interference). From available knowledge we believe that the global temperature should not increase above 2 degrees and that this could be used as guidance for our future work.

Norway's emissions of GHG amount to less than 0.2% of the global anthropogenic emissions. Thus, we find ourselves in the same situation as most other countries: Our own efforts to reduce emissions will have a negligible impact on the global problem. It is only through concerted action with global participation that we can solve the problem. And we will take an active part in finding a global solution. For small and open economies it is important that we can find solutions that are fair and create a level playing field.

The end of the first commitment period of the Kyoto Protocol is only 7.5 years away. Industry is planning for 20-30 years ahead and the society planners normally have an even longer time horizon. Their choices frame future emissions. We owe the concerned sectors more clarity on international climate policy issues. It is about time that we as government officials start exchanging views on the future in an open dialogue where we listen to each other and discuss the future in a constructive way. We have with interest participated in various side events where research institutes and other think tanks present ideas on how we might approach future climate change regimes. We therefore know that there are many ideas available for us to build on.

Norway does not yet have a fixed position on what is the best solution. That is why we want to engage in an open and constructive dialogue to find an adequate response to the challenge we are facing. At present we believe that the following elements could guide our work: More countries than in the Kyoto Protocol should participate with some type of emission commitment; keep the good elements of Kyoto (differentiated commitments, flexibility ("all" gases, multiyear period, market mechanisms), reporting and review systems); be perceived to support sustainable development in all countries; be perceived as fair by governments and private sector (level playing field, competitiveness, leakage); take into account the need for adaptation; include technology research, development and deployment.

Norway is convinced that governments now have to start serious talks about the future, making full use of, but not limited to, ideas that have been presented by the research community.

European Commission

(on behalf of the European Community and its member States)

Presented by Mr. Artur RUNGE-METZGER

Head of Climate Change and Energy Unit

Environment Directorate-General

European Commission

Abstract

EU Policies and Measures to achieve Kyoto targets: The European Climate Change Programme (ECCP)

How to prepare and implement practical policies and measures to achieve Kyoto commitments, while not limiting economic growth? This is the mission of the European Climate Change Programme: to help the EU decision makers identify the most cost-effective measures and to drive forward the implementation of EU policies and measures. ECCP measures focus on issues with an EU dimension and complement Climate Change Programmes that Member States are implementing in their own country.

Since the launch of the European Climate Change Programme, a considerable number of EU measures have been adopted. Most importantly, the EU has implemented an emission trading scheme covering approximately 50% of CO₂ emissions in the EU-25, notably of the energy intensive sectors, so as to achieve emission reductions in the most cost-effective and flexible way. In addition, the “linking Directive” establishes the provisions and rules for enabling economic operators to use credits from Joint Implementation and Clean Development Mechanisms for compliance within the emission trading scheme. Other key measures, related among others to the energy supply and demand sectors, as well as to other gases, will also be addressed briefly.

The presentation will aim to share the state of play and EU experience in the development of policies and measures, including lessons learnt, good practices and the planned new phase of the ECCP, that will pave the way for further reductions.

Presentation (read from left to right)



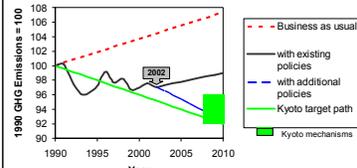
The European Climate Change Programme

Seminar of Governmental Experts, 16-17 May 2005, Bonn
A presentation on behalf of the EU

Artur Runge-Metzger
European Commission

The EU's Challenge: EU-15 projected progress towards Kyoto Commitments

Figure 1: EU-15 greenhouse gas emissions until 2002 and projections until 2010



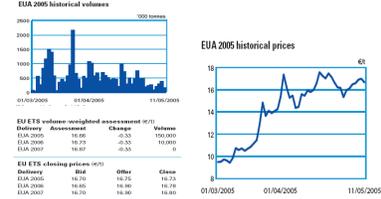
The EU's Response: European Climate Change Programme (ECCP)

- Objective**
 - Identify and develop cost effective elements of EC strategy to meet the EU's Kyoto target in cooperation with stakeholders
- Major Milestones**
 - Launch March 2000; October 2001: EC commitment on concrete Action Plan supplementary to Member States' efforts
 - 2004: new legislation largely put in place, wide policy mix
 - New phase in 2005 (e.g. review, energy efficiency, aviation, CCS, adaptation)
- Major Achievements**
 - EU Measures currently "in implementation": potential of 350-430 Mt CO₂eq./year (equals Kyoto target for EU-15)

EU Emissions Trading: operational since 1st January 2005

- a new, market based instrument, covering close to 50% of EU-25 CO₂ emissions – the largest ever implemented
- taps on the market dynamics and innovation capacity of the industrial sectors, reduces Kyoto compliance cost
- covers major energy intensive industries, in total 12000 installations
- approximately 2 billion allowances per year (2005-2007)
 - total value of allowances: 32 billion € at current prices
- linking with JI/CDM: direct access of credits to EU ETS
- linking with other domestic schemes enabled through current regulatory framework

EU Emissions Trading: Price & Traded Volumes in the EU ETS



EU ETS volume weighted assessment (t/1)			
Delivery	Allowance	Change	Volume
EUA 2005	16 000	-5 55	104 000
EUA 2006	16 000	-6 50	103 000
EUA 2007	16 000	-6 50	103 000

EU ETS clearing profiles (t/1)			
Delivery	EU4	Other	EU25
EUA 2005	16 000	16 25	16 25
EUA 2006	16 000	16 50	16 25
EUA 2007	16 000	16 50	16 25

Source: Point Carbon's Carbon Market Daily

More information on EU climate change policy



http://europa.eu.int/comm/environment/climat/home_en.htm

Supporting material on the presentation from the European Commission can be found at: <unfccc.int>

United States of America

Presented by Mr. Harlan L. WATSON
Negotiator and Special Representative
Bureau of Oceans and International
Environmental and Scientific Affairs
Department of State

Abstract

The United States climate change policy is integrated into the broader context of the sustainable development agenda: alleviation of poverty, rule of law, good governance, investment in people, stable economic institutions, protection of human freedom, promotion of economic growth and prosperity, enhanced energy security, and reduction of pollution. It reaffirms our commitment to the United Nations Framework Convention on Climate Change (UNFCCC), and recognizes the need to take near-term actions, while maintaining economic growth that will improve the world's standard of living. It is grounded in the reality that addressing the issue of climate change will require the sustained effort by all nations over many generations, as well as the development and deployment of new transformational technologies during this century—technologies that will allow us to produce and use energy with reduced greenhouse gas emissions.

This presentation will address both policies and measures adopted by United States that supports the implementation of its existing commitments under the UNFCCC, as well as actions relating to mitigation and adaptation to assist Parties to continue to develop effective and appropriate responses to climate change.

Presentation

Good morning.

I am pleased to be here today to talk about U.S. climate change policy.

Let me first turn an overview of that policy.

U.S. climate change policy:

- Is integrated into the broader context of development agenda: Alleviation of Poverty, Rule of Law, Investment in People, and Stable Economic Institutions.
- Reaffirms the U.S. commitment to the United Nations Framework Convention on Climate Change (UNFCCC).
- Recognizes the need to take near-term actions, while maintaining economic growth that will improve the world's standard of living.
- Is grounded in the reality that addressing climate change will require the sustained effort by all nations over many generations.

- Promotes advances in climate science and accelerated development of transformational energy technologies.

President Bush's climate change policy has three basic components designed to address both the near-term and long-term aspects of climate change: (1) slowing the growth of GHG emissions; (2) laying important groundwork for both current and future action through major investments in science and technology, and institutions; and (3) promoting international cooperation.

In February 2002, President Bush committed the United States to a comprehensive strategy to reduce the greenhouse gas intensity of the American economy (how much we emit per unit of economic activity) by 18 percent by 2012. Meeting this commitment will prevent the release of more than 500 million metric tons of carbon-equivalent emissions to the atmosphere.

The second component of U.S. climate change policy focuses on laying the groundwork for both current and future action—investments in science and technology. We need better science to promote better decision-making and better technology to slow GHG emissions growth. President Bush's Fiscal Year 2005 budget seeks nearly \$5 billion for climate change science and technology programs through the Climate Change Science Program (~\$2 billion) and the Climate Change Technology Program (~\$3 billion).

The third component is promoting international cooperation, which recognizes the importance of working with other nations to develop an effective and efficient global response to the complex and long-term challenge of climate change.

The United States is taking many actions to meet the President's intensity reduction goal.

We have in place more than 60 Federal programs—some mandatory, some incentive-based, and some voluntary—designed to help reduce emissions by more than 500 million metric tons of carbon-equivalent through 2012, including the following examples:

Nuclear Power 2010 is a joint government/industry cost-shared effort to identify sites for new nuclear power plants, develop and bring to market advanced nuclear plant technologies, evaluate the business case for building new nuclear power plants, and demonstrate untested regulatory processes leading to an industry decision in the next few years to seek Nuclear Regulatory Commission approval to build and operate at least one new advanced nuclear power plant in the United States.

On April 1, 2003, the Bush Administration finalized regulations requiring an increase in the fuel economy of light trucks for Model Years 2005 - 2007, the first such increase since 1996. The increase from 20.7 miles per gallon to 22.2 miles per gallon by 2007 more than doubles the increase in the standard that occurred between Model Years 1986 and 1996. The new increased fuel economy standards will save approximately 3.6 billion gallons of gasoline over the lifetime of these trucks, with the corresponding avoidance of 31 million metric tons of carbon dioxide emissions.

The Clean Air Rules are a suite of actions that will dramatically improve America's air quality. Three of the rules specifically address the transport of pollution across state borders (the Clean Air Interstate Rule, Clean Air Mercury Rule and Clean Air Nonroad Diesel Rule). These rules provide national tools to achieve significant improvement in air quality and the associated benefits of improved health, longevity and quality of life for all Americans. Taken together, they will make the next 15 years one of the most productive periods of air quality improvement in America's history and result in a significant reduction of greenhouse gases.

Climate VISION is a voluntary partnership in which 13 industry sectors representing 40-45% of US GHG emissions and the Business Roundtable have committed to work to reduce greenhouse gas emissions in the next decade.

Climate Leaders is an EPA partnership encouraging individual companies to develop long-term, comprehensive climate change strategies. Under this program, partners set corporate-wide GHG reduction goals and inventory their emissions to measure progress. Over 50 major companies are now participating, including General Motors, Alcoa, BP, Pfizer, Staples, International Paper, IBM, Miller Brewing, Eastman Kodak, and Target.

SmartWay is a voluntary partnership between various freight industry sectors involving more than 70 shipping, truck, and rail companies and EPA that establishes incentives for fuel efficiency improvements and greenhouse gas emissions reductions. By 2012, this initiative aims to eliminate 33-66 million metric tons of carbon dioxide emissions and up to 200,000 tons of nitrogen oxides emissions per year, and will result in fuel savings of up to 150 million barrels of oil annually.

The Voluntary Reporting of Greenhouse Gases Program, established by Section 1605(b) of the Energy Policy Act of 1992, provides a means for organizations and individuals who have reduced their emissions to record their accomplishments and share their ideas for action. In 2003, more than 230 entities reported nearly 2,220 projects to reduce or sequester greenhouse gases. Improvements intended to enhance the accuracy, reliability, and verifiability of greenhouse gas reductions measurements are being finalized.

The U.S. is employing near-term incentives for carbon sequestration to increase the amount of carbon stored by America's farms and forests. Under the 2002 Farm Bill, the U.S. will invest up to \$47 billion in the next decade for conservation measures on its farms and forest lands—including measures that will enhance the natural storage of carbon. The U.S. Department of Agriculture estimates that actions taken to date will sequester over 12 million metric tons annually by 2012.

President Bush's Fiscal Year 2005 budget of more than \$5.2 billion for climate change science and technology programs and energy tax incentives, also supports the near-term objective as well future actions through major investments in science and technology.

How have we done?

U.S. carbon dioxide and greenhouse emissions in 2003 were slightly below year 2000 levels. Over the three-year period 2000-2003, the population of the United States has increased by nearly 9.4 million, which is larger than the population of Sweden. And over that same three-year period, the GDP of the United States has increased by more than \$1.45 trillion, which is an amount larger than the 2003 GDP of China. So progress is being made.

The *Strategic Plan for the U.S. Climate Change Science Program* guides activities and priorities of the CCSP over the next decade. The document describes a strategy for developing knowledge of variability and change in climate and related environmental and human systems, and for encouraging the application of this knowledge. The plan was developed with extensive consultation with the scientific community, including a 1,300-person workshop hosted by CCSP in November 2002, with representatives from over 35 countries. The National Academies of Science gave the plan high marks as it "articulates a guiding vision, is appropriately ambitious, and is broad in scope. It encompasses activities related to areas of long-standing importance, together with new or enhanced cross-disciplinary efforts."

The Climate Change Technology Program (CCTP) coordinates and prioritizes the Federal government's nearly \$3 billion annual investment in climate-related technology research, development, demonstration, and deployment. It has six goals and includes a broad portfolio of technology options that address climate change in the near-, mid-, and long-term.

President Bush has placed great emphasis on international cooperation, as shown by the quotes on this slide from his two major climate change policy addresses. The United States is engaged in extensive international efforts on climate change, both through bilateral and multilateral activities.

The U.S. believes that to be most effective, international action must focus on broad development agenda, not climate change alone:

- Promote economic growth
- Reduce poverty/meet basic human needs
- Enhance energy security
- Reduce pollution
- Mitigate greenhouse gas emissions

In particular, cooperation among developed and developing countries must combine action on greenhouse gases with larger and more urgent societal need for *increased* energy resources to fuel economic growth, reduce poverty, provide access to modern sanitation and clean water, and enhance agricultural productivity — and to do so in way that reduces pollution and improves energy security.

Today the United States is working with many nations from around the world to address climate change. Since June 2001, the United States has established bilateral climate partnerships with 14 countries and regional organizations that, together with the United States, account for almost 80% of global greenhouse gas emissions. Partnerships have been developed with Australia, Brazil, Canada, China, Central America (Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, and Panama), European Union, India, Italy, Japan, Mexico, New Zealand, Republic of Korea, Russian Federation, and South Africa, and now encompass well over 400 individual activities. Successful joint projects have been initiated in areas such as climate change research and science, climate observation systems, clean and advanced energy technologies, carbon capture, storage and sequestration and policy approaches to reducing greenhouse gas emissions.

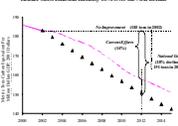
The United States also places great emphasis on multilateral international partnerships as a way to leverage resources and improve the coordination of R&D activities. We remain fully engaged in multilateral negotiations under the UNFCCC, and have created or worked to revitalize a range of international climate initiatives within the last four years, including the following programs:

- Carbon Sequestration Program (CSLF)
- International Partnership for a Hydrogen economy (IPHE)
- Generation IV International Forum (GIF)
- Methane to Markets Partnership
- ITER
- Group on Earth Observations (GEO).

In summary,

- The U.S. remains committed to the UNFCCC and to the mutual goals of sustainable development and economic growth.
- Addressing global climate change will require sustained effort involving all nations over many generations that:
 - Harnesses the power of markets and creativity of entrepreneurs;
 - Draws upon the best scientific research; and
 - Develops and deploys new transformational technologies over this century.
- The U.S. has an ambitious near-term goal to reduce the growth of its GHG emissions (18% by 2012).
- The U.S. is investing billions of dollars on climate change S&T for near-term and long-term.
- The U.S. is fully engaged internationally and leads major bilateral and multilateral climate change S&T initiatives—will continue to cooperate with all nations.
- Cooperation among developed and developing countries must combine action on GHGs with larger and more urgent societal needs for increased energy resources to fuel economic growth, reduce poverty, provide access to modern sanitation and clean water, and enhance agricultural productivity—and to do so in way that reduces pollution and improves energy security.

Presentation (read from left to right)

<h3>U.S. Climate Change Policy</h3> <p>Dr. Harlan Watson Senior Climate Negotiator and Special Representative U.S. Department of State</p> <p>Seminar of Government Experts Maritim Hotel, Plenary I Bonn, Germany May 16, 2005</p>	<h3>U.S. Climate Change Policy Overview</h3> <ul style="list-style-type: none"> Integrated into the broader context of development agenda: <ul style="list-style-type: none"> Alleviation of Poverty; Rule of Law; Investment in People; and Stable Economic Institutions. Reaffirms the U.S. commitment to the United Nations Framework Convention on Climate Change (UNFCCC). Recognizes the need to take near-term actions, while maintaining economic growth that will improve the world's standard of living. Grounded in the reality that addressing climate change will require the sustained effort by all nations over many generations. Promotes advances in climate science and accelerated development of transformational energy technologies. 		
<h3>U.S. Climate Change Policy Components</h3> <ul style="list-style-type: none"> Slowing the Growth of Net Greenhouse Gas (GHG) Emissions. <ul style="list-style-type: none"> National Goal: Reduce GHG Intensity by 18% Over 10-Year Period (2002-2012). Laying the Groundwork for Current and Future Action: Investments in Science and Technology. <ul style="list-style-type: none"> Climate Change Science Program (~\$2 billion/year) Climate Change Technology Program (~\$3 billion/year) Promoting International Cooperation. 	<h3>Actions to Meet 10-Year GHG Intensity Reduction Goal</h3> <ul style="list-style-type: none"> More than 60 Federal programs designed to help reduce emissions by more than 500 million metric tons of carbon-equivalent through 2012. <ul style="list-style-type: none"> Nuclear Power 2010 Fuel Economy Increase for Light Trucks (April 2003) Clean Air Rules Numerous U.S. Department of Energy (DOE) and U.S. Environmental Protection Agency (EPA) voluntary programs to help consumers and corporations reduce their GHG emissions. <ul style="list-style-type: none"> Climate VISION SmartWay Transport Partnership Climate Leaders Voluntary Reporting of Greenhouse Gas Program Incentives for carbon sequestration on America's farms and forests. U.S. Fiscal Year 2005 budget of more than \$5.2 billion for climate change programs and energy tax incentives strongly supports the near-term objective and as well future actions through major investments in science and technology. 		
<h3>Climate Change Science Program (CCSP)</h3> <ul style="list-style-type: none"> World's Largest Climate Change Scientific Research Program ~ \$2 Billion/Year Goals <ul style="list-style-type: none"> Improve knowledge of climate and environment Improve quantification of forces driving changes to climate Reduce uncertainty in projections of future climate changes Understand sensitivity and adaptability of natural and manmade ecosystems Explore uses and limits of managing risks and opportunities 	<h3>Climate Change Technology Program (CCTP)</h3> <ul style="list-style-type: none"> Ambitious Program of R&D ~ \$3 Billion/Year Goals <ul style="list-style-type: none"> Reduce emissions from energy use and infrastructure Reduce emissions from energy use and infrastructure Advance CO₂ capture and sequestration Reduce emissions from non-CO₂ gases Enhance measurement & monitoring Boost the contributions of basic science Technology Options for the Near-, Mid-, and Long-Term <table border="0"> <tr> <td> <ul style="list-style-type: none"> Transportation Buildings Infrastructure (Grid) Industry Low-emissions fossil-based power and fuels Hydrogen Renewable energy and fuels Nuclear fusion </td> <td> <ul style="list-style-type: none"> Nuclear fusion Geologic sequestration Terrestrial sequestration Ocean sequestration Methane emissions Other High GWP Gases Tropospheric Ozone Precursors and Black Carbon Measurement and Monitoring </td> </tr> </table> 	<ul style="list-style-type: none"> Transportation Buildings Infrastructure (Grid) Industry Low-emissions fossil-based power and fuels Hydrogen Renewable energy and fuels Nuclear fusion 	<ul style="list-style-type: none"> Nuclear fusion Geologic sequestration Terrestrial sequestration Ocean sequestration Methane emissions Other High GWP Gases Tropospheric Ozone Precursors and Black Carbon Measurement and Monitoring
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<h3>International Cooperation</h3> <ul style="list-style-type: none"> "I am today committing the United States of America to work within the United Nations framework and elsewhere to develop with our friends and allies and nations throughout the world an effective and science-based response to the issue of global warming." — President Bush, June 11, 2001 "I will intend to work with nations, especially the poor and developing nations, to show the world that there is a better approach, that we can build our future prosperity along a cleaner and better path." — President Bush, February 14, 2002  	<h3>Principles for Effective International Action</h3> <ul style="list-style-type: none"> Action must focus on broad development agenda, not climate change alone: <ul style="list-style-type: none"> Promote economic growth Reduce poverty/meet basic human needs Enhance energy security Reduce pollution Mitigate greenhouse gas emissions 		

U.S. Climate Change Bilaterals

U.S. Climate Change Bilaterals

Innovative International Partnerships

- **Carbon Sequestration Leadership Forum (CSLF)**—17 members: Focused on CO₂ capture & storage technologies.
- **International Partnership for the Hydrogen Economy (IPHE)**—17 members: Organizes, coordinates, and leverages hydrogen R&D programs.
- **Generation IV International Forum (GIF)**—11 members: Devoted to R&D of next generation of nuclear systems.
- **Methane to Markets Partnership**—14 members: Recovery and use of methane from landfills, mines, and oil & gas systems.
- **ITER**—6 members: Project to demonstrate the scientific and technological feasibility of fusion energy.
- **Group on Earth Observations**—57 members and more than 40 participating organizations: Design and operational implementation over the next 10 years of a new international, integrated, sustained, and comprehensive Earth observation system, the Global Earth Observation System of Systems (GEOSS).

U.S. Climate Change Policy Summary

- U.S. takes the issue of climate change very seriously and remains committed to the UNFCCC and to the mutual goals of sustainable development and economic growth.
- Addressing global climate change will require sustained effort involving all nations over many generations that: harnesses the power of markets and creativity of entrepreneurs; draws upon the best scientific research; and develops and deploys new transformational technologies over this century.
- U.S. has an ambitious near-term goal: to reduce the growth of its GHG emissions (18% by 2012), and is taking many actions to help meet that goal.
- U.S. is investing billions of dollars to address climate change—both in the near-term and long-term.
- U.S. is fully engaged internationally, is leading major bilateral and multilateral climate change science and technology initiatives, and will continue to cooperate with all nations.
- Cooperation among developed and developing countries must combine action on greenhouse gases with larger and more urgent societal needs for increased energy resources to fuel economic growth, reduce poverty, provide access to modern sanitation and clean water, and enhance agricultural productivity — and to do so in way that reduces pollution and improves energy security.

Supporting material on the presentation from the United States of America can be found at: <unfccc.int>

Q&A

Question and answer session (Based on the presentations by South Africa, Norway, European Commission, and the United States of America)

A complete coverage of the question and answer session that took place after the presentations by experts from South Africa, Norway, the European Commission, and the United States of America can be found at unfccc.int

The issues raised during the discussion included the role of technology, emissions from aviation, emissions from transport (including aviation) and the commercial sector, the role of land use, land-use change and forestry, emissions trading, clean development mechanism and joint implementation, and possible elements/structure of a future regime.

One participant noted that tackling climate change requires substantial changes in the way energy is used, and that technologies should be brought to the markets that can reduce greenhouse gas emissions from energy use. It was also recognized that some countries invest substantial amounts of money in research and development on climate issues. In attempting to establish what links can be found between energy security and mitigating climate change a participant asked what are the most appropriate and effective means for accelerating technology deployment for meeting the ultimate objective of the Convention. A question was also asked on the potential for research conducted by actors other than governments.

