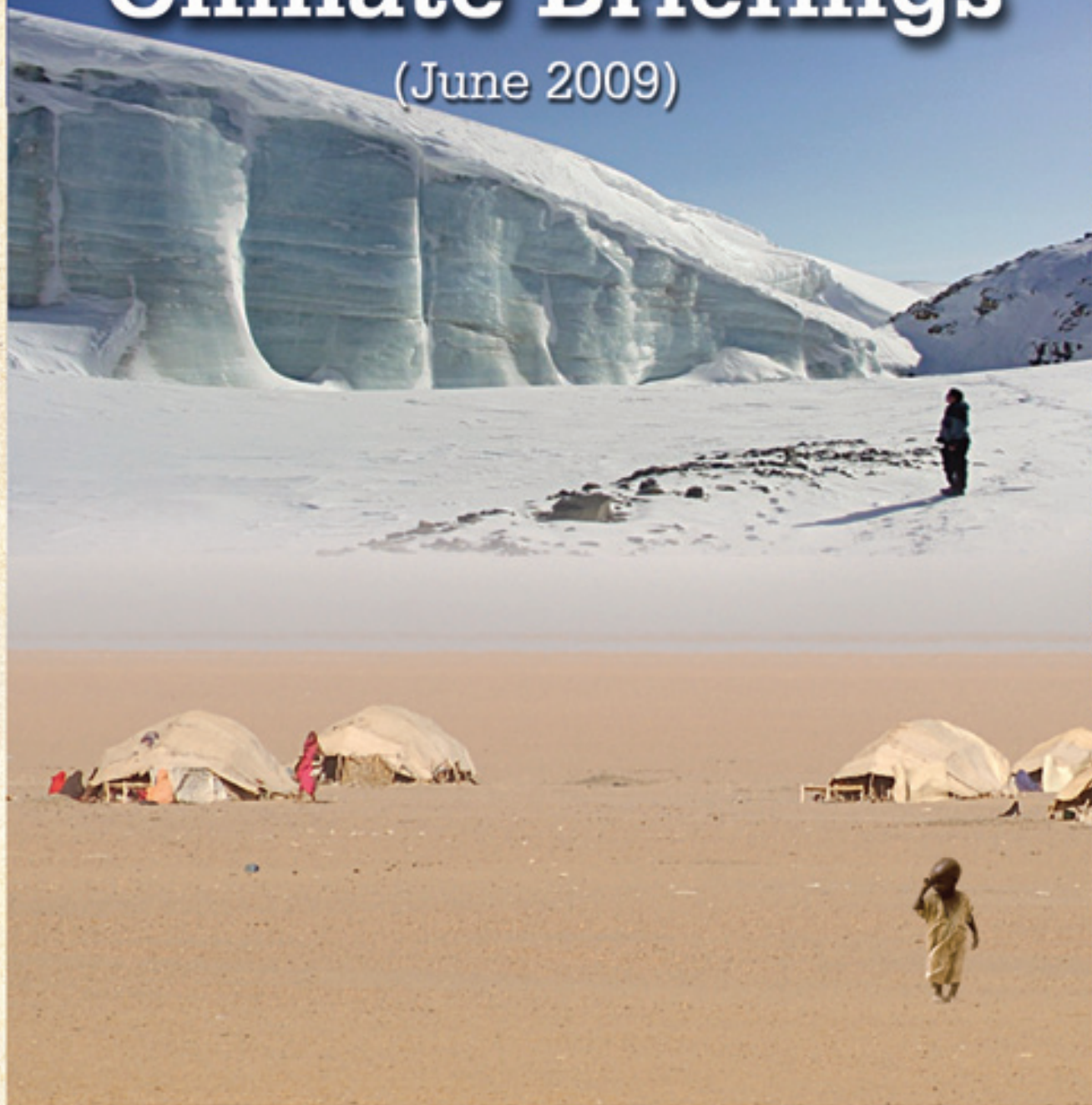


Third World Network **Bonn News Updates and Climate Briefings**

(June 2009)



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This is a collection of the 22 News Updates and three Briefing Papers prepared by the Third World Network for and during the United Nations Climate Change Talks in Bonn, Germany, from 1-12 June 2009.

Bonn News Updates

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Bonn News Update

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29 March 2009

Developing Countries Question Approach of Chair's 'Focus Document'

Bonn, 29 March (Meena Raman) – Several developing countries questioned the content and approach of a key document prepared for a session of the climate talks following up on the Bali Action Plan, saying that their views and proposals had been relatively ignored.

They were commenting on a paper prepared by the Chair of the Ad-Hoc Working Group On Long-Term Cooperative Action (AWG-LCA) to provide focus for the negotiating process at the 5th session of the group. The group, under the United Nations Framework Convention on Climate Change (UNFCCC), is mandated to prepare for the outcome of the Copenhagen climate conference this December.

Their views were expressed at a pre-session event that took place in Bonn on 27 March, on the eve of the 5th session of the AWG-LCA, which is taking place on 29 March-8 April.

Some developing countries also expressed concern about the way the negotiations would be conducted, as the Chair had proposed topics to be discussed in "focus groups" on selected topics within the broader contact groups. With the proliferation of groups, delegations especially of smaller countries would not be able to take part in all the meetings.

At the event, the Chair, Michael Zammit Cutajar, presented his document, which he referred to as the 'focus document'. He explained the document was prepared to focus the negotiating process on the fulfilment of the BAP and on the components of the agreed outcome, describing areas of convergence in the ideas and proposals of Parties, exploring options for dealing with areas of divergence and identifying any gaps that might need to be filled in reaching an agreed outcome in Copenhagen in December this year.

Several developing countries voiced the view that the document was not balanced in dealing with the proposals and submissions of all Parties, but was

instead selective in focussing more on elements that had been proposed by the developed country Parties. In contrast, the developing countries' views were not taken on board or were not adequately represented.

Bernarditas Mueller of the Philippines, speaking for the G77 and China, said that very few of the concerns of the Group were captured by the focus document and questioned whose 'focus' it represented.

China expressed doubt that the selective process and narrow focus, without fair treatment of other Parties' proposals or submissions, would be of any use for the current negotiating process.

India said that it was concerned that the focus document was "diminishing the thin ice of trust" among Parties "on the road to Copenhagen". It added that the document is selective, elevating some proposals and leaving out others without a clear objective idea on how to go forward. It said that the document was disappointing.

Bolivia said that the proposals of the G77 and China have not been taken on board the way they ought to have been. It questioned the balance of the focus document and also expressed disappointment.

Cutajar, in presenting the focus document, recalled that at the 4th session of the AWG-LCA in Poznan in December 2008, Parties had invited the Chair to prepare under his own responsibility, a document for consideration at its current session in Bonn. The pre-session event was held to provide Parties with "an opportunity to understand and explain the document".

The focus document was presented in two parts. Part I consists of an overview by the Chair that assesses the state of play of the negotiations and suggests points of focus that could encourage forward movement at the current session. Part II covers in more detail ideas and proposals by Parties on the elements of the BAP (which are a shared vision for long-term cooperative action; and enhanced

action on adaptation, mitigation, finance and technology).

Cutajar stressed that the document was not a negotiating text but “an expression of the Chair’s impressions and judgements.” On whether amendments can be made to the document, he said that the document will cease to have any guide at the end of this session. Parties should not spend time amending the document, said Cutajar. He welcomed reactions to the document in preparation for the negotiating text (which will be ready for the June session of the AWG-LCA).

He said that it was clear in the mandate for the preparation of the focus document that it “does not take anything off the table.” He added that the basis of work is constituted by Parties’ submissions which are in an “assembly document” (compiled by the previous Chair, Luiz Machado of Brazil).

Cutajar said that the ‘focus’ was selected and that he expected Parties to say “that this and that is not mentioned” but “it is all there in the submissions”.

In the document, the Chair stated that in dealing with the material at his disposal, he has placed focus on topics and options that, in his judgement, merit particular attention at the present state of the negotiations. It states that the document is thus, “necessarily, selective.”

The pre-session meeting discussed the various topics in the Chair’s paper. In relation to **the issue of ‘shared vision’** under the BAP, the Chair said that there was broad support for an indicative goal based on science for what a long-term global goal for emission reductions should be. In this regard, the Chair said that focus be placed on narrowing the options for expressing the long-term global goal for emission reductions and clarifying the issue of emission pathways to the mid-century. The Chair was therefore convening a technical briefing on Monday, 30 March, on estimates of required emission reductions for stabilisation scenarios which include the proposal by the EU for GHG emissions of developing countries as a group to deviate from business-as-usual by 15-30% by 2020.

China said that the Chair’s selection of this particular topic (for a briefing) instead of others “has serious political implications”. The Philippines asked if the briefing was requested by Parties. In response, the Chair said that it was entirely on his own initiative.

Apart from the content of the focus document, developing countries also expressed concerns over **the organisation of work** during the 5th session of the AWG-LCA. These ranged from the topics for the focus of contact groups, the establishment of

“focus groups” under the contact groups that they said would disadvantage countries with small delegations, and the lack of summaries by the Chair following the work of the contact groups.

The Chair had proposed that the four contact groups (on shared vision; mitigation; adaptation; finance and technology) that were previously established, focus their work on specific topics such as those suggested in the focus document. This could be done by dedicating meetings of a contact group to a specific topic or by assigning topics to “focus groups” which would seek to narrow down options or flesh out promising ideas. The work of the focus groups could, in some cases, be facilitated by individuals identified by the Chair of the respective contact groups, known as “Friends of the Chair”.

Bolivia expressed concerns over the ‘setting’ of the discussions. How are the focus issues selected when there is no consensus on the Chair’s document, it asked. If Parties go into the contact groups and there is no convergence, the Chair’s paper will not be the basis for discussions. The proliferation of focus groups will be a disadvantage to developing countries which have small delegations, it said.

The Chair also proposed that summaries by the Chair need not be prepared in a phase of work in which progress may be captured in negotiating texts.

In response to South Africa on how to capture progress of work if not through the Chair’s summary, Luiz Machado from Brazil, the Vice-Chair of the AWG-LCA, said that when Parties enter into the negotiating text phase, progress will be captured by additions of Parties to the Chair’s text. He said that the text could have many brackets and Parties’ views would be captured in insertions to the negotiating text.

On the **issue of shared vision**, China said that the Chair’s document was too narrow in perspective, as there was general agreement among parties from previous discussions that the ‘shared vision’ should be comprehensive and not just narrowed down to the issue of a long-term global goal. It said that this points to the general approach of the focus document which is selective and which is called ‘a focus document’ when in fact it is a ‘selective document’ that can lead to serious problems for Parties. This is a process that is not driven by the Chair or the UNFCCC Secretariat but by Parties, it stressed.

China said further that in the preparation of any document, although it is on the Chair’s own responsibility, if it is to have utility and be helpful in the negotiations, then there is a need for balance in the document which reflects delicately the submissions and proposals by all delegations.

India said that with regard to what was understood in Poznan, in relation to the document to be prepared by the Chair, it thought that the document would incorporate certain issues to advance implementation as mandated by the BAP and distinguish this from issues that go beyond the scope of the Convention. On enhancing implementation, it should tell us where the convergence and divergence is, said India. It hoped that discussions can focus on specific actions that would enhance implementation of the specific provisions of the Convention.

Brazil said that a more comprehensive approach to shared vision is important. Throughout the work of Parties last year on ‘shared vision’, it said that there have been references to enhancing possibilities to implement stronger actions in an ambitious manner and priority. There was a common view of financing for enhanced action for adaptation and mitigation, it added. This would have been a useful way to address the shared vision as a first issue, said Brazil. The focus document selected one specific aspect of shared vision, which is the long-term global goal of emission reductions and this is not the view of all or the concept that all parties seek to emphasise, it stressed.

Costa Rica also said that the shared vision as presented was narrow in interpretation when what has been expressed was a broader and more encompassing view.

Tuvalu offered words of encouragement to the Chair and said that it was in the right direction to narrow down focus. On shared vision, it would like to see the minimising impacts on vulnerable countries.

Barbados, speaking for the **Alliance of Small Island States**, said that the Chair’s document was useful, although it had general areas of concern that related to the issue of urgency of climate change as shown by science. It said that it would like an opportunity to present the scientific analysis underpinning the call by AOSIS and LDCs for the most ambitious targets and objectives.

Saudi Arabia said that the main scope of the BAP is in enhancing implementation. Narrowing down the scope is a concern, as a narrow focus could lead to the losing of focus.

South Africa said that on the way the document is conceptualised, the question is on what is meant by focus. It said that there could be two interpretations – focusing on areas of work that would require further discussion or evolution and perhaps, the long-term goal can be an example or the second interpretation could be focusing on areas

where there is convergence and support and leave behind those issues that would not get any broad convergence.

In response, Cutajar said that there was a need for a bi-focal approach – issues that require further discussion due to divergences, as in the case of the long-term goal for emission reductions, and in other areas, where there is a potential for agreement.

In relation to **mitigation**, **China** said that the selective document refers to “global mitigation efforts and on the contributions of different groups of Parties” and that this is misleading. It said that it is clear from the Convention that the groupings in the Convention are Annex 1 and non-Annex 1 Parties and that it was opposed to such language in the document, especially when it comes from the Chair.

Micronesia said that the Chair’s view that there is convergence over the mechanism on matching enhanced action on mitigation with financial and technology support is overstated.

The EU said that the document does capture the issues raised. It also identified some areas of omissions. It agreed that there was a need to avoid being too selective and to maintain a balance.

On the issue of **finance and technology**, the **Philippines** said that there is a large gap of understanding among parties on the delivery of implementation. It said that what is needed is to reach a common understanding. It said that the G77 and China proposals have not had reactions. Proposals instead are quite opposite and contrary to what the G77 has put on the table, it said. The focus document makes no references to this, it said. Limiting Parties to focus on selected areas will not allow for frank and open exchange on specific proposals on the table that will move Parties forward, it said. There is a need to overcome barriers of mistrust and to build trust.

China was also of the view that in the process of negotiations, there is a need to build trust. On the specific part of finance and technology, it was surprised that there was no mention on technology transfer in the Chair’s presentation, which is the most crucial element involved in implementation of the Convention. It said that in the selective document, the Chair was shy to mention technology transfer. This is not a very good sign for trust and confidence building. In the contact groups and workshops, the G77 and China had put up concrete proposals regarding technology transfer but the Chair seemed to be too selective and had omitted this aspect.

In response, the Chair said that technology transfer is not mentioned in the first part of the document but is reflected in its second part.

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Bonn News Update

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'Focus Document' not a Basis for Negotiations, Says G77 and China

Bonn, 30 March (Meena Raman) – The 'focus document' presented by the Chair of the Ad-Hoc Working Group on Long-Term Cooperative Action (AWG-LCA) is not the basis for Parties to focus on the negotiating process, said the G77 and China at the opening of the climate talks in Bonn on Sunday 29 March.

The 'focus document' was prepared by the Chair of the AWG-LCA, Michael Zammit Cutajar, to focus the negotiating process on the fulfilment of the Bali Action Plan and on the components of an agreed outcome to be reached in Copenhagen in December this year.

This is the first of several meetings of the AWG-LCA this year to prepare for the Copenhagen conference. A highlight of the opening session was a speech by the United States' President's envoy on climate change, Todd Stern, who said that the US is glad to be back and wants to make up for lost time and is seized with the urgency of the task before Parties.

Ambassador Ibrahim Mirghani Ibrahim of **Sudan**, speaking for the **Group of 77 and China** at the opening plenary, said that many of the Group's submissions have unfortunately been either omitted or not adequately reflected in the focus document.

An example is the issue of adaptation, he said. It is known that detailed proposals were submitted by members, and groups of members of the G77 and China on this very important and urgent issue, but these were not adequately reflected in the document. Instead of focusing on meeting the costs of adaptation as provided for in the Convention, the text places this obligation mainly on the developing countries themselves.

Similarly, the Group's concrete proposals on finance and technology have not been adequately expressed, nor have the commitments pertaining to these issues as stated in the Convention been explicitly included, it added. It expressed concern

that there has not yet been an open and clear exchange of views on specific proposals that the Group has submitted.

Realising that Parties should keep a constructive view, and having exchanged opinions with the AWG-LCA Chair, it said that it was clear to the Group that the basis for negotiations are the Parties' submissions and proposals.

"In this context, we recall that this document is a paper prepared under the responsibility of the Chair, not reflecting a convergence of Parties' views, nor therefore, a basis for further negotiations," said the Group.

It said that the Group will continue to elaborate proposals, priorities and focus areas from the perspectives of the Group, expecting reactions from other Parties. "As we move into a negotiating mode and focus our attention on the enormous task before us, the Group will ensure that its positions are fully taken into account," said Sudan.

Algeria, speaking for the **Africa Group**, said that it was time to prioritise proposals for enhanced implementation of the Convention under the Bali Action Plan. It said that it was important to work in a transparent and open manner. It placed high importance on the work needed on adaptation, finance, technology and capacity building. It said that the meeting of the Conference of Parties in Copenhagen must provide for scaled-up funding and an international programme of work on adaptation. It called for ambitious cuts in emissions for Annex 1 Parties under the Kyoto Protocol and for comparable efforts by non-Kyoto developed country Parties (viz. the US). For the non-Annex 1 Parties, it said that nationally appropriate actions in the context of sustainable development must be enabled and supported by finance and technology. Algeria said that new institutional arrangements should be in place. It said that on the issue of a 'shared vision', it is not simply about the stabilisation of the climate

but is also about addressing the impacts of climate change and enabling development to proceed in a balanced manner. It should be about a shared vision as to the means of implementation, it said.

Grenada, speaking for the Alliance of Small Island States (AOSIS), stressed that recent science has underscored the need for urgency of collective effort. It said that new studies show it is achievable and feasible to have far lower climate stabilisation scenarios than the IPCC. The AOSIS called for global GHG concentrations to be well below 350 ppm by 2050 and for temperature rise to be limited to far below 1.5 degrees centigrade. It said that the level of ambition in the negotiating process will determine the future survival of the small island states. It rejected attempts by some Parties to consider adaptation funding as ODA. Funding to support small island states and LDCs is cooperative action and is fundamental. Financing must be new, additional, predictable and grant-based.

Lesotho, speaking for the LDCs, echoed the AOSIS call for keeping temperature limits to well below 1.5 degrees centigrade and for GHG concentrations to be well below 350 ppm by 2050. It also stressed the importance of supporting adaptation efforts through finance and technology. It also reiterated the need for an enhanced financial architecture under the Convention.

The **Czech Republic**, speaking for the EU, said that the EU Heads of States had in December 2008 confirmed the legal framework for the EU to achieve its independent commitment to reduce emissions to 20% below 1990 levels by 2020. The EU said that it is also committed to a 30% reduction as its contribution to a global and comprehensive agreement. It said that achievement of the necessary global emissions trajectory to keep the 2-degree-centigrade objective within reach will require developing countries as a group, in particular the most advanced among them, to achieve a substantial and quantifiable deviation below the currently predicted emissions growth rate. According to the EU, recent analysis indicates that such deviation will need to be in the order of 15 to 30% below business-as-usual cuts by 2020, respecting the principle of common but differentiated responsibilities. It said that it recognised that many actions have already been taken, and with additional support, more can be done to achieve this level of ambition. It proposed Low Carbon Development Strategies as a vehicle to link action and support.

Todd Stern, the US Special Envoy for Climate Change, said that the US is glad to be back (in the negotiations) and wants to make up for lost time and

is seized with the urgency of the task before Parties. He said that to establish a foundation for a strong agreement in Copenhagen, there was a need to have a long-range vision that is guided by science. The US said that it would like to see all countries set a long-term pathway and develop strategic actions that will collectively put the world on the road to a low-carbon future. Stern said that the US recognises its unique responsibility both as the largest historic emitter of greenhouse gases and as a country with important human, financial and technological capabilities and resources. He said that President Obama is working actively with key members of Congress to implement a nationwide cap and trade programme that would cut US emissions by more than 15% from current levels by 2020 and 80% by 2050.

The US said that there must be a global response, with truly significant actions by all major economies, adding that those most responsible for past carbon emissions should join together with countries that are on track to be most responsible for future emissions.

On the issue of finance, the US said that it was working intensively on the question of how to establish a structure to ensure that significant funds flow to developing countries. It said that it wanted to ensure that the structure is well balanced, providing for a robust amount of resources, transparency, sound governance, and the right incentives to establish policy and regulatory environments that can leverage private investment and unleash innovation both in developing countries and around the world. It also said that appropriate protocols should be developed to ensure that low-carbon technology is effectively developed and diffused. The US also suggested that Parties fashion an agreement that is guided by the laws and programmes that are in place nationally.

Australia, speaking for the “Umbrella Group” (that also includes the US, Japan and Canada), said that all countries need to act to mitigate, especially the major economies. It added that there is a need for consistency and coherence between the AWG-LCA and the discussions under the Ad Hoc Working Group on Further Commitments for Annex 1 Parties under the Kyoto Protocol (AWG-KP). It said that the output of the AWG-LCA and the Kyoto Protocol will form the post-2012 agreement.

The meeting then dealt with the organisation of the work for the Bonn session. The Chair said three workshops will be held on the following issues – a workshop on the economic and social consequences of (mitigation) response measures to be held on 31 March; a workshop on para 1(b)(i)

and 1(b)(ii), dealing with mitigation efforts by developed and developing countries, to be held on 1 April; and a workshop on opportunities and challenges for mitigation in the agricultural sector to be held on 4 April.