Further clarification was requested by some participants on various issues, including future action for curbing GHG emission from the aviation sector, the role of forests as a fundamental element for reducing the impact of greenhouse gases on the environment, the prospects of the emission trading scheme and investments in CDM and JI beyond 2012, and the prospects for including the transport sector as part of the emissions trading scheme in the European Union.

The panel experts explained that existing technologies could make a contribution through the use of taxes and incentives for introducing more energy-efficient products, such as motor vehicles, in the market. They added that similar instruments, such as the appliance standards of the European Union, help to promote energy-efficient technologies in the market and this in turn impacts on energy security.

In response to the concern about emissions from the aviation sector, it was mentioned that the European Union is studying this sector with a view to preparing an official communication on this in 2005. It was also highlighted that a stakeholder conference is scheduled for June 2005 to address emissions trading, charges and taxes as well as the effects on climate of emissions from aviation. At the same time it was underlined that there would be a need to tackle this sector in a future international climate regime beyond 2012. One expert stressed the need for technology advancements in developed countries and acceleration in technology transfer to assist developing countries in addressing the problem of growing emissions from aviation.

One expert noted that forestry was partially covered in the Kyoto Protocol and that deforestation will need to be addressed in the future, not only because it accounts for 20–25 per cent of greenhouse gas emissions, but also because it is linked to biodiversity and water management issues. One expert suggested that forests be included in future protocols, but with a regime that is simple enough to be able to track compliance, and one that includes as many countries as possible, and multistage approaches. Another expert recommended caution in determining how to use forestry in water stressed countries, given that for some developing countries, it is an adaptation and vulnerability issue and not a solution in the form of “sinks”. It was further stressed that any future regime for forests should take into account national circumstances and challenges of all developing countries.

With respect to transport issues, the participants were informed about the European climate change programme which contains measures in the transport sector, some of which are expensive, with a cost of more than EUR 20/tonne CO₂. It was also noted that the current level of taxes on transport fuels were on average around 100 E/per tonne of carbon. As a way forward, one expert noted the need to act in the coming decades to improve energy efficiency by working together with industry, and to explore further charges for transport such as those linked to congestion charges in London and in Germany (for freight).

Session Three

**PRESENTATIONS OF EXPERTS
IN CHRONOLOGICAL ORDER**

(Monday 16 May pm)

Tuvalu

Albania

Republic of Korea

The Netherlands¹

Question and answer session

¹ On behalf of the European Community and its member States

Tuvalu

Presented by Mr. Ian FRY
International Environment Adviser,
Environment Division
Department of Foreign Affairs and Labour
Office of the Prime Minister

Abstract

The presentation and discussion paper will focus on Part (a) of the terms of reference for the Seminar of Government Experts. It will discuss future actions in relation to mitigation and adaptation.

It is the view of the Tuvalu Government that many small island states that we are already suffering the serious effects of climate change. Such effects include more severe weather events, coral bleaching, to name a few. Due to these effects, we believe that a dangerous level of greenhouse gas concentrations has already been reached and may have been reached some time back. We believe all countries need to address their greenhouse gas emissions and this can be achieved by prescribing specific courses of action for: Annex B Parties, Non Kyoto countries and Non Annex I Parties.

The period 2012-2020 will be vitally important. Annex B Parties will need to reduce their emissions substantially. This can be achieved through establishing a renewable energy and energy efficiency technology (REEET) pathway. Furthermore, changes in the Kyoto Protocol will be required including limiting the use of the CDM and eliminating the use of sinks as a tradable commodity.

For Non-Kyoto countries new actions will need to be considered including the possible development of a new legal instrument, taking significant domestic reduction targets and establishing carbonless market incentives.

With respect to Non-Annex I Parties, we believe that it is possible to develop a voluntary emissions reduction process that will allow developing countries to take meaningful reduction targets without hindering their sustainable development aspirations. This can be done, for example by developing a renewable energy and energy efficiency fund (REEET Fund) and expanding the scope of the emissions trading system under the Kyoto Protocol. An overview of the mechanics of the REEET Fund is presented in the discussion paper. Finally, we need to decarbonise international financial institutions and establish rules that do not promote environmentally problematic technologies such as nuclear power.

With respect to adaptation we believe that there are two principle components; building resistance and resilience to the impacts of climate change and restoring damage after impacts have occurred. Establishing an effective process to allow countries to adapt to the impact of climate change will be vitally important for many countries in the near future. We do not believe it is necessary to develop an "adaptation protocol", however changes will need to be made to the funding arrangements. We believe that countries should be able to develop their own vulnerability assessment processes without necessitating the development of internationally agreed criteria. National vulnerability assessments could be assisted by developing a vulnerability assessment clearinghouse.

Current funding arrangements for adaptation are inadequate and inappropriately administered. Funding conditionalities associated with incremental costs, mainstreaming, and co-financing hinder urgently needed adaptation action on the ground. The discussion paper suggests major reforms, including the development of a new adaptation finance facility outside the GEF. Sources of funding for this new facility are suggested. To meet the costs of restorative action a climate change insurance facility is proposed. The discussion paper also proposes action with respect to the impact of response measures, suggesting that fossil fuel exporting countries may be able to make a meaningful contribution to the sustainable development of other developing countries while at the same time ensuring their own financial security.

Finally the discussion paper suggests that the Seminar of Government Experts should be the first in a series of government dialogues.

Presentation (read from left to right)

<p>Seminar of Government Experts</p>  <ul style="list-style-type: none"> • Focus on Part (a) of the terms of reference for the Seminar of Government Experts. • We will discuss future actions in relation to : <ul style="list-style-type: none"> – mitigation – adaptation. <p>Government of Tuvalu</p>	<p>Seminar of Government Experts</p> <ul style="list-style-type: none"> • Mitigation • Many small island states that we are already suffering the serious effects of climate change • We believe that a dangerous level of greenhouse gas concentrations has already been reached <p>Government of Tuvalu</p>
<p>Seminar of Government Experts</p>  <ul style="list-style-type: none"> • Concerted efforts by all countries to address their greenhouse gas emissions is required. – Pillar One: Annex B Parties to the Kyoto Protocol – Pillar Two: Non-Kyoto countries – Pillar Three: Non Annex I Parties to the UNFCCC <p>Government of Tuvalu</p>	<p>Seminar of Government Experts</p> <ul style="list-style-type: none"> • Annex B Parties will need to reduce their emissions substantially  <ul style="list-style-type: none"> • renewable energy and energy efficiency technology (REEET) pathway <p>Government of Tuvalu</p>
<p>Seminar of Government Experts</p>  <ul style="list-style-type: none"> • Changes to the Kyoto Protocol will be required including: • Limiting the use of the CDM • Eliminating the use of sinks as a tradeable commodity <p>Government of Tuvalu</p>	<p>Seminar of Government Experts</p> <ul style="list-style-type: none"> • Non-Kyoto countries new actions will needed including: – the possible development of a new legal instrument – taking significant domestic reduction targets – establishing carbonless market incentives <p>Government of Tuvalu</p>
<p>Seminar of Government Experts</p>  <ul style="list-style-type: none"> • Non-Annex I Parties <ul style="list-style-type: none"> – Possible to develop a voluntary emissions reduction process without hindering their sustainable development aspirations – developing a renewable energy and energy efficiency fund – expanding the scope of the emissions trading system <p>Government of Tuvalu</p>	<p>Seminar of Government Experts</p> <ul style="list-style-type: none"> • Impact of response measures: – Fossil fuel exporting countries could invest in the Renewable Energy and Energy Efficiency Technology Fund – Securing sustainable development for Developing Countries and securing an economic future for themselves <p>Government of Tuvalu</p>

Seminar of Government Experts

- Decarbonise international financial institutions
- Establish rules that do not promote environmentally problematic technologies such as nuclear power




Government of Tuvalu

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Seminar of Government Experts

- Adaptation
- two principle components:
 - building resistance and resilience to the impacts of climate change
 - restoring damage after impacts have occurred




Government of Tuvalu

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Seminar of Government Experts

- ADAPTATION
- Not necessary to develop an "adaptation protocol",
- However changes will need to be made to the funding arrangements




Government of Tuvalu

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Seminar of Government Experts

- National vulnerability assessments could be assisted by developing a **Vulnerability Assessment Clearinghouse**




Government of Tuvalu

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Seminar of Government Experts

- Funding conditionalities problematic:
 - incremental costs
 - mainstreaming
 - co-financing
 - arduous proposal writing




Government of Tuvalu

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Seminar of Government Experts

- New Adaptation Financial Facility is needed
- This would hopefully operate outside the GEF
- Operated by a Management Board under the COP




Government of Tuvalu

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Seminar of Government Experts

- Sources of funding for Adaptation Financial Facility include:
 - A share of the proceeds from a fossil fuel levy
 - Contributions from governments
 - Contributions from private business with a high emissions profile
 - Contributions from insurance funds




Government of Tuvalu

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Seminar of Government Experts

- To meet the costs of restorative action a Climate Change Insurance Facility is proposed




Government of Tuvalu

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Seminar of Government Experts

- The Seminar of Government Experts should be the first in a series of government dialogues.




Government of Tuvalu

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Albania

Presented by Ms. Ermira FIDA
National Coordinator for Climate Change
Ministry of Environment

Abstract

1. Background on country profile

Albania is a small mountainous Balkan country. It covers an area of 28,748 km². The population of Albania is 3.3 million. Small rivers that traverse the country have high erosive power due to the rugged relief of the land but constitute an important source of hydropower by supplying over 95% of the electricity. Albania has a Mediterranean climate. As of 2003, the estimated Gross Domestic Production (GDP) average growth per year was 7% per year. 46.6% of the population lives below the poverty line of \$ 2 per day. In 2002 the Government formulated, with financial and technical support from international community, the National Strategy for Socio-Economic Development (NSSED). This Strategy aims to address poverty reduction through a broad set of reforms and activities. Albania is also in the process of negotiating a Stabilization and Association Agreement (SAA) with the European Union. These two instruments are the main focus of national development and donor support. The Government considers the environment to be an integral component of poverty reduction strategy.

2. Albania and Climate Change

Albania joined the UNFCCC on 1995 and has a status of Non-Annex I country. Recently Albania has joined the Kyoto Protocol. The National Focal Point for UNFCCC and CDM DNA belongs to the Ministry of Environment of Albania through its Climate Change Program / Unit. The Government of Albania has taken considerable steps for the implementation of the Convention such as preparing the First National Communication, Technology Needs Assessment and compiling the National Action Plan (NAP) to address Climate Changes through the UNDP/GEF support. Albania has also just started the preparation of the Second National Communication to the UNFCCC.

3. National Communication exercise

3.1 GHG abatement

According to the First National Communication – this learning-by-doing exercise, Albania is found to be a relatively low net emitter of greenhouse gases, with relatively low CO₂ emissions per capita mainly due to the fact that 95 % of electricity is generated by hydro sources. Energy sector contributes with more than 60% of emissions total. Relatively high CO₂ emissions per GDP are explained mainly due to high energy intensity. Based on the predictions for future emissions, it is expected that by 2020 the emissions total would be raised more than 5 times. Although Albania does not have any commitments for GHG emission reduction, the NAP aims at reduction of the growth rates of GHG emissions. The abatement scenario of emissions foresees the introduction and implementation of different options mainly focused on energy saving through energy efficiency measures and promotion of renewable energy sources. A tier of GHG mitigation measures for all GHG relevant sectors with a more significant focus to energy sector is proposed and evaluated in terms of many criteria, which does not consist only at reduction potential and cost and benefit but also the contribution to reduce poverty and social acceptability. Measures consist on the thermal insulation in housing, efficient bulbs, solar thermal, LPG (cooking, heating), small schemes SHP, fuel switching in industry, etc.

3.2 Adaptation

The future climate scenario for Albania predicts changes such as increased temperatures, decreased precipitation and reduction of water resources and arable land. The most vulnerable found area is Albania's coastal zone and regarding sectors those highlighted as most vulnerable are water resources, agriculture energy and tourism. Future climate changes are expected to negatively impact the river flow, which in turn will affect the generation capacity of Hydro Power Plants. This is an issue that needs to be taken into consideration. This is why it is addressed under the Vulnerability and Adaptation part of the Albania's Second National Communication by taking under analysis the Drini river cascade that is prioritized as a significant system from the vulnerability point of view (dependence of hydro electricity generation from climate changes).

4. Efforts to mainstreaming climate change into national strategies

National Communication process has not only been considered as a tool for reporting to the UNFCCC but also for mainstreaming to national planning process and programming through mobilization of new resources. Due to such efforts the National Energy Strategy has already integrated many findings and outputs from Albania's First National Communication and Technology Needs Assessment. The strategy aims at increasing the security of energy supply through optimization of the supply and efficient consumption by ensuring at the same time minimal impact to the environment. In the frame of the Millennium Development Goals exercise led by UNDP, the Climate Change Unit /Program managed to naturally link up national energy planning, poverty and climate change issues. According to the NES a national target to be achieved by 2015 for saving energy with 23% and a share of 18% of renewable energy sources have been set. This will bring in turn a GHG reduction of 4 million CO₂ eqv. A law on energy efficiency along with an energy trust fund has been recently adopted in order to support the implementation of the NES. A package of project idea notes has been developed under the First National Communication and Technology Needs Assessment. Two projects have been sent to GEF for funding and seem to be successful. One of them is a project on market transformation for solar thermal water heating in Albania. GEF has recently approved the PDF B and the pipeline entry of the full project. Another project on building adaptive capacities for a representative vulnerable system is under way. Many from the rest would be a good source possible CDM project ideas.

5. Public awareness

Public awareness is an important component that is crosscutting the overall National Communication exercise. Efforts to raise awareness on climate change have contributed positively to the mainstreaming process. This component will also continue to be developed under the Second Communication phase.

Presentation (read from left to right)

National Communication exercise_a tool for mainstreaming climate change into national policy and planing

Albania case

Ermira Fida, MBA
National Manager; Climate Change Unit
Bonn, 12 May 2005

Content of presentation

- Country context
- Albania and UNFCCC
- Highlights from INC
 - Inventory, abatement, V&A
- Efforts to mainstreaming
 - National energy strategy
 - Energy efficiency, RES, GHG reduction
- The way forward

Country context

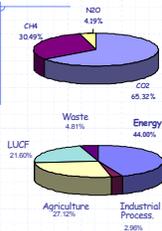
- Surface Area 28,748 km²
- Population of 3,3 million (1999).
- Since 1998 the country has seen steady progress.
 - As of 2003 GDP growth average 7% per year.
 - Inflation at 2-4%, with stable currency
- However:
 - 46.6% of the population is below the poverty line of \$2 per day
 - 53% of the population lives off the land.
 - High levels of migration (15% is abroad) and unemployment.
- NNSDD / PRSP
 - In line with MDGs
 - Aims at poverty reduction
 - Address environment protection



Albania and UNFCCC & KP

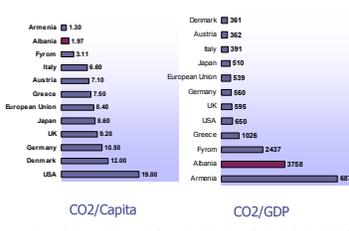
- Joined the UNFCCC in January 1995
- Non-Annex I Party to the UNFCCC
- Joined Kyoto Protocol
 - December 2004: Law on ratification of KP from RoATM
 - 1 April 2005: Instruments of ratification
 - 30 June 2005: Albania becomes a Party to KP
- INC submitted and launched at COP8, India. (10/CP2)
 - GHG inventory
 - GHG mitigation analysis
 - Vulnerability & Adaptation
 - National Climate Change Action Plan - part of NEAP
- Technology Needs Assessment completed
 - Mitigation technologies
 - Adaptation technologies
- SNC started on April 2005 (17/CP8)

INC- highlights from GHG inventory



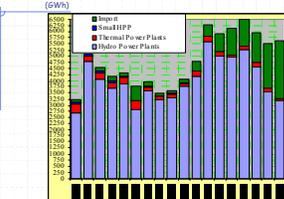
- [7061.45 Gg] CO₂ eqv emissions total for 1994
- CO₂ - the main GHG - 65%
- Energy sector - the main source category - 44%

GHG inventory: main indicators

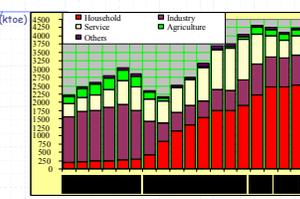


CO₂/Capita CO₂/GDP

Electricity generation



Electricity consumption



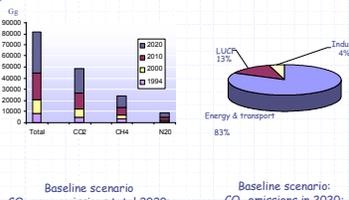
Energy intensity



High intensity & Low consumption / capita

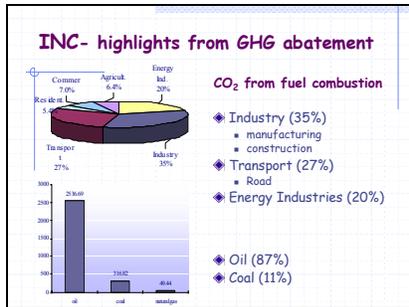
- Albania industry - very energy intensive
- Low energy prices
- Low energy consumption per capita
- Low levels of economic activity

INC- highlights from GHG abatement

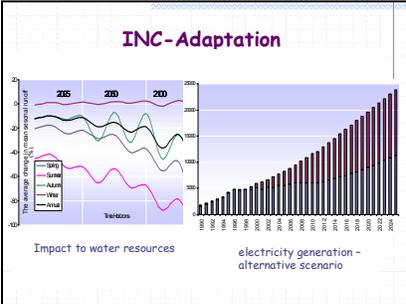
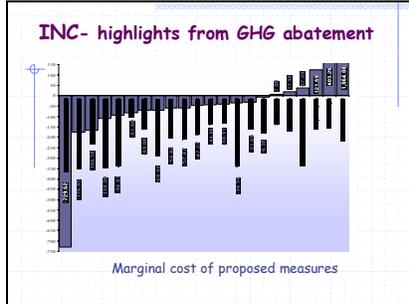
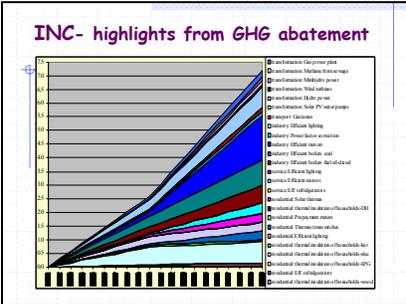
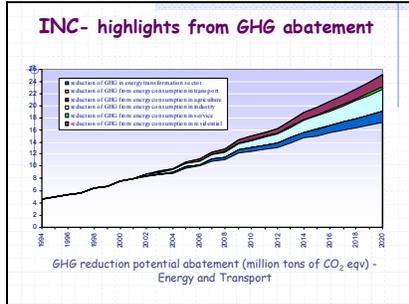


Baseline scenario CO₂ eqv., emissions total 2020: **37,653 Gg**

Baseline scenario: CO₂ emissions in 2020: **22,562 Gg**

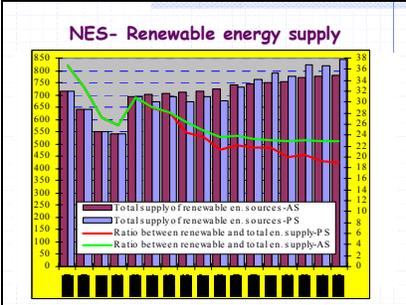
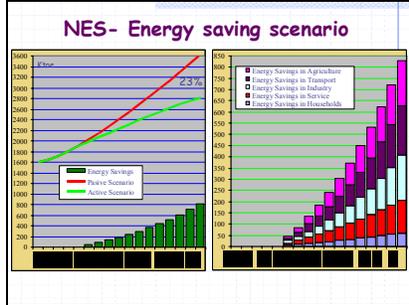


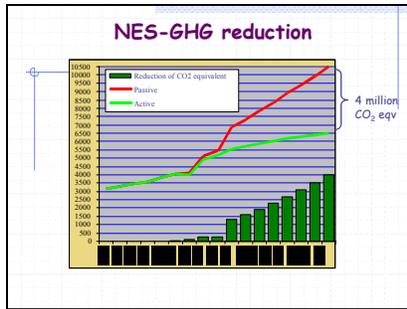
- ### INC- GHG abatement measures
- End-use energy efficiency improvement
 - Supply-use energy efficiency improvement
 - Renewable energy
 - Fuel switching
 - Agriculture
 - Industrial processes
 - Solvent and other product use
 - Waste management
 - Sinks (afforestation and reforestation)



- ### Efforts in mainstreaming...
- National Communication to UNFCCC not ONLY a reporting exercise but a tool for mainstreaming and programming as well:
 - Major findings from INC/TNA have been addressed to the National Energy Strategy that complements NSSED/PRSP
 - Mobilizing resources to funding of priority technologies
 - Energy efficiency (buildings)
 - Solar panels -HWS
 - Adaptation project (Drini River Delta)
 - Raise awareness among policy makers on climate change
 - Kyoto Protocol ratification

- ### National Strategy of Energy (NSE)
- Objectives:**
- Establish of an efficient energy sector from the financial & technical point of view
 - Increase of the security and reliability of the energy supply in general and electricity in particular, in national and regional levels
 - Establish of an effective institutional and regulatory framework
 - Optimization of the supply system with energy sources based on the least cost planning principle and minimal environmental pollution





NES-investments needed

Year	03	04	05	06	07	08	09	10	11	12	13	14	15
ENERGY EFFICIENCY INVESTMENT NEEDS													
1. Investment Needed for energy saving in households													
(M\$D)	1.00	2.51	4.91	10.2	11.6	13.2	14.6	16.7	18.2	20.1	21.8	23.7	25.3
(M\$D)	0.0	0.24	0.89	10.7	11.6	12.5	13.7	15.0	16.2	17.6	19.0	20.6	21.9
3. Investment Needed for energy saving in industry													
(M\$D)	1.00	5.41	6.9	17.51	27.9	37.5	46.9	51.16	9.62	10.1	10.5	11.0	11.8
(M\$D)	0.0	2.30	5.10	8.52	12.4	16.8	21.8	27.4	33.4	39.9	46.8	54.2	62.1
5. Investment Needed for energy saving in agriculture sector													
(M\$D)	1.00	0.30	4.80	3.00	4.10	5.00	6.80	8.20	9.70	11.3	13.0	14.8	16.6
RENEWABLE ENERGY SOURCE INVESTMENT NEEDS													
6. Investment Needed for Penetration of Solar Water Heaters													
(M\$D)	1.00	2.27	10.15	11.1	12.1	13.2	14.4	16.0	17.2	18.9	20.4	22.1	23.5
(M\$D)	0.0	3.00	4.00	4.80	6.30	7.32	8.44	9.00	10.2	10.4	12.0	12.5	13.4
TOTAL INVESTMENT NEEDED ENERGY EFFICIENCY AND RENEWABLE ENERGY SOURCES													
Investment (M\$D)	0	39	47	56	66	77	89	100	115	128	144	159	175

- ### Energy Efficiency Law
- ◆ The aim of this law is to create the legal framework required for the promotion and improvement of the efficient utilization of energy in Albania with a minimal impact to the environment
 - ◆ Law addresses:
 - National Energy Efficiency Policy
 - Objectives of Energy Efficiency Promotion
 - Local Energy Offices
 - Labeling of Electric Appliances
 - Energy Audits Responsibilities of the energy auditor and of persons subject of the audit
 - Licensing of Energy Auditing
 - Energy Efficiency Fund (sources and administration of fund)
 - Activities funded by the Energy Efficiency Fund

- ### The way forward....
- ◆ Continue with GHG abatement
 - ◆ More focus on adaptation issues
 - Coastal zone
 - Water resources and their impact to hydro electricity generation
 - ◆ Public awareness
 - Engage public sector and civil society
 - ◆ Resource mobilization
 - Energy efficiency
 - Renewable energy
 - CDM

Thank you!

Supporting material on the presentation from Albania can be found at: unfccc.int

Republic of Korea

Presented by Mr. Boo Nam SHIN
Deputy Director-General
Environment and Science Affairs
Ministry of Foreign Affairs and Trade

Abstract

1. Introduction

In implementing the commitment of UNFCCC, the government of the Republic of Korea (ROK) has long adopted various mitigation policies and measures, especially for energy sector which is responsible for more than 80 percent of the GHG emissions.

Four-decades-long transformation from the predominant agricultural economy into the export-oriented industrial economy in Korea is an important determinant of Korea's unique energy situation. The total primary energy consumption in the country has rapidly increased by ten folds during the last three decades, reaching 215 million TOE in 2003 while its dependency on overseas energy importation has been sharply on the rise to 96.9 percent in 2003. There was almost complete linear correlation in changes between GDP and energy consumption.

The total gross emissions of greenhouse gases by Korea in 2002 were 154.7 million tonnes of carbon equivalent, while carbon dioxides from fuel combustion were 127.1 million tonnes of carbon.

2. Mitigation policies and measures for the energy sector

As a party to the UNFCCC, Korea has been voluntarily developing and vigorously promoting various policies and measures to alleviate climate change at all levels of the economy. Such efforts also contribute to worldwide GHG reduction efforts. Recently, the ROK government adopted 'The Third Comprehensive National Action Plan for the Framework Convention on Climate Change' covering from 2005 to 2007. The financial funds for this plan will be 20 billion dollars including 8 billion dollars from private sector. The main policies and measures embodied in the plan are summarized in the following sub-sections 2.1 and 2.2.

2.1. Energy conservation measures

Currently, more than 1,000 factories are participating in the Voluntary Agreement (VA), with 58 percent of industrial energy use in 2003. Participating firms are provided with low-interest loans, tax credits, and technical support. The government encourages energy supply companies to develop Demand Side Management (DSM) programs with a rebate system for high-efficient electricity appliances.

A fuel-efficiency rating and labeling program has been introduced in order to provide the consumers with better information on the relative fuel efficiency of vehicles. Promotion of mass transit system by integrating the subway and bus lines and expanding bus-only lanes proved quite successful. A project targeting provision of CNG buses is also making good headway towards completion by 2010.

Energy efficiency rating and labeling programs are adopted for various household appliances such as refrigerators, air conditioners, incandescent bulbs, and fluorescent lamps.

2.2 Energy supply measures

The expansion of nuclear and natural gas in the power sector are regarded as important options in Korea. In particular, about 40 percent of generation will be met by nuclear power. The government plans to build ten new nuclear and 18 units of LNG power by 2015. Currently, combined heat and power (CHP) provides heat and power to more than 500 factories in 21 industrial complexes over the country. In developing a new industrial complex, the government evaluates the feasibility of constructing cogeneration plants.

In 2003, the government set an ambitious target of raising the share of new and renewable energy in total primary energy consumption to 5% by 2011 from current 2.3%. Major areas of concentration will involve, inter alia, hydrogen fuel cell, photovoltaic, and wind power. In order to overcome barriers of deployment, the government plans to introduce very strong programs such as renewable portfolio standards (RPS) or mandatory purchase of electricity generated by renewable energy sources.

3. Energy demand and GHG projection to 2020

Notwithstanding the various policies and measures taken as part of the mitigation effort, GHG emissions in Korea as a result of projected increase in energy demand are expected to maintain upward momentum for the foreseeable future. Main drivers behind Korea's increasing energy demand and resultant GHG emissions in the near future are GDP growth, increasing ownership of vehicle and household appliances, as well as the growing number of household.

Total primary energy demand and the resultant carbon dioxide emissions are projected to increase at an average annual increase of 2.8 percent and 2.3 percent respectively between 2002 and 2020. It should, however, be noted that the demand for primary energy is expected to grow more slowly than GDP through 2020, which is a contrast to the current situation. Notable factors, including the downward drift of energy-intensive manufacturing, are contributing to this trend.

4. The way forward

Korea is projected to witness growing energy demand in the coming decades as mentioned in Section 3. Likewise, global demand for energy is also expected to rise, requiring almost 60% more energy than today by 2030.

In light of an overall projected increase in worldwide energy demand over the next few decades, the world now faces toughest challenge of meeting the future energy demand and reducing GHG emissions while not impeding economic development. It is against this backdrop that development and diffusion of more efficient technology stands out as a long-term viable option for meeting the world's challenge. In this context, international cooperation to expedite technology innovation, development and diffusion need to be further promoted. Korea holds the view that Annex I parties have significant role in this regard by spearheading their progress towards providing technological assistance for non-Annex I parties, in accordance with the principle of common but differentiated responsibilities and the specific circumstances of each country as stipulated in the text of the UNFCCC. Adherence to such key principles is central for ensuring wider participation and should be incorporated in any future discussion on addressing global climate change.

Presentation (read from left to right)



Policies and Measures to Address Climate Change in Korea

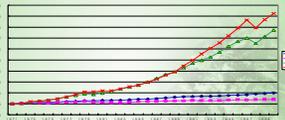
Shin Boo-nam
Deputy Director-General
MOFAT, KOREA

Contents

- I. Korea's Unique Energy Situation
- II. Government Response to Climate Change Mitigation
 - II-1 Energy Conservation Measures
 - II-2 Energy Supply Measures
- III. Energy Demand and GHG Projection to 2020
- IV. The Way Forward

I. Korea's Unique Energy Situation

- four-decades-long transformation from predominant agricultural economy into export-oriented industrial economy
- energy sector responsible for more than 80% of the GHG emissions



- 10-fold increase in Korea's primary energy consumption during the last three decades, reaching 215 million TOE in 2003
- total gross emissions of GHG : 154.7 million TCE in 2002

II. Government Response to Climate Change Mitigation

- Established Inter-Ministerial Committee on the Framework Convention on Climate Change (1998)
 - Chaired by the Prime Minister
 - Comprised of competent Ministries, national research institutions, and industries
- Adopted 'The Third Comprehensive National Action Plan for the Framework Convention on Climate Change' (effective from 2005 to 2007)
 - Financial funds amounting to 20 billion dollars, including 8 billion dollars from private sector, being earmarked for the Plan

II-1. Energy Conservation Measures

- Voluntary Agreement**
 - Participation of more than 1,000 factories, with 58% of industrial energy use in 2003
- Demand Side Management (DSM) Program**
 - Promotes efficient utilization of energy through a rebate system for high-efficient electricity appliances
- Fuel-efficiency Rating and Labeling Program**
 - Encourages car manufacturers to produce more fuel-efficient vehicles

- Promotion of Mass Transit System**
 - Integration of the subway and bus lines, along with expansion of bus-only lanes in metropolitan areas proved quite successful
- Energy Efficiency Rating and Labeling Programs**
 - Adopted for various household appliances (eg. refrigerators, air conditioners, clothes washers, incandescent bulbs, fluorescent lamps)

II-2. Energy Supply Measures

- Power Sector Measure**
 - Expansion of nuclear and natural gas in the power sector regarded as important option in Korea
- Promotion of Combined Heat and Power (CHP)**
 - Provides heat and power to more than 500 factories in 21 industrial complexes over the country
- Low Carbon Energy System: the role of renewable**
 - Target being set to raise the share of new and renewable energy in total primary energy consumption to 5% by 2011 from current 2.3%

III. Energy Demand and GHG Projection to 2020

- Korea's energy demand and resultant CO₂ emissions projected to increase through 2020
 - Total primary energy demand and the resultant carbon dioxide emissions: projected to increase at an average annual increase of 2.8 percent and 2.3 percent respectively between 2002 and 2020

Table 1 - Indicators on Primary Energy Consumption and CO₂ Emissions from Energy Sector

	2002	2010	2020	'02 - '20
Primary energy (million TOE)	209	269	340	2.8%
Per Capita energy use (TOE/person)	4.4	5.4	6.7	2.4%
CO ₂ Emissions (Mill TC)	128	162	193	2.3%
Per Capita CO ₂ (TC)	2.7	3.3	3.8	2.0%

Main drivers behind increasing energy demand and resultant CO₂ emissions

- GDP growth
- increasing ownership of vehicle and household appliances
- growing number of household

UNEP However, the **demand for primary energy** expected to **grow more slowly than GDP** through 2020, due to notable factors such as downward trend of energy-intensive manufacturing

IV. The Way Forward

- **Korea projected to witness growing energy demand in the coming decades.**
 - **World's toughest challenge** : meeting the future energy demand and reducing GHG emissions while not impeding economic development
- **Development of more efficient technology emerging as a long-term viable option for meeting the world's challenge.**
- **Annex 1 parties have significant role by spearheading technological assistance**
 - In accordance with the principle of CDBR and the **specific circumstances of each country** as stipulated in UNFCCC

Thank you!!

10

The Netherlands

(On behalf of the European community and its member states)

Presented by Mr. Yvo DE BOER

Director for International Environmental Issues
Climate Change Department, Ministry of Housing
Spatial Planning and Environment

Abstract

Policy integration challenge

The challenge is to integrate effective and appropriate responses to climate change in all relevant policy areas. Greenhouse gas emissions are related to processes and activities in other policy areas: development, land use, investment, transport and environment. For example: energy use is essential for social and economic development, but often leads to greenhouse gas emissions at the same time. On the other hand, emissions lead to climate change impacts that jeopardize development.

These other policy areas have countless other objectives, beyond combating climate change: e.g. access to energy and technology, economic development, combating air pollution, preservation of biodiversity and combating desertification. Co-benefits of policies on climate change and other areas may well exist. Often emission reductions are being achieved for reasons other than climate change, for example reduction of local air pollution for health reasons. The achievement of sustainable development objectives (for example related to energy, land use and local environmental problems) can go hand in hand with controlling greenhouse gas emissions. Likewise, policies aiming at the reduction of greenhouse gases can have benefits in other areas: e.g. developing technologies can lead to positive employment effects.

Approaches to optimise the positive synergies between climate change and other policy areas should be discussed. In this process key decision makers when it comes to e.g. economic development and investments in technologies must be involved. This implies involving stakeholders – both at the domestic and at the international level – other ministries (e.g. energy, development and transport), private sector, multinational corporations and multilateral organisations.

Presentation (read from left to right)

Seminar of Governmental Experts, Bonn, 16-17 May 2005

Policy integration challenge

Presentation on behalf of the EU

➔

Yvo de Boer
The Netherlands

VRDM 31-10-2005

➔ The case of energy: World primary energy demand by fuel

VRDM 31-10-2005

➔ The case of energy: Regional shares in world primary energy demand

VRDM 31-10-2005

➔ Clear international framework under the Convention

- To achieve the ultimate objective, significant global emission reductions are needed (IPCC)
- Clear international framework needed to:
 - set targets and timetables
 - provide new approaches for differentiation between Parties
 - provide rules and instruments (e.g. monitoring, flexibility mechanisms)
- Important challenges:
 - Minimise costs: free-market approach with broadest participation
 - Make emission reductions economically attractive

VRDM 31-10-2005

➔ The case of energy: some observations

- Projected increase in energy demand ➔ increase in GHG emissions
- Integrated decision-making: energy markets with a sound economic basis that are environmentally sustainable
- National level: decision-making through energy plans
- International level: concerted use of financial, fiscal and administrative resources to stimulate investments in the energy sector

VRDM 31-10-2005

➔ Benefits of policy integration

- Achieving development + climate objectives at the same time
 - providing access to (sustainable) energy to the poor
 - reduction local air pollution for health reasons ➔ GHG emissions ↓
- Benefits of climate policies on other areas
 - Positive employment effects of developing-deploying technologies
 - Increasing energy security by: increasing energy efficiency and use of renewable energies; cleaner and more efficient use of fossil fuels
- Decision-making in all relevant policy areas to integrate climate change (both mitigation and adaptation)

VRDM 31-10-2005

➔ Questions for SoGE participants

How can the international community help in making use of synergies in combating poverty and climate change at the same time? What is the role of UNFCCC in that context?

What effective actions can be taken in other policy areas to develop appropriate responses to address long term climate change? What can UNFCCC contribute?

VRDM 31-10-2005

Supporting material on the presentation from The Netherlands can be found at: <unfccc.int>

Q&A

Question and answer session (Based on the presentations by Tuvalu, Albania, the Republic of Korea, and the Netherlands)

A complete coverage of the question and answer session that took place after the presentations by experts from Tuvalu, Albania, the Republic of Korea, and The Netherlands speaking on behalf of the European Community and its member states, can be found at unfccc.int

The issues raised during the discussion included the link between climate change and poverty, and the role of developed and developing countries in research and development of climate change technology, in particular, energy efficiency and renewable energy.

All participants acknowledged the links between climate change and poverty, and indicated that renewable energy could meet both objectives (slowing climate change and alleviating poverty) as a means to deliver energy to the poorest people and countries. On other matters, some participants noted the role of developing and developed countries in technology research and development; they stressed that such actions could also be undertaken through programmes established by governments. Participants also noted the role of the UNFCCC in providing incentives for climate change action in several policy areas. Other participants called for financial institutions to take into consideration climate change matters when providing funding for technologies that reduce greenhouse gas emissions. Finally, some participants highlighted the importance of raising public awareness to facilitate the implementation of the UNFCCC.

Session Four

**PRESENTATIONS OF EXPERTS
IN CHRONOLOGICAL ORDER**

(Monday 16 May pm)

Canada

Japan

Morocco

India

Question and answer session

Canada

Presented by Ms. Norine Smith
Assistant Deputy Minister
Global Climate Affairs
Environment Canada

Abstract

Canada's Efforts to Address Climate Change

Canada has released a new national Climate Change Plan called *Project Green*. *Project Green* is a comprehensive plan setting out the policies and measures designed to allow Canada to meet its Kyoto target in full. This plan is comprised of six key elements, each of which is structured to assist Canada to capitalize on the opportunities associated with addressing climate change.

Need for International Cooperation

The international community is becoming increasingly aware that much more needs to be done to address climate change. If we are to stabilize GHG concentrations at a level that is not associated with dramatic disruption of the climate system, emissions need to be reduced to a fraction of their current levels. This cannot be done without international cooperation. The international community must work together to address climate change long after the end of the Kyoto Commitment Period and Canada is committed to pursuing a multilateral approach.

The Future

The international community is collectively entering an important stage in the international effort to address climate change. We have the opportunity to design the next generation of international climate change policy, one that builds on our efforts under the Kyoto Protocol. Many new ideas are emerging and more discussion of them amongst Parties is required.

Laying the Foundation in Montreal

COP11, COP/MOP1 can lay the foundation for effective and inclusive international cooperation on climate change for the long term that will achieve the deep reductions in global emissions necessary to avoid the dangerous environmental impacts of climate change as well as adapting to the climate change that is inevitable; and fairly and equitably reflects the diverse circumstances of the many countries of the world and promotes sustainable economic growth.

Starting the Dialogue

In order to stimulate discussion on the path forward, incoming COP President, Minister Dion has been meeting with Parties to discuss what central questions need to be addressed if the international community is to collectively move ahead in addressing the threat of climate change. Based on initial discussions the following questions have been identified:

What type(s) of climate change goals would best ensure the necessary deep reductions of emissions while securing sustained economic growth for both industrialized and developing countries?

How could the global climate change regime more strongly promote the development and deployment of the needed technologies?

**How can a global climate regime make the most effective use of market forces, including promoting a robust and efficient international carbon market?
How should the global climate regime balance the need for adaptation to a changing climate with global emissions reduction?**

The incoming COP President will be seeking the views of Parties on the appropriate questions that can stimulate discussion about the most effective means of working together to address climate change and national perspectives on potential answers to these questions.

Informal consultations will continue to explore these questions over the coming months.

Other Critical Steps in Montreal

There is much that needs to be accomplished in Montreal. The draft decisions needed to be adopted to bring the Marrakech Accords to life. Important steps for operationalizing the Kyoto Protocol, such as electing the members of the compliance committees and the JI supervisory committee must be completed. The potential exists for finalizing some long-standing funding issues under the Convention. CoP11/MoP1 could also have other deliverables that would build confidence and a sense of progress, such as an agreement to strengthen the operation of the CDM through administrative improvements that would be possible within the existing Marrakech framework.

Presentation (read from left to right)

<p align="center">Seminar of Government Experts: Presentation by Canada</p> <p align="center">Bonn Germany, May 16, 2005 Norine Smith Assistant deputy Minister Global Climate Affairs Environment Canada</p> <p align="right">1</p>	<p align="center">Canada's Commitment to Address Climate Change</p> <ul style="list-style-type: none"> • In April the Government of Canada introduced an updated national climate change plan- <i>Project Green: A Plan for Honouring our Kyoto Commitment</i> • Project Green includes six key elements: <ol style="list-style-type: none"> 1. Harnessing Market Forces – The Climate Fund 2. A Partnership among Canada's Governments – The Partnership Fund 3. Competitive and Sustainable Industry for the 21st Century- Addressing emissions from the Large Final Emitters <p align="right">2</p>
<p align="center">Canada's Commitment to Address Climate Change Con't</p> <ol style="list-style-type: none"> 4. Engaged Citizens – Expansion of the One Tonne Challenge 5. Sustainable Agriculture and Forest Sectors – enhanced carbon sequestration 6. Sustainable Cities – New funds for public infrastructure <p align="right">3</p>	<p align="center">The Need for International Cooperation</p> <ul style="list-style-type: none"> • The Kyoto Protocol is only a first step • The impacts of climate change are increasingly being felt right now • Climate change is a global issue that requires a global response • Canada is committed to a multi-lateral approach • International community must work together to address climate change long after the end of the Kyoto Commitment Period <p align="right">4</p>
<p align="center">The Future</p> <ul style="list-style-type: none"> • We are entering an important new phase in the international effort to address climate change • In Montreal, we need to consider how to build on what we have in a way that is: <ul style="list-style-type: none"> – effective and inclusive – promotes sustainable economic growth – fairly and equitably reflects the diverse circumstances of countries • Many new ideas are emerging • More discussion amongst the Parties is required <p align="right">5</p>	<p align="center">Laying the Foundation for Montreal</p> <ul style="list-style-type: none"> • Canada is hopeful that COP11, COP/MOP1 can lay the foundation for effective and inclusive international cooperation on climate change for the long term that will: <ul style="list-style-type: none"> – achieve the deep reductions in global emissions necessary to avoid the dangerous environmental impacts of climate change as well as adapting to the climate change that is inevitable; and – fairly and equitably reflects the diverse circumstances of the many countries of the world and promotes sustainable economic growth. <p align="right">6</p>

Starting the Dialogue

- Based on initial consultations Minister Dion is asking four central questions:
 - What type(s) of climate change goals would best ensure the necessary deep reductions of emissions while securing sustained economic growth for both industrialized and developing countries?
 - How could the global climate change regime more strongly promote the development and deployment of the needed technologies?
 - How can a global climate regime make the most effective use of market forces and promote a robust and efficient international carbon market
 - How should adaptation to a changing climate be more fully integrated into development policies and funding instruments?

7

Party Views

- Minister Dion is seeking the views of Parties on:
 - The appropriate questions for consideration
 - Potential answers to the questions
- Informal consultations will continue to explore these questions over the coming months.

8

Critical Steps in Montreal

- There is much that needs to be accomplished in Montreal starting with:
 - Successful adoption of draft COP decisions
 - Key steps in operationalizing the Protocol- election of the JI Supervisory Committee, Compliance Committees etc.
- Additional progress needs to be made on:
 - Reaching an agreement on funding issues
 - Other deliverables that would build confidence and demonstrate progress such as administrative improvement to strengthen the CDM
- We seek your views on additional areas where progress can be made

9

Conclusions

- There is much that needs to be accomplished in Montreal
- The challenges ahead are great and they can only be effectively addressed through international cooperation
- If the challenges are to be effectively addressed we must set ambitious goals for Montreal
- We seek your advice and support

10

Japan

Presented by H.E. Mr. Mutsuyoshi NISHIMURA
Ambassador for Global Environmental Affairs
Ministry of Foreign Affairs

Abstract

Japan's position on further international actions on climate change

~ Toward more global and effective undertakings ~

1. The need for further international efforts

- GHG emissions are increasing worldwide. Further increases are expected in the medium and longer term.
- Substantial reductions based upon the precautionary principle are necessary for the stabilization of GHG concentrations. All countries must work harder for this goal.
- Sharing of scientific knowledge on climate change and the pursuit of the ultimate objective (Art.2) of the UNFCCC are the key.
- The Kyoto Protocol is an important first step. Further development and improvement is necessary, building upon the common ground and experiences gained so far.

2. Policies and measures to achieve the existing commitments

- The Government of Japan drew up the Kyoto Protocol Target Attainment Plan.
- Japan will steadily implement GHG reduction measures including efforts to improve energy efficiency.

3. Basic principles for further undertakings

- Each country should take effective measures to achieve global and substantial reduction to realize the ultimate objective of the UNFCCC, under the principle of "common but differentiated responsibilities".
- Global participation must be ensured.
 - Mitigation: Efforts by major emitting countries are important. Contribution to both the environment and economy as well as achieving sustainable development can be the incentive.
 - Adaptation: Adaptation measures for vulnerable countries are particularly important. Adaptation should be integrated and mainstreamed in development policies. Relevant capacity building should also be promoted.

4. Concrete actions to implement the basic principles (with practical examples)

(Development and diffusion of technologies)

- Development and diffusion of innovative technologies
 - What technologies bring substantial reduction?
 - Stronger international cooperation and domestic measures toward substantial, long-term reduction
- Diffusion of existing technologies
 - Sectoral efforts for improving energy efficiency

(Undertakings by each country)

- Further emission reduction efforts by AI countries

Presentation

It is a great pleasure for us to have gathered here today for this seminar with participants from a total of xx countries.

First of all, Co-Chairs, I would like to express my disposition to work with you and with all participating delegations in a most cooperative way so that this unique opportunity be a success.

Yet, I must also say that while we joined this seminar with a great deal of expectations, I must caution that we must be realistic as to the outcome of this seminar.

This is going to be the first of many meetings and seminars ahead. Only further down the road, can we assess the value of our work.

Having said that, and in view of time constraint, let me quickly touch upon some key points of Japan's Kyoto Protocol Target Achievement Plan.

Upon entry into force of the Kyoto Protocol, the GOJ decided on a new implementation plan on April 28, recognizing that the Kyoto Protocol is an important step towards long-term global action.

Basically, what we put forward in this plan is to make sure that we achieve our goal of a 6% reduction through a huge package of myriad measures, through a nation-wide mobilization of all actors and stakeholders, involving national and local governments, local communities, households and ordinary citizens, business and organizations of all sorts.

As you know, Mr. Chair, Japan has spearheaded energy conservation and energy efficiency for long time. We will do this more vigorously.

Japan has been mainstreaming energy saving life-styles and has been heading towards a low carbon society. We will certainly continue this.

Japan has spearheaded science and technology for a long time. We will also do this more energetically.

We have always been the world's front runner in supplying the global market with such key technologies as hybrid cars.

And, we are going to achieve all these objectives so as to ensure a genuine win-win situation between economic growth and environment.