Cutajar also proposed the establishment of four contact groups – on shared vision, mitigation, adaptation and delivery on finance and technology.

The Chair said that the contact groups will consider the organisation of the work. He said that it was time to focus on the negotiations. He said that he had provided some suggestions in the focus document but it is up to the contact groups to decide

on what to focus on.

The Philippines speaking for the G77 and China emphasised that the process must be party-driven and the focus should be on proposals by Parties. The Group also proposed that summaries from the contact groups be made available as the Chair of the AWG-LCA had said that there would be no summaries by the various Chairs of the contact groups.

In response, Zammit said that the Chairs will provide impressions and as to whether summaries will be produced, he said that the matter was being looked into.

Developing Countries Frustrated over Lack of Progress to Establish Annex 1 Emission Cuts

Bonn, 30 March (Hira Jhamtani and Juan Hoffmaister) – The seventh session of the Ad Hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol (AWG-KP) opened on Sunday, 29 March with expressions of frustration by developing countries on the lack of progress by developed countries to establish the scale of commitments in reducing their greenhouse gas emissions in the second commitment period.

The AWG-KP was established in 2005 to discuss and eventually recommend the scale of emission reductions to be achieved by Annex I Parties (developed countries) in aggregate for the second and subsequent commitment period, as mandated by Article 3.9 of the Kyoto Protocol (KP).

The first commitment period which commenced in 2008 expires in 2012. The scale of emission reductions in the first commitment period is reflected in Annex B of the KP which consists of a list of Parties together with their respective quantified emission limitation or reduction commitments (QELRCs) expressed as a percentage of base year or period.

The AWG-KP is also mandated with the task of concluding a draft text for amendments to Annex B and the relevant articles of the Protocol, in time to be adopted at the fifth Meeting of the Parties (CMP 5), in December this year at Copenhagen. Based on Article 20 paragraph 2, in order for this to happen, the text of the proposed amendments must be communicated at least six months before the meeting which is proposed for adoption. Thus such a proposed text must be ready by June 2009.

Developing countries are frustrated that Annex I countries are delaying in putting forward the proposed scale of emission reductions for the second period of commitment, despite the fact that the AWG-KP has been working close to four years now.

The AWG-KP is currently being chaired by Mr. Harald Dovland of Norway.

In its opening statement, **Sudan on behalf of the G77 and China** reiterated the fundamental principle that developed countries shall take the lead in combating climate change. One of the most important actions to demonstrate this leadership is the establishment of ambitious quantified emission reduction commitment for the 2nd period and subsequent commitment periods, it said. The Group has maintained and reiterated its position that Article 3.9 of the KP provides a very clear mandate for the AWG-KP to set further commitments for Annex I Parties, through the amendments to Annex B of the Protocol.

The Group expressed serious concerns that the progress of the AWG-KP in achieving its clear and simple mandate is extremely slow. The Group reaffirmed its strong position against linking the work of the AWG-KP to extraneous issues and other processes under the Convention, while recognizing that the work of the AWG-KP must take place in the context of the Convention's ultimate objectives, principles and obligations.

After three full years of work, the Group expressed disappointment by the failure of the AWG-KP to reach final conclusions on the mitigation potentials, means, methodological issues and ranges of mitigation reduction potentials to be achieved by Annex I Parties in aggregate.

The G77 and China said that the AWG-KP, at its resumed 6th session, agreed that the current session of the AWG-KP adopt conclusions on the scale of emission reductions for Annex I Parties in aggregate and reach conclusions on draft amendment texts to ensure that required amendments to the Protocol will be forwarded in time for adoption by the CMP 5.

The Group noted that the Chair's scenario note proposes to establish a contact group on emissions trading and project-based mechanisms, a contact group on land-use, land-use change and forestry (LULUCF) and an "omnibus" contact group on the

other issues of gases, sectors, sources, common metrics, sectoral approaches and legal issues.

In this regard, the Group said that given the primary objectives of this session are to: firstly, adopt conclusions on the scale of emission reductions for Annex I Parties in aggregate and secondly, to reach conclusions on a draft “legal” amendment text, the Group expressed concern that the organisation of work proposed by the Chair’s scenario note is not built and focused on delivering on these primary objectives of this session of the AWG.

The G77 and China expressed concern that the Chair’s scenario note only provides for the handling of the first primary objective to adopt conclusions on the scale of emission reductions for Annex I Parties in aggregate in the second plenary session with no provision for any process to advance and adopt conclusions on the matter.

The Group is also concerned that the scenario note of the Chair only providing for the handling of the second primary objective to reach conclusions on a draft amendment text is only one issue within the omnibus contact group and that there is only a provision for consultations on “ways to address legal matters during the course of the year” without any other more formal process to advance and adopt conclusions on the matter at this session.

Given this primary focus on these two objectives, the Group urged the Chair to establish the contact groups in line with the objectives and to enable the AWG-KP to fulfill its work by the end of 2009 in accordance with its mandate.

The Group also welcomed the establishment of a contact group to continue deliberation on the issue of potential consequences, including spill-over effects, of tools, policies, measures and methodologies available to Annex I Parties.

Algeria, on behalf of the **Africa Group**, expressed its frustration about the lack of progress on the work of the AWG-KP. “We are extremely concerned that over the past few months there has been very little done on the work of the AWG-KP and we are now left with 8 months before Copenhagen, without any concrete elements pertaining to the mandate of this Ad Hoc Working Group,” Algeria said.

The Africa Group said that the work of this session is very important in order to move towards an agreement in Copenhagen. It emphasised that the legal mandate of Art. 3.9 of the Protocol is the focus of the work of the AWG-KP, which is specifically to set further quantified emission reduction commitments for Annex I Parties for subsequent commitment periods through the amendment of

Annex B of the Protocol, and would like to urge Parties to start focusing on the mandate and leave other issues for relevant bodies that have the mandate to address them.

Algeria further said that the scale of reductions decided for Annex I Parties under the KP for the second commitment period will provide a yardstick to which efforts by other developed countries will be compared. It must therefore be ambitious, if Annex I Parties are to really take the lead in the global response to climate change.

It said that the potential economic and social consequences, including spill-over effects, of tools, policies and measures and methodologies available to Annex I Parties are also very important to the Africa Group.

Lesotho, on behalf of the **Least Developed Countries (LDCs)**, said the work of the 7th session of the AWG-KP is of great significance for the development of an agreement in Copenhagen that will entail stringent emission reductions by developed countries. “We continue to believe that ambitious Quantified Emission Reduction Commitments from Annex I Parties be at least 25-40% below 1990 levels by 2020 and 80-95% by 2050 as suggested by the IPCC”. Lesotho said further that all efforts at emission reduction under the KP should be designed in such a manner that they do not impose constraints and expose economies of the most vulnerable Parties but instead enhance resilience of such economies against the impacts of climate change.

Grenada, speaking on behalf of AOSIS, said that the scale of emission reduction objectives will determine the survival of nations in the course of this century, which makes this session extremely important to agree on a scale for emission reductions by Annex I Parties. It added that the AWG-KP should take on board new scientific information made available since the IPCC’s Fourth Assessment Report. It said the new information shows that changes in ocean acidification, melting of permafrost, and ice melting are happening much faster than projected by the IPCC. It added that the objective must be to reach stabilization of GHG concentrations at well below 350 ppm and to limit temperature rise to below 1.5 degrees centigrade, based on pre-industrial levels, noting that emissions must peak in 2015, with Annex I reductions of more than 40% by 2020 and more than 95% by 2050 based on 1990 levels.

Australia, speaking on behalf of the Umbrella Group, said that the AWG-KP was progressing well, particularly through consultations on flexible

mechanisms and LULUCF, as they are vital for the post-2012 work. It noted that the in-depth consultations on emissions trading and project-based mechanisms and LULUCF showed that there is no single model and that there are challenges in determining comparable efforts. It noted the close links between discussions in the AWG-KP and the Ad-hoc Working Group on Long-term Cooperative Action (AWG-LCA). It added that these processes are co-dependent, and hence there is a need for consistency and coherence. Taken together the output of the AWG-KP and the AWG-LCA will form a post-2012 agreement.

The **Czech Republic**, speaking on behalf of the **EU**, said that the AWG-KP is now in full negotiating mode and it looked forward towards concrete texts for adoption in Copenhagen. It said that the work must be guided by a shared vision and that delaying action will lead to carbon lock-in, increase the likelihood of crossing critical thresholds and increase the cost to the global economy.

It said that the EU's proposed collective cut by developed countries of 30% is consistent with the range in the IPCC Fourth Assessment Report of 25-40% by 2020. It said that this will be achieved

through domestic and international efforts. It also said that improved and new carbon-market mechanisms enable Annex I Parties to take on ambitious targets in a cost-effective way. The EU sees a strong continuing role of the flexible mechanisms, including the Clean Development Mechanism.

The EU said that there are synergies with the work of the AWG-LCA and that the work at the AWG-KP will only be part of the broader Copenhagen agreement.

It was clear during the opening statements that there is a divergence on how to organize the work of the AWG-KP in its seventh session. Developing countries feel that priority must be placed on concluding the scale of emission reductions by Annex I Parties and the legal draft text for amendments of the KP, pursuant to Article 3.9. They feel that other issues should not burden the work of the AWG-KP given the time constraints. Developed countries feel that emissions trading, project-based mechanisms and LULUCF are important in informing their decisions on the scale of emission reductions. These differences have impacts on the organization of the work of the AWG-KP, as will be reported in the next update.

Finance and Technology – Make-or-break Issue in Copenhagen

Bonn, 31 March (Meena Raman) – The issue of delivering on finance and technology is what will make or break the final deal in Copenhagen, said Luiz Machado of Brazil, the Vice-Chair of the Ad-hoc Working Group on Long-term Cooperative Action (AWG-LCA), at the climate talks in Bonn.

Machado was referring to the meeting of the Conference of Parties to the UNFCCC in December this year. He made these remarks at the first meeting of the contact group on ‘delivering on technology and financing, including consideration of institutional arrangements’ which was held on 30 March.

The technology and finance contact group (which Machado chairs) is one of four contact groups in the meeting of the AWG-LCA, which is under the UNFCCC (UN Framework Convention on Climate Change). The other contact groups are on shared vision, mitigation and adaptation.

The Chair’s view was supported by South Africa which said that this issue is the “make-or-break part of negotiations, for without a robust agreement on finance or technology, developing countries cannot agree on much else.”

Machado said that several proposals by Parties have been put on the table for consideration which are in the assembly document compiled by him, as well as the more recent proposals presented by Parties this year and the AWG-LCA Chair’s focus document.

As a way forward in the conduct of work, Machado suggested that Parties identify ideas and proposals that require clarity and discuss what needs to be done in terms of the final agreed outcome.

The Philippines on behalf of the **G77 and China** said that the focus document prepared by the Chair of the AWG-LCA did not reflect the concerns of the Group. The Group’s proposals are in some ways reflected in an inaccurate or insufficient manner.

The Group has submitted proposals on financing and technology and the institutions necessary to implement the specific articles of the Convention. It said that the Group would be interested to hear from the other Parties and have an exchange of views on its proposals and also discuss the proposals of other Parties.

India said that there were several key issues on the issue of finance and technology. The first and primary issue is whether there is a commitment by developed countries to provide this. Referring to various articles of the Convention, India said that the provision of finance is a commitment made by developed countries under the Convention and is not within the aid paradigm. Unless this is clarified, Parties will not get to the real issue of finance, said India. Another issue relates to what is meant by “agreed incremental costs”, it said. There is no metric available on what are agreed incremental costs and this needs to be developed, said India.

Ghana said there was a need to appreciate technology transfer. It expressed concerns over the focus document and wanted more elaboration on the issue of technology transfer as the whole picture needs to be reflected, it said. On the institutional arrangements regarding technology, Ghana said that it was crucial to reflect the long-term strategy and for Parties to capture the ideas of the Expert Group on Technology Transfer (EGTT) into the work of the AWG-LCA.

Saudi Arabia said that financing must come from the developed countries and there should not be a renegotiation of the Convention in this regard such as expanding it to South-South financing.

The Philippines said that on the generation of resources, there should be a common understanding. Referring to the G77 and China financial mechanism proposal, the generation of resources is only one small part of the institutional structure of the

mechanism that will ensure the meeting of the obligations under the Convention. The G77 proposal is anchored under Article 4.7 of the Convention. There has to be a common understanding that it is a commitment under the Convention relating to differentiated responsibilities, it said. There is a need for the identification of the nature of the financial resources as well as the needs, it said. What is available at present is at best estimates and extrapolations as well as misperceptions.

The **EU** said that it was logical to focus on the issue of the generation of new and additional finance needed and to keep in mind the role of private investment and public finance. It said that further discussion was needed on public finance, including the contributory approach of the market. It also said that Parties should try to avoid the discussion on “show me the money and then show the actions”. There is a need to look at how low-carbon development strategies can be used as a vehicle to match actions and income.

China stressed the need for a technology mechanism. The focus paper of the Chair is on research and development rather than on diffusion and deployment, it said. There is a need to make clear the scope and boundary of the debate. Understanding the concept of technology transfer is important. On the institutional mechanism, there is a need to link the financial mechanism to the roadmap and strategy for technology transfer.

Barbados speaking for the **AOSIS** (small island states) said that none of the proposals on financing, with the exception of the G77 and China’s proposal, approach the level of significant financing needed. The financial resources should be outside of ODA and there is a need for the demonstration of political commitment by developed country Parties. It is public financing that is the demonstration of the political commitment, it said. Financing from market-based mechanisms and international transactions is complementary to public financing. There is a need now to show the numbers in relation to financing.

Pakistan also underscored the need for understanding the Convention commitments and on

what mechanisms are needed to implement the objectives of the Convention. It said that the market alone cannot be the financier and that enhanced public financing is required.

South Africa said that there are many proposals on the table and there has been little engagement. It called for robust interaction. It also stressed that financing is new and additional and not ODA.

Brazil said that the consideration of the level of financing is necessary and is an essential reference in considering what are the instruments of financing that Parties must focus on. On the consideration of the multiple sources of funding, it is important to recognise the level of financing necessary, it said. What the market can produce is important but it is something that will not be up to the total level of what is needed.

Uganda emphasised that there should not be confusion over ODA and commitments of developed countries that exist under the Convention. Funds must be adequate and predictable and therefore must be largely public. Government is the best mobiliser of resources, as seen from the current financial and economic crisis. Governments should take similar bold actions for climate change programmes. Funding should not just be a percentage of the GDP of developed countries but must also be based on the cumulative contributions to GHGs from countries. Countries could have a high GDP but may not have contributed to GHGs as much as others, it added.

Tanzania said that market-based mechanisms cannot solve adaptation needs.

The **US** said that there is a need to recognise the need for additional financial resources. The sources and scale of financing from the current market sources and the possible larger-scale resources from future markets all pale in comparison to the financing available from FDI and private sector capital, it said. Strong intellectual property protection is necessary for enabling FDI, it added. On governance, the US said that it is not clear that a single financial structure satisfies all financial means.

Different Emphases by Parties in Shared Vision Contact Group

Bonn, 1 April (Meena Raman) – The contact group on “shared vision” held two meetings on 30 and 31 March, with various groupings and countries presenting differing emphases on what this concept means and how it should be worded. Most developed countries focused on the global goal of emission reductions and limiting temperature rise, while most developing countries stressed the need for a comprehensive vision, encompassing all aspects of the Bali Action Plan mandate (including finance and technology transfer). Summing up, the Chair said members viewed “shared vision” as an act of political messaging, conveying the political will of Parties.

Several developing countries also stressed the right to development and the centrality of equity in sharing the “carbon space” or to the “atmospheric resource.” Some countries, like Brazil, referring to what they obtained from a technical briefing on stabilisation scenarios, also said that there are different stabilisation scenarios which are based on different assumptions on pathways, burden-sharing and uncertainties, and that science does not establish a single pathway.

The contact group was meeting at the 5th session of the Ad-hoc Working Group on Long-term Cooperative Action (AWG-LCA) at the Bonn climate talks being held under the United Nations Framework Convention on Climate Change (UNFCCC).

Summing up the two-day discussion on 31 March afternoon, the Chair of the AWG-LCA, Michael Zammit Cutajar of Malta, said that a number of Parties viewed the shared vision outcome as an act of political messaging that is simple and profound and conveys the political will of Parties.

“It is a way of expressing how Parties will move forward, based on the objectives of the Convention where all Parties will play a fair part, based on the its principles and provisions. Emphasis is placed on using the shared vision to convey the level of finance

and technical support needed to enable the desired outcome,” said Cutajar.

(The Bali Action Plan, adopted in December 2007 in Bali, provides that the shared vision for long-term cooperative action includes a long-term global goal for emission reductions, to achieve the ultimate objective of the Convention, in accordance with the provisions and principles of the Convention, in particular the principle of common but differentiated responsibilities and respective capabilities, and taking into account social and economic conditions and other relevant factors. The long-term global goal for emission reductions has been one of the most contentious issues in the post-Bali climate talks.)

Cutajar said that the long-term global goal is a component of the broad vision and is science based. He said that some Parties had referred to the technical briefing held on 30 March on estimates of required emission reductions for stabilisation scenarios which included the proposal by the EU for GHG emissions of developing countries as a group to deviate from business-as-usual by 2020 from minus 15-30%. In this regard, referring to interventions by Parties, Cutajar said that there was difficulty beyond the clarity of science to a negotiated outcome.

Costa Rica, on behalf of the **G77 and China**, said that there are two parts to ‘shared vision’, viz. ‘shared’ and ‘vision’. Vision is that component that addresses the urgent situation through to mid-term and longer-term perspectives to the future world of low emissions. It is a blueprint to which Parties will return in future to make a review on the adequacy of efforts. The term ‘shared’ as Parties move forward, makes sure that no country is left out. It provides a multi-dimensional view and includes a long-term goal in addition to the goal of resilience, timely adaptation, appropriate finance and the goal of low emissions technology. The four goals (of mitigation, adaptation, finance and technology) together are the

legs of a well-balanced chair and provide the platform for long-term cooperation. Shared vision should be simple in form and profound in establishing the path forward under the principles of the Convention. It must ensure effective integration of the four pillars and be mutually interdependent.

South Africa on behalf of the Africa Group said that the shared vision is more than a number in the long-term goal. Stabilisation of the climate is also about adaptation. It is also about developed countries meeting their existing commitments. The means of implementation of technology and finance are necessary. On the long-term goal, it needs to be ambitious, have a base year and clear mid-term targets.

Uganda on behalf of the LDCs said that there was a need for a long-term goal of wanting to see stabilisation of GHGs which is safe. The shared vision must be derived from the objectives of the Convention. Provision of technology and financial resources must be accelerated.

The Bahamas speaking for AOSIS said that there is a need to stress the sense of urgency for action. The right to existence is a basic human right. This is a serious issue for the small island states. The science is constantly evolving and there is room for improvements in addressing the inaccuracies.

Brazil stressed the importance of a comprehensive shared vision that arrives at points of consensus on many issues including on the level of financing for mitigation and adaptation. The shared vision should include a long-term global goal and use it as an aspirational reference to face climate change. The long-term goal is defined under the principles of the Convention and should be ambitious and based on best science and updated accordingly.

Referring to the technical briefing on the stabilisation scenarios, Brazil said that there was a need to explain how different scenarios are constructed and based on different baselines, pathways, burden-sharing and uncertainties. Any proposed goal for limiting temperature rise can be achieved by multiple pathways and multiple peakings. Science does not establish a single pathway. Different pathways may lead to the same end result. Brazil cautioned that as Parties engage, it was important to avoid definitions of pathways that are misleading.

China said that the shared vision is for long-term cooperative action and is guided by the ultimate objective of the Convention and should be comprehensive in addressing mitigation, adaptation, finance and technology. The long-term global goal

should be down to earth and be based on the mid-term emission reductions for Annex 1 countries. The right to development is a basic human right and development is an important element for peace and security in the developing countries. Developed countries should take the lead in emission reductions to ensure adequate space for sustainable development in developing countries and poverty eradication.

India said that Article 2 of the Convention sets the ultimate objective in the stabilisation of GHG concentrations and underscores the concepts of cumulative and historical emissions and that the stabilisation must be achieved within a time frame sufficient to allow ecosystems to adapt naturally, to ensure food production is not threatened and economic development is enabled in a sustainable manner. If that is agreed, then there are principles that guide this. Equity must be central to the way forward. Any stabilisation target should be achieved on the basis of the principle that each human being has an equal right to the atmospheric resource. The right to development must be fully respected. Rapid development is an essential required in building the coping capacity of countries to climate change. The stabilisation target and time frame is achieved along with the equity paradigm for sharing the carbon space. There should be no tampering with the baseline year of 1990. Otherwise, targets are meaningless. Any stabilisation target cannot be used to seek the revision of the Convention. Developing countries must be compensated in accordance with the full incremental costs. The stabilisation target must be linked to a medium-term target.

The Philippines said that to have a shared vision, Parties must address all the implementation gaps in a comprehensive and integrated manner. The long-term global goal must be based on historical responsibility and be measured in those terms. Referring to the technical briefing held on stabilisation scenarios, the Philippines said that the long-term goal should not be based on studies in which a few scientists were quoting each other in their work.

Tuvalu said that the long-term goal can be quantitative, qualitative and functional. In relation to a quantified goal there could be a mid-term goal of stabilisation levels by 2020, with temperature rise limited to well below 1.5 degrees centigrade and a 350 ppm concentration level of GHGs. On the qualitative goals, all countries have the right to survive and that is fundamental. All citizens have the right to a sustainable future. The functional goal should be for urgent and cooperative action both on mitigation and adaptation; and adequate finance and

support to compensate countries especially the small island states and the LDCs.