With this implementation plan in order, we are sure we can achieve our target. We will achieve it by monitoring our performance closely and adopting new measures if needed.

Let me now turn to the next item, which addresses the task ahead of us.

While, as I said earlier, I am very cautious as to the outcome of this meeting, from my perspective, this is an important occasion for all of us to recall some hard-pressed truths on the issue in front of us.

--- First, scientific facts compel each passing day and the threat of climate change is real.

---And then, a delay in action would incur more damage and more burdens.

---On this subject, technical innovation is the key. Massive investment on technology and its transfer and diffusion is increasingly needed.

---And lastly, there is no denying, a widely shared perception is emerging that calls for an effective global action in the soon coming post-Kyoto era.

In short, we need to move, move forward and move forward diligently. For that, we seek dialogue. We seek a frank and free flowing dialogue. For that we are here today.

But this dialogue must be a new dialogue. In our new dialogue, we should be less dogmatic and more pragmatic. It should be more pragmatic based on reality . It should be based on visions rather than fears.

In essence, we have to have a whole new paradigm for the battle against climate change. It must be positivist, encouraging and enabling, caring and truly cooperative. We should be more encouraging and enabling rather than simply imposing cap and punishing if one fails. It must attend to each individual's particular situations.

Therefore, a new dialogue must focus on how best the international community as a whole can effectively combat climate change, reduce green house gases and chart a road-map to a low carbon society. For this purpose, global participation in mitigation and adaptation with the principle of "common but differentiated responsibilities" is essential.

It must, therefore, focus on how all countries can benefit from being part of this new global agenda, how countries should not lose by joining this battle.

All this means that the agenda must be essentially an agenda of sustainable development, feasible, beneficial, cost-effective and truly effective for attaining our common goal.

Before I finish my presentation, let me illustrate some of our basic ideas for our task ahead.

(1)---First, a new agenda must seek to mainstream the ultimate objective of the UNFCCC as spelled out in its art.2.

And this implies for us to have a longer-term perspective rather than a very short term perspective.

And this long-term focus is very important because our aim is not just to reduce those gases, but to build a whole new society of carbon free sustainability.

(2)---Secondly, a new agenda must make sure that achieving targets, whatever they may be, results in more development, more economic opportunities, and more social welfare.

---and a new agenda mustn't punish those who genuinely make efforts but rather reward them with help and assistance, with information and know-how, and with credits and facilities. International cooperation for that purpose certainly has to be further strengthened. For the battle to be won, this must essentially be an enabling institution rather than a punitive mechanism.

(3)---Thirdly, a new agenda must encourage massive international investment on science and technology including those for substantial energy saving. And we must encourage and reward such investment and its transfer to the needed. To create business incentive, institutional reform of CDM as well as promotion of current CDM is important.

(4)Finally, adaptation measures must be further promoted, led by ownership and country-driven initiatives. The current joint effort on the Buenos Aires Programme of Work on Adaptation and Response Measures is expected to pave the ground for long-term actions.

Mr. Chair, thank you for allowing me to make this presentation. I hope this will contribute to our deliberations.

Thank you.

Presentation (read from left to right)

<p>Further international actions on Climate Change ~Toward more global and effective undertakings~</p> <p>For the Seminar of Governmental Experts (16-17 May 2005)</p> <p>Government of Japan</p>	<p>Policies and Measures to achieve Japan's existing commitments</p> <ul style="list-style-type: none">• The Kyoto Target Achievement Plan<ul style="list-style-type: none">– Simultaneous Pursuit of environment and economy– Promotion of technological innovations– Participation and cooperation by all parties– Utilising a variety of policies and measures– Evaluation and reviewing process– International cooperation
<p>Future International Actions on Climate Change</p> <p>Toward more global & effective undertakings</p>	<p>CRUCIALLY IMPORTANT:</p> <ol style="list-style-type: none">1. Mainstreaming, ---stabilization (UNFCCC Art.2) and, ---low carbon future.2. All major emitters taking effective long-term measures to reduce emissions.3. Shifting to encouraging and enabling environment by, among others; ---investing massively in innovative technologies, and R&D-D. ---giving business more incentive to drive technology diffusion : institutional reform of CDM, promotion of current CDM ---meeting each emitter's requirements4. Support for adaptation effort.

**Supporting material on the presentation from Japan can be found at:
<unfccc.int>**

Morocco

Presented by Mr. Taha BALAFREJ

Directeur du partenariat

de la coopération et de la communication

Ministère de l'aménagement du territoire,

de l'eau et de l'environnement

(For English version consult CD-ROM or website)

Abstract

Notre action

Le Maroc a ratifié la Convention Cadre des Nations Unies sur les Changements Climatiques (CCNUCC) en 1995, et le protocole de Kyoto en 2002 et a abrité la COP7 à Marrakech.

Présenté sa Communication Nationale Initiale en 2001 et prépare sa Seconde Communication Nationale.

La CNI a démontré une grande vulnérabilité du pays face aux CC, notamment dans deux secteurs clés de l'économie nationale que sont les ressources en eau et l'agriculture.

Dans cette CNI, une douzaine de projets d'adaptation ont été identifiés. Certains sont en cours de réalisation et d'autres font l'objet de prospection de financement.

Le Maroc fait partie des pays qui ont cru très tôt dans le Protocole de Kyoto.

Pour mieux répondre à ses besoins en développement durable et pour contribuer à l'effort d'atténuation des pays industrialisés par ce mécanisme, le Maroc a rempli toutes les conditions et dispose d'un portefeuille de projets MDP permettant de réduire des quantités importantes de Gaz à effet de serre. Il a également tissé des relations de coopération avec divers pays développés, pour atteindre les objectifs de notre convention multilatérale à travers des relations bilatérales renforcées.

Nos attentes

Comme tous les membres de la communauté internationale de plus en plus consciente des dangers du changement climatique, le Maroc estime que les efforts qui sont menés restent en deçà du seuil permettant la tranquillité sur l'avenir de notre planète.

Les discussions de ce séminaire devront éclairer l'avenir de notre processus. La communauté internationale attend une riposte multilatérale, capable d'accélérer la réduction des Gaz à effet de serre, en consolidant les acquis et l'expérience du Protocole de Kyoto.

Sur la base des différentes conclusions scientifiques du GIEC, le Maroc soutiendra toute proposition visant à contenir le réchauffement mondial de manière substantielle, et estime qu'il est temps de réfléchir sur les moyens d'y parvenir. Compte tenu de la responsabilité historique des pays industrialisés et afin que le respect de cet objectif ne ruine pas les perspectives de développement des pays en développement, une entente entre les pays

industrialisés, tous les pays industrialisés, pour un engagement fort, est souhaitable. Et le plus tôt serait le mieux.

Des préoccupations sérieuses sont exprimées par les représentants des milieux d'affaires sur le devenir de leurs activités économiques et financières dans un monde globalisé mais perturbé par les changements climatiques. Nous devons en faire nos alliés pour notre réussite. Dans ce sens, une implication plus grande dans les étapes à venir de notre processus des ministres en charge de l'économie serait un atout de grande importance.

Nous devons également rendre notre processus moins compliqué et moins laborieux. L'initiative commencée lors de la COP10 pour l'amélioration du fonctionnement de notre convention devrait être poursuivie afin d'aboutir à un système plus souple, moins fastidieux et tenant compte davantage des préoccupations et attentes des pays en développement.

A ce propos, les procédures régissant le MDP gagneraient à être allégées. Notre Autorité Nationale Désignée a toutes les peines à expliquer ces procédures et susciter l'intérêt des partenaires marocains. Il devient urgent d'améliorer le fonctionnement du Conseil Exécutif qui se trouve aujourd'hui au centre d'intérêts économiques et financiers grandissants. Dans le même cadre et pour une plus grande équité, une répartition régionale plus équilibrée des Entités Opérationnelles Désignées est souhaitable, ainsi que le renforcement des capacités des experts des pays en voie de développement en matière de MDP.

L'ère qui s'ouvre devant nous doit aussi être celle de plus d'efforts pour l'adaptation. Une plus grande prise en compte des projets des pays en développement identifiés dans le cadre de leurs communications nationales initiales est indispensable. Dans ce sens, nous appuyons le plan de Buenos-Aires et espérons voir ses orientations sur ce volet développées et concrétisées. Nous estimons également que les fonds mis en place à ce jour pour accompagner cet effort devraient être rapidement opérationnels et pourvus de ressources financières suffisantes.

A partir de ce séminaire, nos gouvernements doivent tracer le cadre futur de leur action collective pour une vision politique claire. C'est la condition pour mobiliser tous les acteurs sociaux et économiques vers la réussite dans notre lutte contre le changement climatique.

Presentation

Notre action

Depuis le Sommet de la terre de 1992, le Maroc a pris part de façon active et régulière aux efforts internationaux visant la protection du climat planétaire. Ainsi le Maroc a ratifié la Convention Cadre des Nations Unies sur les Changements Climatiques (CCNUCC) en 1995, et le protocole de Kyoto en 2002 et a abrité la COP7 à Marrakech.

Dès la ratification de la Convention, le Maroc a mis en place les structures en charge des CC. Il a préparé sa Communication Nationale Initiale et l'a présentée lors de la COP7.

Les résultats de l'inventaire en GES attestent de la très faible contribution du Maroc aux émissions mondiales en GES (moins de 2 Teq CO₂/hab./an). Cela n'a pas empêché notre pays de lancer des actions concrètes en matière d'atténuation des émissions en GES : préparation de projets d'économie et de maîtrise d'énergie, efforts de promotion des Energies Renouvelables.

En revanche, la CNI a démontré une grande vulnérabilité du pays face aux CC, et le besoin d'une politique forte d'adaptation. Cette vulnérabilité a été mise en relief pour deux secteurs clés de l'économie nationale que sont les ressources en eau et l'agriculture.

Dans cette CNI, le développement des scénarios climatiques pour le Maroc selon la méthodologie du GIEC a donné des résultats particulièrement sévères. Si rien n'est fait à l'échelle planétaire, le Maroc connaîtra, à l'horizon 2020, une augmentation de la température moyenne annuelle, comprise entre

0.6°C et 1.1°C, et subira une réduction moyenne du volume annuel des précipitations de l'ordre de 4% par rapport à l'année 2000.

Ainsi, l'impact possible des CC sur les ressources en eau en 2020 serait une baisse moyenne et générale de l'ordre de 10 à 15%, et sur l'agriculture en 2020, une réduction des rendements des céréales serait de 50% en année sèche et de 10% en année normale.

Dans cette CNI, une douzaine de projets d'adaptation ont été identifiés. Certains sont en cours de réalisation et d'autres font l'objet de prospection de financement.

Conformément aux dispositions de la Convention, le Maroc tient à rendre compte à la Communauté Internationale, de manière régulière et continue, des actions entreprises par le pays pour s'acquitter de ses obligations vis-à-vis de la CCNUCC. Dans ce sens, le Maroc a démarré sa Seconde Communication Nationale en avril 2005. Elle permettra de renforcer les capacités techniques et institutionnelles du Maroc en vue d'intégrer les préoccupations liées aux changements climatiques dans les priorités nationales et sectorielles de développement. Aussi, elle s'inscrit dans la continuité des actions déjà initiées afin de compléter et améliorer les études de vulnérabilité et adaptation ainsi que l'évaluation du potentiel d'atténuation des émissions en GES.

Le Maroc fait partie des pays qui ont cru très tôt dans le Protocole de Kyoto. Les Accords de Marrakech, obtenus dans un contexte politique difficile, ont ouvert la voie à l'entrée en vigueur de ce Protocole. L'histoire retiendra particulièrement les décisions qui ont facilité le lancement rapide du Mécanisme pour un développement propre, un mécanisme exemplaire de partenariat Nord-Sud pour le développement durable.

Pour mieux répondre à ses besoins en développement durable et pour contribuer à l'effort d'atténuation des pays industrialisés par ce mécanisme, le Maroc a rempli toutes les conditions et dispose d'un portefeuille de projets MDP permettant de réduire des quantités importantes de Gaz à effet de serre. Il a également tissé des relations de coopération avec divers pays développés, pour atteindre les objectifs de notre convention multilatérale à travers des relations bilatérales renforcées. Nos attentes Comme tous les membres de la communauté internationale de plus en plus consciente des dangers du changement climatique, le Maroc estime que les efforts qui sont menés restent en deçà du seuil permettant la tranquillité sur l'avenir de notre planète.

Les discussions de ce séminaire devront éclairer l'avenir de notre processus. La communauté internationale attend une riposte multilatérale, capable d'accélérer la réduction des Gaz à effet de serre, en consolidant les acquis et l'expérience du Protocole de Kyoto.

Sur la base des différentes conclusions scientifiques du GIEC, le Maroc soutiendra toute proposition visant à contenir le réchauffement mondial de manière substantielle, et estime qu'il est temps de réfléchir sur les moyens d'y parvenir. Compte tenu de la responsabilité historique des pays industrialisés et afin que le respect de cet objectif ne ruine pas les perspectives de développement des pays en développement, une entente entre les pays industrialisés, tous les pays industrialisés, pour un engagement fort, est souhaitable. Et le plus tôt serait le mieux, à commencer par Montréal. Des préoccupations sérieuses sont exprimées par les représentants des milieux d'affaires sur le devenir de leurs activités économiques et financières dans un monde globalisé mais perturbé par les changements climatiques. Nous devons en faire nos alliés pour notre réussite. Dans ce sens, une implication plus grande dans les étapes à venir de notre processus des ministres en charge de l'économie serait un atout de grande importance.

Nous devons également rendre notre processus moins compliqué et moins laborieux. L'initiative commencée lors de la COP10 pour l'amélioration du fonctionnement de notre convention devrait être poursuivie afin d'aboutir à un système plus souple, moins fastidieux et tenant compte davantage des préoccupations et attentes des pays en développement.

A ce propos, les procédures régissant le MDP gagneraient à être allégées. Notre Autorité Nationale Désignée a toutes les peines à expliquer ces procédures et susciter l'intérêt des partenaires marocains. Il devient urgent d'améliorer le fonctionnement du Conseil Exécutif qui se trouve aujourd'hui au centre d'intérêts économiques et financiers grandissants. Dans le même cadre et pour une plus grande équité, une répartition régionale plus équilibrée des Entités Opérationnelles

Désignées est souhaitable, ainsi que le renforcement des capacités des experts des pays en voie de développement en matière de MDP.

L'ère qui s'ouvre devant nous doit aussi être celle de plus d'efforts pour l'adaptation. Une plus grande prise en compte des projets des pays en développement identifiés dans le cadre de leurs communications nationales initiales est indispensable. Dans ce sens, nous appuyons le plan de Buenos-Aires et espérons voir ses orientations sur ce volet développées et concrétisées. Nous estimons également que les fonds mis en place à ce jour pour accompagner cet effort devraient être rapidement opérationnels et pourvus de ressources financières suffisantes.

A partir de ce séminaire, nos gouvernements doivent tracer le cadre futur de leur action collective pour une vision politique claire. C'est la condition pour mobiliser tous les acteurs sociaux et économiques vers la réussite dans notre lutte contre le changement climatique.

India

Presented by Mr. Surya P. SETHI
Adviser (Energy) Planning Commission
Government of India

Abstract

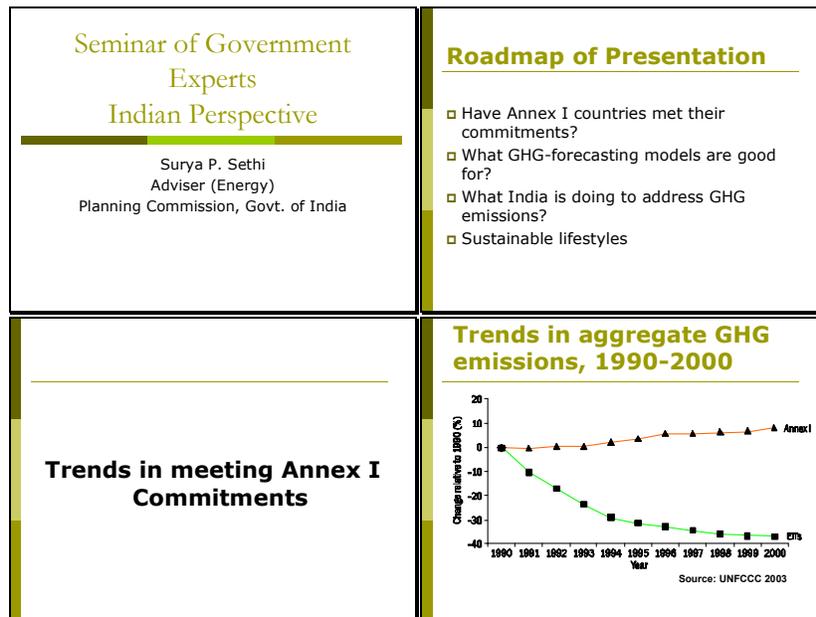
Annex II Parties' commitments have not been met and emissions are still rising. The transfers of finance/technology are minimal.

Numerical forecasts of relative or absolute growth in GHG emissions from models vary widely and hence cannot drive policies. However, qualitative insights if replicated by a range of models are useful.

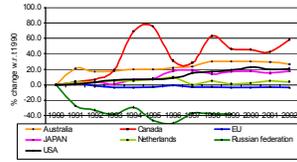
Low per-capita GHG emissions in India are due to sustainable lifestyles & not poverty alone.

India is doing enough in mitigation of GHGs. Technological and Financial barriers to achieving identified energy initiatives must be removed.

Presentation (read from left to right)



Trends of CO₂ Equivalent Emissions



Sharp decrease for Russian Federation
Essentially flat for EU-15
Significant increase for Australia, Canada, Netherlands, Japan, USA

Transfer of finance

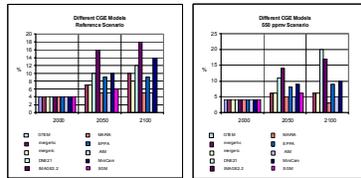
- GEF allocation during 2nd replenishment period USD 648.31 mn
 - Against a pledge of USD 2750 mn
- Co-financing ratio of 4.7:1 (in 279 GEF climate change projects). However all co-financing:
 - Not "new and additional" finance
 - Often sourced from host country
- Only 7.2% of bilateral ODA commitment of DAC of OECD for climate change between 1998-2000

Transfer of technology (TT)

- National communication reporting of technology transfer
 - Very few examples of actual successful "hard" TT
 - Information networks, capacity building reported as TT
 - Programmes reported include those for improving trade relations (e.g. Asia Eco-best, TACIS)
- Commercial sales equated with technology transfers

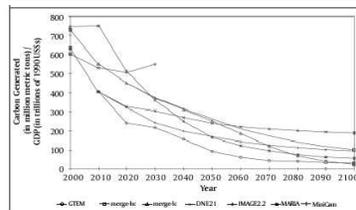
Forecasts Using CGE Models

Different CGE Models run with same scenarios give widely varying results (e.g. Indian share of global emissions)



Source: Weyant & Parikh, 2004

Qualitative result: carbon intensity of GDP for India



Source: Weyant & Parikh, 2004

India's Initiatives

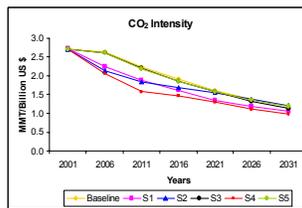
Key Energy Programmes and policies

- Improving energy efficiency
- Promoting hydro and renewable energy
- Power sector reforms
- Promotion of clean coal technologies
- Energy and infrastructure development
- Coal washing
- Cleaner and lesser carbon intensive fuel for transport
- Environmental quality management

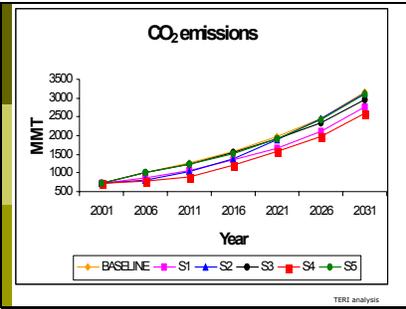
India's Energy Policies: Scenarios simulated by MARKAL (2001-2036)

- **Baseline (BAU Without Energy Initiatives):**
Base year 2001, GDP growth 8%, IPCC emissions factors, Official demographic projections, 8% discount rate
- S5: Baseline with GDP growth 6.7%
- **Energy Scenarios with baseline assumptions**
- S1: Cleaner fuels for power generation
- S2: Electricity for all by 2012, decentralized renewable options efficient cook stoves
- S3: 20% increase in share of public road transport
Greater CNG use in buses, taxis, 3-W vehicles
- S4: S1+S2+S3

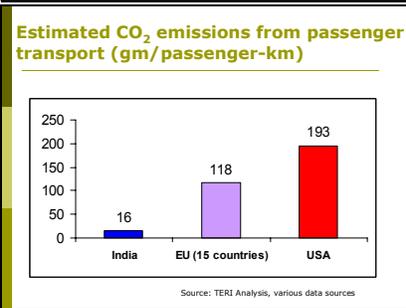
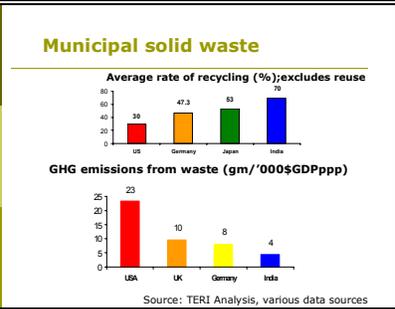
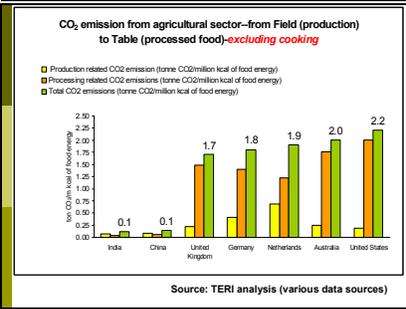
Change in India's CO₂ intensity as a result of Government policy initiatives



TERI analysis



Lifestyle Differences



Conclusions

- Annex I I commitments not met – emissions still rising, transfers of finance/technology minimal.
- Numerical forecasts of relative or absolute growth in GHG emissions from models vary widely and hence cannot drive policies
- However, qualitative insights if replicated by a range of models are useful
- Low per-capita GHG emissions in India are due to sustainable lifestyles & not poverty alone
- India is doing enough in mitigation of GHGs. Technological and Financial barriers to achieving identified energy initiatives must be removed

Q&A

Question and answer session (Based on the presentations by Canada, Japan, Morocco and India)

A complete coverage of the question and answer session that took place after the presentations by experts from Canada, Japan, Morocco and India can be found at unfccc.int

Issues raised during the discussion included the increase of emissions in Annex I Parties, effective options for technology transfer through the clean development mechanism and other institutions, and business confidence in the context of dealing with climate change commitments.

On the issue raised in one of the presentations on the increase of emissions in Annex I countries, participants were told that there are many policies and measures adopted by the European Union that are delivering real emission reductions, including the recently launched European Union Emissions Trading Scheme. It was also noted that these measures are being implemented according to the objectives of the World Summit on Sustainable Development, in that they deal with sustainable energy consumption and production and energy for the poor. It was also pointed out that emission reductions in countries with economies in transition were due to economic recession during the process of transition to a market economy in these countries and that more than 50 per cent of the reductions were achieved through strong policies and measures such as privatization and liberalization of the electricity markets. In other countries one third of the overall emission reductions resulted from a shift in energy use to natural gas.