Saudi Arabia said that measures taken to combat climate change should not constitute arbitrary actions or disguised trade measures. The issue of setting a long-term goal is premature. There was a need to concentrate on a shared vision on the four arms. There was a need to build the four building blocks before arriving at the goal. Referring to the technical briefing, it said that Parties cannot rely on them as the conclusions have not been IPCC reviewed.

Pakistan said that in Bali there was agreement only on “measurability, reportability and verifiability”, and stressed that its shared vision was not based on any deviation from the baseline (of emission reductions). Parties must be mindful of the implementation gap and there was a need to focus on this gap. Shared vision is more about long-term cooperative action than about the long-term global goal. The emissions reduction goal is but one aspect of this. The long-term goal is about the allocation of the carbon space; scaling up of resources; be guided by best-available science and the principles of common but differentiated responsibilities, equity, including intergenerational equity as well as historical responsibility, and meeting the adaptation debt. There is a need for additional work on the emission pathways.

Malaysia said that the shared vision must be shared by all and not be imposed. It cannot be addressed in a vacuum but in the context of economic development and eradication of poverty. The right to development is an important principle. The developed countries have occupied the atmospheric space and they have a historical responsibility to address climate change.

Japan agreed with Brazil that there are multiple pathways in relation to emission reductions taking into account economic situations and other factors. There was a need for developing countries to undertake actions too, based on common but differentiated responsibilities and respective capabilities.

Switzerland for the Environmental Integrity Group said that IPCC scenarios show peaking of emissions by the end of the century. There is a need for burden-sharing in mitigation. Half of the global

emissions are not constrained by the Kyoto Protocol and continue to grow as development needs lead to this. Hence, the long-term goal must be shared by all by limits on temperature and GHG emissions and later by emission targets. Adaptation, finance and technology should also be a part of the shared vision.

The **EU**, referring to the focus document of the Chair, said that there was an emerging convergence of views among Parties. There was a need to integrate climate change into sustainable development and eradication of poverty. There is urgency towards a low-carbon society. There is a need for a long-term global goal that is aspirational and science based and should comprise all the BAP elements. There is a need to focus on options for expressing the long-term global goal - emissions pathway with peaking in mid-century; avoiding dangerous climate change impacts especially for the most vulnerable; keeping within the 2-degree-centigrade limit; having a mid-century goal of at least 50% reductions in global emissions based on 1990 levels and the need for emissions to peak by 2020.

The **US** said that the shared vision should inspire the efforts of Parties and to communicate collectively to the public about the urgency. It needs to address the rapidity of the transition. It needs to speak explicitly to the halfway question. The US domestic plan is to reduce emissions by 17% from 2005 levels by 2020 and an 80% reduction by 2050.

Cutajar said that three more meetings of the contact group will be held, with one meeting on global goals, another meeting on other aspects, and a final meeting. He suggested that Parties focus on ‘cooperative vision’ and the long-term global goal.

In response, Bolivia and China said that shared vision had several elements including finance and technology, adaptation and mitigation and therefore, balance was needed to emphasize all the four legs in terms of allocation of the time. China asked for greater balance, as the G77 and China wants a comprehensive vision of the shared vision and not just on a long-term global goal.

Cutajar said that Parties had four and half hours ahead (for remaining meetings of the contact group). One hour will be dedicated to the long-term global goal in one session, and the rest of the time in the other two sessions for the other elements and general aspects.

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Contact Group on Scale of Emission Reduction by Annex I Parties

Bonn, 31 March (Hira Jhamtani and Juan Hoffmaister) – Many developing countries insisted that the work on the scale of emission reductions to be achieved by Annex I Parties in aggregate be prioritized at the seventh session of the Ad Hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol (AWG-KP).

During the Plenary session on 30 March, when discussing the organization of the work of the seventh session of AWG-KP, they criticised the scenario note prepared by the Chair of the AWG-KP, Harald Dovland, for not being focused on that mandate.

South Africa, on behalf of the **G77 and China**, reiterated that the Chair's scenario note did not focus on the objectives of the AWG-KP in its current session to conclude work on the scale of emission reductions by Annex I Parties and to draft amendments to Article 3.9 and Annex B of the Kyoto Protocol. In particular, it questioned the Chair's proposal to establish four contact groups on emissions trading and project-based mechanisms; Land use, Land use change and Forestry (LULUCF); information about potential environmental, economic and social consequences of tools, policies, measures and methodologies available to Annex I Parties; and an 'omnibus' contact group on all the other issues (such as gases, sectors, categories). The Chair also proposed to consult Parties on legal matters arising from the work of the KP. South Africa had requested that a contact group be formed on the scale of emission reductions by Annex I Parties and on legal matters to take the work forward.

China said that the practice of bringing other issues for discussion in the AWG-KP must stop. Otherwise the group will not be able to conclude its work at Copenhagen.

India reiterated its concern about the slow progress and suggested that the group only have three contact groups viz. on emission reductions, legal matters and the spill-over effects.

Brazil stressed that the amendments to determine the scale of emission reductions should be ready by June, while **Nigeria** reiterated the need to focus on the mandate rather than bringing in issues outside of the mandate.

Tuvalu also supported the call to focus attention on the scale of emission reductions and to come up with some numbers at this session.

The **Czech Republic** on behalf of the **EU** did not agree that the progress of work in AWG-KP had been slow. It said the matter of the scale of emission reductions has deep implications for the economies of EU countries and requires deep consideration. The EU said it needs time to clarify what concepts are on the table and what improvements can be made to the KP. This was supported by Australia, Japan and Switzerland who agreed with the scenario note of the Chair.

Norway supported the Chair's proposal on contact groups and suggested enhancing discussion on emission reductions, adding that countries need to know the rules before setting targets.

In response to Parties, the Chair said that there is now a lot of understanding about the issues and that he had made a mistake of lumping too many issues in one contact group. He then made a proposal to bring up the agenda item on the scale of emission reductions in the plenary and then form a contact group. He proposed the same method for the agenda item on legal matters and to form a contact group on spill-over effects, then bring up other agenda items such as mechanisms and LULUCF subsequently, depending on time.

After a short consultation, South Africa, on behalf of the G77 and China, agreed to the Chair's proposal but reiterated the focus is on the agenda item of the scale of emission reduction, and the legal matters draft amendment text. It also said that due to capacity limitations, it will be difficult to schedule the sessions in parallel. As there is a need to have a

legal text by June to comply with the six-month rule for acceptance of amendments, South Africa asked that the discussions on mechanism and LULUCF be concluded by the end of the next session.

Numbers begin at AWG-KP

Bonn, 31 March (Hira Jhamtani) – The discussion on numbers for emission reductions by Annex I Parties for the second period of commitment began on Monday March 30 under the Ad Hoc Working Group for Further Commitments of Annex I Parties under the Kyoto Protocol (AWG-KP).

The Chair, Harald Dovland, conducted a general discussion on this issue, and reiterated the need for ambitious targets for 2020. Delegates are beginning to mention numbers for the scale of emission reductions by Annex I Parties for the second period of commitment under the Kyoto Protocol (KP) commencing in 2013.

Australia said that it is in its interest to keep the greenhouse gas concentrations at 450 ppm. At the national level, it will reduce GHG emissions unconditionally by 5% in 2020. If all the countries including the major economies agree, it will undertake a reduction of 15% below 1990 levels.

Japan said that all Parties should be making 50% reductions by 2050. All Parties should share views on how to achieve this goal. Establishing a low-carbon society and developing innovative technology is crucial. Developed countries must take the lead by making reductions. Major developing countries must take responsibility by appropriate action, Japan said, because emissions from developing countries now surpass developed countries. Thus, the mitigation of Annex I Parties should be considered in a holistic way with mitigation actions of developing countries. This cannot be done in the AWG-KP only, but must be done together in the Ad-hoc Working Group on Long-term Cooperative Action (AWG-LCA).

Norway said it is committed to the 2-degree-Celsius goal, and reduction of emissions of 25-40% by developed countries by 2020 and 80-95% by 2050. It said that emissions from developing countries should deviate substantially from the business-as-usual scenario, but not for offsetting by developed countries.

Norway is aiming to be carbon neutral by 2030 and will reduce emissions by 30% below the 1990 level by 2020, two-thirds of which will be domestic emissions. It also said that 1990 should be used as the historical year, but a new base year should be

used for calculations of new gases. The second commitment period should be 2013 to avoid any gap. A new quantified emission limitation and reduction objective (QELRO) should be negotiated for 2020, said Norway.

Micronesia said that the reduction target should be guided by two issues: stabilisation of GHGs below 350 ppm of CO₂ equivalent and limiting temperature rise to below 1.5 degrees Celsius. This means that Annex I Parties as a group should set a reduction target of more than 40% by 2020 and more than 90% in 2050. This is a minimum target, said Micronesia.

The **Czech Republic** on behalf of the **EU** said it proposes a collective reduction of 30% below the 1990 level by 2020. A major part can be achieved by domestic measures at reasonable costs. It also said that early action is important. The EU also said they need to know the rules related to LULUCF and by improving these rules, the number for emission reductions will look different. It also proposed to include emissions from maritime transport and aviation. The commitment period should start in 2013, moving in a path towards 2020, with allocation of demands for each year. The EU also said that there is a need to seek synergies with AWG-LCA for comparative effort and to harmonize when setting targets.

Tuvalu said that the science has moved beyond the ranges that IPCC suggested. It said that the GHG concentration should be 350 ppm as the level for reduction commitment, the base year 1990 and the second period of commitment should be 2013 – 2017. It understands that the AWG-KP is a faith-building exercise, so that non-Annex I Parties can move forward in the AWG-LCA.

Strong debate in AWG-KP but no clear direction in emission reductions

Bonn, 1 April (Hira Jhamtani) – The discussion at the ad hoc working group on the Kyoto Protocol (AWG-KP) under the UN Framework Convention on Climate Change on the scale of emission reductions to be achieved by Annex I Parties under the Kyoto Protocol has been marked with differences in perspectives between developed and developing countries.

Developing countries say that the level of ambition for emission reductions can be set now as a sign of good faith, and can be adjusted later as other issues are defined. Annex I Parties (developed countries) say that they must know the rules first and the costs in order to set their level of ambition;

and some countries like Japan are also demanding that developing countries are included in obligations in the post-2012 period.

Despite these basic differences, delegates have begun to exchange views on the emission reductions target, the base year, the period of commitment, etc.

The EU, in a statement in the contact group on the scale of emission reductions to be achieved by Annex I Parties under the Kyoto Protocol (KP) on Tuesday, 31 March, reiterated the figures of 20% cut by 2020, for the second commitment period, 2013 to 2020. However, the 20% cut is a figure without the reductions from LULUCF. Depending on the rules, the LULUCF sector will influence the figure for emission cut. (LULUCF refers to land use and land use change and forestry.)

Japan said that all Parties should share a global goal, by taking aggregate mitigation action, including developing countries. The new framework beyond 2012 will have to include obligations of both developed and developing countries. Japan also said it cannot make an agreement before Parties can agree on LULUCF, the base year and the coherence with issues agreed at the AWG-LCA.

On this, the Chair reminded that the group has a mandate from the Kyoto Protocol, and is awaiting the trust. This should not become a “catch 22” situation.

Similarly, New Zealand said it is reluctant to start discussion without the LULUCF rules as it is affected by LULUCF more than any other Annex I Parties. The fact that they do not have an idea about the global goal is also holding up the discussion. Russia said it supports Japan in seeking a broader context of commitments moving towards a global comprehensive agreement.

Responding to Japan, South Africa speaking on behalf of the G77 and China said that under the Convention, all Parties do have obligations, and this discussion under the AWG-KP is not geared towards a new framework. The task is to focus on the 2nd period of commitment. “We can talk about levels of ambition, before taking on the rules. We urge that Parties do not use these reasons to delay the discussion here”.

South Africa said the current protocol can be used to calculate many aspects such as the base year. The important thing is to put the numbers for convenience, such as the period of commitment 2020, the base year 1999 and then adjust them later. On a general note, South Africa said that it may be useful to use the criteria approach in determining the level of commitment, such as the historical responsibility and the right to sustainable development.

Colombia said there is a need to be pragmatic. If everything has to depend on everything else, nothing will happen; everything will be tied down and the deadline cannot be met.

Speaking for AOSIS, Micronesia said that it is looking at the commitment (of Annex I countries in the Protocol) as an aggregate and must be in excess of 40% below the 1990 level by 2020. The longer-term target should be a cut of over 95% below the 1990 level by 2050. Efforts should aim at stabilizing the GHG concentration at 350 ppm and global temperature rise at 1.5 degrees C with a commitment period of 2013–2017. The key elements are capability, historical responsibility, and sustainable development.

Responding to Japan, Micronesia said that this is a forum for Annex I Parties and not a forum to discuss the responsibility of non-Annex I Parties.

China said the group has a clear mandate. On the approach, it said the most important are the historical responsibility and the common but differentiated responsibility. Based on historical responsibility, Annex I Parties must reduce its per capita emission. They cannot ignore the fact that their per capita emission is much higher than that in developing countries. Annex I countries are obliged to reduce their emissions drastically in order to ensure equal rights for developing countries. The discussions on mechanism were useful last year, but this year, the group must reach a conclusion on numbers.

Zambia said that the global goal is addressed in the AWG-LCA and Parties should not hide behind processes. All issues raised by Japan are dealt with in the AWG-LCA. In this process, we need numbers from Parties. The Marshall Islands voiced similar concerns with the reluctance to set numbers. It said the global goals are to be set starting by numbers set by Annex I Parties.

The Czech Republic on behalf of the EU said that it is not possible to set the numbers before setting the rules, because the rules are complex and resetting numbers will be more difficult with new rules. A change of rules can move the numbers downward as well as upward. In the case of LULUCF, the EU wants to do more justice to the atmosphere through proper accounting and incentives to move forward. Without LULUCF, it is impossible to reduce emission.

It proposed that in order to move forward, take all the available proposals and see what are being offered based on targets, base year and the commitment period.

India questioned the relevance of the IPCC numbers especially Box 13.7 of the fourth

Assessment Report. It said the findings are driven by subjective assumptions from one region of the world and at best are guesses like saying “the moon is made of blue cheese”. Responding to the views of some delegations on the need for broader global efforts, India said the AWG-KP is not the forum. The UNFCCC provides commitments by all countries, but the commitments of developing countries depend upon other Parties. The discussion on broader global efforts cannot begin without solving the financial and technological commitments in the AWG-LCA.

India further said that when China mentioned the historical responsibility, the EU asked how it will translate into commitments. This cannot be reduced to a quantitative target. It is a fundamental issue that underlies the equal rights of humans over global atmospheric space. India said it found it curious that Parties that are vocal on equality of humans have this bout of amnesia when it comes to rights over the global environment.

To this the EU replied that the fundamental principle of equal rights to atmosphere is not mentioned in the UNFCCC, although there is the word “equity”. “Should we then reopen discussion on that article?” asked the EU.

India responded by saying that indeed the UNFCCC does not spell this out, but it was referring to fundamental principles of many conventions. The EU itself, in many of its pronouncements at multilateral forums has mentioned these fundamental rights. Therefore, India is surprised that EU seems

to deny the rights to global environment resources. It hoped the EU is not saying that the UNFCCC rules out that humans are created equal. It further said that it would be tragic if the EU and other Annex I Parties deny the more fundamental principle of history.

On LULUCF, Brazil reiterated that the EU seems not to want to set numbers, because it wants to set the rules first, particularly LULUCF. The EU said by doing so, it wants to do justice to the atmosphere. According to Brazil, LULUCF is complex, but it is not the most important sector for emission of GHGs. In fact, LULUCF may be the most impacted by climate change. “We should try to achieve conclusion in June, and not use this as an excuse anymore,” Brazil said. “We should focus on what we can, bearing in mind we want to do justice.” Indonesia, a country with the most interest in LULUCF rules, also said that it should not be an issue to delay setting targets.

On this the EU responded that it agreed with Brazil that LULUCF is a complex sector and not the most important, but the most impacted, sector. But the LULUCF is currently also a source of GHGs, which is not reflected in the calculations. Some approaches are being made to reflect this sector and thus do more justice to the atmosphere. This issue is raised not to delay, but to have a system, the EU said.

In summary the Chair said that the debate has been rich but gave no clarity on where to head to. There is no basis for the Chair to make a written proposal for the next meeting.

TWN Intervention AWG-LCA Workshop on 1(b)(ii) of the Bali Action Plan

As NGOs working in developing countries, we are actively working in support of national efforts to address the climate challenge.

We also appreciate the development challenge that our governments face in meeting the basic needs of our people.

The developed world has used up much of the atmospheric space. There is very little space left. Yet a lot of this space will still be occupied by developed countries in the next decades if we accept their proposed cuts of 20-30% by 2020 and 60-80% by 2050.

There is a danger that in order to pre-book their continued unfair use of the carbon space, the developed countries may try to get developing countries to commit, in one way or another, to give up their own space. This would be done for instance by setting a global figure for reduction, then a figure for Annex I, and then ask developing countries to take on responsibility for what remains, that is, a residual cut.

In Bali, developing countries made a concession to undertake MRV for their mitigation actions in exchange for MRV for finance and technology. One goes with the other, but has to be done in proper sequence. Since finance and technology are the enabling factors, it follows that these have to come first.

We thus suggest that the discussions on 1b2 be focused first on what level of finance and technology will be made available. Then it may be clarified, what are the mitigation actions that can be supported by this level of finance and technology.

The level of ambition for finance and technology has to be very high, if we are to have results in mitigation. We have heard in the contact groups that finance and technology are the make-or-break issues for Copenhagen. We are disappointed to say the least that there has been hardly any response from Annex I on the finance and technology they are willing to provide. They have hardly

responded at all to the two G77 proposals on this. The silence is deafening. There has to be deep engagement on this now, to break the impasse.

The carbon space that developing countries have in the future depends largely on the emission cuts that Annex I will be asked to make. In our calculation, if the developing countries are to have space at all to even maintain their present per capita emissions, let alone to increase their emissions for development purposes, then Annex I has to undertake commitments for negative emissions, that is, to cut to zero and then go below zero, through creation of sinks etc.

And this move to negative emissions should already start before 2020. If Annex I is unable to meet this obligatory target, then it may have to compensate for unmet obligatory targets.

It is unfair for the Annex I to propose what is so called politically realistic for itself and ask developing countries to do what is unrealistic for them.

In this context we want to comment on the proposal by the EU and others that developing countries take on a commitment to deviate 15-30% from business as usual by 2020. This is not in the Bali Action Plan and is a major new commitment being proposed. This range of 15-30% is not in the IPCC report. It is also conveniently a residual figure calculated from accepting the range of 25-40% cut for Annex I countries. The definition and calculation of what is business as usual are also not agreed to. There are many assumptions and many pathways for each assumption, and many trade-offs or links between Annex I and non-Annex I obligations in the burden-sharing issue. We should not throw in a particular figure onto the stage and ask developing countries to accept it, on the pretence that it is the science that tells us to do so.

In conclusion the key to unlocking the 1b2 issue is for a breakthrough in finance and technology. And that is what delegates and NGOs alike should be focusing on in the few days we have left in Bonn.

Debate over Public or Private Finance for Climate Change

Bonn, 2 April (Meena Raman) – Developing and developed countries debated over who is responsible for financing climate change at the Ad-Hoc Working Group on Long-term Cooperative Action (AWG-LCA) under the United Nations Framework Convention on Climate Change (UNFCCC).

Several developed countries emphasized the role of the private sector in generating the scale of financial resources needed, whilst developing countries stressed the commitments of developed countries under the Convention to meet the financial needs for mitigation and adaptation actions of developing countries.

Luiz Machado of Brazil, the Vice-Chair of the AWG-LCA, said that there were a number of proposals on generating new and additional resources for climate change. There were two broad types of sources – public finance and funds generated from economic mechanisms, such as the auctioning of emission allowance units, levies on airline travel and other proposals, he said. (Switzerland had also proposed a global tax on CO₂.)

Machado also said that there appeared to be some form of notion that when looking at funding for adaptation, it was from public financing, whilst funding for mitigation included both public and private sources.

The Philippines for the **G77 and China** said that the financial architecture proposed by the G77 and China allows for flexibilities in securing funding for adaptation with less conditionalities.

Uganda for the **LDCs** reiterated that funding is a commitment and not a donation. Financing for climate change will remain public. The private sector can complement it.

South Africa for the **Africa Group** said that financing is a commitment and the starting point is on the means of implementation informed by core values. The extent of developing countries' actions

depends on the developed countries' actions. The means of implementation is about technology, finance and capacity building. There is a need to talk about what approaches will deliver the scale of funding needed and what kind of institutional mechanism is needed to deal with this. There is a need to get agreement on the institutional arrangement.

Barbados for **AOSIS** said that the G77 and China proposal has proposed a Convention fund. On the Swiss proposal (see below for details), it said that it liked the idea of funding for insurance. It said that adaptation required large-scale funding and this cannot be undertaken by the private sector.

Norway explained its proposal on generating funds through the auctioning of assigned amount units (AAUs), which generates new and additional financing. (AAUs are assigned amount units of emissions allowed or allocated to each Annex I Party on the basis of its emission reduction target under the Kyoto Protocol.)