One participant stressed the importance of adopting sustainable patterns of consumption and production, highlighting the historical contribution by developed countries to the climate change problem.

Several participants addressed seeking new, innovative ways of dealing with climate change, the need for clear, long-term frameworks to drive investment by the private sector in cleaner technologies, and what elements in the Kyoto Protocol could be used for the future climate change regime. One expert suggested that certain technologies be moved into the public domain, given that the pace of commercially driven technology transfer is not sufficient to deal with the climate change problem, and called for the seminar to focus on the efforts made by Annex I Parties and their results to this end.

Others stressed the importance of strengthening the multilateral approach in dealing with climate change. An expert acknowledged that there are many similarities in the ways Parties deal with climate change despite differences in national circumstances. It was also proposed that there is a need to continue exchanging ideas on the role of the subsidiary bodies now that the Kyoto Protocol has entered into force.

Discussions also centered on how some countries are cooperating with the business community to implement the Kyoto Protocol, especially on the issues of providing certainty and business confidence after 2012 and time frames for setting long-term frameworks for business investments. One expert requested clarification on how the CDM will be applied in reducing 2 per cent of the emissions reduction target in European Union countries. On the CDM itself, it was pointed out that it is an important mechanism for developing countries to participate in the UNFCCC. However, there was a bottleneck as far as the number of projects submitted to the Executive Board was concerned and an equitable regional distribution of projects, given that Africa was grossly under represented. One expert noted that the business community in Japan was committed to supporting the implementation of the Kyoto Protocol and that there exists a good dialogue between the government and business and all major utilities in implementing several types of voluntary programmes. Another informed the seminar that Canada has had consultations with many climate change stakeholders

including the business community for more than 10 years and that consultations with business have become more intensive during the past two years. As a result of these consultations new approaches to dealing with climate change have been adopted, and the emissions intensity approach is being used to account for the differences in the emission sectors and their growth rates. The question of providing certainty for long-term business operations in the context of dealing with climate change is also being addressed.

Session Five

**PRESENTATIONS OF EXPERTS
IN CHRONOLOGICAL ORDER**

(Tuesday 17 May am)
Papua New Guinea
(in cooperation with the Republic of Congo)
Mexico
Australia
France¹

Question and answer session

¹ On behalf of the European Community and its member States

Papua New Guinea

(In cooperation with the Republic of Congo)

Presented by H.E. Mr. Robert G. AISI

Ambassador

Permanent Representative

Mission of Papua New Guinea to the United Nations

Presentation

Introduction

Let me open by highlighting a portion of the UN Secretary General's Report, titled '**In Larger Freedom**'ⁱ where he notes '*the greatest environmental and developmental challenge of the 21st Century will be that of controlling and coping with climate change.*'

I also refer to the Millennium Development Goals – and especially Goal #7, which addresses '*Environmental Sustainability*', a goal noted for underpinning all of the other MDGs. The purpose of this seminar is to facilitate open and frank dialogue. The concern for climate change is not a matter limited to either developed countries or Developing countries – but is important to all of us. In the spirit of these discussions, we seek to present a proposal related to tropical forests which could impact over 2.7 billion people in more than 60 developing nations.ⁱⁱ

PNG Overview

But let me start by telling you a little about my country: Papua New Guinea is truly a global treasure – there is no other place like it on earth! But as UN Ambassador, I may be just 'slightly' biased!

- ▶ Papua New Guinea is a land of tremendous diversity. Our country has 832 living languages - not dialects, but languages - more than any other country in the world. We also have tremendous biological diversity - with over 750 bird species and the greatest floral richness of any island on the planet.

- ▶ As a Small Island Nation, our country is, like many other countries, already feeling the adverse effects of climate change, including the terrible consequences of sea level rise.

The island of New Guinea has the world's third largest rainforest, after Amazonia and the Congo. However, our rainforests are under pressure from deforestation.

The Kyoto Dilemma

The IPCC concluded that during the 1990's an estimated 20-25% of global annual greenhouse gas emissions came from land use and land use change – primarily from degradation of tropical forests.ⁱⁱⁱ In our view, this obligates countries like mine to consider our own responsibilities with regard to emissions. This causes a dilemma: Kyoto does not allow developing nations that voluntarily reduce deforestation emissions to get credit. Kyoto unfairly discriminates against rainforested developing nations who seek to participate within the world carbon market.

Tropical rainforest nations deserve to be treated equally. If we reduce our deforestation, then we should be compensated for these reductions – as are industrial countries. The compensation we seek is access to the world's carbon markets, but on a **fair and equitable** basis. Access to those markets

would facilitate development and alleviate poverty – especially in the rural areas where the majority of our people live and who legally own the resources, as guaranteed by our National Constitution.

Proposals for the Path Forward

So the question for today remains: how do we resolve this dilemma? So we pose the following options for consideration and to facilitate meaningful dialogue:

1. *Marrakesh*: Should we review or modify the Marrakesh Accords?

2. *Annex B*: Should developing nations with rainforests give notification under UNFCCC Article 4.2(g) – subject to more ‘appropriate’ LULUCF capping allowances?

3. *Amend*: Should we amend the KP to include tropical deforestation? In our view, to remain effective, the Kyoto Protocol must remain dynamic. We must encourage and consider thoughtful and pro-ACTIVE amendments as we consider the future.

4. *Optional Protocol*: However, for those against amendment of Kyoto, should we develop an Optional Protocol on deforestation under the UNFCCC which is linked to and complements the Kyoto Protocol? In our view, an Optional Protocol would allow a subset of forwardlooking nations, both industrial and developing, to forge a path based upon experience which would then provide a sound basis for a more inclusive and effective climate regime going into the future. The lessons learned from such an Optional Protocol could then be incorporated within future KP commitment periods.

Furthermore, we seek to open dialogue on issues which may have been impediments in the past. While there are many technical issues – there are answers! And so we say:

► *Additionality*: We believe that by establishing national deforestation baseline rates, the effectiveness of efforts to reduce deforestation can be judged quickly and accurately. Using these baselines, we can determine, at a national level, whether deforestation has in fact been reduced from historical levels. But such baselines must underpin clear TARGETS, and not be speculative.

► *Leakage*: We believe that by addressing deforestation on the National level, it will be possible to capture the leakage that can occur at the level of individual projects.

► *Permanence*: We suggest the establishment of a carbon banking mechanism that credits early action and debits compliance failures. We also suggest leveraging the insurance markets to address traditional risks such as fire, flood, etc.

► *Trading*: When it comes to trading, a ‘ton is a ton is a ton.’ **Protecting a rainforest – that was otherwise going to be destroyed – avoids emissions no less than cleaning up a dirty electric power plant.** Rainforest protection credits must be fully tradable in the international emissions trading system.

Conclusions

In closing, I must defer to the wisdom of our Seminar Co-Chairs. As H.E. Minister Jürgen Tritten stated yesterday, the problem of climate change provides an opportunity to pursue numerous alternatives towards its mitigation. We respectfully put forth such an alternative.

Additionally, we agree with the observation of H.E. Minister Gonzales Garcia: distrust between industrialized and developing nations has indeed been an impediment. But as he also pointed out, climate change will impact our 'common destiny,' therefore, we must all heed his call to remain open to all alternatives when dealing with this serious issue! Furthermore, a recent report from the Commission of the European Communities titled '**Winning the Battle against Global Climate Change**' recommended that '*devising incentives for developing countries to take part in international emissions reductions may ... achieve wider participation...*' The Commission also determined that '*a fresh look will have to be taken at how to halt deforestation of the world's forests.*'^{iv} **We encourage the European Commissions leadership in this regard and hope such momentum will lead to the development of meaningful new mechanisms!**

Accountability: For our part, as a developing nation, **we stand prepared to be accountable** for our contributions toward global climate stability. And in this regard, let me again highlight the IPCC's conclusions on rainforests. With candid introspection, we humbly ask: can we be responsible global citizens and NOT directly confront this issue?

Full Participation: Lasting climate stability cannot be achieved with over **half of the world sitting on the sidelines** and over 50% of global emissions being unregulated. For the future, emissions reductions must be a GLOBAL commitment.

What we are proposing, in effect, is simply that the UNFCCC be thoughtfully employed toward an '*Environmentally Sustainable Developmental Finance Mechanism.*' Properly harnessed, the carbon emissions markets can monetize our environmental resources and capitalize our sustainable development.

Next Steps

Papua New Guinea invites others at this Seminar to join with us in forming a '**Coalition for Rainforest Nations**' – industrial and developing nations alike.

Time is short! We must act now! We cannot wait until post-2012 to begin seriously addressing this matter. An Optional Protocol may offer a meaningful way forward.

Together we can ensure that nations that begin today to reduce destruction of the world's rainforests while contributing to climate stability will get fair and just compensation - in the form of tradable emissions credits.

Rainforest nations are facing tremendous deforestation pressures. We want this squarely on the table at COP-11/ MOP-1 in Montreal. We need your help!

In closing, let me recall Benjamin Franklin's observation during the occasion of the signing of the United States Declaration of Independence: I quote: '**Indeed we must all hang together, or most assuredly, we will all hang separately!**'

Surely this must be the case when dealing with the issues of global climate change!

THANK YOU!

Footnotes

- i) In Larger Freedom: towards development, security and human rights for all. Report of the Secretary General, United Nations, March 2005
- ii) World Resources Institute, Tropical Forests and World Bank, Population Figures, compiled by Kevin Conrad
- iii) Intergovernmental Panel on Climate Change, Special Report: Land-Use, Land-Use Change and Forestry, Summary for Policy Makers, 2000
- iv) 'Winning the Battle Against Global Climate Change', Pages 5, 8-9, Commission of European Communities 2005

Presentation (read from left to right)

 <h2 style="text-align: center;">Climate Change Kyoto and Beyond</h2> <p style="text-align: center;">H.E. Robert G. Aisi Ambassador / Permanent Representative Mission of Papua New Guinea to UN UNFCCC Seminar of Governmental Experts Bonn, May 16-17 2005</p>	<h3>PNG Forests</h3> <ul style="list-style-type: none"> Forests: The island of New Guinea has the world's third largest rainforest, after Amazonia and the Congo. Our rainforests are under pressure from deforestation Land Use Change: The IPCC has concluded that during the 1990's an estimated 20-25% of global annual greenhouse gas emissions came from land use and land use change - primarily from degradation of tropical forests 
<h3>Papua New Guinea</h3> <ul style="list-style-type: none"> Diversity: PNG is a land of tremendous diversity <ul style="list-style-type: none"> 832 living languages - not dialects, languages - more than any other country in the world. Tremendous biological diversity - with 750 bird species and the greatest floral richness of any island on the planet. Climate: As a Small Island Nation, we will feel the adverse effects of climate change, including the terrible consequences of sea level rise 	<h3>The Kyoto Dilemma</h3> <ul style="list-style-type: none"> KP Exclusion: Kyoto does not allow developing nations that reduce deforestation emissions to get credit. Kyoto unfairly excludes and discriminates against these nations in the world carbon market Market Access: Tropical rainforest nations deserve to be treated equally. If we reduce deforestation, fairly compensated for reductions. Need market access. 
<h3>Proposals for Path Forward</h3> <ul style="list-style-type: none"> Marrakesh: Review/modify the Marrakesh Accords Annex B: Developing nations with rainforests to give notification under UNFCCC Article 4.2(g) for 'Kyoto Protocol Annex B' status – subject to 'appropriate' LULUCF allowances Amend: Kyoto Protocol must remain dynamic. Consider amendments. Optional Protocol: Develop an Optional Protocol on deforestation which is linked to and complements the Kyoto Protocol 	<h3>Proposals for Path Forward</h3> <ul style="list-style-type: none"> Additionality: Establish national deforestation baseline rates Leakage: Address forestry-sector on a National level to offset the risk of leakage between projects Permanence: Develop a carbon banking mechanism that credits early action and debits compliance failures Trading: International emissions trading system for trading credits issued against avoided forest emissions 
<h3>Conclusions</h3> <ul style="list-style-type: none"> Accountability: We stand prepared to be accountable for our contributions toward global climate stability Full Participation: Lasting climate stability cannot be achieved with over half of the world sitting on the sidelines and over 50% of global emissions being unregulated Development Finance: Emissions markets can monetize environmental assets and capitalize sustainable development – fair carbon trade before aid! 	<h3>Conclusions: Next Steps</h3> <ul style="list-style-type: none"> Coalition: Papua New Guinea invites others at this Seminar to join with us in forming a "Coalition for Rainforest Nations" Act Now: Given today's rates of deforestation, we CANNOT WAIT until 2012 to resolve! COP-MOP1: Rainforest nations are facing tremendous deforestation pressures. We want this squarely on the table at COP-11/COP-MOP.1 We need your help! 

Supporting material on the presentation from Papua New Guinea can be found at: <unfccc.int>

Mexico

Presented by Mr. Fernando TUDELA
Underminister for Planning and Environmental Policy
SEMARNAT

Abstract

As a developing country, Mexico adopts poverty eradication as an absolute priority, and avoids policies that may jeopardize economic growth. As such, climate change is both a threat and an opportunity to foster sustainable development, insomuch as risks associated with climate change itself and with potential response measures (given that Mexico is an oil exporting nation), can be avoided.

Mexico's policy on climate change is a staged response, in which the consolidation of national capacities (institutions, legal framework, actions, monitoring and evaluation) is achieved step by step. For example, while the Climate Change Office was set up in 2003 and the Inter-Ministerial Climate Change Commission established in April 2005, the Law on Renewable Energy is still being drawn up.

National capacity building evolves around seven functional clusters, of which the first, the preparation of GHG Inventories and National Communications, is crucial for all the rest, as monitoring progress on prevention and mitigation requires reliable baselines. Formulating policies, coordinating actions, R & D, promoting mitigation projects (AIJ, CDM), the participation of civil society and effective participation in climate change negotiations, constitute the other six functional clusters.

Among the concrete measures implemented by Mexico, PEMEX has instituted a virtual cap and trade on CO₂ emissions unparalleled elsewhere, which is in the planning stages of becoming a real exchange process. Mexico was also the first Non-Annex I country to produce a second National Communication, in 2001. At present, a new GHG Inventory and a new National Strategy for Climate Action – this last in collaboration with the Mario Molina Center – are both in progress, and expected to be published late in 2005. A third National Communication will be published late in 2006.

Mexico, like other Latin American countries, supports the CDM, but considers that while useful for inducing positive institutional arrangements, it has largely failed to live up to expectations: Its effectiveness is perceived as relatively poor, its transaction costs are high and it has the potential to become a perverse incentive, limiting developing countries' mobilization of their own full potential, when improved national legislation and policies threaten to undermine the requisite proof of additionality for individual CDM projects.

Mexico's medium to long term strategy on climate change embraces several conceptual standpoints, including the need for greater differentiation of responsibilities among advanced developing nations. Also, while other Parties' non-compliance should not affect Mexico's own compliance, it could affect the scope of its commitments. Nevertheless, Mexico is against sanctions for non-compliance. While Mexico foresees some limited success in mitigation achievements, it will require international support to go beyond these: Mexico considers that over-compliance should win compensation.

Equity concerns are essential to Mexico, and per capita emissions and their

evolution should play a more central role in the international regime, on the basis of flexible convergence in accordance with national circumstances. Furthermore, a need to go beyond isolated projects to tackle entire sectors of the economy, in accordance with their readiness to act, is also essential. There is also a need to review the potential effectiveness of the “emissions intensity” approach, which may be less effective when compared with the carbon efficiency standards per unit of product or service approach.

Presentation (read from left to right)

	<p>As a developing country, Mexico:</p> <ul style="list-style-type: none"> adopts poverty eradication as an absolute priority avoids policies that may jeopardize development/ economic growth perceives climate change as both a threat and an opportunity to foster sustainable development is risk-averse [climate change impacts/ response measures]
<p>Climate Action</p> <ul style="list-style-type: none"> Strengthening national capacities is the foundation for improved output in terms of GHG emissions Setting up institutions <ul style="list-style-type: none"> Administration Law / Regulations Functional clusters <p>→ A step-by-step process involving subsequent cycles: capacity/ P & Ms/ actions/ monitoring/ evaluation</p> 	<p>Institutional Development</p> <ul style="list-style-type: none"> Office of Climate Change at SEMARNAT (2003) Intersectoral Committee for Climate Change Mitigation Projects (NDA) (early 2004) Climate Change Committee for the Energy Sector (February, 2005) InterMinisterial Climate Change Commission: April 25, 2005 Law on Renewable Energy (in progress)
<p>Seven Functional Clusters</p> <ol style="list-style-type: none"> Preparation of GHG inventories & Nat'l Coms Formulation of CC policies (incl. reporting, monitoring, assessment) Intersectoral, multilevel coordination Research & Development on CC Promotion & control of mitigation projects (AIJ, CDM); adaptation projects Participation of civil society in CC policies (business, NGOs, other stakeholders) Effective participation in CC negotiations 	<p>Functional Development I</p> <ul style="list-style-type: none"> Virtual Cap & Trade for CO₂ throughout the Oil & Gas sector (PEMEX, the State monopoly) Workshops promoting CDM in different States Governmental promotion of the GHG Protocol (WRI/ WBCSD): setting up of two pilot groups of public and private enterprises, including entire productive sectors First Non-Annex I country to produce a Second National Communication (2001)
<p>Functional Development II</p> <p>Currently working on:</p> <ul style="list-style-type: none"> A new Inventory of GHG Emissions from all sectors (ready: end 2005) New National Strategy for Climate Action, in collaboration with the Mario Molina Center and academic / business institutions (ready: end 2005) Third National Communication (published: end 2006) 	<p>CDM: a failed opportunity?</p> <ul style="list-style-type: none"> In Latin America CDM induced positive institutional arrangements CDM has not lived up to expectations so far Areas of dissatisfaction in Mexico: <ul style="list-style-type: none"> CDM unable to strike an adequate balance between effectiveness and environmental integrity Crippling transaction costs Insufficient flow of approved methodologies/ projects CDM may become a perverse incentive preventing developing countries from mobilizing its own potential to a full extent

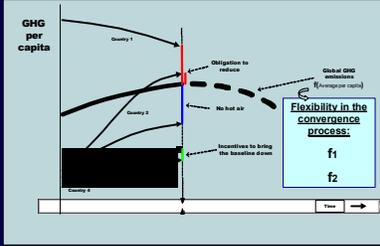
Some conceptual standpoints I

- **Short term / long term**
Current action is framed by some vision of what might be the medium / long term evolution of the international climate regime
- **Advanced developing countries**
In the context of *common but differentiated responsibilities*, further differentiation among developing countries should be effected
- **Inaction**
Other Parties inaction or non-compliance should not be an excuse for not carrying out one's own best efforts. It may however affect nature and scope of commitments

Some conceptual standpoints II

- **Action / commitments**
For the scope of meeting the ultimate objective of UNFCCC, progressive climate action is more significant than the adoption of legally binding commitments, especially if the latter are limited to ensure compliance
- **Compliance**
Buying in external carbon markets or facing sanctions for non-compliance would be socially /politically unacceptable
- **Equity**
Equity concerns: essential. Per capita emissions and their evolution should play a more central role in the international regime
- **Flexibility**
National circumstances; differentiated needs. Flexible convergence of per capita emissions

Evolution of GHG emissions & commitments



To be discussed...

- **Types of commitments**
Binding vs non-binding; Pledge & Review...
- **Commitment contents**
 - From projects to entire economic sectors
 - P & M, CC / Environmental Regs
 - Dynamic targets:
GHGs / GDP; *may be flawed*
 - Carbon efficiency standards:
GHGs / ton of cement, steel, Al, thermal KWh, ton road freight, etc
 - Incentives for overcompliance



Australia

Presented by H.E. Ms. Jan ADAMS
Ambassador for the Environment
Department of Foreign Affairs
and Trade

Presentation

Dear co-chairs and fellow seminar participants,

Australia views climate change as a serious problem that warrants a long-term commitment to substantive action.

There is clear scientific evidence that the global climate is warming, and that greenhouse gas emissions and their radiative forcing have continued to increase as a result of human activities.

Further observations and modelling are required to reduce scientific uncertainties. Even so, it seems that some regions will warm faster than others and that extreme weather events may intensify in the future.

Australia, as the inhabited continent with the driest and most variable climate, is particularly vulnerable to climate change. Many natural and human systems and economic activities in Australia are vulnerable to the potential impacts of climate change. Shifting rainfall patterns, for example, could severely impact our agricultural and livestock production.

Moreover, according to our modelling and due to our national characteristics, the negative impacts of climate change on Australia are likely to be felt at a lower increase in temperature than in other regions of the globe.

The Australian Government is therefore working assiduously to address climate change nationally through both efforts to reduce greenhouse gas emissions and to adapt to the unavoidable impacts of climate change.

Key elements of our mitigation policies and measures in Australia include:

- over 1.8 billion dollars committed to measures, including half a billion dollars to seed finance the development of low-emission technologies;
- encouragement of greater energy and industrial efficiencies;
- regulation to ensure a sharp reduction of land clearing rates; and
- support for renewable energy, including the world's first mandatory renewable energy target and more than half a billion dollars in direct funding support.

As a result of these domestic mitigation policies and measures, our emissions will be 17 per cent lower in 2010 than would have otherwise been the case.

Through these measures, we are preventing the equivalent of 94 million tons of carbon dioxide from entering the atmosphere. This is more than the emissions from our entire transport sector.

Australia's achievement is all the more significant given we are a young and strongly growing nation.

Between 1990 and 2010, the Australian economy is expected to grow by 90 per cent. Yet, by means of domestic policies and measures, we are on track to limit emissions to our target agreed at Kyoto.

Indeed, greenhouse gas emissions per dollar of real GDP is set to decline by an impressive 43 per cent from 1990 to 2010.

Similarly, Australia's population is one of the fastest growing in the developed world, yet emissions per capita are set to decline by 14 per cent between 1990 and 2010.

It is worthwhile noting that Australia is one of the world's great commodity providers. These commodities provide vital inputs for other countries that do not have to account for the greenhouse emissions associated with their production.

But Australia's efforts alone to mitigate emissions will not make much difference to overall global concentrations of greenhouse gases.

The magnitude of the global challenge is huge.

Notwithstanding the efforts we have all made to constrain greenhouse gas emissions, global emissions are expected to be some 40 per cent higher in 2010 than in 1990.

Global greenhouse gas emissions will continue to rise at a rapid and unsustainable pace without renewed and concerted action and cooperation by all of us, but particularly by the major emitters, the top dozen of which produce over three-quarters of global emissions.

The core problem is how to satisfy growing global energy demands while recognizing that any stabilisation of greenhouse gas concentrations in the atmosphere requires steep cuts in global emissions.

There are some fundamental truths. The energy sector produces the bulk of global emissions already and global energy demand will continue to rise strongly this century in line with much welcome global development.

The development, diffusion and uptake of new low-carbon technologies, fuel switching and effective energy efficiency policies and measures will be essential elements in providing for the long-term solution to global reductions in greenhouse gas emissions.

This view was endorsed Energy and Environment Ministers from twenty of the largest emitting nations earlier this year in a roundtable hosted by the United Kingdom.

Renewable energy and nuclear power will represent an increasing share of global energy supply in the years to come.

And Australia will continue the development, commercialisation and uptake of low-emission energy from renewables sources. We will also promote practical energy-efficiency policies and measures.

Even so, global dependence on fossil fuels for energy will be an enduring reality for our lifetimes and beyond.

A major collective challenge, therefore, is to develop and implement cleaner, more efficient technologies that allow for the continued economic use of fossil fuels while constraining emissions.