The proposal is to auction or sell part of the emission allowances. It said that the value of AAUs is immense. If all Parties agree to limit the temperature rise to less than 2 degrees C, then it is possible to generate \$2,000 to 3,000 billion. The value of the asset (AAU) is \$1,000 billion and 1% of that is \$10 billion. If the agreement is to limit temperature rise to 2 degrees C, then the value of the AAU is \$100 per tonne and if it is a 3-degree C rise, the price would be half.

Norway said that it is the industrialised countries who will pay and who would have had the allowances for free. In essence, it is the polluter who pays.

Switzerland said that its proposal concerns the financing of adaptation. It suggests a global carbon dioxide (CO₂) tax. Switzerland's scenario was that \$50 billion per year could be generated for

adaptation. The idea is a global levy on all CO₂ emissions. The proposed level of the tax is \$2 per tonne of CO₂. The proposal is based on the principle of common but differentiated responsibilities and the 'polluter pays' principle. The money will go primarily to developing countries. The poorest who emit only 1.5 tonnes of CO₂ would be exempted from the tax.

Mexico in reference to its proposal said that there was a need for new and predictable funding and for institutional arrangements under the Conference of Parties (COP). It proposed a fund under the Convention where contributions are assessed based on a country's GDP, population and contribution to emissions. It is based on the principles of equity, efficiency, polluter-pays and capacity. It said that the Fund could mobilise \$10 billion a year.

Brazil said that the level of ambition in the provision of finance and technology to developing countries has to be high and that this was a 'make-or-break' issue for the Copenhagen COP. In reacting to the proposals by Parties, it said that the Norwegian proposal was interesting and brings in a significant level of contributions. It said that the realities of what must be financed define the nature of the financing. On the Swiss proposal, Brazil expressed concerns over a global CO₂ tax. The levels of current emissions are due to a historical responsibility. If the base of the financial contributions is on current emissions, then 'historical responsibility' is turned upside down. Countries that emitted in the past and achieved their development to allow them to reduce emissions would then contribute less than those who face the development challenge and who emit growing levels now based on current emissions. There is a need to look at historical responsibility, equity and 'polluter pays' in that context. It stressed that Parties are dealing with commitments under the Convention and not a donor-recipient paradigm.

India said that financing from the private sector is in pursuit of commercial activities that have

returns. This is not the case in mitigation or adaptation activities. The Convention deals with meeting the full costs of national communications of developing countries and the full agreed incremental costs for mitigation and adaptation. If the incremental costs are positive costs, and the initial upfront capital investment and lifetime costs of adaptation are positive, somebody has to recompense that. Which private sector will recompense this with no returns, asked India. Hence the need for public money.

There is a net cost that will be incurred in mitigation and adaptation. There is also a base cost. The base cost is funded by a multitude of resources and this forms part of development and adaptation. Grants are interest-free and non-repayable. Parties have to put to rest what is public and private. Funding incremental costs will primarily be public. The private sector has a role but a limited one.

China said that it was important to look at the purpose of finance, the sources and then the governance. On the purpose, it was a matter of commitment of developed country Parties and implementation of the Convention. On the source, it is both public and private. It is more important to understand the role of the public and private sectors. They have different roles especially when addressing the global public good and an externality. There is a need to design a policy instrument for financial flows to flow where we want them to flow.

Japan said that no single funding source can solve the problem of the scale of resources need. In terms of technology financing, about 86% of the financing comes from the private sector. It found the G77 and China proposal and that of Norway interesting.

Australia said there was a need to avoid the proliferation of funding mechanisms.

The **EU** said that both public and private funding is required and the role of the markets is important.

G77 and China Propose Elements for a Comprehensive Framework on Adaptation

Bonn, 2 April (Juan Hoffmaister) – The G77 and China presented elements for an adaptation framework at the Bonn climate talks under the United Nations Framework Convention on Climate Change.

The proposal was presented by the Maldives, on behalf of the Group on 2nd April, at the contact group on adaptation, under the Ad-hoc Working Group on Long-term Cooperative Action (AWG-LCA).

William Kojo Agyemang-Bonsu of Ghana and Thomas Kolly of Switzerland chaired the contact group. The contact group has had three meetings thus far, since 30 March.

The G77 and China presented the elements of a comprehensive approach for adaptation. Adaptation is essential for all developing countries, and must be treated with higher priority in the AWG-LCA. The objective, principles, and scope are essential for enhanced action on adaptation, and there must be an institutional mechanism that provides access to technology and finance to support capacity-building, national planning, insurance, and other elements to be developed further. The Group said that more details will be provided on a Convention mechanism for adaptation.

South Africa, on behalf of the Africa Group, supported the G77 and China on the elements of the framework and said that it was a useful path. There was a need to avoid fragmentation and promote coherence on adaptation not only in the UNFCCC, but within the UN system. It stressed the need to support and enable implementation and for adaptation actions on the ground. Given the history of adaptation in the UNFCCC, where adaptation has not received the same attention as mitigation, there was a need to massively increase the provision of finance, technology, and capacity-building for adaptation.

The **Cook Islands**, for the AOSIS, supported the G77 and China. It said that the approach to adaptation should be structured, yet flexible and with support for means of implementation as much as, if not more than, mitigation. It recalled the proposal presented by AOSIS previously, particularly the mechanism to address losses and damage from climate impacts. It also highlighted the elements proposed by the Maldives for capacity-building and national adaptation planning. It stressed that finance is necessary for adaptation.

The **Philippines** said that adaptation was a priority for developing countries and that, in view of the common but differentiated responsibilities, developed countries are to take the lead in both adaptation and mitigation. It added that adaptation is not charity, but a legal commitment contained in the Convention articles. It noted that the G77 and China proposal for a financial mechanism would allow for effective implementation of adaptation. Adaptation finance must be flexible.

Bangladesh spoke of a comprehensive framework for adaptation and the need to consider a legally binding instrument for both developed and developing countries. It suggested a vulnerability index to facilitate further activities and to assist the Adaptation Fund in determining allocations for countries according to their vulnerability.

Pakistan said that it was necessary to identify possible agreed outcomes. There was also a need to identify what resources are required for adaptation and there was an enormous gap in estimations. There is a need for mechanisms to allocate those resources, and once those mechanisms are in place, it stressed the importance of direct access. It was not a matter for developing countries to state their needs first and for developed countries to decide if they are to be funded or not. The process has to be automatic, otherwise it becomes meaningless.

Bolivia said that the focus document prepared by the Chair of the AWG-LCA did not reflect the proposals presented by developing countries for additional finance and technology transfer. The focus document had left out the institutional arrangement for adaptation. It was concerned that adaptation is being framed as a need presented by developing countries, rather than as a moral and legal obligation by developed countries, trying to pass the burden to the carbon market.

China said that the outcome of these negotiations should be a framework for implementation that will help countries implement adaptation, with the financial and technical resources and clear institutional arrangements.

Tanzania said that adaptation is a long undertaking, and thus the mechanism must be flexible to accommodate needs that we may not be aware exist today, but that will become evident in the future. It stressed that adaptation is a commitment, and that a compensation mechanism for lost lives and resources will be necessary for delayed action from the international community.

Uganda said that adaptation should not be a part of ODA, saying that it is not a donation, but a payment for actions that have been caused by negative impacts on those countries that are most affected.

Australia recognized that climate change was an additional burden to development, but stressed that adaptation and sustainable development are interlinked. On institutional arrangements, it said that institutions must run parallel and work towards common objectives. There is a need to increase support for adaptation, particularly for the vulnerable countries with less adaptive capacity. It said that enhancing adaptation required fairness, efficiency, and effectiveness in providing increased support, particularly to vulnerable countries.

Norway spoke in support of a framework of common principles to guide countries in the adaptation process. It noted that the ultimate goal should be to enable communities facing climate change in the adaptation process to reduce vulnerability and increase resilience. On institutional arrangements it said that Parties need to know what is to be achieved before deciding on institutions, their

roles and responsibility. On finance, acknowledging that adaptation finance must be additional, it said that it should not be separate from ODA because adaptation and development must be linked.

The **Czech Republic**, speaking for the EU, said that Parties must ensure that adaptation is part of a clear integrated strategy for climate change, is country-driven and is facilitated by international support. A framework for adaptation is to facilitate action on the ground to mobilize support, both technical and financial. It welcomed the emerging agreement that adaptation needs to happen at national, regional and local levels, for all parties, and that function and identified needs must be discussed taking into account existing institutions and processes inside and outside of the UNFCCC. It said that adaptation requires integration of adaptation action in sectoral and other processes, and pointed to the need to bridge the gap from a project-based approach to a process that results in resilience building. It also said that a framework would provide guidance to finance vulnerabilities to ensure that all strive to enhance adaptation in a coherent manner.

Canada said that it was a little premature to speak of details of institutional arrangement and mechanism without discussion of the objectives and principles. It said that adaptation must be country driven, and that overarching objectives must be set prior to creating tools.

The **US** said that it was committed to help all countries, particularly the most vulnerable countries. It recognized the responsibility for its contribution to climate change, and noted that additional support will be required, and that this will need to come from multiple sources. It was also necessary to note that adaptation will depend on a country's circumstances, such as the level of development, and environmental circumstances. An approach to adaptation will need to be flexible and must guide priorities and actions, but these must be driven at the national, regional, and subnational levels.

Japan called for a comprehensive framework to sustain the most vulnerable countries and supported establishing a knowledge network for adaptation to strengthen the capacity-vulnerable countries in vulnerability assessment, planning and implementation.

Divergent Views over Kyoto Protocol Amendments

Bonn, 2 April (Hira Jhamtani) – Developing and developed countries had strong disagreements over amendments to the Kyoto Protocol, at the climate talks in Bonn, under the Ad-hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol.

Parties to the Kyoto Protocol (KP) are discussing legal matters related to the second commitment period for greenhouse gas emission reductions by Annex I Parties. This will entail amending the current Annex B of the Kyoto Protocol in accordance with Article 3.9.

Developing countries insist that the amendment is simple and clear that would require just an amendment to Annex B, that includes the new targets for emission reductions by Annex I Parties that have been agreed upon. Some developed countries on the other hand have suggested various legal options consisting of a single, new protocol that unifies action under the Convention and builds on the Kyoto Protocol or entails two protocols in the form of an amended Kyoto Protocol and a new Protocol under the Convention.

These proposals appear to be premised upon the desire by some developed country Parties to merge both the AWG-KP process (which is under the Kyoto Protocol process) with the work of the Ad-hoc Working Group on Long-term Cooperative Action (AWG-LCA) under the United Nations Framework Convention on Climate Change. Some developed countries have also referred to the two-track process as a 'single undertaking', implying that nothing is agreed until everything is agreed.

The AWG-KP is mandated with concluding discussions on further commitments for Annex I Parties beyond the first commitment period that expires in 2012, and to agree on the scale of emission reductions to be achieved by Annex I Parties by 2009.

During the plenary of the AWG-KP and in the

contact group on legal issues, a number of developing countries said that the requirement for the amendment is simple and clear that would require just an amendment to Annex B.

South Africa speaking for the **G77 and China** said there should be minimum changes to the Protocol. The first matter is to set the aggregate scale of emission reductions for Annex I Parties and the time period for the second commitment period. This should be followed by the reflection of individual commitments in Annex B. Nothing in the Kyoto Protocol prevents decisions on multiple commitment periods, it said. The next step is for Parties to ratify the amendments which will then enter into force.

China said that the issue is not very complicated. A legal document can be prepared that includes the aggregate emission reduction target and individual country targets. Nothing more complicated than this is required, it said.

Tuvalu said that the architecture of the Kyoto Protocol should remain and that Parties should not rewrite the Protocol or invoke other issues from the AWG-LCA.

Australia said that the legal form for the second commitment period for emission reductions by Annex I Parties is a serious undertaking. It also encompasses the work of the AWG-LCA and coherence and consistency needs to be ensured. In its submission, Australia proposed the following options – the first legal option consists of a single, new protocol that unifies action under the Convention and builds on the Kyoto Protocol. The second option entails two protocols in the form of an amended Kyoto Protocol and a new Protocol under the Convention.

Japan said that there cannot be a truly effective framework with only amendments of Annex B. There must be integration with the AWG-LCA. Japan reiterated its view that the new climate regime must

include commitments of both developed and developing countries. It suggested that a new protocol is one option to do that, although it did not rule out amendments to the Kyoto Protocol.

Belarus also suggested the formulation of a new protocol, merging the AWG-KP and the AWG-LCA outcomes and producing a comprehensive text for a new protocol to be negotiated and adopted in Copenhagen.

New Zealand said that the Copenhagen process is a single undertaking, hence, linkages are inevitable between the two Ad-Hoc Working Groups. It said that some proposals under the AWG-LCA will require amendments to the Kyoto Protocol in order to be effective. On the Kyoto Protocol itself, it said that a number of amendments will be required. It suggested that apart from maintaining the quantified emission reduction commitments of the Annex I Parties in the first commitment period, Annex B also contain a new column or table reflecting the commitments for the second commitment period. It proposed a new Annex C that contains the future commitments of Parties that are not currently in Annex I.

Canada said that it is essential for the AWG-KP to take into account the work of the AWG-LCA in order to lead to a single undertaking in Copenhagen. Canada said that on legal matters it is valuable to keep two principles in mind. First, if the intention is to ensure that the work of the AWG-KP is to be consistent with that in the AWG-LCA. Second, when looking at amendments, it is important to ensure that the work of the AWG-KP does not prejudice the outcome in other fora including the AWG-LCA.

The EU represented by the **Czech Republic** said that Parties should seek synergies as much as

possible. On the form of amendments, the EU said we need to keep the current text as much as possible, and add text for new provisions. It said that it preferred to add a third column in Annex B, but is interested to consider the suggestion by New Zealand of having an Annex C, as long as this does not change the nature of commitments. The amendments under Article 3.9 of the KP can include text that is coherent with the outcome of the AWG-LCA so that further commitments can be discussed under one track. The proposals on emissions trading and project-based mechanisms (to achieve emission reductions by Annex I Parties) in another contact group under the AWG-KP may also entail amendments to the Kyoto Protocol. An example would be the proposals on sectoral approach to achieve emission reductions, the EU said.

In response, **South Africa**, for the G77 and China, said that it agreed with the EU on keeping the text of the KP unchanged as far as possible. The amendments envisioned by the G77 and China are relatively simple, with a limited number of consequential changes. The focus is on the second commitment period. Many issues that are raised by the developed country Parties are impossible.

The EU said that since many important issues in the AWG-KP are related to the work in the AWG-LCA, a joint group should be formed well before Copenhagen. This was supported by Japan and Uganda.

The Chair then suggested that he, together with the Secretariat, would develop a non-paper on the text for amendments under Article 3.9 to facilitate further discussions. This text will provide clarity and input for negotiations on the legal form. This was agreed to by the Parties.

Developing Countries Proposed Relaxing IPR Rules for Climate Technologies

Bonn, 4 April (Meena Raman) – Developing countries today called for relaxation of intellectual property rights on climate-friendly technologies at the climate talks in Bonn under the United Nations Framework Convention on Climate Change.

The range of proposals by many developing countries (including Bolivia, China, India, the Philippines for the G77 and China, supported by Saudi Arabia, Uganda, Pakistan) included exemptions from patentability for climate-related technologies and products, the extension of exemptions and flexibilities for developing countries regarding IPRs, the regulation of the terms of voluntary licenses to exclude anti-competitive elements, and the establishment of patent pools to facilitate the easier obtaining of licenses from patent holders at discounted royalty rates.

Developed countries did not directly engage on these proposals. Japan said that protection of IPRs was important to enable companies to recoup their innovation costs.

The IPR issue was a highlight at the meeting of the contact group on finance and technology on 3 April under the Ad-hoc Working Group on Long-term Cooperative Action (AWG-LCA).

Bolivia said that its President, Evo Morales, had stated that developed countries cannot treat patents as something “sacred” that have to be preserved at any cost and that in serious cases the exemptions and flexibilities had to be enlarged to heal Mother Earth.

Bolivia said that a ‘business as usual’ approach in dealing with intellectual property rights (IPRs) is simply not an option, if developing countries are to meet their enormous mitigation and adaptation challenges. Where IPRs are identified as barriers to the transfer of climate friendly technologies, measures must be available to relax such rights so as to ensure easy and affordable access by developing

countries to such technologies. This is a fundamental prerequisite for the implementation and advancement of the Bali Action Plan.

As Parties move towards a new global system for innovation and technology transfer, Bolivia proposed a number of specific mechanisms (which was not an exhaustive list) to ensure that IPRs are not a barrier to the development and transfer of technologies. Some of these mechanisms can be resorted to by developing countries, as is currently allowed for under the flexibilities of the TRIPS Agreement (Trade-related Intellectual Property Rights Agreement under the WTO) and has been advanced in other fora including the WHO and the Convention on Biological Diversity, said Bolivia.

Further to the G77 & China proposal for ‘A Technology Mechanism’ and in elaboration, Bolivia proposed the following measures and mechanisms:

- Compulsory licensing in developing countries – Compulsory licensing is allowed for under the TRIPS Agreement. The grounds are not restricted. Such licenses are used by some developed countries which empower courts to compel patent holders to provide licenses to other technology users or producers at a specified royalty for technologies that prevent or reduce air pollution.
- Voluntary licenses: The terms of voluntary licenses can be regulated to ensure affordability and to prevent monopolistic and anti-competitive practices.
- Patent pooling – Patent pooling, through one-stop centers for obtaining licenses for technologies at specified and discounted rates to facilitate cheaper and easier licensing for products that either reflect multiple patents or for which there are multiple users especially in developing countries.
- World-wide mandatory exclusion from patents – Technologies and products related to climate change must be fully within the public

domain, not under any private monopolistic patent regime that obstructs and makes technology transfer more expensive to developing countries. Parties should consider requiring all climate-friendly technologies to be free of intellectual property rights to ensure their widest availability.

For example, Article 31 of TRIPS allows for a waiver of IPRs if there is a national emergency or a situation of urgency or for public non-commercial use. Bolivia considers climate change as a global emergency which can be tackled in this way.

- Expansion of flexibilities in the IPR system – There should be an expansion of the flexibilities in the current IPR system.

- Expansion of exemptions – There should be an expansion of exemptions for climate-friendly technologies, using existing or new provisions in the IPR system including the use of exemptions and implementation periods in developing countries vis-à-vis developed countries.

Given that developed countries bear historical responsibility for the adaptation and emissions debt, a new IPR partnership for climate is needed, said Bolivia. Additional flexibilities are needed to pay for the historical debt owed, it added.

The Philippines for the **G77 and China** also proposed a new partnership regime on IPRs, citing a recent resolution of the European Parliament for a new climate partnership on IPRs.

Saudi Arabia and **Uganda** also supported the G77 and Bolivia.

China said that there were two crucial concerns in the context of IPRs. The first is how to avoid over-protection of IPRs which is against rapid and broad transfer of environmentally sound technologies (ESTs). This is also related to anti-monopoly and unfair measures to limit broad use of ESTs. The second is how to improve the performance and efficiency of technology markets. An interesting idea is to create a patent pool for climate protection and serving as a combined clearing house in terms of information and real transaction, based on the current patent institutional network. This kind of clearing house may be expected to play roles in enriching useful technological information and lowering transaction costs, and thus create win-win opportunities. Several measures should be taken to overcome barriers related to IPR issues such as: IPRs of publicly owned ESTs should be clarified and made available for transfer; favoured share of IP benefits

derived from joint R and D be arranged; compulsory licensing be developed to curb unfair monopoly and over-protection of IPRs and price discrimination of ESTs may be introduced for different regions to support developing countries.

China also made several other proposals on other aspects, including on a technology acquisition fund and a technology roadmap and action plans under the UNFCCC and the establishment of a subsidiary body on technology under the UNFCCC that would deal with technology policy and actions.

Saudi Arabia, in addressing the IPR issue, supported the “excellent” suggestion of Bolivia. It said that there was a need to measure explicit policies to relax IPRs. Some Parties are emphasising IPR protection while others say IPRs are barriers. There was a clear need to arrive at solutions.

Uganda in supporting Bolivia said that Parties can learn from the HIV-AIDS issue in dealing with climate technologies where technologies, although owned by the private sector, were made available for example in drug production in countries like Uganda.

India also stressed the need for the removal of barriers to technology transfer, including a “restructuring of the global IPR regime.” It also proposed establishment of a network of R and D centres as part of technology cooperation under the UNFCCC.

Indonesia said that there was a need to balance between commerce and development as regards the issue of IPRs and that IPRs must not be a barrier to technology transfer.

Pakistan also stressed the need to use the existing flexibilities under TRIPS in relation to dealing with IPRs.

Bangladesh in relation to adaptation technologies said that genetic resources should not be patented by multinational corporations as there should be “no playing hard ball” with food security.

Brazil said that on the issue of IPRs, there was a need for a balanced approach between rewarding innovation and facilitating technology transfer. Joint development of technologies between developed and developing countries is one way.

Japan said that it was important to protect IPRs as they are important tools to recoup research and development investment and to promote further technology development.

Developing Countries Criticise Developed Country Mitigation Approaches

Bonn, 2 April (Meena Raman) – Several developing countries strongly criticised developed country mitigation approaches at the Ad-hoc Working Group on Long-term Cooperative Action (AWG-LCA) under the UNFCCC.

India said that presentations and interventions by developed country Parties had five problems: they ignore their historical responsibility; make unsubstantiated projections of likely future emissions from the developing world; create new categories such as “more advanced developing countries”; require that developing countries deliver low-carbon pathways without enabling financial, technological and capacity-building support, and draw unsubstantiated marginal abatement cost curves that show large low-cost abatement options even in the bottom 50% of the world, which includes India, and has negligible historical responsibility and together accounts for only 11% of the current carbon dioxide emissions.

All of these are attempts to redefine the fine balance of responsibilities and obligations already negotiated under the Convention and the Bali Action Plan, said India.

Calling upon the developing world, including the bottom 50% of the world, to show global vision and leadership that preserves the unsustainable lifestyles and consumption patterns of the developed world without tackling abject poverty and the consequent absence of adaptive capacity in developing countries is not supported by the Convention or indeed any defensible notion of equity, said India.

Several other developing countries also stressed the historical responsibility of the developed countries in causing climate change and called for the payment of the historical debt owed to developing countries due to their overuse of the carbon space in the atmosphere during their development.

These views were expressed at the meetings of the contact group on mitigation held on 2-3 April. The contact group met following a workshop held on 1 April on mitigation commitments of all developed countries and nationally appropriate mitigation actions of developing countries under paragraph 1(b)(i) and 1(b)(ii) of the Bali Action Plan (BAP). Several Parties, both developed and developing, made presentations at the workshop.

Brazil, for the **G77 and China**, stressed that the nature of the commitments for developed countries should take the form of quantified emission reduction commitments (QERC) and a bottom-up approach was not adequate and that an economy-wide approach was needed, given the level of cuts necessary for Annex 1 countries. The idea by some developed country Parties of taking a “costs perspective” in defining the contributions of Annex 1 is unacceptable, it said.

Michael Zammit Cutajar, who chaired the contact group and who is also the AWG-LCA Chair, said that a bottom-up approach refers to assessment of mitigation costs, while a top-down approach refers to a commitment in the form of QERC.

The contact group first discussed the mitigation commitments of developed countries (referred to as paragraph 1b(i) under the Bali Action Plan (BAP)), which was followed by an exchange on the nationally appropriate mitigation actions by developing countries (NAMAs) which are to be enabled and supported by technology and finance and capacity building, under paragraph 1(b)(ii) of the BAP.

Discussions also took place on the comparability of efforts in emission reductions among all developed countries and how a compliance mechanism can be in place. There was also reference to the long-term global goal, peaking of emissions and pathways for reductions.

In relation to NAMAs, some developed country Parties stressed for more action from “more advanced developing countries”. Japan called for a new international binding agreement at Copenhagen i.e. a new legal framework that encompasses the US and the effective participation of major developing countries.

Parties also discussed the idea of an international registry to register mitigation actions and on how to ensure the measuring, reporting and verifying of both the actions of developing countries and the support in finance and technology.

Developed Country Mitigation (para 1bi)

Brazil said that in arriving at a definition of the QERC of the Annex 1 countries, the concept of historical responsibility is relevant as contained in the Brazilian proposal.

(The Brazilian proposal was introduced during the negotiations under the Convention that led to the Kyoto Protocol. The concept differs from the target-setting approach adopted under the Protocol, i.e. uniform reductions, subject to differentiation for special circumstances and with the European Union subject to a single collective target. The proposal defines targets for Annex 1 Parties, set on the basis of the relative degree of responsibility for the anthropogenic greenhouse effect.)

Brazil said that in defining a contribution that is just, Parties have to consider the historical process of countries. Some have suggested that the Brazilian proposal is moralistic. It is moral but not moralistic. Historical responsibility is an equity issue. It is not about historical guilt for climate change but historical responsibility for climate change. Some Parties say that countries in 1750 did not know that their emissions were generating climate change. We say ‘polluter-pays’ and not ‘polluter, polluting with knowledge, pays’.

In response to New Zealand that emissions today are not the same as in 1750, Brazil said that there are different impacts of emissions on temperature, depending on the magnitude of the emissions and the time the emissions are in the atmosphere. Whatever emissions today, in a specific volume has a different temperature impact. The climate impact of emissions depends on the volume and time the emissions have been in the atmosphere. Discussions cannot be limited by looking at emission levels of a country today.

Bolivia said that the developed countries are responsible for the historical emissions of GHGs which are directly related to current and future

increases in temperature. They have over-used the ability of the earth’s climate system to absorb the emissions, which therefore limits the availability of carbon space in the atmosphere for developing countries and future generations. The developed countries owe a historical accumulated debt to developing countries. This debt should be repaid in tons per capita and expressed emission reductions that must be undertaken by developed countries. At the workshop on 1 April, Bolivia also spoke about an ‘adaptation debt’ – the payment for incremental costs resulting from the loss of development opportunities to developing countries.

China said that developed countries have a historical responsibility for their GHG emissions that have occupied the carbon space, which they continue to occupy. There is a need for deep cuts in developed country emissions to enable the development space needed by developing countries. The comparability of efforts among all developed countries should be legally binding and would be comparable to commitments undertaken under the Kyoto Protocol and should also be expressed as quantified emission limitation or reduction commitments. The compliance mechanism should also be comparable and can be based on existing mechanisms.

Barbados for the AOSIS said the earlier global emissions peak, the higher the probability of achieving climate stabilisation. Many Parties approach the issue of reaching the stabilisation level through efforts of developed and developing countries. However, since the level of enabling support to be provided for by the developed countries to the developing countries to undertake actions is unknown, it must be assumed that the current level of actions will be limited in developing countries. Hence, the level of ambition of developed country mitigation efforts must be calibrated accordingly.

India said that there was a need to address the question of the overall reductions of emissions which Annex 1 countries ought to undertake. In the Ad-hoc Working Group on Further Commitments for Annex 1 Parties under the Kyoto Protocol (AWG-KP), Parties are looking at individual economy-wide efforts by Parties to the Kyoto Protocol. Under the AWG-LCA, there are developed country Parties who are not Parties to the Protocol (viz. the US). Therefore, in the KP process under Article 3.9, a consideration of the overall scale of reductions required of Annex 1 Parties is desirable, in working out the individual Annex 1 commitments. Under the AWG-LCA, the total reductions overall of all developed country Parties should be looked at, including those Parties who are not Parties to the KP.

The Philippines said that in relation to the compliance issue, since the KP is the offspring of the Convention, there are many provisions that can be looked at in considering compliance of Parties in meeting their commitments. There has to be consistency between the Convention and the Protocol. It is in that context that Parties could look at the provisions of the KP relating to reporting, verification, peer reviews and so on.

New Zealand on comparability of efforts said that there is a need to see what is nationally appropriate. How can Parties frame comparability in terms of costs? It is important to talk about baselines, cost-curves and criteria based on GDP per capita.

Nationally Appropriate Mitigation Actions by Developing Countries (NAMAs) (para 1bii)

India said that climate science is telling us that the developing world's primary responsibility for climate change has not changed since the Convention came into force and is unlikely to significantly change by 2020 or 2030 or 2050 under any set of defensible assumptions. Hence, equating 1(b)(i) and 1(b)(ii) of the BAP is simply untenable. If Parties are to move forward, Parties cannot keep reopening negotiated text.

In relation to the concept of a registry, India said that "Registry" is not the same as a "Register". A Registry is a legal entity endowed with powers to approve and enter something into the Register it maintains. Thus, the Registry is NAMAs' window of the proposed financial mechanism under the Convention.

China, on the nature of NAMAs, said that it should be a country-driven process to meet the needs of sustainable development with concrete actions as defined by the BAP and should be supported and enabled by finance and technology.

South Africa asked what the meaning of "more advanced developing countries" was that was referred to by some developed country Parties. It said that the UNFCCC has not defined this term and called on Parties to refrain from using this term until it was clearly defined. The BAP provides for enhanced implementation of NAMAs in the context of sustainable development which is supported and enabled by developed countries in a measurable, reportable and verifiable manner. The extent of the implementation of NAMAs would depend on the effective implementation of financial and technology resources.

In relation to its proposal for a register of NAMAs, South Africa said that the proposal was

for a register of actions and not to register Parties.

Argentina expressed caution over the word 'registry' and the implications it may have. It preferred to talk about a mechanism that can work under authority and guidance under the COP. It also asked who was going to decide that actions are matched. The selection of support for action could create a cherry-picking process.

The Philippines said that the **G77 and China** does not have a strong position in favour or against the idea of the registry. There are different understandings.

Saudi Arabia referred to its suggestion for a 'Support and Accreditation Mechanism' (SAM). It explained that such a mechanism will pool activities and support and figure out which way to move, whether by accreditation or support or a combination of both. There is more than one choice.

Algeria said that there is no suggestion in 1(b)(ii) of the BAP that supports the idea of matching as it implies delays and uncertainties for actions to be supported.

Japan, in response to India, said that it does not expect developing countries to make the same mitigation commitments as the developed countries. Developed country Parties have QERCs. Major developing countries have to commit to improving energy efficiency. It expressed its firm stand that it cannot accept a scenario of a simple amendment of the KP without any effective participation of non-Kyoto Parties and major developing countries including India. Japan called for a new international binding agreement at Copenhagen i.e. a new legal framework that encompasses the US with a QERC and the effective participation of major developing countries.

In response, **Saudi Arabia** said that looking at the Convention and the BAP, the term 'most advanced developing countries' is not there. It said that there should not be a renegotiation of the Convention or the BAP as an outcome for Copenhagen.

The **US** said that there was a need for differentiation among countries in view of their different circumstances and so as to reflect what countries can do. It said that there was a need to integrate climate change into all programmes.

The **EU** said the more advanced developing countries can do more depending on their level of development. Different countries have different capabilities. It stressed the need to design a mechanism that allows for actions to come together with the support needed. How can a registry be enabled to do this? Many countries are doing NAMAs and these should be recognised. There is a

need for a coordinating mechanism for actions and support.

Mexico said that developing countries should not interpret Article 4.7 of the Convention restrictively. (Article 4.7 provides that the extent of developing country actions will depend upon the

extent to which developed countries provide finance and technology.) Since developing countries are already taking mitigation actions without financial support, Parties should not stick to a restrictive approach in taking mitigation actions only with finance.

Developing Countries Propose Financing Framework for Adaptation

Bonn, 4 April (Juan Hoffmaister) – The contact group on adaptation, under the Ad-hoc Working Group on Long-term Cooperative Action (AWG-LCA), focused on matching adaptation support with finance and technology, as well as capacity-building at its meeting on 3 April. The meeting was chaired by Thomas Kolly of Switzerland and William Kojo Agyemang-Bonsu of Ghana.

The Maldives, for the G77 & China, said that the Adaptation Framework presented by the Group on 2 April is consistent with the financial mechanism proposal presented by the Group. Funding for adaptation must be additional to ODA, new, predictable, and grant-based. The scale and magnitude of predicted needs for adaptation has to be matched by finance. The governance of the financing structure has to be under the authority of the COP.

On 2 April, the G77 and China presented elements for a Framework on Adaptation that treats adaptation and mitigation on an equal footing and recognizes adaptation as an absolute necessity for all developing countries.

The G77 and China said that the Adaptation Framework would require implementation arrangements to address enabling activities, such as knowledge sharing; functional implementation, and projects on the ground by national, local, and regional stakeholders; and coordination mechanisms. This framework should also include a mechanism to address loss and damage including insurance and requires compliance.

South Africa, speaking for the African Group, said that finance for adaptation must be massively scaled up and predictable with support for technology and capacity-building, which must be additional to ODA, recognizing payment for agreed full incremental costs.

The amount needed for adaptation is in the range of US\$28-67 billion per year by 2030, on the

assumption that developed countries take ambitious mitigation targets. Otherwise, this amount will be higher. It stressed that the G77 and China financial mechanism proposal recognizes the importance of a country-driven approach and direct access to funds.

The **Cook Islands**, speaking on behalf of AOSIS, said that the less there is mitigation, the more resources are required for adaptation, stressing the need to match needs with funds. The scope of the framework needs to take into account new and additional finance consistent with polluter-pays principles, and should be directed to the most vulnerable countries, particularly SIDS and LDCs. Enabling activities can include project-based activities, long-term approaches, sector-based approaches and a mechanism for loss and damage, with priority for the most vulnerable. A matching mechanism, more than a clearinghouse, must record national adaptation plans as well as new and additional funds.

Brazil said that adaptation finance must be consistent with the G77 and China's financial mechanism proposal. An adaptation window under the proposed financial mechanism must be created, based on contributions from developed countries with financing that is predictable, stable, new, additional, and country-driven for both urgent and long-term adaptation. On technology for adaptation, there must be support for research and development, diffusion, and transfer of adaptation technologies and must cover full incremental cost for adaptation technologies.

The Philippines emphasized the commitment of Parties to meet the agreed full incremental costs to meet both the urgent and long-term climate trends.

Uganda reminded the Parties that adaptation is a commitment, and that any other initiatives outside of the process are complementary, and that funds made available must be through a common 'basket' that can be monitored.

Samoa said that adaptation should be available to all developing countries, but priority access should be given to vulnerable countries, not at the expense of other countries, but as a reflection of the reality and immediacy. Climate change is an additional burden beyond the control or causing of vulnerable countries, and the full cost of an adaptation approach is needed.

Bolivia said that climate change is causing enormous damage to developing countries' economies and society, postponing the right to development. Developed countries, based on their irresponsible use of the carbon space, have an adaptation debt to developing countries. Adaptation has been treated under the Convention very broadly and is imbalanced, compared to mitigation. The adaptation debt must be paid through the financial mechanism proposed by the G77 and China, for the full cost of adaptation, including for the loss of development opportunities.

China underlined the need to establish a mechanism for adaptation finance that is adequate, predictable, and for the long term to support adaptation in developing countries. It said that there is a need for a regional body to guide the implementation of adaptation activities. It stressed the importance of technology transfer.

Saudi Arabia stressed the need for development and transfer of technology, and capacity-building for technologies that address the adverse impacts of mitigation responses, and finance for the removal of barriers for the large-scale transfer of technologies to improve the resilience of economies and enhancement of human and institutional capacity.

The **EU** recognized the need to scale up support for adaptation and emphasized mutual accountability, robust governance, and a country-led approach, noting the role of different channels for delivery. Countries should be supported for climate-resilient development, and climate-specific adaptation programmes, noting that it is a long-term process as

part of national plans, policies, and institutions. It said that countries should be supported through this path. There is a need for coherence with institutions elsewhere and the UNFCCC plays a role in improving coherence.

Japan spoke of establishing an adaptation information-sharing mechanism under the UNFCCC to highlight actual adaptation needs that necessitate resources to link them with the most appropriate resource-providers, including regional organizations or donors, emphasizing the Pilot Programme for Climate Resilience under the World Bank.

New Zealand stressed the need for mutual accountability and robust governance principles as part of any support for developing countries, particularly vulnerable countries. A range of mechanisms and channels to deliver climate change support should allow the use of bilateral, regional, and international channels and be accounted for as contributions to adaptation finance.

Canada said that it is useful to develop guiding principles, such as giving priority to the most vulnerable, using a country-driven approach, and promoting an enabling environment that aims to achieve a common goal, as well as concepts and principles that will structure and focus adaptation to enable the most effective use of resources. There is great value in building on the expertise and resources that currently exist, and the Convention has a strong role for catalyzing adaptation efforts with new initiatives such as the Nairobi Work Programme.

Norway said that pre-definitions of appropriate adaptation actions should be avoided. Actions should be result-based, effective, and efficient. Projects will be part of adaptation actions, but it is necessary to move away from project-based mechanisms. Adaptation is a learning-by-doing process, and this structure must be flexible. A one-size-fits-all support structure is not sustainable. No single institution can deal with adaptation in all areas. Additional adaptation entities must be created only when functions cannot be met by existing ones.

Third World Network Intervention at the Workshop on Agriculture at the 5th Session of the AWG-LCA, Bonn, 4 April 2009

Agriculture seriously affects climate change and is in turn seriously affected by it. The large mitigation potential can change agriculture from being the second largest emitter of GHGs to a much smaller emitter or even a net sink. The overall mitigation potential is 6 billion tonnes a year, which is close to all of agriculture's direct emissions. The greatest potential mitigation contribution is from soil carbon sequestration (5.38 billion tonnes annually), followed by reduction of methane emissions (500 million tonnes) and nitrous oxide emissions (120 million tonnes).

Conventional and intensive agriculture characterized by mechanization and use of agro-chemicals (mineral fertilizers, herbicides, pesticides) and reliance on high external inputs (chemicals, irrigation, fossil fuels) has led to high environmental and social costs that may undermine future capacity to maintain required levels of food production.

In April 2008, the International Assessment of Agricultural Science and Technology for Development (IAASTD) launched its report in Johannesburg, which was approved by 57 governments. The IAASTD was an inter-governmental process, co-sponsored by the FAO, UNDP, UNEP, GEF, and World Bank. Over 400 authors were involved in drafting the report. It conducted a three-year evidence-based assessment on agricultural science and technology and on the future of agriculture. It made a critique of conventional industrial farming and called for a fundamental change in farming practices so as to better address increasing food prices, hunger, inequities and environmental crises. The report reflects a growing consensus among scientists and many governments that the old paradigm of industrial energy-intensive and toxic agriculture is an outdated concept, while small-scale farmers and agro-ecological methods provide the way forward.

Sustainable agriculture, that includes organic agriculture, is an effective approach to mitigation and adaptation efforts. For that to happen, some important measures must be taken urgently.

(1) Clearly, sustainable agro-ecological agriculture should be supported and developing countries wanting to undertake or implement such activities should be enabled and supported by financing. This should be a priority, as this also supports local communities and farmers. To that end, the UNFCCC must be made friendly to small organic farmers and indigenous peoples.

(2) Capacity-building activities in promoting sustainable agriculture should be supported. Arrangements should be made for the sharing of experiences and the transfer of good practices in agriculture that can constitute mitigation and adaptation efforts.

(3) Given the many advantages of organic farming and sustainable agriculture, in terms of climate change as well as social equity and farmers' livelihoods, there should be a much more significant share of research, personnel, investment, financing and overall support from governments and international agencies that should be channeled towards sustainable agriculture. Promotion of sustainable agriculture can lead to a superior model of agriculture from the environmental and climate change perspective. As high-chemical and water-intensive agriculture is phased out, more natural farming methods should be phased in, with research and training programmes, promoting better production performances in sustainable agriculture.

(4) In addition, international agencies and developed country governments should halt the promotion of unsustainable chemical-intensive agriculture policies and programmes in developing countries that undermine climate change efforts.

TEBTEBBA Intervention on the Workshop on Agriculture at the 5th Session of the AWG-LCA, Bonn, 4 April 2009

Many indigenous peoples in all parts of the world are still very much engaged in traditional livelihoods in agriculture and agroforestry. These include rotational agriculture or swidden agriculture, high mountain agriculture, hunting and gathering, and pastoralism. These are very sustainable livelihoods which continue to provide food and cash for millions of indigenous peoples. Indigenous peoples from Asia, Africa and Latin America have just finished their regional summits on climate change and agriculture has been extensively discussed because it is in this sector that indigenous peoples have contributed to mitigation and have also shown their capacities to adapt. Indigenous agricultural and agro-forestry practices are some of the best examples of agro-ecological agriculture.

Rotational agriculture, for example, is an indigenous agricultural practice embedded with complex and sophisticated systems of resource management and knowledge of land use and cultivation, soil types and fertility and adaptation to climatic variations. Indigenous pastoralists like the Maasai of Africa, the Sami reindeer herders of the Arctic and the llama and alpaca herders in the Andes, also have sophisticated traditional knowledge which allows them to graze their herds in the most fragile ecosystems. All these are low-carbon livelihoods but these are very much under threat because of climate change impacts and also because of the potential effects of solutions to climate change. The

pastoralists in Africa raised their concern, that with the increasing support for REDD, their grazing lands are under threat of being afforested which will mean the end of pastoralism and the cultures around this.

In this light, we support fully the statement of the Third World Network which calls for sustainable ecological agriculture to be recognized as a key mitigation measure for climate change and as a key element for sustainable and low-carbon development. We further recommend the following:

- Further studies on the contributions to mitigation, indigenous peoples' agriculture and agroforestry practices should be undertaken and these potentials should be included in the monitoring of mitigation measures.

- Finance and technology transfer, which may potentially undermine indigenous agricultural systems, should be stopped.

Because of the fact that indigenous peoples' concerns on climate change cut across various issues, including agriculture, forestry, technology transfer, adaptation, mitigation, finance and a long-term shared vision, we propose the following:

- That an Expert Workshop on Indigenous Peoples and Climate Change be held to look into how indigenous peoples can effectively contribute to mitigation measures, which include the mitigation potentials of indigenous agriculture and agroforestry practices, and how they can be supported to adapt to climate change. This can be held before the AWG-LCA session in Bangkok in September 2009. We hope some Parties can support this so that a fruitful dialogue between indigenous peoples and governments can take place.

Debate on Using New Versus Existing Financing Institutions in Finance and Technology Group

Bonn, 6 April (Meena Raman) – At a two-session meeting of the contact group on finance and technology (institutional arrangements), developing countries stressed the need for a new financial mechanism and architecture under the UNFCCC, with many of them giving reasons why the existing institutions for delivering climate-related funds (such as the World Bank and the GEF) were inappropriate and deficient.

They spelt out elements of the G77 and China proposal on finance as well as technology, emphasising why the best solution would be to establish the new mechanisms and institutions on finance and technology within the UNFCCC. Several developed countries on the other hand want the existing institutions to be improved or reformed to enhance the delivery of financial resources.

The session also saw the start of the European Union, represented by the Czech Republic, commenting on elements of the G77 and China proposal, which was welcome by the Group and its members.