And we must find fresh ways to cooperate further and share knowledge on clean development policies and low-carbon technology development and deployment.

This will help not only curb greenhouse gas emissions but will also deliver the co-benefits of improving air quality, energy security and industrial efficiency.

Already technology exists that can help put developing countries on a lower emissions trajectory than that of their developed country counterparts at the same stage of economic development.

To give one example, our modelling indicates that accelerated adoption of world-best practice for thermal power generation alone would cut global emissions by 1.5 per cent by 2010, which is a greater reduction in emissions than will be achieved by the Kyoto Protocol.

Looking further ahead, the effective and widespread introduction of clean coal and carbon sequestration technologies in the coming decades promises enormous reductions in global emissions while not unduly penalising development.

For example, extensive work is being undertaken in Australia and elsewhere on the proving of oxy-fuel combustion for coal-based power stations which involves the burning of coal with added oxygen. Combined with carbon sequestration, oxy-fuel combustion holds promise for achieving near zero emissions from coal-based electricity generation. Moreover, oxy-fuel combustion technology may be able to be retro-fitted to existing power plants.

Australia will therefore place a high priority on cooperation with regard to the development and deployment of clean development technologies, including both low-emission fossil-fuel technologies and renewables.

At present such technologies are being pursued in a number of international fora such as the Carbon Sequestration Leadership Forum.

We wish to see such efforts deepened and broadened.

We are also working bilaterally with a number of our trading partners to exchange information and progress opportunities for technology transfer.

And we would welcome additional focus on the role of technologies in the UNFCCC.

Another major priority for Australia will be increased cooperation on adaptation. Climate change will impact on all countries, developed and developing alike.

Given the varied climate change impacts faced by countries, adaptation responses demand tailored and localised responses. Australia recognises the desire of countries to plan and undertake appropriate adaptation responses, and therefore looks forward to the elaboration and implementation of a five-year programme of work in the UNFCCC that will assist all countries in their efforts.

Australia looks forward to making further progress on developing long-term solutions to climate change, both with regard to mitigation and adaptation.

Thank you very much

France

(On behalf of the European Community and its member states)
Presented by Mr. Paul WATKINSON
Coordonnateur de l'action
Internationale Mission Interministérielle de l'effet de Serre

Abstract

The investment challenge

The International Energy Agency has estimated that meeting global energy demand will require cumulative investment of around \$16 trillion by 2030, for production and distribution, about half in industrialised countries, half in emerging economies and other developing countries. Significant investment is also underway in other sectors, notably urban infrastructure, transport, and building stock. The long-lived nature of these investments means that equipment built now will still largely be around in the middle of the century and decisive for long-term emissions profiles. The right choices will facilitate the transition to a low carbon future. However, the choice of inefficient technologies, infrastructures or technologies that are not compatible with future improvements, will lead either to stranded capital, or to “lock in” which will limit future options to tackle climate change. The challenge is to find ways to influence and to facilitate such decisions over the coming 10-20 years.

The international financial institutions have a key role to play in directing investment decisions, through integration of climate change considerations into their appraisal processes, and their influence on bilateral and commercial practices. However, the real challenge is to influence private investment decisions.

A global carbon price is at the heart of creating the incentives needed to meet the investment challenge. The European Trading System is already making emissions trading a reality so that business can start to integrate climate policy into investment decisions, with a link to the Kyoto Protocol project mechanisms (CDM and JI) which provide a further innovative tool. However current arrangements appear inadequate given the scale of the investment challenge. We need to explore options (including e.g. mainstreaming of climate considerations in investment decisions in other policy areas) that build on and strengthen existing bases and provide the visibility and certainty needed to influence these globally crucial and urgent investment choices, particularly in sectors where there is a long period for capital stock turnover. A predictable global framework can provide this certainty.

Presentation (read from left to right)

<p>The investment challenge</p> <p>A presentation on behalf of the EU Seminar of governmental experts</p> <p>Bonn, 16 May 2005</p> <p>Paul Watkinson, France</p> 	<p>The nature of the challenge</p> <ul style="list-style-type: none">• Tackling climate change requires the diffusion and use of cleaner products and equipment.• The long-lived nature of many investments (energy infrastructure, urban infrastructure, housing and transportation infrastructure) means that equipment built now will still largely be around in the middle of the century and decisive for long-term emissions profiles.• The "right" choices will facilitate the transition to a low carbon future.• The "wrong" choices will lead to stranded capital, or to "lock in" and limit future options to tackle climate change. <p>2</p>
<p>Energy investment – an example</p> <ul style="list-style-type: none">• IEA estimate need \$16 trillion investment by 2030, about half in industrialised countries, half in emerging economies and other developing countries. About \$10 trillion for electricity.• Also IEA World Alternative Policy Scenario foresees faster deployment of more efficient and cleaner energy technologies and lower greenhouse gas emission reductions (but still far off stabilisation scenarios). The pattern of investment is substantially different but the total investment does not differ much from the standard scenario. But financing may be more difficult, especially in developing countries.• Major long term investment is also underway in many other sectors, such as transport, infrastructure, housing. <p>3</p>	<p>Facing up to the challenge</p> <ul style="list-style-type: none">• We need ways to influence and to channel these major investment decisions in the right direction over the coming 10-20 years. The window of opportunity to avoid dangerous levels of climate change is narrow.• What choices within the UNFCCC can give the right incentives?• How can we ensure that the necessary enabling framework is in place soon to support financing of long term investment compatible with a lower carbon future?• What role does a broader participation play?• How can climate change tools also support investment for development? <p>4</p>
<p>Involving other international actors</p> <ul style="list-style-type: none">• What sort of actions should the international community be asking the World Bank, the regional development banks, etc. to do to integrate climate further into their planning processes?• Influence on the choices of commercial actors.• What priorities should they follow?• What is the possible role of the international trade regime, and the WTO? <p>5</p>	<p>Influencing private investment decisions</p> <ul style="list-style-type: none">• How can we influence private investment choices?• A global carbon price is at the heart of creating the incentives needed. We have already started – the Kyoto Protocol, trading, project mechanisms, European Trading Scheme.• But policy is only outlined for the next few years – not enough certainty for businesses for long term investments.• Uncertainty on CDM after 2012 is already hurting its success.• Current arrangements inadequate given scale of the challenge. <p>6</p>
<p>Putting the debate into a wide context</p> <ul style="list-style-type: none">• Climate change policy is only one among many drivers.• Oil prices ... energy security ... integrating externalities into energy prices – all will have a strong influence on the investment climate.• What steps can we take to improve the investment environment?• How can we improve policy coherence?• How do we involve actors from outside the climate and environment sphere? <p>7</p>	<p>Final questions for the seminar</p> <ul style="list-style-type: none">• How can we work together to identify options that can better address these questions in all countries?• How can we build on and strengthen existing bases, in particular the Kyoto protocol and its flexible mechanisms, so as to provide the greater visibility and certainty needed to influence these globally crucial and urgent investment choices?• How can we start to mainstream climate considerations in investment decisions in other policy areas and find synergies with development priorities?• How can a global climate framework provide greater certainty and predictability to our decisions? <p>8</p>
<p>Paul WATKINSON Mission interministérielle de l'effet de serre http://www.effet-de-serre.gouv.fr</p> <p>9</p>	

Supporting material on the presentation from France can be found at:
<unfccc.int>

Q&A

Question and answer session (Based on the presentations by Papua New Guinea, Mexico, Australia and France)

A complete coverage of the question and answer session that took place after the presentations by experts from Papua New Guinea, Mexico, Australia and France on behalf of the European Community and its member States, can be found at <unfccc.int>

The issues raised during the discussion included equity in the international climate change process, technology transfer and opportunities to accelerate it, a proposal to develop an optional protocol on deforestation, national experiences relating to the clean development mechanism, complexity of the flexibility mechanisms of the Kyoto Protocol, roles of developed and developing countries in the climate change process, need for adaptation to climate change to become localized, funding for adaptation, international cooperation, importance of avoiding the “lock-in” effect when making investments, and importance of certainty for investors.

Several participants expressed the view that the CDM is complex and inflexible and that the rules for flexibility mechanisms under the Marrakesh Accords need to be simpler and reformed for the post-2012 period by introducing more flexibility in terms of additionality and removing current obstacles. Others observed that the CDM has only just started and time is needed to assess it, recognizing that some of the difficulties arise from the fact that there are now many methodologies under discussion; after a sufficient number of methodologies have been approved, the CDM should function more efficiently and attract investors.

One participant pointed out that there is a general misunderstanding of the CDM, and reiterated that the process should not lose sight of the fact that it was conceived as a tool for achieving sustainable development in a climate-friendly manner. It was also observed that the CDM was designed as an opportunity with enormous development potential; for this reason it is a vital mechanism for developing countries, and if it is to work well, funding for CDM projects needs to be strengthened. One solution to address the problems highlighted on the CDM was to work with specific economic sectors where baselines can be defined at the outset.

On the issue of technology transfer some experts raised the question of identifying advantages resulting from being a Party to the Kyoto Protocol in terms of investment decisions. Others asked how the involvement of private actors in technology transfer could be improved. The investment challenge and the importance of certainty were also addressed. It was emphasized that huge investments are expected, for example in the energy sector of countries such as China, but it is important to avoid “lock-in” investments and ready-made solutions, because the diffusion of best technologies invariably depends on national circumstances.

The need to localize adaptation was emphasized; finding innovative ways to fund adaptation was suggested as an important issue to be addressed. One expert noted that Australia is implementing a multi-billion dollar assistance programme for small island States.

Equity issues were also raised with regard to what level of infrastructure was needed to reach an acceptable level of development, as some participants felt that the needs of developing countries are sometimes marginalized or ignored. One expert suggested that more international cooperation is needed where developed countries are viewed as partners. It was suggested that further differentiation is needed among developing countries, and that the divide between developed and developing countries should not be allowed to continue. To this end an expert proposed that, in the light of the huge differences among developing countries, there should be efforts to further differentiation among them in any future dialogue on climate change. It was also proposed that a discussion is needed on how the UNFCCC process could contribute to increasing national capacities.

On the way forward and how to work together in addressing climate change, support was expressed for consideration of a proposal by one of the experts on avoiding emissions from deforestation. Some

clarification was requested on the special role for deforestation vis-à-vis afforestation and reforestation, and whether the proposal included a change to the Marrakech Accords to include developing countries in Annex B for the matters relating to deforestation. An expert clarified that the proposal on an additional protocol on deforestation was not new and had been rejected in earlier negotiations, but that it needs to be revisited in discussions on the way forward.

Some participants underscored the commitment of their countries to engage in a discussion of a future regime, whereas others noted that participation of all is needed in such a discussion, taking into account the respective financial and human capacities and national circumstances of countries. One participant gave full support to the idea of discussing the issue of equity in terms of per capita emissions and welcomed the “the 1 tonne challenge” proposed by one of the experts. There was also a suggestion to make data on emissions by Annex I countries available on the UNFCCC web site.

In discussing the future, experts expressed the view that the CDM, technology development and deployment, and adaptation should form part of a future climate change regime, recognizing that domestic action in developing countries was important. At the same time it was noted that there is no single response to the development challenge and that development is needed, populations should have the right of access to energy and that carbon mitigation can benefit development. For these reasons one expert suggested that it was important to find the right questions and work on them in Montreal.

Session Six

**PRESENTATIONS OF EXPERTS
IN CHRONOLOGICAL ORDER**

(Tuesday 17 May am)

New Zealand

Germany¹

Argentina

Finland¹

Question and answer session

¹ On behalf of the European Community and its member States

New Zealand

Presented by Ms. Helen PLUME
Coordinator
Climate Change Office
Ministry for the Environment

Abstract

New Zealand treats climate change seriously and is taking action to implement its commitments under the UNFCCC and the Kyoto Protocol, including: a carbon tax, Negotiated Greenhouse Agreements, Projects to Reduce Emissions, a Permanent Forest Sinks Initiative, and a Pastoral Greenhouse Gas Research Consortium.

The most serious impacts of climate change fall on some of the world's most vulnerable citizens. New Zealand is focused on helping to meet the concerns and needs of Pacific Island Countries. In 2001 New Zealand pledged a voluntary commitment of NZ\$5M per year, from 2005, to support climate change activities in developing countries. New Zealand provided NZ\$12M in the previous Global Environment Facility replenishment round.

It will be important to take into account national circumstance in considering what more is needed to tackle climate change. New Zealand's emissions profile is more akin to an advanced developing country than it is to other Annex1 countries: agriculture accounts for almost 50% of greenhouse gas emissions; a significant plantation forestry industry and large indigenous forest areas, are important sinks and reservoirs.

The Kyoto Protocol is an important first step: to build on it we urgently need a constructive dialogue on future action. New Zealand has no predetermined view on the best future global framework. Difficult questions need answering:

- How can we start now a constructive dialogue on what the international community should do next to tackle climate change? We do not have the luxury of time. There are real costs to all of us in doing nothing.**
- How can we make climate change measures compatible with future economic growth and development aspirations? The private sector needs confidence to make long-term climate friendly investments: certainty and competitiveness issues are important. We need to make the best use of existing technologies, now. Market mechanisms will be important.**
- How do we recognise that some economic sectors, such as agriculture and transport, currently have limited technology solutions? For natural resource-based economies, like New Zealand and many developing countries, achieving a substantial reduction in greenhouse gases over the short to medium term, while allowing for economic growth, is not easy.**

How do we get all of the major emitters involved? We need broad and balanced participation and action, in particular by all of the world's major emitters, including both developed and developing countries.

Presentation (read from left to right)

 <p>New Zealand Presentation Seminar of Governmental Experts Bonn, 17 May 2005</p>	<p>Overview</p> <ul style="list-style-type: none">• New Zealand's actions• Importance of national circumstances• Constructive dialogue urgently needed 
<p>New Zealand's actions</p> <ul style="list-style-type: none">• Carbon tax from 2007• Negotiated Greenhouse Agreements• Projects to Reduce Emissions• Permanent Forest Sinks Initiative• Research on agricultural emissions• Adaptation• Public Awareness and Education• Supporting policies 	<p>New Zealand's actions</p> <ul style="list-style-type: none">• Voluntary commitment of \$5 million per year from 2005 for developing country activities• Focused on helping to meet the needs and concerns of Pacific Island Countries 
<p>New Zealand's circumstances</p> <ul style="list-style-type: none">• Economy dependant on a stable climate• Relatively small but energy intensive industrial sector• Electricity– high proportion of renewables• CH₄ and N₂O from agriculture are 50% of emissions• Significant plantation forestry industry and large areas of protected indigenous forest 	<p>Future action</p> <ul style="list-style-type: none">• Given the urgency of the issue and the real costs to us all of doing nothing, how can we get a constructive dialogue started now on what the international community should do next to tackle climate change?<ul style="list-style-type: none">– What do we agree on?– Start by looking at different ways forward? 
<p>Future action</p> <ul style="list-style-type: none">• How can we make climate change measures compatible with future economic growth and development aspirations?<ul style="list-style-type: none">– Certainty for business?– Role of climate-friendly technology?– Role of market mechanisms? 	<p>Future action</p> <ul style="list-style-type: none">• How do we recognise that some economic sectors (such as agriculture) currently have limited technology solutions?<ul style="list-style-type: none">– Recognition of research?– Flexible and differentiated solutions? 
<p>Future action</p> <ul style="list-style-type: none">• How do we get all the major emitters involved?<ul style="list-style-type: none">– We are all affected by climate change; we all have to contribute to the response– Need broad and balanced participation <p>More information: www.climatechange.govt.nz</p> 	

Supporting material on the presentation from New Zealand can be found at:
<unfccc.int>

Germany

(On behalf of the European Community
and its member States)

Presented by Mr. Karsten SACH

Deputy Director General

International Cooperation

Federal Ministry for the Environment,

Nature Conservation and Nuclear Safety

Abstract

The Innovation challenge - Risks, urgency and opportunities

Climate change requires substantial changes in how the world produces and uses energy. As worldwide demand for energy and transport services will continue to grow, the reduction of greenhouse gas emissions will need to be realised through technologies based on lower carbon intensity per unit of service than current technologies.

This risk of rapid further growth in emissions calls for urgent policy responses. Technological change in all economic sectors will be required. How can we make sure that the technological innovation linked to ongoing investment cycles will reflect the needs of tackling climate change? Long lasting effects of today's investment decisions could cause lock-in effects into high-emission pathways. What are cost efficient options to avoid this? Many technologies to reduce greenhouse gas emissions either exist already or are at an advanced pilot stage. However many promising technologies face very limited market up-take. How can be ensured that these technologies are taken up by mainstream markets? How can we enhance the transfer and diffusion of technologies across the world?

Two main complementary strategies will be further elaborated:

1. Pulling technological change or: how can we ensure the right incentives?

2. Pushing technological change or facilitating technological breakthroughs

Another issue that will be elaborated is how the UN process could open up for technological policy opportunities.

Presentation (read from left to right)

<p>The Innovation Challenge Presentation on behalf of the EU</p> <p>Dr. Karsten Sach German Federal Ministry for the Environment, Nature Conservation and Nuclear Safety</p> <p>Version of 13 May 2005 – check against delivery</p>	<p>Need for technological change</p> <p>Prevention of dangerous climate change implies move towards a low-carbon economy</p> <p>Some technology change will occur in any event – but substantial additional technology change is needed in all sectors</p>
<p>Bringing technologies to the markets</p> <p>Many technologies to reduce greenhouse gas emissions, e.g. renewable energy technologies or combined heat and power production, exist already</p> <p>Both existing technologies and new advanced technologies have to be brought to the markets</p> <p>Technological innovation needs to be linked with investment cycles – to avoid lock-in effects into high-emission pathways</p>	<p>Technology innovation needs 'push' and 'pull' policies</p> <p>Source: Michael Grubb (2004)</p>
<p>Example: Renewable Energy</p> <ul style="list-style-type: none"> – European Experience: Cost reduction 1980 – 1995 through active support policies: <ul style="list-style-type: none"> • By 65% for photovoltaics • By 82% for windpower • By 85% for electricity from biomass – Technology costs will further decrease - continuing learning curves and accelerated mass production 	<p>Faster deployment of climate friendly technologies is possible</p> <ul style="list-style-type: none"> • IEA alternative policy scenario: No increased overall investment needed. • Gradual transformation requires a predictable and stable long term policy framework and political commitment.

Questions for SoGE: Role of UNFCCC process

How can we secure a **stable long-term policy framework** .

- to drive technology policy opportunities
- to facilitate and enhance international synergies
- to facilitate the implementation of 'push' and 'pull' policy approaches
- to ensure broad and fair participation with regard to technological change

Supporting material on the presentation from Germany can be found at: unfccc.int

Argentina

Presented by Mr. Vicente BARROS
Professor
University of Buenos Aires

Abstract

The results of the recent studies developed by the Ministry of Health and Environment of Argentina have given us stronger and additional evidence that climate change is already taking place at an alarming rate.

Important climate trends started about the 1970 decade in Argentina.

Except over the Andes, annual rainfall augmented in most of the territory, more than 30 % in some areas. The relative benefits of this change were overcome by an increased interannual variability in the north, by extensive and long lasting floods over the flat pampas in the centre of the country, and by more frequent floods on the margins of the great rivers in the east.

In addition, as in many other areas around the world, intense precipitation events are now considerably more frequent. These events cause losses of lives and severe damages to agriculture, households and infrastructure.

Because of higher temperature and lower precipitation, almost all the Andes glaciers are receding, threatening important natural landscapes and the water resource that sustain the economic activities of the now prosperous oasis at the foot of the mountains.

There is already a persistent trend in most of the rivers coming from the Andes that causes losses in power generation and ecological damages. These trends are likely to worsen as indicated by future climate scenarios resulting from increased CO₂ concentration.

The water level of the Río de la Plata estuary has increased almost 20 cm in the last century, half of it in the last 30 years. As a consequence storm surges that flood crowded populated areas in the Metropolitan region of Buenos Aires are becoming more frequent. By the middle of this century, with increased CO₂ concentration scenarios, the storm surges would flood more land affecting hundreds of thousands of people and costing an average of more than a hundred million dollars a year.

Disasters resulting from extreme climate events have caused damages to human life, property, infrastructure and biological diversity. This constitutes a new barrier to sustainable development, because much needed resources allocated to health, education and housing, must be diverted to plan climate change disasters mitigation and preparation and to invest in new infrastructure.

It is clear that more ambitious mitigation efforts are urgently needed because national, regional and global vulnerability to the effects of climate change is increasing.

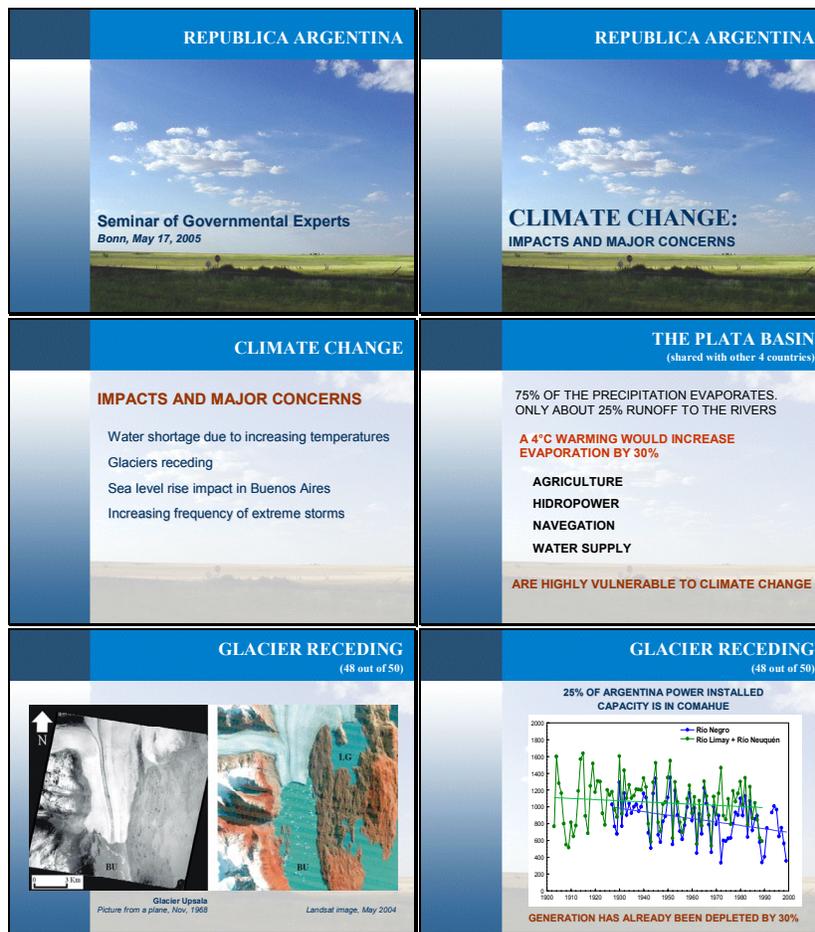
But during the last three decades, Argentina has already put in force different policies and measures, related to energy, agriculture, forestry and the environment, whose final consequence has been a reduction of green house gases emissions.