These discussions took place at the meeting of the contact group on finance and technology on 4 April under the Ad-hoc Working Group for Long-term Cooperative Action (AWG-LCA). The focus of the meeting was on proposals relating to institutional mechanisms and governance issue. It was chaired by Luiz Machado of Brazil.

The Philippines for the **G77 and China** said that a component of an agreed outcome in Copenhagen would have to be a strong financial architecture that will finally deliver the necessary financial resources to developing countries in accordance with the commitments of developed countries under the Convention. The Group said that its proposal was necessary given the experience in the past 15 years (where there has been an implementation deficit of the commitments of the

developed countries to meet their financial obligations). The Group referred to its proposal on a financial mechanism that clearly laid out the objectives, elements, functions and its architecture.

Barbados for **AOSIS** said that there must be a fair system of governance with a new institutional arrangement, with balanced representation, and where access must be enhanced, especially to the most vulnerable. It said that while coherent planning was important, the provision of finance should not be stopped. The problem is with the commitment to deliver funds. It said that the G77 and China proposal for a financial mechanism must have a window for adaptation.

India said that the financial mechanism structure should provide for technical advice and oversight and ensure adequate and predictable financial resources. It should be overseen by an inclusive and transparent process. There was a need for the evolution of such a mechanism beyond the current institutional structure. India emphasised the important role the mechanism can play as an agent of change. It should be able to nudge and redirect investment flows to climate-friendly investment and to enhance the size of such investments.

China said that an agreement on the delivery of finance and technology will determine whether Copenhagen will be a success or not. It said that there was a need to have an integrated approach under the Bali Action Plan and design a single architecture that will deliver on finance and technology for mitigation and adaptation. In relation to technology, there was a need for a UNFCCC-wide committee at the macro level to coordinate strategically. It can have a series of panels and maintain experts and specialists as well as decision-makers. It should deal with action plans, performance assessment and financing.

The **EU** reiterated its suggestion for countries to put together a development strategy for mitigation

and adaptation for direct financing. In relation to the institutional arrangements, it found convergence on six points with the G77 and China financial mechanism proposal – viz. the governance must be efficient, effective and transparent; balanced and equitable representation of Parties; allows for transition from a more project-based approach to a programmatic one; finance must be measurable, reportable and verifiable; improve developing country access to funds including direct access where appropriate; country ownership and mutual accountability. It said that it was important to build on existing institutions, and allow for finance from a range of sources, including through bilateral and multilateral sources.

The Philippines for the G77 and China in response to the EU said that it was hearing sweet music. However, it was not hearing the sweet words of “commitment” and “finance”. It stressed that financing is an enabling means. Referring to the Convention, it said that the articles do not say that developing country Parties have to come up with ready-made actions first.

Australia said that the financial mechanism must be integrated, adequate, sustainable and efficient. Priority must be given to those who are vulnerable. The architecture must be based on key principles such as country ownership, national priorities, streaming of the process oriented to results, transparency and mutual accountability.

Japan said that there was a need to improve the governance of the financial mechanism for it to be effective but it must avoid bureaucratic duplication. It suggested the use of existing organizations by reforming existing bodies or adding new mandates to existing organizations and upgrading the level of functions.

The **US** said that more thinking on its part was needed. On the financial architecture, it said that it was important to determine what structures or institutions are needed to ensure that financing is responsive to developing country needs. It was also considering the role of the private sector and carbon markets in this regard.

New Zealand said that the scaling up of financial resources was critical and also stressed the need for transparency, good governance and mutual accountability. It expressed caution against creating a bureaucratic nightmare, saying that there was thus a need for principles to be established.

On 4 April afternoon, when the session resumed, **Ghana** appealed to members to consider the G77 and China proposal on technology and to seriously engage on it.

Barbados for AOSIS said that the Group did not want to enhance institutions that failed in the past. Institutions like the World Bank have different systems of governance (than the UNFCCC); for example, Caribbean countries have only 0.6% of the vote. We don’t have a voice in these institutions, so we won’t have a say in the World Bank’s enhanced resources. The current financing system has failed and tinkering with a failed system won’t deliver financing to our countries.

India welcomed some positive statements from Annex I countries in the morning. However on the issue of financing outside the Convention, this would not be supported by the Convention. We want a financial mechanism under the Convention, of which the GEF is only one entity. Other institutions outside the Convention don’t satisfy the Convention provisions. Article 11 and other articles lay down the conditions the financial mechanism must fulfil, the nature of commitments and hence the funding under the Convention. Funds under the Convention are not aid, but are resource transfers that discharge Annex I responsibilities. The different institutions have different mandates. India also cautioned that tools used in climate financing should not start a new trade war. For example, the harmonising of carbon taxes worldwide or across borders can be very detrimental to global trade.

China said the design of the institutional arrangement should be issue-oriented, starting with what we need to enhance and then direct finance and technology to that area. It stressed the hierarchy of institutional arrangement. The key issue is that a body or committee should institute action and information sharing. We can then continue to elaborate on the work and the panels that can support this central committee.

Saudi Arabia stated that a new body is needed for technology in the Convention. It joined Ghana’s call to invite Annex I partners to engage on the G77 and China proposal.

The Philippines for the G77 and China responded to the EU and the items it saw convergence of views with the G77, for example that the governance must be transparent. We were operating under a failed system of delivery, which is also not “MRViable”. It asked how much of funds went through institutions outside the Convention, and went into climate activities, or did they undermine climate activities instead? On governance, it said the World Bank played multiple roles, as trustee of the GEF, as an implementing agency, and it placed conditions attached to these roles. The conditionality affected the delivery of the finance. So far the

guidance of the Parties is not followed by the entity (GEF).

The G77 proposal is the most cost-effective, as Parties ensure the guidance of the Convention is followed. The proposal is also flexible and can take in the other proposals of other parties. Also, the proposal refers to models like the Global Fund and Montreal Protocol, put up by members and handling large sums. The G77's proposed multilateral fund can apply the concept of incremental costs, and expert panels would advise the various funds.

The Czech Republic for the EU looked forward to seeking consensus with the G77. It agreed with the G77 referring to learning from lessons from other models such as the Montreal Protocol. It liked the G77 proposal's element of facilitating linkage with other funding sources and reducing fragmentation. It asked how synergy can be secured between the windows of the G77's proposed multilateral fund. It also agreed that low-carbon strategies are not a prerequisite for adaptation finance. (The Chair Luiz Machado said he hoped it is not a prerequisite for anything.)

Japan said there are three categories of funds outside the UNFCCC: (1) bilateral and multilateral institutions can be used for urgent projects especially for SIDS and LDCs; (2) financial resources operated by multilateral and regional organisations are available for projects with co-benefits in mind; (3) big private sector money can be offered by companies eager to do projects. Sectoral projects can facilitate match-making, with an UNFCCC technology advisory group (proposed by Japan) playing the role of matchmaking money offered by donors and agencies with developing countries that can choose which resources are convenient for their activities.

Switzerland said we should try to use existing institutions to channel finance and technology, and co-financing should not be excluded.

Pakistan said it wants a detailed consideration of the G77 finance proposal. The finance mechanism and the implementation of finance commitments can only come about under the Convention. It stressed the need to avoid multiplicity of funding structures with different governance systems; otherwise, we will spend more resources to access resources than to tackle climate change. The multiple structures will make access difficult.

South Africa on behalf of Africa also welcomed positive responses by some developed countries on the G77 proposal. We should not use the existing financial mechanisms which have failed, and in light of the economic crisis they failed developed and developing countries alike. The problems include extremely complex and cumbersome procedures to access funds, the developing countries are voiceless in the governance, and replenishment of funds is just not enough. It stressed key principles for the institutional arrangements, that there is a need for geographic balance, for direct access to funding, a country-driven approach, and the need for support at regional level so that all stakeholders are brought together for programmes. The developed countries' MRV must be binding and the institutional framework's role is to design it.

India, responding to the Czech Republic on synergy of the fund's windows, said that it was the same as a multi-product company having synergy from having the units producing the various products being in the same company. On Japan's explanation on various institutions to do financing, none of them provide the financing to meet the incremental costs (referred to under the Convention). On Switzerland's suggestion to use existing institutions, India said it hoped Switzerland does not have to deal with these institutions as a SID or LDC. Many African countries have complained that the way they run the system, it is very hard for a small country to deal with them.

China on public-private partnerships said when technology is owned by the private sector, the public sector can give incentives and guide the private sector through policy instruments. We can start with the public finance to provide predictable flows and then by means of policy instruments, we can leverage to obtain private finance into the technology market.

The Climate Action Network expressed disappointment with the slow progress and the lack of urgency, with the missing element being a strong signal on finance from developed countries. Massive finance and technology on the scale of hundreds of billions of dollars is needed. The G20 is providing \$5 trillion for the economic crisis. The financial crisis comes and goes but the climate crisis persists. There must be an early signal that developed countries will meet their obligations. The ball is in the court of developed countries, and now is the time to say 'Now we will.'

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New Numbers, but No Consensus on Emission Reductions

Bonn, 6 April (Hira Jhamtani) – The contact group on the “scale of emission reductions” for Annex I Parties to the Kyoto Protocol (KP) ended last week with no conclusions in sight.

The Chair of the Ad hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol (AWG-KP), Harald Dovland from Norway, ended the session on Friday, 3 April saying that there seems to be no consensus as yet on the number for emission reductions of Annex I Parties in aggregate.

The AWG-KP is negotiating the subsequent commitment period of emission reductions by Annex I Parties, which will be established in an amendment to Annex B of the KP.

However, after three years of discussions, there is no sign as yet that Parties can come to a conclusion.

One reason for this is that some developed country Parties want to first discuss the rules and tools for emission reductions (discussed in other contact groups under the AWG-KP) and to coordinate discussions with the Ad hoc Working Group on Long-term Cooperative Action (AWG-LCA) under the UNFCCC. The AWG-LCA is discussing a long-term global goal for emission reductions as one issue of the ‘shared vision’ for long-term cooperative action. Several developing countries, on the other hand, stress that the mandate of the AWG-KP is simple and clear and is about agreeing on the numbers for the subsequent commitment periods for emission reductions of Annex I Parties.

During the contact group meeting, the Chair of the AWG-KP first suggested an approach that he called a “bottom-up” process in which he will prepare, for information purposes, the aggregate targets for Annex I Parties proposed by some Annex I Parties for the subsequent commitment period. In

other words, what some Annex I Parties are prepared to do. From this, the Chair proposed that the range for the aggregate emission reductions to be determined for the subsequent commitment period can be extracted. Dovland also said that the secretariat had all the proposals of Parties and could help prepare this.

Micronesia for the **AOSIS** (comprising 43 countries) and a number of other countries (Colombia, Costa Rica, Chile, Peru, Argentina, Gambia, Uganda, Senegal, Tanzania, Mozambique, Guatemala, Panama, El Salvador, Kenya, Benin, Togo and Ecuador) said that Annex I Parties collectively, whether or not Parties to the KP, must reduce emissions by at least 45% below 1990 levels by 2020 and by at least 95% below 1990 levels by 2050. Micronesia said that it was not appropriate to wait for the AWG-LCA process, as conclusions on emission reductions by Annex I Parties are the central focus of the AWG-KP.

China said that it was not against the proposal for the secretariat to collect information on the national pledges by Annex I Parties to see how much they are willing to commit in aggregate. However, this is a negotiation process on the commitments of the Annex I Parties and is not about a “showing of willingness process”. The focus should be to reach a conclusion on the numbers in aggregate. Since the long-term global goal for emission reductions is one element of the Bali Action Plan, it should be discussed by the AWG-LCA and not by the AWG-KP.

India reiterated the suggestion it made during the AWG-LCA session, that the AWG-KP discuss the aggregate and individual country emission reductions commitment for Annex I Parties that are Parties to the KP. Since not all Annex I Parties are Parties to the KP (i.e. the US), the emission reduction figures and the overall aggregate emission

reductions for all the developed countries (i.e. including those that are not Parties to the KP) should be discussed in the AWG-LCA.

Japan said that an exercise to arrive at an aggregate figure first is not useful. Information about pledges is more useful, it said. Simple aggregation can be tricky as there are different numbers and ranges, and different base years for each country. Japan repeated that the long-term mitigation pathway for global emission reductions is crucial for Japan. It questioned the 25-40% reduction scenario for Annex I Parties that is indicated in the IPCC report as it is only one of the many scenarios. It said that the IPCC provides some scientific assessment but allocation for emission reductions is in the realm of politics. It said that it is also concerned that the US is currently emitting 40% of the Annex I Parties emissions. There is the issue of comparability of efforts between all the Annex I countries that is being discussed in the AWG-LCA and therefore there is a need for coordination between the two working groups, it said.

New Zealand said that 2050 is a long time away and countries and the world will change. What is needed is the long-term global goal and elements of the shared vision. Therefore it is important to link

the work of the AWG-KP with the work of the AWG-LCA, it said.

On the length of the subsequent commitment period for Annex I Parties, some countries suggested 5 years while others are suggesting 8 years.

On the length of the subsequent commitment period, Australia, New Zealand and Japan said that they have not taken a definitive view, while Norway said it also has no fixed position, but sees the merit of 2020, with a compliance assessment after five years. The EU said that it has committed to 2020 as its target, and introduced an annual compliance cycle in its procedures.

South Africa speaking for the **G77** and **China** reiterated that the mandate from Poznan was very clear, one of which is to reach a draft conclusion for the amendment of Annex B and the consequential amendments in accordance with Article 3.9.

The **EU** said it was nervous about views that there are many ranges for emission reductions in the IPCC report. The EU found the 25-40% range and the related pathway interesting and this has guided its programmes. It said that there were many targets and the ranges of emission reductions can be reflected. It said that it may, however, not be easy to arrive at aggregate figures.

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Parties Divided over “Long-term Global Goal” in Shared Vision

Bonn, 7 April (Meena Raman) – Parties were divided over the issue of the long-term global goal for emission reductions as an element of the ‘shared vision’ in the Bali Action Plan which was discussed by the contact group on shared vision, at the meeting of the Ad-hoc Working Group on Long-term Cooperative Action (AWG-LCA) under the United Nations Framework Convention on Climate Change (UNFCCC).

The contact group held a meeting on 6 April which was dedicated to the subject of the long-term global goal for emission reductions, which is one of the aspects in the larger issue of “Shared Vision”. The meeting was chaired by Thomas Becker from Denmark. The shared vision contact group was chaired by Michael Zammit Cutajar (the Chair of the AWG-LCA), who designated Becker to chair the meeting on long-term goal.

At the 6 April meeting, several developing countries emphasised the need for a comprehensive approach and were not in favour of establishing a numerical global goal for emission reductions. Other developing and some developed countries referred to the need for an aspirational target with a number.

The EU was explicit in calling for the contribution of developing countries to be included in the global goal. It mentioned a 15-30% deviation below the baseline for developing countries by 2020 to correspond to the goal of a 30% reduction for Annex I parties by 2020, as mid-term targets. It claimed that the figures are what science, backed by the IPCC report, had clarified.

Several developing countries, including India, Brazil and Saudi Arabia, challenged the view that the emission-stabilisation figures were clearly concluded by science. They were of the view that there were many different pathways to achieve an emission goal, and that a particular pathway chosen would be based on certain assumptions, so that if the assumptions changed, so would the pathways.

The EU however replied that there was no leeway anymore (to choose different pathways).

Several developing countries were explicitly against any targets for developing countries, and some were against having numerical figures in any global goal.

It was obvious from this session that parties are far from sharing a common view on the issue of a global goal in particular, nor on the shared vision generally.

[The Bali Action Plan, adopted in December 2007 in Bali, provides that the shared vision for long-term cooperative action includes a long-term global goal for emission reductions, to achieve the ultimate objective of the Convention, in accordance with the provisions and principles of the Convention, in particular the principle of common but differentiated responsibilities and respective capabilities, and taking into account social and economic conditions and other relevant factors. The long-term global goal for emission reductions has been one of the most contentious issues in the post-Bali climate talks. (See TWN’s Bonn Update 4.)]

At the start of the meeting, Becker said that Parties seemed to have convergence in some areas in relation to the long-term global goal. Among the areas were that the goal should be aspirational and indicative; that it should be ambitious and reflect the urgency for actions to address climate change and should aim to achieve the ultimate objective of the Convention; that it should be based on best-available science and should have key benchmarks to minimise climate change impacts and be comprehensive. Based on these characteristics, he asked what needs to be achieved in terms of emission reductions of GHGs and to guide necessary short and medium-term action. He asked Parties how this should be reflected in text for the Copenhagen Conference of Parties.

Becker also said that some Parties had proposed different pathways including GHGs to peak within a certain time-frame and that there were different options and contributions by different groups of Parties and some suggested that Annex 1 countries show leadership by reducing emissions from between 25-40% by 2020 based on 1990 levels and some Parties say that others must contribute as well.

At the end of the meeting, Becker summarised the discussion, and this summary was rather different from what he had said at the start of the meeting was then his sense of the views of members.

In his end-of-meeting summary, Becker said that he saw convergence among Parties that the shared vision was a way to achieve the ultimate objective of the Convention. A global target is part of that way. Some would like to see how a target can be quantified now, while the majority of Parties prefer to wait and see how the other tracks of the discussions are developing before doing so. Some Parties would like to see the long-term goal accompanied by the mid-term goal for Annex 1 countries. Parties also had questions on how science and scientific arguments are used in a certain direction. Suggestions of per capita emissions were also questioned. Several Parties also said that the global goal should not hamper economic development in developing countries.

At the start of the meeting, **Argentina** for the **G77 and China** said that the shared vision must be comprised of all the four building blocks of the BAP (mitigation, adaptation, finance and technology). The long-term cooperative actions should be guided by Articles 2 and 3 of the Convention. (Article 2 relates to the ultimate objective of the Convention whilst Article 3 relates to the principles). On the long-term global goal for emission reductions, the Group stressed the need for quantifiable emission reductions by developed countries.

India said that if Parties are to fix a long-term target for the long-term global goal, this has to be achieved on the basis of equitable right to atmospheric resources. Shared vision must encompass what we share. This should be achieved on the basis of equitable distribution, taking into account the historical emissions. Some countries have suggested that if the long-term global goal is to be achieved, it implies reductions of emissions for developing countries for even if developed countries reduce their emissions, residual actions will have to be taken by developing countries. This involves an ambition on a target.

If developing countries are to achieve this, what would they be compensated, for the agreed full

incremental costs of the changes, by developed countries, India asked. The Convention is clear that any mitigation action by developing countries that involves incremental costs must be compensated for in terms of the agreed full incremental costs by developed countries. This relates to how emission reductions are financed and hence, this takes us back to the four building blocks which are an integral part of the shared vision. Without the finance and the question of incremental costs being addressed, we cannot look at the long-term global goal allocation of the target for emission reductions.

Later, India also said that if there is to be quantification, then there should be the quantification of everything, including the distribution of the atmospheric resources and the carbon space that we share. There is a need to know from where we start and where we want to reach. When Parties talk about figures that are “science-based”, it is important to understand that the figures are based on certain assumptions.

Referring to the technical briefing held on 30 March (on estimates of required emission reductions for stabilisation scenarios which included the proposal by the EU for GHG emissions of developing countries as a group to deviate from business-as-usual by 2020 from minus 15-30%), India said that it was clear that the presenters had shown a continuum of actions and had picked the range of 25-40% for Annex 1 reductions in 2020, and the consequent 15-30% deviation from the baseline for developing countries. If they had instead picked the figure of a 60% cut for Annex 1, then the developing countries’ contribution would be zero.

China said that the long-term goal for cooperative actions includes the long-term global goal to achieve the ultimate objective of the Convention as stated in Article 2. The objective is not only to stabilise GHG concentrations but also to allow ecosystems to adapt and to ensure that food production and economic development proceed in a sustainable manner. The essence of the long-term goal is that such a goal can only be achieved by enhancing the implementation of the Convention.

To achieve the long-term goal, developed countries must fulfil their commitments on reducing emissions and in providing finance and technology. It cited various articles on these commitments. China said whether developed countries fulfil their commitments is a matter affecting the survival of the developing countries. The developed countries should cut their emissions so that the developing countries have adequate space for sustainable development and poverty eradication. To achieve the long-term goal while fulfilling the principles of

common but differentiated responsibilities and equity, the developed countries should reduce their emissions. However, according to UNFCCC data on national emissions from 1992 to 2006, the emissions of developed countries increased by 9.9%. The emissions of many developed countries, though they completed their industrialisation 30 or 40 years ago or even earlier, have still not peaked.

Developing countries have made active efforts to reduce their GHG emissions. The per-capita emissions of developing countries are still relatively low and they have to meet their social and development needs. The long-term goal should enhance the implementation of the Convention, and all the building blocks of the BAP must be addressed in a comprehensive manner in the shared vision.

South Africa said that it is committed to a shared vision that incorporates sound science, ensures balance between mitigation and adaptation; meets the climate and development imperative and provides for effective means of implementation. It could include a long-term global goal that is clear and ambitious with mid-term targets with developed countries undertaking 80-95% reductions by mid-century and a quantified emission reduction commitment under the Kyoto Protocol of at least 40% by all developed countries by 2020, and nationally appropriate mitigation actions for developing countries supported and enabled by technology and finance. We need to integrate the long-term goal in a broader shared vision.

The **Czech Republic for the EU** said that the long-term goal is an integral part of the shared vision and agreement on the long-term global goal on emission reductions is necessary to guide actions in all the four building blocks of the BAP. The goal has to be science-based, reflect urgency and be informed by more recent science. It needs a time-frame for the peaking of emissions and should clarify the contributions of both developed and developing countries. Developed countries have to take the lead in emissions reduction and support developing countries to move to a low-carbon society. It has to acknowledge that all countries must do their fair share.

The EU said there is a need to quantify the long-term goal and this involved keeping the temperature rise to below 2 degrees C and for global emissions to peak by 2020 at the latest. Global emissions should be cut by at least 50% by 2050 relative to 1990 levels. Developed countries should take the lead with 30% cuts by 2020 consistent with the range of 25-40% reductions that science requires. Regarding the ranges, it is clear what science tells us, that the contributions of developed and

developing countries are two sides of the same coin. Developed countries cannot do it in the mid-term alone. There is a need for developing countries to also contribute in achieving the global goal. In the ranges we have seen, the science told us there is a need for substantial deviation from baseline levels for developing countries of 15-30% by 2020, which corresponds to a 25-40% cut for developed countries.

Brazil agreed with other developing countries that the shared vision is comprehensive of which the long-term goal is a part. The long-term goal is useful as an aspirational reference for international effort. It should be under the principles of the Convention and be ambitious, based on best science. An important and significant lesson from the technical briefing (held on 30 March) is not to confuse elements within a scientific consideration. It is important not to confuse limiting a temperature rise with specific pathways.

Limiting to a 2-degree C maximum rise can be achieved by several different pathways. It is clear that in the design of the scientific studies, assumptions are made on the burden-sharing, baselines and pathways. Sometimes an assumption in a scientific study is treated as a scientific truth and introduced in a political process as being necessary. It is important to make this distinction clear. Brazil said that there are topics in which we already have references. In the long-term goal, it is not necessary to clarify the contributions of developed and developing countries, as this is already clarified in the Convention and in the mitigation action.

Saudi Arabia said that it acknowledged the long-term global goal for emission reductions but does not see it as a numerical goal. It had concerns about the science and the pathways. It is extremely difficult to pick one pathway over another. On a number, 2050 can be an aspirational time of what is achievable. What is the long-term commitment of Annex 1 Parties and what is the level of finance and technology support needed by developing countries now, up to and until 2050? How much NAMAs can the finance support? It was not necessary to have a number as part of the global goal. When you put numbers together, it can be very challenging.

The EU, in response to Brazil and Saudi Arabia, referred to their statement that to reach the 2-degree target there can be many pathways. The EU wished this were so. This is something that the IPCC in its 4th assessment report made clear, we all endorsed it, that we don't have that leeway anymore. The emission pathway must peak by 2020 as 2030 is too late.

The Philippines said that the shared vision is a reflection of the ultimate objective of the Convention. Achieving the stabilisation of the climate is subject to the parameters in Article 2 of the Convention and the same parameters apply to the long-term global goal such as ensuring sustainable development, adaptation and in ensuring that food security is not threatened.

The Bahamas for the **AOSIS** said that a science-based approach must be undertaken which keeps up with current information. The quantified emission reduction commitments of developed countries must keep temperature rise to well below 1.5 degrees C below the pre-industrial levels and the peaking of emissions should not take place beyond 2020.

Uganda for the **LDCs** said that there are two elements to ensure a safe level of stabilisation. First, there must be a number and a time-frame within which stabilisation takes place. Second is the resilience of ecosystems and economies. It said that “environmental space” is a valid question raised. However, if we want equitable emissions per capita, by the time we get to that, many islands would have disappeared. It would not go along with per capita emissions. **Singapore** agreed with Uganda that per capita emissions is not an appropriate parameter. There should be no one-size-fits-all approach.

Algeria said that the most important long-term goal is in enhancing the implementation of the Convention. It is important to recover confidence among all Parties in relation to the following elements until we get an agreement – Equity and environmental integrity must be based on sustainable development targets; Annex 1 countries demonstrate their mitigation commitments to reduce emissions; and Annex 1 Parties support developing countries with finance and technology. The long-term goal is not to identify ranges for emission reductions or create new objectives under the Convention. All elements of the BAP must be guided by an equity-oriented approach in dealing with emission reductions as contained in Algeria’s submissions.

Malaysia said that developed countries must demonstrate their role in leading with ambitious emission reductions. The methodology used in defining the long-term global goal must reflect historical responsibility, per capita emissions;

technology, finance and capacity-building needed by developing countries to meet their needs and the historical and climate debt. Developing countries cannot be denied their right to the atmospheric space and the long-term goal must take that into account.

Bolivia said that the long-term goal is to change the economic system as this is the source of the climate change problem. Developed countries are historically responsible for the climate and ecological debt. Rather than focus on levels of stabilisation of GHGs, the long-term global goal must reflect the need for change of the economic system and consumption patterns; the volume of technology to be transferred and unencumbered access to technologies; the compensation to be paid for loss of opportunities and the right to development due to the overuse of the carbon space by the developed countries, etc. It should include a set of numbers that include the climate debt, historical emissions debt and an adaptation debt, alongside the quantification of changes in trade, finance, and consumption patterns of developed countries.

New Zealand said that the long-term global goal provides a useful opportunity to discuss the quantitative element of the shared vision as other elements are qualitative. There is a political breakthrough needed on the issue of emission reductions. A GHG concentration level of 450 ppm comes from science. If we can agree on this, then the task is made easier. There is more than one way in expressing the long-term global goal that guides the shared vision and mid-term vision.

Australia said that the long-term global goal must reflect the collective ambition of all Parties to effectively respond to climate change. It can be a single quantified percentage of emission reductions with a base year and target by which emission reductions can be achieved and involve carbon budgeting. 2050 is an appropriate date and there is a need to agree to a mid-term goal that will define the trajectory for international action. When questioned by the Chair if the mid-term goal should be for everyone or for developed countries alone, **Australia** said that it should be an effective global goal guided by emission cuts by Annex 1 countries.

Japan said that a long-term global goal is an essential part of the shared vision. Halving global emissions by 2050 is needed and the goal should not be binding but be aspirational.

Parties Divided over Mandate of AWG-KP

Bonn, 7 April (Lim Li Lin) – The Ad hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol (AWG-KP) held a second contact group on legal matters during the climate change negotiations in Bonn on 3 April. There was a clear divide between developed and developing countries on the issue of the mandate of the AWG-KP.

The AWG-KP is mandated to conclude negotiations in 2009 on the next commitment period for Annex I (developed countries) Parties to the Kyoto Protocol to reduce their greenhouse gas (GHG) emissions in the period starting from 2013. The first commitment period is from 2008 to 2012.

The Chair of the contact group, Harald Dovland from Norway, had prepared a ‘non-paper’ on 1 April with text proposal options for how to amend Annex B of the Kyoto Protocol and the related consequential amendments of the Kyoto Protocol text itself (namely in Article 3.1, 3.7 and 3.9) that is required as a result of the Annex B amendment. Annex B contains the quantified emission limitation or reduction commitments for individual Annex I Parties.

The Chair had also earlier prepared a note on ‘Possible elements for amendments to the Kyoto Protocol pursuant to its Article 3, paragraph 9’ (Paper 3) which is the basis of the Chair’s non-paper. Another Chair’s note, ‘Possible elements of a text relating to issues outlined in document FCCC/KP/AWG/2008/8, paragraph 49’ (Paper 4) outlines other issues which have been proposed by Parties for consideration as part of the work of the AWG-KP.

Paper 4 indicates action that should be taken by the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol (CMP) to adopt proposals and/or to request any follow-up work to implement such proposals. The adoption of a proposal may require an amendment to the Kyoto Protocol or the adoption of a decision by the CMP. The paper contains issues relating to emissions

trading and project-based mechanisms; rules and guidelines for land use, land-use change and forestry (LULUCF); new GHGs, sectors and source categories; common metrics to calculate the CO2 equivalence of emissions and removals and other issues.

Paper 4 is controversial because the work of the AWG-KP is clearly defined by Article 3.9 of the Kyoto Protocol, which specifies how the next commitment period for Annex I Parties is to be established. The first CMP established the AWG-KP to carry out this work. There is no legal mandate for the AWG-KP to consider any other matter, or to make any amendments to the Kyoto Protocol beyond what is necessary for the subsequent commitment period for Annex I Parties.

Developing countries want to stick closely to the mandate of Article 3.9 and to the mandate of the AWG-KP. Developed countries have sought to introduce other issues to the work of the AWG-KP and possible amendments to the Kyoto Protocol beyond what is mandated in Article 3.9. A number of developed countries have suggested replacing the Kyoto Protocol with a new Protocol and/or collapsing the outcome of the AWG-KP and the Ad hoc Working Group on Long-term Cooperative Action (AWG-LCA) under the Climate Change Convention, and negotiating a new legal treaty.

South Africa expressed satisfaction that the Chair’s non-paper reflected the mandate of Article 3.9, and expressed concern about how Paper 4 would be reflected as it is outside of the mandate of the AWG-KP.

Mexico said that the AWG-KP does not have further mandate to discuss actions by developing countries, as that is the work of the AWG-LCA.

China said that it would like to see a very simple text based on the mandate of Article 3.9, and that the AWG-KP should not invent anything new or insert text that is out of its mandate.

Bolivia said that the mandate for the AWG-KP is for amending Annex B in accordance with Article 3.9, and that no further amendment is necessary except in extreme cases. It saw no role for the failed model of the market or market mechanisms.

Botswana insisted that the legal mandate under Article 3.9 must be addressed. Even though other issues may have a bearing, they should not stop the work under Article 3.9.

Pakistan also insisted that the AWG-LCA needed to stick to its mandate, and should not expand its mandate and incorporate other amendments beyond the Article 3.9 amendments.

Indonesia said that the mandate of the AWG-KP is strictly derived from Article 3.9, and that it was critically important that discussions took place in a more serious manner in order to comply with the 6-month rule (for circulating a proposed amendment for adoption).

Developed countries, on the other hand, wanted a broader scope of the Chair's non-paper. Switzerland stated that they considered the Chair's non-paper as only a part of the total picture.

Japan stated that the post-2012 agreement at the 15th Conference of the Parties (COP) to the UNFCCC in December 2009 in Copenhagen must be comprehensive, fair and effective. In its view, a simple amendment of the Kyoto Protocol according to Article 3.9 is not so good as it lacks the participation of non-Annex I Parties especially the "advanced" developing countries. Thus the scope of the Chair's non-paper is too narrow and insufficient, and must be supplemented by consideration of other issues and there has to be close consideration of the AWG-LCA process, it said.

Russia also insisted that there should be comprehensiveness in terms of substance and participation, and wanted to see possible amendments to other parts of the Kyoto Protocol beyond the Article 3.9 amendment.

The **Czech Republic**, for the **EU**, said that they saw this text as a partial text, and that how Paper 4 is going to be reflected is very important for them.

Canada said that the Chair's non-paper was an important piece of a larger puzzle, and that it is very important not to prejudge the outcomes in other relevant contact groups. It said that it would like to keep all the options open, both in the AWG-LCA as well as in the AWG-KP.

Norway said that the Chair's non-paper is part of a broader legal outcome that it would like to have in Copenhagen. It supported the idea that there should be spaces in Annex B for other countries to be added in.

The Chair's response was that the other issues would be discussed at the appropriate time, and that whether or not there would be one (outcomes from Paper 3 and 4 combined) or two texts would have to be decided by the Parties. He said that he intended to produce an additional document (based on Paper 4). However, he said that the mandate for the work on the Article 3.9 amendment is clear, and there is a need to proceed, to provide clarity before Copenhagen. As there was still no agreement on the scope of this work, the text options in the Chair's non-paper were all in square brackets (indicating no consensus).

Countries also indicated which options they preferred in the Chair's non-paper. Option 1 for the amendment for Annex B is a replacement of the current table in Annex B for individual Annex I countries' quantified emission limitation or reduction commitments (QELRC), with a new table showing the second commitment period only.

Option 2 results in an additional column in the table in Annex B that specifies the QELRC for the second commitment period alongside the column for the first commitment period.

Option 3 is for a new table replacing the current table in Annex B that specifies the second commitment period in terms of QELRC expressed in gigatonnes of carbon dioxide (CO₂) equivalent (as opposed to a percentage of the base year or period as is the case in the current table in Annex B) and the reduction rates from 1990, 2000, 2005 and 2007 expressed as a percentage.

In the Chair's non-paper, the options for the consequential amendments required to the Kyoto Protocol text itself as a result of the amendment of Annex B are for amendments that replace the current text of the Kyoto Protocol (Option 1), or those added on to the existing text of the Kyoto Protocol (Option 2). A number of consequential amendments are required in Articles where the text currently only refers to the first commitment period and other related issues.

Belarus expressed that either Option 1 or 2 was all right. Most countries (including Tuvalu, South Africa, the EU, Norway, China, Bolivia, Switzerland, Botswana, Pakistan, Singapore, the Africa Group, and Indonesia) preferred adding new text to the Kyoto Protocol rather than replacing current text in the Kyoto Protocol.

South Africa said that for historical reasons, and to ensure that the legal status of existing decisions will not be in doubt, it preferred to add in text rather than amend the Kyoto Protocol text. It said that it would like to keep all options open for

the length of the second commitment period and did not want to see a review incorporated in it. It also said that it would be submitting its own proposal as an alternative to the Chair's non-paper, and which could be incorporated into the Chair's non-paper.

The **EU** said that long or multiple commitment periods would be good for predictability for the private sector and governments. On the other hand, there may be new scientific evidence that may indicate a new pathway. The Intergovernmental Panel on Climate Change's 5th Assessment Report would be ready at the end of 2014, and it would need to be taken fully into account especially for longer pathways. It said that it would like to have a mid-term or interim review if the second commitment period is long - to look at implementation issues, exchange of good practices, etc. The EU also said that it would submit a proposal so that its ideas could be integrated into the Chair's non-paper.

Australia said that it is concerned to reflect existing commitments and that it was thinking of a fourth option for the amendment of Annex B, and that it found some elements of Option 3 attractive.

New Zealand wanted to keep all options on the table. It said that it had specific suggestions about a possible new Annex C.

Micronesia, speaking on behalf of the **Alliance of Small Island States (AOSIS)**, said that it had expressed an aggregated figure of at least 45% of 1990 levels by 2020, and a long-term vision for 2050, which should be in excess of 95% of 1990 levels, and would like to see this reflected in the text. It also suggested that a mid-term review should be included. It asked those Parties that have proposed numbers to think about the consequences of their proposals.

China said that it preferred Option 2, and to keep the original Kyoto Protocol text as it is, adding on new text rather than amending the existing text, for historical references and compliance assessment reasons.

Bolivia said that it preferred Option 2 with some changes, and supported a 5-year second commitment period for compliance reasons. It said that the aggregate commitment for Annex I Parties needed to be larger than 45% due to the historical responsibility of developed countries from the beginning of the industrial revolution.

Gambia, speaking on behalf of the least developed countries (LDCs), also wanted the 45% figure to be reflected in the text, and said that it was going to come up with text.

Tuvalu said that it had suggested having a new Annex C and consequential amendments. It said that there may be a relationship between the length and magnitude of the second commitment period. If it is a short commitment period, the aggregate commitment may be different, while if it is a long commitment period, the figure may be greater than 45%.

Senegal, speaking for the **Africa Group**, said that it supported an aggregate commitment of at least 45% below 1990 levels by 2020.

Indonesia proposed that Annex I Parties should reduce their emissions in aggregate by at least 40% by 2020, and by 85% by 2050, according to 1990 levels.

In the discussion on how to bring Paper 4 forward, the Chair clarified that he only wanted to find out how to prepare a document that would contain all those issues and what the document would look like, and did not want to discuss the substance of those issues, which would be worked on in the meetings leading up to COP 15 in December 2009.

The EU said that this text can reflect the state of the discussion, and clarify options that are on the table. It said that other elements can be reflected, especially from Paper 4, and that the legal text would grow.

The Chair announced that the South African proposal would be available as a conference room paper, and invited other proposals to be submitted by noon on 4 April. He said that he would produce a new version of his non-paper on 6 April which would be restricted to Paper 3 issues – amendment of Annex B and consequential amendments and associated issues such as a review if there is a long commitment period, and a long-term goal. The second version of the Chair's non-paper was released on 6 April, incorporating proposals from South Africa, Botswana and the Philippines, among others.

The **EU** stated that some things would fall in between (Paper 3 and Paper 4 issues). It wanted work to be carried out in a holistic and comprehensive manner, so that the plan of what the whole building is going to look like can be seen.

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Developing Countries Question Mitigation Actions on Emissions from Aviation

Bonn, 7 April (Meena Raman) – Several developing countries expressed their concerns over mitigation actions in developed countries to address emissions from the aviation sector. The concerns were raised in a contact group on mitigation, under the Ad-hoc Working Group on Long-term Cooperative Action (AWG-LCA) that met on 6 April.

In discussions on sectoral approaches to mitigation efforts, Algeria referred to the aviation sector. It said that this sector was a test case to decide whether sectoral approaches are attractive propositions or whether, when they amount to circumventing the differentiation between Annex 1 and non-Annex 1 Parties, they are traps that should be carefully avoided.

Algeria referred to a recently adopted EU Directive to include aviation in its emissions trading scheme (ETS). The purpose of the Directive, said Algeria, appears to be the reduction of GHG emissions from air transport. Under the Directive, air carriers will have as of this year an obligation to monitor and report GHG emissions and starting in 2012, to reduce emissions or to obtain quotas which will initially be obtained free of charge and then, from 2013 onwards, auctioned in increasing proportions. The Directive will essentially apply to all commercial flights to and from airports in the EU, whether the air carriers are based in the EU or not, it said. It also appears that the intention is for the EU ETS to serve as a model for other countries considering similar national or regional schemes, and to link these to the EU scheme over time.

The mandatory monitoring and reporting, as well as the purchase of auctioned quotas, would involve costs for our airlines and are incremental costs that must be covered by developed countries, said Algeria. It asked how such costs will be met. Aviation is a sector involving advanced technologies that are unevenly distributed in the world, and reduction of GHG emissions from aviation surely

involves the application of sophisticated technologies. It asked what steps will be taken to promote, facilitate and finance the transfer of such technologies and know-how and would development and enhancement of endogenous capacities and technologies be provided?

These concerns were shared by Brazil, Saudi Arabia and Qatar.

The contact group on mitigation dealt with various issues under the mitigation element of the Bali Action Plan, apart from paragraphs 1(b)(i) and 1(b)(ii). It included cooperative sectoral approaches and sector-specific actions to enhance the implementation of Article 4(1)(c) of the Convention (para 1(b)(iv)) and various approaches including the use of markets (para 1(b)(v)).

The EU, in response to the concerns over aviation, said that its Directive applied to all carriers regardless of nationality. It said that there was however a *de minimus* rule that would exclude most aircrafts from developing countries. In the designing of the Directive, the EU said that it had done impact assessments and these showed that the costs incurred were minimal.

In relation to cooperative sectoral approaches, **Brazil** for the **G77** said that national actions in sectors can foster opportunities for relevant initiatives for technology cooperation in the context of Article 4(1)(c) of the Convention. Such cooperation should be in conformity with Articles 3.3 and 3.5 and reflect the distinct responsibilities of developed and developing countries.

(Article 4(1)(c) of the Convention provides for the promotion and cooperation among Parties in the development, application and diffusion, including transfer of technologies, practices and processes that control or prevent anthropogenic emissions of GHGs in all relevant sectors.)

The Philippines said that cooperative sectoral approaches are undertaken through Article 4.1(c) of

the Convention and Article 10(c) of the Kyoto Protocol.

Saudi Arabia said that on the sectoral approach, national actions cannot extend beyond the national boundary with the exception of cooperation under Article 4(1)(c) of the Convention. Anything else is unacceptable. Any cooperation must be in line with Article 3(3) of the Convention. The sectoral approach cannot be a tool for the Annex 1 countries to shift their commitments to developing countries. It also expressed concern over the issue of bunker fuels.

Qatar said the sectoral approach cannot be used to justify the creation of new international regulations for industries. It expressed opposition to any efforts that would jeopardise trade in developing countries.

The **EU** said that the sectoral approach is a logical approach. On the nationally appropriate mitigation actions (NAMAs) in developing countries, the low-carbon development strategies can cover sectoral NAMAs in developing countries needing support. It said that the carbon market mechanisms are useful for ensuring cost effectiveness. It said that there were two types of sectoral mechanisms – sectoral crediting and sectoral trading, that can be cost-effective and an incentive for developing countries. The sectoral approach is also relevant for technology needs identification. One issue that features under paragraph 1(b)(iv) is international aviation and maritime. Bunker fuels are the largest growing emissions and are not subject to an international regime and need to be addressed at the global level for a global solution.

Australia said that sectoral approaches cannot replace economy-wide approaches. Such approaches can assist Parties in meeting their international commitments.

Japan said that sectoral targeting by advanced developing countries can help identify technology cooperation.

On market-based approaches, **Brazil** for the **G77** and **China** said that in the context of the principles of the Convention including the principle of common but differentiated responsibilities, the Group believed that markets can play a part in generating resources. However, the role of government is essential in ensuring that global mitigation efforts are equitable in the implementation of the Convention as a whole.

The **EU** said that NAMAs can be supported by the carbon market. It said that sectoral crediting and sectoral trading are relevant. Developing countries could sell their carbon reduction emission units. There was a need for continuing the role of

the Clean Development Mechanism.