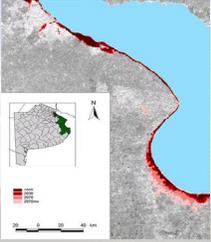
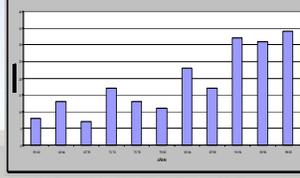
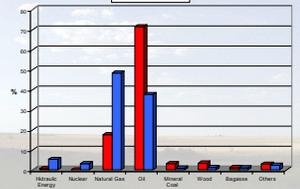
Among those measures we can mention the promotion of the use of natural gas instead of oil derivatives to generate energy, the use of natural gas for vehicles (NGV), biofuels regulatory incentives, the design and implementation of an economic dispatch framework in the electric system leading to a low baseline of green house gas emissions, renewable energy subsidies to wind and solar energy, extended use of no tillage systems in agriculture, subsidies for forestry activities and huge investments in the underground transport system.

Despite the effort undergone by the Argentines, sustained even under very difficult macroeconomic and financial circumstances, the country is suffering relevant and negative impacts of climate change.

Therefore, we strongly believe that the moment to engage in a productive dialogue is now and we look forward to it with the clear awareness that an increase in the international efforts to address climate change must be achieved through cooperation and consensus.

Presentation (read from left to right)



<p>AIACC Project Sea level rise effect</p> <p>Area flooded with a return period of 5 years</p> <p>Year 2070: 1.5 M persons affected</p> <p>2050-2100 Damages: About 10 B USS</p> 	<p>PRECIPITATIONS</p> <p>Precipitation events of more than 100 mm in less than 48 hours in 16 stations of central and eastern Argentina</p> 
<p>CLIMATE CHANGE</p> <p>For Argentina is vital to address climate change because:</p> <ul style="list-style-type: none"> • it is a new and additional barrier to sustainable development • its adverse effects divert resources essential to social policies (housing, health, education and environment) <p>Thus, it is of the country's interest to contribute to the international climate policy regime after 2012</p>	<p>REPUBLICA ARGENTINA</p> <p>MITIGATION</p> 
<p>MITIGATION</p> <p>In the last three decades:</p> <ul style="list-style-type: none"> • Hydroelectric power (50% of electricity generation) • Substitution of fuel oil for natural gas in combined cycles • The largest automotive fleet run with natural gas (1,100,000 vehicles) • Subsidies to Wind Energy 	<p>MITIGATION</p> <p>RESULTS: ENERGY MIX COMPARISON</p> <p>■ 1970 ■ 2003</p> 
<p>MITIGATION</p> <p>CARBON SEQUESTRATION</p> <p>FORESTRY: 258.747 Ha (2000 - 2004) Forest Promotion Law</p> <p>MINIMUM TILLAGE: 14 M hectares 62% of the total crop land</p>	<p>MITIGATION</p> <p>CLEAN DEVELOPMENT MECHANISM</p> <p>75 Projects in the pipeline representing 15 M tons of CO² reductions</p> <p>We believe that CDM is to be successful Argentina can make a substantial contribution</p> <p>After 2012, it is necessary to expand the scope of CDM to include all possible means of achieving emission reductions</p>

<p style="text-align: center;">REPUBLICA ARGENTINA</p>  <p style="text-align: center;">ADAPTATION</p>	<p style="text-align: center;">ADAPTATION</p> <p>Argentina is already working on adaptation</p> <p>It has several Programs, i.e.:</p> <ul style="list-style-type: none"> • Water Management Infrastructure • National Climate Scenarios Program • National Adverse Effects Impact Program <p>Several major problems have been identified, but there are severe financial constraints due to heavy public debt</p>
<p style="text-align: center;">ADAPTATION</p> <p>Argentina is already working on adaptation</p> <p>Like in other developing countries, adaptation requires of international cooperation</p> <p>Buenos Aires Program of Work on Adaptation and Response Measures is a proper initiative to conduct and enhance this cooperation</p>	<p style="text-align: center;">REPUBLICA ARGENTINA</p>  <p style="text-align: center;">We should not wait till 2012 to think about the future</p>

Finland

(On behalf of the European Community
and its member States)

Presented by Ms. Outi BERGHÄLL

Director

International Climate Project
Ministry of the Environment

Abstract

Adaptation and Sustainable Development

Climate change and its adverse physical effects will further impact on social and economic development prospects of nations and livelihoods of households and can have a strong negative impact on nature and biological diversity. Climate change is already happening. Therefore, addressing climate change should be part and parcel of sustainable development policies, including development cooperation and funding policies, now and in the future. Non-action leads to higher adaptation needs and endangers the achievement of the Millennium Development Goals.

Adaptation needs to be tailored into local, sub-national and national decision making to meet local needs and circumstances. Integration of adaptation concerns into sectoral decision-making is key, rather than developing stand-alone adaptation actions. Synergies should also be strengthened at all levels, including action taken under various multilateral environmental agreements (MEAs).

There is a need to increase awareness of climate change and its impacts among policy makers in all sectors. In addition to publicising the problem, knowledge of approaches, tools and methods to address the impacts effectively and efficiently should be enhanced. There is also a need to strengthen the understanding of cause and effect relations: the more successful mitigation efforts are, the less there is a need to adapt. There are also limits to adaptation.

Presentation (read from left to right)

<p><i>Seminar of governmental experts Bonn, 16-17 May 2005</i></p> <p>ADAPTATION AND SUSTAINABLE DEVELOPMENT</p> <p><i>Presentation on behalf of the EU</i></p> <p>Outi Berghäll, Finland</p> <p><small>Ministry of the Environment</small></p>	<p>Addressing climate change is an integral part of sustainable development</p> <ul style="list-style-type: none">▪ Examples – CSD 13 thematic areas:<ul style="list-style-type: none">▪ Water scarcity <= climate change▪ Low-cost sanitation options <= risk of floods <= climate change▪ Risks for people living in areas prone to flooding, landslides and other disasters <= climate change <p><small>Ministry of the Environment</small></p>
<p>Urgency in addressing the problem</p> <ul style="list-style-type: none">▪ "In order to prevent severe damage to the environment and society, and to ensure sustainable development even under changing climate conditions, adaptation strategies are required." (Europe's climate assessment)▪ Intelligent development policies include planned adaptation.▪ The feasibility of adaptation strategies depends on the level of mitigation. <p><small>Ministry of the Environment</small></p>	<p>Opportunities</p> <ul style="list-style-type: none">▪ Integration of climate change aspects into SD policies and into decision-making<ul style="list-style-type: none">▪ enables to address the problem cost effectively and at the scale required.▪ helps to ensure that duplication of efforts and waste of scarce resources is avoided▪ "Devise water, sanitation and human settlements policies and action taking account of the need to address the impacts of...climate change and climate variability..." (CSD13) <p><small>Ministry of the Environment</small></p>
<p>Need to increase awareness and knowledge of CC impacts</p> <ul style="list-style-type: none">▪ Need to involve decision-makers and stakeholders in all sectors and at all levels;▪ Need to increase awareness and knowledge of climate change and its impacts;▪ Need to develop and disseminate knowledge of promising approaches to address the impacts. <p><small>Ministry of the Environment</small></p>	<p>International support for developing countries</p> <ul style="list-style-type: none">▪ Impacts of climate change fall disproportionately upon developing countries and upon the poor.<ul style="list-style-type: none">▪ Need to identify the most cost-effective way for the international community to act;▪ Need to integrate climate aspects into ODA and funding policies and create synergies when supporting sustainable development▪ The EU will continue to help developing countries to build their capacities to adapt and take adaptation measures. <p><small>Ministry of the Environment</small></p>
<p>Questions for discussion</p> <ul style="list-style-type: none">▪ How can the knowledge base be enhanced: vulnerabilities, impacts and cost-effective adaptation options? What is required to enhance adaptive capacity?▪ How can awareness of the adaptation challenge be enhanced at all levels and in all sectors? How can practitioners be educated about the "how to"?▪ How can cross-sectoral communication be developed at all levels? <p><small>Ministry of the Environment</small></p>	

Supporting material on the presentation from Finland can be found at:
<unfccc.int>

Q&A

Question and answer session (Based on the presentations by New Zealand, Germany, Argentina and Finland)

A complete coverage of the question and answer session that took place after the presentations by experts from New Zealand, Argentina, Germany and Finland, both on behalf of the European Community and its member States, can be found at <unfccc.int>

The issues raised during the discussion included strengthening networks on technology and on enhancing the knowledge base locally, nationally and internationally, as well as the role of the CDM in a future regime on climate change, the equity principle, and providing certainty for investors in order for them to make long-term decisions on projects.

Several participants addressed the issue raised by one of the experts on how to find ways to promote technology change and bring technology to markets. One participant remarked that the best way of achieving this objective is to promote networking of research organizations, universities, and public and private sector organizations in energy conservation and efficiency and renewable energy. It was stressed that this type of networking can give rise to benefits that can lead to technology transfer, and reduction of global carbon emissions, and experience would be gained in the process that could lead to the development of a secure, sustainable, long-term policy framework.

Another participant indicated that his country cooperates with Argentina on several infrastructure projects that take climate change issues into account. The renewable energy conference held in Bonn in 2004 was highlighted as an important forum at which participating ministers agreed to establish the Renewables 21 network for the purpose of networking and spreading best practices technology, and creating a framework for building capacities in the area of climate technology.

Several participants also addressed the issue raised by one of the experts on how the knowledge base can be enhanced locally, nationally and internationally. An initiative in the Asia Pacific Region was highlighted as an important forum for exchange of regional expertise and scientific knowledge. One expert emphasized the need to find ways to strengthen networks, and to promote cross-sectoral networking among agencies in adaptation efforts, noting that responses to adaptation should depend on national circumstances and adjusted accordingly.

On ways forward, one participant indicated that there may be a need for a new Protocol after 2012 and that this should address equity concerns. Another wished to know what kind of common and coordinated actions could constitute a future mitigation programme under the UNFCCC. On the issue of providing certainty to private investors, the need was emphasized to send a message of long-term stability to build confidence by investors to engage them in the mechanisms. One participant, in trying to address this issue, mentioned that more discussion is needed on whether an agreement on an overall long-term collective target on GHG emissions could give investors some certainty. One expert noted that a clear framework to foster investment and innovation is urgently needed.

Another expert called for discussions to start under a Montreal mandate to explore new mechanisms to facilitate and encourage the reduction of emissions.

Session Seven

**PRESENTATIONS OF EXPERTS
IN CHRONOLOGICAL ORDER**

(Tuesday 17 May pm)

Peru

Mali

Saudi Arabia

Question and answer session

Peru

Presented by Ms. Maria PAZ CIGARAN
Director
PROCLIM-CONAM

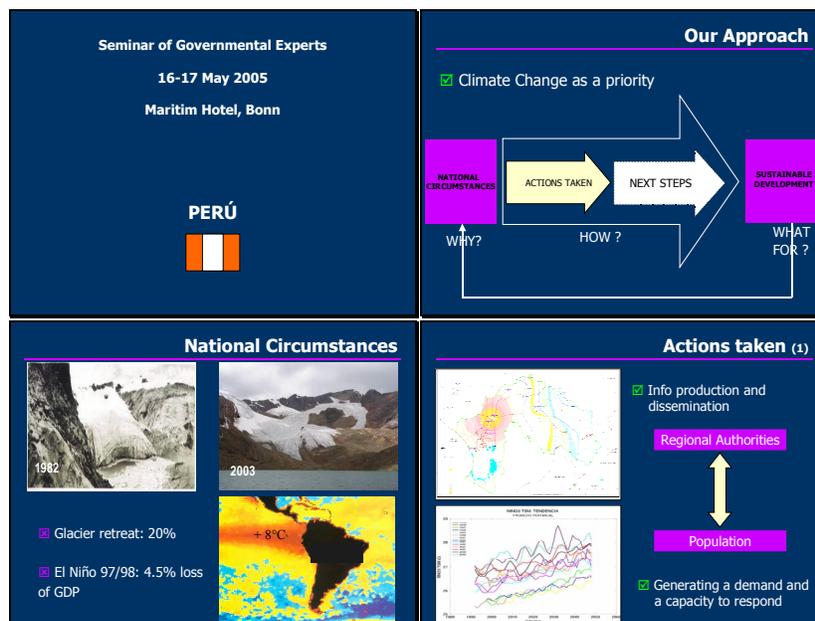
Abstract

The presentation will be focused on:

- The integrated approach applied in Peru for developing V&A assessments towards adaptation strategies at different management levels and activities in the country using bottom up (with full participation mechanisms, public awareness and capacity building activities) and top down approaches.
- The path envisioned based on these findings to actually incorporate climate change considerations into development and poverty reduction processes.

Efforts to find ways to implement mitigation actions in the country, linking them to the current air pollution abatement efforts.

Presentation (read from left to right)



Actions taken (2)

¿Y si dejara de haber mango?
What if there were no mangos?

EL CLIMA ESTA CAMBIANDO. NOSOTROS TAMBIEN DEBERIAMOS.
www.cambioclimatico.gob.pe

Next steps: CC into development

Info and instruments:

- ☑ Policy Framework for Private and Public Investment
- ☑ Budget Allocation Model

National Gvmt
↕
Sector/Regional

Adaptation is local, but needs a global response

- ☑ From local experiences to international solutions
- ☑ Dissemination activities
 - ☑ To whom? Identify critical actors
 - ☑ What and how?
- ☑ Flexible and national priority oriented funding

International Community
↕
National Gvmt

El clima cambia. Yo también!

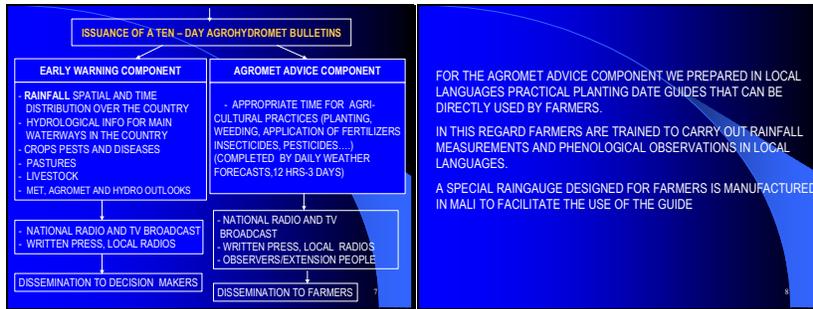
Gracias!!!

Mali

Presented by Mr. Mama KONATE
 Directeur national de la météorologie/
 Point focal de la CCNUCC
 Direction nationale de la météorologie

Presentation (read from left to right)

<p>BUILDING ADAPTATIVE CAPACITY TO CLIMATE CHANGE IN A LEAST DEVELOPED COUNTRY (LDC)</p> <p>THE RURAL SECTOR IN MALI</p> <p>Mama KONATE Director General, National Met Service UNFCCC Focal Point Bamako - MALI</p>	<p>BRIEF "OVERVIEW" OF MALI</p> <p>MALI IS A SEMI - ARID AND LANDLOCKED COUNTRY LOCATED IN THE WESTERN PART OF THE AFRICAN CONTINENT</p> <p>AREA > 1,240,000 Km² OF WHICH MORE THAN ONE-THIRD IS DESERTIC</p> <p>POPULATION = 11,400,000 INHABTS</p>
<p>LIVESTOCK : CATTLE : 7,5 00, 000 SHEEP AND GOATS : 13,000,000 CAMELS : 700, 000</p> <p>INCOME/PERSON < US\$ 1 / DAY. MALI IS AN LDC LENGTH OF RAINY SEASON VARIES FROM 2 MONTHS IN THE NORTH, TO 5 - 6 MONTHS TOWARDS THE SOUTH DROUGHT IS VERY COMMON</p> <p>AGRICULTURE - BASED ECONOMY CASH CROP = COTTON ANNUAL PRODUCTION : 500,000 TONS MAIN CEREAL CROPS = MILLET, SORGHUM, MAIZE, RICE, ANNUAL PRODUCTION : 2,850,000 TONS COUNTRY OF VERY HIGH VULNERABILITY TO CLIMATE CHANGE</p>	<p>DROUGHTS OF EARLY SEVENTIES IN SAHEL REGION AFFECTED SERIOUSLY COUNTRIES</p> <p>A LOT OF DAMAGES WERE CAUSED TO AGRICULTURE, LIVESTOCK AND EVEN HUMAN BEINGS.</p> <p>TWO MAIN ACTIONS WERE TAKEN :</p> <ul style="list-style-type: none"> - AN INTER STATE COMMITTEE TO COMBAT DROUGHT IN SAHEL (CILSS) WAS ESTABLISHED IN 1974 BY A MINISTERIAL CONFERENCE - IN THE REGION IN 1975, AGRHYMET REGIONAL PROGRAM WAS LAUNCHED BY UNDP, WMO, FAO AND THE INTERNATIONAL COMMUNITY <p>AGRHYMET REGIONAL PROGRAM WAS COMPOSED OF A REGIONAL CENTER IN NIGER AND A NATIONAL COMPONENT IN EACH OF THE 9 CILSS MEMBER COUNTRIES.</p>
<p>THE MAIN OBJECTIVE OF THE PROGRAM WAS TO STRENGTHEN METEOROLOGICAL AND HYDROLOGICAL SERVICES IN THE REGION BY :</p> <ul style="list-style-type: none"> - REHABILITATING AND STRENGTHENING SURFACE OBSERVING AND TELECOMMUNICATION NETWORKS. - TRAINING SPECIALIZED STAFF AT THE AGRHYMET REGIONAL CENTER - CREATING / REINFORCING AGROMET AND HYDRO UNITS <p>THIS OBJECTIVE WAS SUCCESSFULLY ACHIEVED IN MALI ENABLING THE NATIONAL MET SERVICE TO UNDERTAKE ACTIVITIES TO DEVELOP AN INFORMATION SYSTEM FOR DECISION MAKERS AND FARMERS.</p>	<p>SCHEMATIC REPRESENTATION OF THE INFORMATION SYSTEM</p> <pre> graph TD A[MET STATIONS / FARMERS FIELDS] --> B[MET AND CROP DATA ARE COLLECTED] B --> C[MET AND CROP DATA ARE PROCESSED] C --> D["- SYNOPSIS CHARTS ARE PLOTTED - WATER BALANCE RESULTS ARE ISSUED - MDD PRODUCTS ARE ISSUED - NDVI DATA ARE USED - SATELLITE ESTIMATED RAINFALLS ARE USED - SEASONAL WEATHER FORECASTS"] D --> E[MWGs MEET EVERY TEN DAYS AND ANALYZE AVAILABLE INFORMATION] E --> F[] style F fill:none,stroke:none </pre>



FOR THE AGROMET ADVICE COMPONENT, WE PREPARED IN LOCAL LANGUAGES PRACTICAL PLANTING DATE GUIDES THAT CAN BE DIRECTLY USED BY FARMERS.

IN THIS REGARD FARMERS ARE TRAINED TO CARRY OUT RAINFALL MEASUREMENTS AND PHENOLOGICAL OBSERVATIONS IN LOCAL LANGUAGES.

A SPECIAL RAINGAUGE DESIGNED FOR FARMERS IS MANUFACTURED IN MALI TO FACILITATE THE USE OF THE GUIDE



RAINGAUGE



FARMERS LEARNING HOW TO MEASURE AND REPORT RAINFALL DATA

RESULTS

- CONTRIBUTION TO FOOD SECURITY
- ? REDUCTION OF THE PERCENTAGE OF REPLANTING (40% TO 5%)
- ? YIELD INCREASE ? 20%
- ? IN 1998 USE OF MET AND AGROMET INFORMATION PREVENTED THE AGRICULTURAL SEASON FROM FAILURE
- ? IN JANUARY 2002 FORECAST OF « OUT OF SEASON » RAINS ALLOWED THE NATIONAL COTTON COMPANY TO SAVE MILLIONS OF EUROS
- ? NAT MET SERVICE IS A MEMBER OF THE NATIONAL COUNCIL FOR AGRICULTURAL ADVICE
- ? THE INFO SYSTEM IS INTEGRATED TO THE AGRICULTURAL ADVICE OPERATIONAL PLAN OF ACTION AND TO THE EARLY WARNING SYSTEM FOR FOOD SECURITY
- SOCIAL AND CULTURAL ADVANTAGES :
- ? SHARING THE SAME AGROMET INFO CONTRIBUTE TO REDUCE CONFLICTS IN HOUSEHOLDS AND VILLAGES ;
- ? REDUCTION OF RURAL DEPOPULATION
- ENVIRONMENT PROTECTION
- ? USE OF MET AND AGROMET INFO RESULTED IN REDUCTION OF THE NUMBER OF TREATMENTS BY PESTICIDES AND INSECTICIDES

PERSPECTIVES ON ADAPTATION FOR LDGS

- GENERALIZATION OF THE INFO SYSTEM TO THE COUNTRY AS A WHOLE
- INTEGRATION OF THE **INDIGENOUS KNOWLEDGE** INTO THE SYSTEM – **LOCAL COPING STRATEGIES**
- FINANCIAL SUPPORT OF LDGF TO THE PROGRAMME REQUIRED.
- IMPROVING **ADAPTATIVE CAPACITY** OF THE MOST VULNERABLE IS THE MOST IMPORTANT ADAPTATION POLICY – THESE ARE THE PEOPLE WHOSE LIVELIHOOD WOULD BE MOST AFFECTED BY THE IMPACTS OF CLIMATE CHANGE.

I WOULD LIKE TO END MY PRESENTATION BY THE STATEMENT OF A 70-YEAR OLD FARMER:

« WITHOUT CLIMATE INFORMATION A FARMER IS LIKE A MOUSE IN A BOTTLE »



That's an illustration of how sensitized the rural people are on climate issues as it is the old people who are more reluctant to innovations.

**THANK YOU
FOR YOUR ATTENTION**

Saudi Arabia

Presented by Mr. Fareed AL-ASALY
Economic Advisor

Ministry of Petroleum and Mineral Resources

Presentation

Co-Chairs, Ladies and Gentlemen,

As we are at a point of open dialogue and confidence building on the implementation of the convention which has been with us for over 10 years now, and the Kyoto protocol which came into force early this year, it is only appropriate to pause and examine three main questions:

1. Where are we in terms of engagement, for both Annex I and non-Annex I Parties?
2. Where do we want to go, to reach an effective and appropriate response to climate change?
3. What do we need to do to get there?

To answer the first question, it is imperative to reaffirm the extent of engagement which all Parties agreed on:

1. Based on the principle of common but differentiated responsibility, Annex I Parties agreed to take the lead through concrete actions to reduce greenhouse gas emissions as part of equity related to their contribution of these gases to the atmosphere. They have started collectively under the convention through Article 4.2 (a & b) to implement such commitments.

As part of taking the lead, the 1995 Berlin Mandate required that Annex I Parties take further commitments on reducing the GHG emissions. At the same time, non-Annex I Parties were not required to take any new commitments but to only advance the existing commitments under the convention.

Even with the entry into force of the Kyoto Protocol, Saudi Arabia believes that Article 4.2 of the Convention and Berlin Mandate is yet to be fully implemented because the Protocol does not apply to well over 30% of Annex I emissions, therefore, we don't believe that Annex I are taking the lead to reduce their emissions nor are they demonstrating real progress in implementing their commitments under financial assistance and transfer of technology to developing countries. Thus broadening the engagement of developing countries over and beyond what was agreed on in the Convention as well as the Protocol will not honor the Berlin mandate agreement nor will it be acceptable by Saudi Arabia.

On the other hand, non-Annex I Parties were to take commitments under Article 4.1 according to their national circumstances and priorities. All parties agreed that the implementation of non Annex I commitments depends on the availability of financial resources as well as transfer of technology from Annex I Parties. In the Kyoto Protocol, developing countries agreed to advance their commitments to honor their agreement under the Berlin Mandate, and have since worked faithfully to fulfill their commitments.

To address the second question of where do we want to go, I believe we are all in agreement that we aim to reach an effective and appropriate response to climate change.

This brings us to the most important question of how to get there?

I believe that an effective and appropriate response to Climate Change can only be accomplished by faithfully implementing the existing Articles in the Convention and its Protocol with three crucial pillars in mind:

1. All actions must be originating from Articles of the Convention
2. The balance of rights and obligations under the Convention must be maintained at all times
3. The concerns of regional groups must be acknowledged, addressed, and fully taken into account

Let me now share with you a very serious concern that Saudi Arabia has as an oil producing developing country.

Our over-riding concern is the future impacts of any policy measures taken by Annex I Parties as part of the climate regime under the Convention and the Kyoto Protocol. It has been our experience that despite agreements on addressing the adverse impacts of response measure, no progress has been made to implement them.

Our colleagues from Switzerland and the United Kingdom highlighted in their presentations yesterday, their concerns, as developed countries, from the impacts of climate change on their sustainable development, and emphasized on the actions and policies that they are taking in response to climate change, such as the addition of further taxes and levies on petroleum products on top of an already distorted energy market that is heavily taxing oil while subsidizing coal and nuclear.

Our concern is more significant and is twofold, because we are concerned about adverse effects of climate change such as water stress, sea-level rise and loss of arable land, as well as the impacts of the actions taken by developed countries. Such policies put us in a double jeopardy situation.

Currently, we are very much troubled with the lack of progress in implementation of Article 4.8 of the Convention and Article 2.3 of the Kyoto Protocol whereby:

1. We believe that current implementation of Article 4.8 and the developments under decisions 5/CP.7, the special climate change fund as well as the Buenos Aires program on adaptation and response measures, is not adequate and very slow. There are 3 main areas that require further development and concrete actions namely:
 - a) Modeling
 - b) Insurance, and
 - c) Economic diversification
2. Furthermore, the development of Article 2.3 of the Kyoto Protocol is very critical since it addresses developing countries concerns under different policy implementations including limiting international trade.
3. In addition, we see a positive way forward in implementing the Convention through win-win policies that aim at improving and promoting cleaner fossil fuel technology and CO2 capture and storage.

In summary, even-though the climate change regime poses great challenges to sustainable development of our future generations, Saudi Arabia had faithfully become a member of the Convention and the Protocol with the understanding that our partners will fulfill their commitments to all developing country's issues. We look forward to our partners to honor the commitments they undertook under both the Convention and the Protocol in order to establish confidence building and bridge the gap among parties.

Thank You.

Q&A

Question and answer session (Based on the presentations by Peru, Mali and Saudi Arabia)

A complete coverage of the question and answer session that took place after the presentations by experts from Peru, Mali and Saudi Arabia can be found at <unfccc.int>

Participants discussed the importance of research and systematic observation to support adaptation activities and the need for innovation as a means for taking further action to meet the objective of the UNFCCC. Several participants highlighted the role that systematic observation plays in supporting adaptation activities; they discussed the experiences in the Sahel region, where farmers have access to relevant data when planning their activities. Some participants suggested a multilateral approach to research and systematic observation. Other participants noted that different regions may have different needs and, thus, generalization of experiences is not always the best solution. Participants also stressed the need to further strengthen actions under Article 2 of the UNFCCC. Some participants suggested that further action could be undertaken through innovative technologies such as CO₂ capture and storage and/or policies (for example, CO₂ levies). They noted the various opportunities for local initiatives in this regard. Finally, some participants noted that priorities in technology should focus on accelerating technology transfer.

Business and industry non-governmental organizations

Presented by Mr. Nick CAMPBELL
of the International Chamber of Commerce

Thank you Mr. Chairman

My name is Nick Campbell, I am speaking on behalf of business and industry organizations attending this seminar, a diverse group with a broad range of views. The business community has been a partner in the international effort to reduce greenhouse gas emissions since the adoption of the Framework Convention on Climate Change over a decade ago.

Business takes seriously the challenge to the international community to address the array of climate change issues. These issues do not exist in a vacuum, and cannot be solved uniquely from an environmental perspective. As we have heard, climate change must be seen in the context of other urgent priorities - energy security, economic development, quality of life and job creation, both in the near and longer terms. It requires integrated thinking and action that marries environmental, social and economic realities.

As and when you, the governments, consider options for longer term approaches, your choices will inevitably affect economies, competitiveness, investment, employment, development pathways and lifestyles as well as the environment. We call upon you to think of the pressing needs in developing countries for investment, market access, economic development and energy in a sustainable manner.

Much has been achieved already in curtailing emissions growth and investing in the technologies on which the world will rely in the future, if emissions are to be substantially reduced. Industry has played a critical role in delivering those achievements and will be critical to the research, development and deployment of future low emissions technologies.

Properly functioning market-based mechanisms such as emissions trading, the Clean Development Mechanism and Joint Implementation are important tools for addressing the challenges of sustainable development and, depending on their design, have the potential to lower compliance costs for those with emission reduction obligations. As governments look to the future, market-based approaches should continue to serve as key policy tools. It is vital that governments improve the efficiency, more ability and transparency of such mechanisms to maximize their impact.

So what must we do now?

We believe that longer-term international climate policy approaches under the UNFCCC must be developed that:

- Take into account the experiences, impacts and effectiveness of implementation of climate policies in different countries and regions, as well as sound scientific analysis;
- Recognise the competitiveness implications of different policy approaches;
- Reflect broad international consensus and participation to address these risks effectively,
- Encourage investments in, and access to, a full range of energy options and technologies, including enhanced research for innovative affordable technologies and increased utilisations of the existing efficient technologies that are needed to promote economic growth and development;
- Provide the most appropriate enabling frameworks to promote the transfer of technology.

Implementing these approaches will have far-reaching, broad and fundamental consequences, the international community must find effective ways to proceed that include all countries and regions.

While the development of longer term options is an essential response to climate change risks, it is important that near term abatement activities and adaptation are continued and strengthened. Many of the approaches being implemented now have the potential to impose high costs on business and society, exacerbate tensions in international trade, and damage economic prospects, competitiveness and investment while doing little to address longer-term increases in global greenhouse gas emissions.

It is profitable companies that invest in research, development and in the dissemination of many of the new technologies. Such companies are dedicating their resources and knowledge to developing better processes, technologies, and products that bring value to our customers and societies and contribute to global efforts to mitigate and adapt to climate change.

As we have seen at this seminar, Parties have a wide range of views on how to best address the climate issue, a balance of which is reflected in the terms of reference for this seminar. Cooperation, transparency, simplicity, flexibility and a focus on sustainable development should characterize the continued evolution of climate policy. The business community stands ready to continue our interactions with the relevant national and international agencies in a process that will lead to cooperative, long-term approaches to climate change in the context of continuing growth and development.

Thank you.

Environmental non-governmental organizations

Presented by Mr. Sanjay VASHIST
Climate Action Network

On behalf of Climate Action Network I would like to thank you for this opportunity to address you all.

We have been listening carefully over the last couple days to the experts. We are encouraged by clear interventions from a number of countries who recognize that the situation is urgent, impacts are happening, and that we need a clear mandate for the negotiations coming out of Montreal. We welcome this clarity and urge all parties to spend the rest of the time here in Bonn discussing how to make such a Mandate happen. CAN firmly believes that urgent action must be taken to preserve our ability to limit overall warming to under 2 degrees Celsius in comparison to pre-industrial levels.

Several statements in this seminar have mentioned a multistage approach as a basis for post-2012. There seems to be a remarkably common understanding of what the elements of a mandate for the negotiations would look like. Let us spend the remaining time here in Bonn solidifying this understanding. The Climate Action Network has a proposed Future Framework that responds well to many of the points made in this Seminar. It has 3 tracks, which we offer as a starting point for Parties to discuss.

The first track should elaborate further absolute mandatory emissions reduction commitments for industrialized countries for the second commitment period. The second "decarbonization" track should focus on enabling developing countries to rapidly deploy clean technologies, meeting sustainable development objectives and bending the curve of their emissions of greenhouse gases. As a matter of justice and equity industrialised countries should make new finance and technology streams possible. This track would not include the Least Developed Countries. The third "adaptation" track, relevant for all countries, should aim to substantially increase the capacity of developing countries to cope with the impacts of climate change. A negotiating mandate that includes all these tracks is the essential task for the meeting of the parties in Montreal.

We cannot delude ourselves that we can engage the US at this point, nor can we wait for the US to change its views before we start post-2012 discussions.

The Kyoto Protocol's binding emission reductions for developed countries have been a landmark first step in dealing with climate change and must be continued. Continuity between the first commitment period and the second commitment period is crucial to ensure that emissions markets and other domestic policies do not falter. Moreover, the negotiation process takes time and we, therefore, cannot wait another year.

Several countries have called for a Montreal mandate; others have not been so clear. We ask the EU and others: Do you or Do you not support or want a mandate to be adopted in Montreal under the Kyoto Protocol to further develop the climate regime? We need clarity and leadership for the future, not discussions of the past.

We also ask my own country, India, a country with 100s of millions of people where livelihoods and development prospects are threatened by climate change to take a fresh approach to this issue and support the development of a Montreal Mandate.

Time is not on our side. Given the disturbing and accelerating pace of climate change and the rate of energy infrastructure development in the world, we only have a narrow window of opportunity to take the next steps in time to prevent dangerous climate change. Developing and agreeing on a Montreal mandate is the least you can do.

Research and Independent non-governmental organizations

Presented by Mr. Salimul HUQ
Bangladesh Centre for Advanced Studies

Mr. Chairmen,

The Research and Independent NGOs group would like to thank you for the opportunity to contribute to this Seminar of Governmental Experts. We commend the Parties for undertaking this valuable seminar and, in particular, applaud those Parties that have taken this opportunity to begin a dialogue on ways to strengthen and advance the international climate change effort beyond 2012.

The RINGO group is comprised of 33 organizations in 22 countries engaged in research and analysis on the full range of climate-related issues. Ours is a diverse group. Our membership organizations draw on different strengths and hold a range of views. Accordingly, we do not seek as a group to offer specific recommendations or advice to the Parties. We are united, however, in the belief that climate change is one of the most profound challenges of our time, and in our support for efforts toward a more robust international response - one that complements and supports sustainable development, and that strengthens action both on mitigation and on adaptation.

Many of our member organizations are actively engaged in work to better define this challenge, and to develop approaches that may help meet it. This work includes expert analysis of a range of issues and options, as well as initiatives to facilitate informal dialogue among governments and stakeholders. We are grateful to Parties represented here that have supported or participated in this work, and to the Experts who in their presentations acknowledged the contributions of the research community to the emerging thinking on future approaches. We are fully committed to continuing this work, and we look forward to opportunities to contribute more directly to this process as it moves forward, in whatever manner the Parties deem most appropriate.

We look forward also to the upcoming Montreal conference, and are hopeful that Parties may find agreement there on steps to initiate more formal consideration of the options for strengthening the international climate framework. Again, we stand ready to contribute to this vital effort in any way we can.

Thank you, Mr. Chairmen.

For more information on the RINGO consistency please visit our website:
<http://www.ringos.net/>

Closing session

Co-chairs' questions and discussions

Technology Transfer

After the presentations by experts, the co-chairs asked the participants to reflect on two questions relating to technology transfer:

- **How could we accelerate the pace of technology transfer to match the increasing demand of appropriate technology to address climate change issues in developing countries?**
- **How can we improve Kyoto mechanisms (clean development mechanism and Joint Implementation)? Can we develop other flexibility mechanisms?**

The complete coverage of this discussion session can be found at <unfccc.int>

During the discussion on the question "How could we accelerate the pace of technology transfer to match the increasing demand of appropriate technology to address climate change issues in developing countries", many participants observed that technology transfer is an important subject for all countries and that this was evident given that most of the presentations made during the seminar addressed aspects of technology transfer. The technology transfer framework under the Convention as well as the work of the Expert Group on Technology Transfer (EGTT) were cited as commendable efforts, especially in capacity-building, preparing technology needs assessment, and providing a handbook, among others.

At the same time, some participants highlighted obstacles to the transfer of technology. These were being political as well as financial in nature. The political obstacles mentioned included the ban on export of certain technologies and the negative effects on employment in developed countries resulting from shifting the production of technologies to developing countries. The financial obstacles included inadequate levels of the public funding that is needed to meet technology needs of developing countries, complicated and slow procedures for the approval of funds provided through the financial mechanism of the UNFCCC, and difficulties in mobilizing public and private funds.

Other participants questioned the relationship between technology transfer and its cost, as well as the confusion of equating technology transfer with that of technology needs assessments. While recognizing that not all developing countries can have access to technology at the same time, it was stressed that some developing countries are ready to deploy some of these technologies and that there is no mechanism in place to enable them to do so. In this regard, there were several calls for governments to play their part in providing a clear, stable, transparent and predictable environment and for donor countries, in particular, to provide credit and tax incentives to the private sector to ensure that technology transfer can take place.

Others suggested that there is also a need to transfer know-how and build capacity on climate-friendly technologies, in order to allow countries to adapt these technologies to their national circumstances and context.

Most participants agreed that more concrete action for technology transfer under the Convention is needed. Others reassured the forum that this is a major dilemma but that through united efforts, resources can be mobilized and solutions found.

Several participants presented proposals on how to move forward and on some issues for consideration in a next phase. It was proposed that the forthcoming discussions on the framework for technology transfer that was adopted in Marrakesh could form the basis for countries to review some possible elements, but that consideration be given to the fact that the time between research and development of certain technologies is much longer than the time frame of the technology transfer framework of the Marrakesh Accords.

A proposal was made to discuss how to accelerate technology transfer through international cooperation using a multilateral approach at COP/MOP 1 that would consider criteria for such an approach including urgency, seriousness, political commitment, transparency, common but differentiated responsibilities and transformation of the technology transfer framework.

It was also suggested that, to date, there has been a lot of attention on developing strategies on specific technologies such as clean coal technologies and renewable energy, and that there is a need to unleash the potential of existing and emerging technologies through exploring further how to pursue and achieve technology deployment more effectively. This could be done through such mechanisms as deployment protocols, research and development agreements, and innovative financing.

One participant suggested that more aggressive and ambitious targets are needed for Annex I Parties in order for technology transfer accelerate. This point was made in the context of technology transfer meeting the needs of the increased energy demand in developing countries where large populations still do not have access to electricity, but are willing to pay to improve their livelihood. Such a demand can be seen as offering a potentially large market for future energy investments that can also provide an opportunity for the development of clean technologies by developed countries over the next few decades.

Others noted that there was no need to develop new mechanisms given that many initiatives were already available and these should be completed first in order to provide input to work under the Convention. These initiatives included leveraging resources for technology transfer such as partnerships (public-private, public-public), engaging the private sector in a more creative way, and participating in multilateral initiatives such as the climate technology initiatives. Specific reference was also made to the discussions of the EGTT workshop on innovative options for financing technology needs assessment outputs as well as working with experts from those countries that have completed these assessment in order to discuss specifics of particular projects and to prepare proposals on how to move forward.

One participant welcomed the proposal of a "Montreal mandate" to support activities in developing countries with respect to innovative ideas under the Convention that could be replicated under other conventions, but he stressed the need to provide financial support to developing countries for the completion of their technology needs assessment and to enable the UNFCCC process to move from theory to implementation.

In the same vein, it was noted that the exiting energy efficiency technologies are too expensive for developing countries and that one solution is to localize production of these technologies to reduce equipment cost. It was also proposed that consideration be given to dispersing plants for manufacturing renewable energy technologies in developing countries in order to assist with training, capacity-building, employment creation, combating poverty and reducing costs associated with imported technologies.

Some participants expressed the view that the two questions posed by the co-chairs are linked, noting that the CDM is an effective way to transfer technology. For this reason efforts should be made to strengthen the CDM as a means of attracting business in developing countries. These participants also noted that countries can make the CDM a success by empowering the private sector. Examples of success stories of CDM and JI projects were presented and a proposal was made to develop guidelines and modalities at COP/MOP 1 on JI as a mechanism that supports the environmental integrity of the Kyoto Protocol.

Others, concerned that not all developing countries will get their fair share of projects under the CDM if market forces alone determine the selection of projects, stressed the need to develop an appropriate procedure to guarantee access to CDM projects by all. To this end it was suggested that selection could include such criteria as contribution of projects to sustainable development, the alleviation of poverty, and promotion of economic growth, recognizing that the least cost of certified emissions reductions is not always compatible with sustainable development criteria. One participant called for a strong compliance system after 2012 to ensure that there is a market for CDM projects and for technology transfer, because many of these projects are still awaiting approval, and that the current price of carbon is not favourable for Parties to support CDM projects.

A view was expressed that the CDM, in its current structure, provides little incentive for decarbonization and that to date, it has not demonstrated its effectiveness in transferring technology.

It was argued that the CDM should also be extended to projects in the transport sector where GHG emissions are very high. Others proposed improvement to the CDM, by analysing why the mechanism is not fulfilling its objectives, learning from difficulties, and designing better mechanisms in the future. A suggestion was made to promote CDM projects and technology transfer through the establishment of a new funding mechanism that would subsidize development of renewable and energy efficiency technologies, and provide a rebate system for developing countries meeting national targets established by each country.

Increasing certainty on what will happen beyond 2012 was quoted by many participants as being an essential precondition for ensuring greater use of mechanisms and for allowing them to make a contribution to the objective of the UNFCCC. One group of countries called for a discussion to further understand how post-2012 strategies can address the issues mentioned above, among others.

Adaptation

The co-chairs posed the following questions to the participants:

- **How can the knowledge base be enhanced on vulnerabilities, impacts and cost-effective adaptation options? What is required to enhance adaptive capacity?**
- **How can we ensure that adaptation to adverse impacts of climate change be integrated into the technology transfer and funding policies, development cooperation and national level decision-making?**

The complete coverage of this discussion session can be found at <unfccc.int>

Participants noted the importance of mitigating climate change and adapting to it, some underscoring that mitigation and adaptation should be seen as complementary strategies to address climate change. One participant observed that there need to be flexible approaches to adaptation and that the international approach to adaptation should be different from that to mitigation. Some called for a bottom-up approach to adaptation, accompanied by intersectoral dialogue and information flow across sectors.

Other participants described their countries' vulnerability to climate change as well as the programmes they are implementing to address these vulnerabilities. The loss of agricultural land due to sea-level rise and the loss of biodiversity due to hypersalination, extreme weather events and natural disasters were cited as impacts that are already adversely affecting communities.

On the challenges facing countries when dealing with adaptation, some participants mentioned how difficult it is to separate natural climate variability and climate change, and proposed that research in this area, particularly in the use of regional climate models, be given priority. On the use of models one participant cautioned against the replication of the models that have been used in the mitigation assessment, especially those that include incremental costs. He advised Parties to use models that generate workable solutions to address natural climate variability and human-induced climate change.

Other challenges mentioned included the need to develop capacities for monitoring and assessing climate change impacts, to enhance the understanding of vulnerabilities and adaptation and to build capacity to introduce adaptation strategies. The transfer of technology that will positively affect people's livelihood and at the same time protect the environment, and access to financial resources, were also highlighted as issues that still need to be addressed.

On the challenges for undertaking national adaptation actions one participant stressed the need to consider the role of the international community and that of the UNFCCC in particular, in order to maximize the use of the scarce global resources (human, institutional, etc).

Most participants mentioned that the development of the 5-year adaptation work programme under the UNFCCC provides an opportunity to discuss the development of adaptation issues. Others noted the importance of the Adaptation Fund under the Kyoto Protocol in implementing adaptation actions. Emphasis was also given to the need to facilitate cooperation among scientists in the developing regions through south-south cooperation, that includes training in research and development and bridging the gap between research and policy development. Cooperation with other organizations and forging collaboration with other conventions such as the Convention on Biological Diversity (CBD) was also encouraged.

There was a call for education, training and public awareness to be given due attention and not to be limited to workshops; they should be included in the development of curricula for schools. Such efforts should include sharing indigenous knowledge on adaptation and assisting developing countries with the acquisition of basic information to assess their vulnerabilities. One participant indicated that adaptation to climate change is varied, localized and sector-specific, and for this reason technology and funding needs should be specific to sectors.

The national adaptation programme of action (NAPA) process was cited as an important step in the demonstration of technology transfer for adaptation. These are likely to facilitate policy development on technology transfer and its eventual integration into national planning. It was stressed that successful experiences should be shared among Parties and can be adopted as best practices.

Mitigation

The co-chairs asked the participants to reflect on two questions relating to climate change mitigation:

- **What type(s) of climate change goals would best ensure the necessary deep reductions of emissions while securing sustained economic growth for both industrialized and developing countries?**
- **How can we formulate climate change policies that produce co-benefits for health, employment, etc; and formulate sectoral policies that produce co- benefits for climate change mitigation?**

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To ensure the necessary deep reductions of emissions while securing sustained economic growth for both industrialized and developing countries, it was proposed that lessons from economic difficulties faced by developed countries in meeting their targets under the Kyoto Protocol should be taken into account as part of any discussion on future regimes. In addition it was highlighted that a post-2012 regime should be based on the principle of "common but differentiated" responsibilities, utilizing market forces and technological opportunities, and should be sufficiently flexible to attract wide participation, use technology opportunities and consider nuclear energy positively.

It was pointed out that similarities in national strategies provide possibilities to pool efforts when designing a post-2012 regime. Similarities also exist between developed and developing countries in tackling climate change. In this regard, co-benefits and collaborations were cited as important: development and climate change are not mutually exclusive, and sustainable development and climate change mitigation are not contradictory.

A group of countries supported the idea to identify synergy between addressing climate change and sustainable development. The group also agreed that to achieve the ultimate objective of the UNFCCC temperature change must be limited to 2o C; and that this translated into reducing GHG global emissions by 50 per cent by 2050. This group expressed its desire to explore the possibility of developed countries achieving reductions of 15-30 per cent by 2020.

The challenges in reducing emissions were outlined. These included how to combine objectives such as security of supply, competitive energy market, social objectives; how to use opportunities provided by low-carbon technologies; and how to address environmental challenges of climate change. It was also stressed that there is a need for a long-term analysis to define how to meet short-term challenges, the paths to get there and their related costs, and what could be considered as economically efficient approaches.

One participant said that the Convention sets a clear framework for mitigation and that countries need to implement it. Another outlined a direction for developing countries to follow whereby climate change is integrated into development policies. It was noted that developing countries are already implementing development policies that bring co-benefits for climate change, including GHG reductions.

Closing remarks by the co-chairs

After the general discussions were completed, co-chair Mr. Konishi acknowledged that everyone had learned a lot from each other given the wealth of discussion. He also recognized the usefulness of the dialogue during the seminar, in making individual and collective efforts more effective and efficient as countries think ahead together, and in creating and consolidating confidence among all, in their common endeavour to fight climate change.

He thanked all participants for their outstanding contributions and said he hoped that this could help pave the way for Montreal conference. He expressed his sincere appreciation for the kind hospitality extended by the Government of Germany and his pleasure in working with his co-chair Mr. Chow.

For his part, co-chair Mr. Chow remarked on the frank exchange of information among experts and thanked them all for sharing their common vision on the important issue of climate change. He left the forum with a Malaysian saying that "We have more than 100 rivers but all flow to the sea" and remarked that even though countries may take 100 different paths, it is hoped that one ends up with the same goal of protecting the climate for sustainable development for the future. He hoped that these positive discussions would continue in paving the way for the future.

After thanking all the experts from all governments in making the seminar a success, it was declared closed.



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