The Philippines said that markets were nowhere mentioned in the Convention. Markets have different objectives and have profit motives that have nothing to do with meeting the objectives of the Convention.

Saudi Arabia said that carbon markets are a flexibility tool and they have relevance under the Kyoto Protocol. They were designed under the KP to deter domestic reduction efforts through offsets. Offsets should come on top of domestic reduction targets. They cannot be used under the AWG-LCA to reduce the level of domestic action and to dilute the financial and technology commitments of developed countries.

Bolivia said that an objective analysis of the carbon markets will make one thing clear and that is that equity is missing. Carbon markets have thus far failed to ensure that GHG emissions are reduced. Emissions have gone up instead. Carbon markets cannot be a solution in achieving the ultimate objective of the Convention.

China said that the role of the market cannot be ignored but it cannot be an excuse for governments to “pass the buck” to the private sector in promoting mitigation actions. Governments have to play a major role and the recent financial crisis has shown that the cost of market failure is very high.

The **US** said that there was a need for a broad suite of policies and market-based approaches to meet the ambitious objectives.

On 4 April, at an earlier meeting of the mitigation contact group, issues relating to mitigation in the forest sector (reducing emissions from deforestation and degradation in developing countries, including forest conservation, sustainable forest management and enhancement of forest stocks or REDD-plus) were discussed.

At the opening of the contact group meeting on 6 April, the Chair of the contact group, who is also Chair of the AWG-LCA, Michael Zammit Cutajar, gave his impressions on the REDD discussions.

Cutajar said that REDD-plus is a nationally appropriate mitigation action option that was recognised by all Parties and was eligible for financial, technical and capacity-building support. REDD-plus actions have special characteristics and may need special treatment. The issue is on how to integrate it in a framework for an agreed outcome. There were uncertainties about emission reductions and carbon-stock changes that pose difficulties for measuring, reporting and verification of the mitigation actions in this sector. The MRV may need to reflect the co-benefits that arise.

Carbon Markets Face Same Problems as the Crisis-hit Sub-prime and Derivatives Markets, Warns Report

By Michelle Chan*, 7 April 2009 – If they are not structured properly, massively scaled-up carbon markets could lead to the creation of an enormous, poorly regulated derivatives market with failures mirroring those that led to the current financial crisis, according to a recently released report by Friends of the Earth.

The report, *Subprime Carbon? Re-thinking the World's Largest New Derivatives Market*, finds that existing financial regulations and emerging proposals to increase the scope of global carbon trading are inadequate to govern carbon trading, creating a potentially huge regulatory gap. The report recommends concrete actions policy makers can take, both domestically and within the UNFCCC, to minimize the environmental and financial risks of carbon trading, including prohibiting offsets and creating a stable price path for carbon. Additionally, the report notes that no single policy approach will solve climate change – a diverse set of complementary strategies is needed.

The FOE report outlines how lessons from the current financial crisis apply to carbon markets, which could become the largest derivatives markets in the world. In particular, it raises concerns about “subprime carbon”, risky carbon credits based on uncompleted offset projects (projects designed to sequester or reduce greenhouse gases). Subprime carbon credits may ultimately fail to reduce greenhouse gases and, like subprime mortgages, could collapse in value, yet they are already being securitized and resold in secondary markets.

Most carbon trading is fundamentally derivatives trading. Currently, most carbon is sold as simple futures contracts (a type of derivative). These contracts contain promises to deliver carbon allowances or credits in a certain quantity, at a certain price, at a specified date.

Today’s carbon markets are relatively small, but if the United States adopts carbon trading on the scale envisioned by most federal cap-and-trade bills and if the multilateral agreements include provisions for massively scaled-up offset markets, carbon futures will become what Commodities Future Trading Commissioner Bart Chilton called “the biggest of any derivatives product”.

Subprime carbon

“Subprime carbon” – called “junk carbon” by traders – are contracts to deliver carbon that carry a higher risk of not being fulfilled, and thus may collapse in value. They are comparable to subprime loans or junk bonds, debts that carry a higher probability of not being paid. Carbon-offset credits (credits derived from projects designed to reduce greenhouse gases) can carry particularly high risks because many things can go wrong with offset projects. Not only do such projects face normal commercial and operational risks, but independent verifiers may find that a project has not reduced the projected amount of emissions, for example; or an agency issuing credits (e.g. the United Nations) may determine that a project failed to comply with relevant standards.

Subprime carbon particularly can become a problem because sellers can make promises ahead of time to deliver carbon credits before the credits are issued, or sometimes even before greenhouse gas emissions have been verified. The potential for credits generated from avoided deforestation and agricultural sequestration to fail to deliver emission reductions is particularly acute, primarily due to impermanence and the remaining substantive methodological constraints associated with robust measuring and verification of emissions from this sector.

Carbon-backed securities: a glimpse of the future

As the FOE report notes, in November 2008, banking giant Credit Suisse announced a securitized carbon deal that bundled together carbon credits from 25 offset projects at various stages of UN approval, sourced from three countries and five project developers. These assets were then split into three portions representing different risk levels and sold to investors, a process known as securitization. Structurally, carbon-backed securities are hauntingly close to mortgage-backed securities, which led to the financial crisis.

Although the Credit Suisse deal was relatively modest, future deals could become bigger and more complex, bundling hundreds or thousands of carbon credits of mixed types and origins, perhaps enhanced with agreements to swap more risky carbon credits for safer assets (such as government-issued emission allowances) as “insurance” against junk carbon. Moreover, it could be as difficult, if not more, to analyze the quality of the numerous underlying carbon-offset projects as it is to analyze US mortgages.

Speculation and the bubble economy

As carbon trading matures, the size of secondary markets (where individual or repackaged carbon is sold for the second, third, or twentieth time) will vastly overshadow the primary markets (where carbon is bought and sold for the first time). While Wall Street banks are keenly aware of the spectacular growth potential in secondary markets, policy makers tend to overlook them, often drawing on the experience of earlier emissions trading schemes.

Financial markets, however, have become vastly more complex and exotic since the early 1990s, when the US introduced sulfur-dioxide trading (the model policy framework for trading in carbon pollution credits). Moreover, much more than previous schemes, carbon markets will be dominated by speculators. Currently, the vast majority of carbon trading funds are set up by investors simply to make a profit; less than one-third of carbon funds have been established by companies to help them comply with carbon caps.

As speculators rush into carbon markets, they can push up carbon prices and spur the development of subprime assets. For example, unscrupulous intermediaries may overpromise on offset projects, selling future credits based on projects that do not yet exist, do not meet standards, or which simply do not deliver promised greenhouse gas reductions. A

carbon bubble can also set the stage for the kinds of financial innovation (e.g. complex securitized products) that can unwittingly spread subprime carbon through the broader financial marketplace. When the bubble bursts, it can have destabilizing consequences for companies and the larger economy.

Regulatory lessons

The financial crisis has demonstrated that significant parts of the financial system, such as the derivatives markets, are under- or unregulated. Robust derivatives regulation is one of the most important elements to ensure a well-governed carbon market, but currently most derivative proposals have focused on credit default swaps, which will have limited impacts on carbon.

A key governance challenge for carbon markets centers on the fact that carbon is a politically generated (created through government fiat) and managed market, and the assets traded are not physical commodities. In addition, there is a compliance requirement (e.g. company compliance with greenhouse gas caps) to carbon trading. It is precisely these politically generated and managed facets of carbon trading, as well as its compliance aspects, that can make carbon markets especially vulnerable to lobbying and regulatory capture. For carbon trading to be successful from environmental, financial, and governance perspectives, policy makers and market regulators must be particularly insulated from corruption and political influence.

Further, current efforts to regulate Wall Street must also address the emerging governance challenges of carbon markets and policy makers should consider that carbon trading has unique components which may need to be covered by entirely new regulations and entities. The size and complexity of carbon trading schemes should be managed to prevent the build-up and spread of subprime carbon assets, and to ensure the environmental and financial integrity of this emerging and exotic derivatives market.

*The author is a researcher with FOE US. A full copy of the report can be downloaded at www.foe.org/subprimecarbon

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Developing Countries Express Disappointment at the Little Progress in Climate Talks

Bonn, 9 April (Meena Raman) – Developing countries expressed their disappointment over the little progress at the climate talks in Bonn which ended on 8 April and stressed that there were wide gaps in understanding the positions of developing countries. They also emphasised the serious implementation deficit by developed countries of their commitments under the UNFCCC.

Some developing countries (India and Algeria) also expressed concern that developed country Parties were bringing in extraneous issues beyond the mandate of the Bali Action Plan (BAP). Algeria said that this was slowing down the progress of negotiations, making it difficult for agreement in Copenhagen at the 15th meeting of the Conference of Parties.

The Ad-hoc Working Group on Long-term Cooperative Action (AWG-LCA) concluded the work of its fifth session which began on 29 March.

The next session of the AWG-LCA will consider a text for negotiations, which will be prepared by the Chair of the AWG-LCA, Michael Zammit Cutajar of Malta.

Ambassador Dr. Ibrahim Mirghani of **Sudan** on behalf of the **G77 and China** said that Parties need to act with urgency and in a manner which is consistent with the objectives, principles and respective obligations of all Parties to the Convention. The Group expressed its disappointment at the little progress made by developed countries in the discussions and that up to now, it saw very little concrete engagement of developed country Parties in this process. There remains a wide gap in the understanding of positions that would allow us to move together to Copenhagen. In particular, there is a serious implementation deficit regarding developed countries' commitments related to the provision of financial resources and transfer of technology under the Convention.

The **G77** and **China** underlined that Parties are undertaking a process to enhance the full, effective and sustained implementation of the Convention. Therefore, the Group is determined, in this process, to address the serious implementation gaps in the four main building blocks of the BAP, that is, mitigation, adaptation, financing and technology development and transfer under the Convention. All the proposals and submissions made by the Group and its member States or groups of developing country Parties are made with a view to bridging all these implementation gaps. The Group is looking forward to receiving a negotiating text in accordance with the mandate given to the Chair to prepare it for the June session. The Group reiterated its position that the text should be based on Parties' submissions and proposals, and should reflect the Group's views and interests made through submissions and deliberations during the meetings of the AWG-LCA.

While welcoming a renewed participation of the United States, the Group said that Parties are still to hear from the US on how it aims to fully engage in an international process of negotiations, and how it views the proposals that are now before Parties.

The Group reiterated that for developing countries, all efforts of the international community should be conducive to change the current lifestyle, in particular that of Annex 1 Parties, and to ensure a sustainable development pathway that would also contribute to the eradication of poverty. It also stressed its commitment to participate in good faith and in a truly transparent and open process.

Grenada on behalf of the **AOSIS** said that it came to the AWG-LCA session with the expectation of developing concrete proposals on many issues. The discussions have been disappointing. The developed countries did not have concrete proposals. There were also a number of disturbing trends. The most disturbing is the casting of aspersions over the

scientific basis regarding climate change. Parties are saying that the report of the Intergovernmental Panel on Climate Change should not be the basis of negotiations. It asked if Parties were serious about dealing with the climate challenge. It said that it was important to keep science at the centre of the deliberations. Parties must be guided by the best-available science as a principle and this was non-negotiable. Negotiations should ensure a legally binding outcome, including for finance that would address loss and damage suffered as a result of climate change. It said that the survival of Small Island States is not negotiable.

Lesotho for the LDCs said the future sessions must ensure an open, transparent and inclusive process. It called for ambitious emission reduction targets for developed countries. The LDCs reiterated the need for the full, effective and sustained implementation of the Convention and stressed the need for enhanced action on adaptation and that financing adaptation is payment for the damage caused due to climate impacts. It said that the funding for the Least Developed Countries' Fund (LDCF) under the Convention only had \$2 million when what is needed is \$2 billion. It asked developed countries to fulfill their pledges as they had committed to meeting the agreed full incremental costs of adaptation and mitigation. The enhanced financial mechanism that is proposed must be fully accountable to the COP and be equitable, ensure direct access and be country-driven.

India said that Parties are here mandated by the BAP to discuss under the AWG-LCA a way to ensure the full, sustained and effective implementation of the Convention. In the negotiating text, we ask the Chair to ensure that it is in full accordance with the mandate of the BAP, that it seeks to enhance the implementation of the Convention and that it does not take on board issues outside this precise mandate. We have noted that some of the views expressed during the deliberations clearly lie outside the provisions of the Convention and the mandate of the BAP. There have been proposals to scale down the financial commitment that developed countries have under the Convention and at the same time, to ask for mitigation commitments and not nationally appropriate mitigation actions by developing countries. In this regard, there have been references to terms such as "advanced developing countries" and "deviation from business as usual low carbon strategies" which lie outside the Convention and even outside the scope of any agreed language. They also mention numbers and figures that have no basis in sound science but are based on subjective

assumptions which the authors do not even reveal.

India asked the Chair to mention in his negotiating text, particularly in each of the operative paragraphs, the Article or Articles in the Convention whose implementation the paragraph proposes to enhance. A linking of all operative paragraphs of the text to specific Article or Articles of the Convention that it proposes to enhance the implementation of, would be extremely useful and would help the Parties in their endeavour to reach an agreed outcome in Copenhagen, said India.

Algeria expressed concern in the way discussions were moving. It stressed that the mandate of Parties was to enhance the implementation of the Convention. It recalled that at COP 11, Parties made a simple decision to start a dialogue on long-term cooperative action. In Bali, developing countries made concessions and approved the BAP. It had hoped for better results in Bonn. It stressed the need for goodwill among Parties. It said that there were two elements that it viewed as barriers which will slow down the pace of negotiations. One was the attempt by some developed country Parties to link and merge the two-track process between the AWG-LCA and the work of the Ad-hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol (AWG-KP). These are efforts to create a new configuration in the UNFCCC process. The second relates to the question of differentiation (efforts to differentiate among developing countries to take on emission reduction commitments).

Algeria said that if Parties work in this manner and bring in considerations that are outside of the AWG-LCA, there will be difficulties in reaching agreement in Copenhagen.

Bolivia, speaking for itself, Honduras, Nicaragua and Venezuela, presented an outline of principles and a methodology to quantify the historical climate debt arising from the historical responsibility of developed countries for irrational emissions. Developed countries have less than 20% of the world's population but are responsible for at least three-fourths of the historical emissions of GHGs, limiting the air space required by developing countries for their development. Developed countries in the past and present continue to over-use and continuously surpass the capacity of the Earth's climate system to absorb the emissions of GHGs, which limits the availability of the carbon space in the atmosphere. This is historical debt.

Additionally, the consequences of suffering in developing countries in terms of costs, damage and loss and delayed development due to the impacts of climate change, constitute what is called the

adaptation debt. Consequently, the climate debt of developed countries is the sum of the historical emissions debt and the adaptation debt, which is part of an even greater ecological debt which includes factors such as loss of biodiversity and other ecosystems, the ecological footprint, excessive consumption of resources, etc. The climate debt has to be paid, and must be an agreed outcome in Copenhagen.

This debt repayment must take the form of developed countries implementing their commitments to reduce their emissions and by other means that generate atmospheric space required by developing countries. Any final solution must ensure an equitable distribution of the limited capacity of the planet by capturing and sequestering greenhouse gases and the costs of mitigation and adaptation to climate change. Particularly, it must be ensured that developing countries secure their share of the remaining air space for their sustainable development. Developing countries are not begging for more money for a problem that they did not cause but are asking for the full payment of the climate debt.

Argentina, speaking on behalf of 14 countries in Latin America and the **Caribbean**, said that it was critical that emissions of developed countries be stabilised at 350 ppm by reducing at least 45% by 2020, and at least 95% by 2050 compared to 1990 levels.

Japan stressed the need for the AWG-LCA and the AWG-KP to ensure coherence to establish a post-2012 framework. In relation to the principle of common but differentiated responsibility and respective capabilities, more focus must be on both historical and future contributions of all Parties in a new framework.

The **EU** said that the Bonn meetings provided a valuable opportunity for Parties to elaborate on more details of their ideas and to gain understanding.

The **US** expressed appreciation for the warm reception it received in its renewed engagement in the climate talks. It said that it was important for Parties to take actions compatible with their national circumstances and level of development. It said that the result in Copenhagen must stimulate near-term mitigation actions with a longer-term planning and

this was essential both for developed and developing countries. The US will take economy-wide cap-and-trade measures and mandatory targets for emissions to be reduced by 80% by 2050. It stressed the importance and role of the carbon markets.

The AWG-LCA conducted its work in four contact groups, viz. on shared vision, mitigation, adaptation, as well as finance and technology. The Chairs of the various contact groups presented their impressions of the discussions from the contact groups. Three in-session workshops were also held and comprised the economic and social consequences of response measures, a workshop each on subparagraphs 1(b)(i) and 1(b)(ii) of the Bali Action Plan and a workshop on opportunities and challenges for mitigation in the agricultural sector.

The Chair of the AWG-LCA said that he will prepare a Chair's summary of the work, where reports of the in-session workshops will be appended.

In relation to work on the negotiating text, Cutajar said he will start working on the text as mandated and will present it two weeks in advance of the next session in June. He also reminded Parties to provide their submissions by 24 April which will be reflected in the negotiating text.

At the June session of the AWG-LCA, Cutajar said that he proposed to have the negotiating text first read as a whole in a single sitting. On the form of the agreed outcome for Copenhagen, he said that he will ask Parties when it would be appropriate to consider the matter and that this will be on the agenda for consideration at the next session in June.

The AWG-LCA also concluded that having assessed the work required of it to enable the COP to reach an agreed outcome, the AWG-LCA determined that the provision of additional meeting time in between the sessions already scheduled would facilitate the successful completion of its work. Therefore, an informal meeting from 10-14 August in Bonn, Germany will be held and a resumed 7th session of the AWG-LCA from 2-6 November at a location to be announced.

The 6th session of the AWG-LCA will be held from 1-12 June and the 7th session will be held in Bangkok, Thailand from 28 September to 9 October, and the 15th COP will be in Copenhagen from 7-18 December.

Kyoto Protocol Meeting Ends with Little Progress

Bonn, 9 April (Lim Li Lin) – The seventh session of the Ad hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol (AWG-KP) ended in Bonn on 8 April.

It failed to reach a conclusion on the total greenhouse gas (GHG) emission reductions for developed countries in their next commitment period under the Protocol.

Deep divisions between developed and developing countries were also evident on what the final outcome ought to be for the 5th Meeting of the Parties (CMP) to the Kyoto Protocol in Copenhagen in December this year.

The AWG-KP is mandated to conclude negotiations in 2009 on the subsequent commitment period for Annex I (developed countries) Parties to the Kyoto Protocol to reduce their GHG emissions in the period starting from 2013. This is to ensure that there is no time lag between the first and second commitment periods. The first commitment period is from 2008 to 2012.

A number of conclusions were adopted by the AWG-KP at this session. The two most important and contentious conclusions were on the 'Scale of emission reductions by Annex I Parties' and on 'Legal matters', and these are both directly linked to the subsequent period for Annex I Party commitments. They relate to how much Annex I Parties will have to limit or reduce their GHG emissions as a group, and individually, in the next commitment period and the legal issues related to the form and the procedure for inscribing the subsequent commitment period for Annex I Parties.

According to the work programme agreed to in December 2008, the seventh session of the AWG-KP in Bonn was supposed to reach conclusions on a draft amendment text on the aggregate scale of emission reductions to be achieved by Annex I Parties in the next commitment period. According to Article 3.9 of the Kyoto Protocol, the subsequent

commitment periods for Annex I Parties are to be established by amending Annex B of the Kyoto Protocol. The Kyoto Protocol's Annex B contains a listing of Annex I countries and Parties with their quantified emission limitation or reduction commitment (QELRC) enumerated as a percentage of the base year or period.

The next session of the AWG-KP (to be held in June 2009) is then supposed to adopt conclusions on the individual or joint contribution of Annex I Parties to the aggregate scale of emission reductions by Annex I Parties. The amendment to the Kyoto Protocol for the subsequent commitment period for Annex I Parties is to be adopted in December 2009, in Copenhagen. This means that the text for adoption must be communicated by June 2009.

The Bonn session of the AWG-KP from 29 March to 8 April did not reach a conclusion on the aggregate scale of emission reductions by Annex I Parties or on the draft amendment text, as it was supposed to. Instead, a listing of so-called 'bottom-up' pledges by some Annex I Parties will be compiled by the UNFCCC (UN Framework Convention on Climate Change) Secretariat, and a Chair's non-paper on 'Proposal for amendments to the Kyoto Protocol pursuant to its Article 3, paragraph 9' was prepared. These will be updated based on further submissions by Parties and considered at the next session of the AWG-KP.

The so-called 'bottom-up' approach was not well received by developing countries which want a more principled approach, establishing the necessary GHG emission cuts needed to be undertaken by developed countries based on scientific information and equitable principles. (If developed countries do not undertake sufficiently large cuts in their GHG emissions, developing countries will suffer the impacts of climate change and will have to undertake major emission reductions as well.)

During a contact group meeting, Gambia insisted that the AWG-KP is not a “pledging club”, and that the numbers proposed so far by some Annex I Parties fall far below what is necessary. The concern is also that the so-called ‘bottom-up’ approach compilation will become the basis for negotiations on the subsequent commitment period of Annex I Parties.

The European Union has said that it is prepared to undertake a 20% reduction of its GHG emissions below 1990 levels by 2020, and a 30% reduction target in the context of a “comprehensive international agreement that provides for comparable reductions by other developed countries (meaning the US who is not a Party to the Kyoto Protocol), and appropriate actions by economically more advanced developing countries” (as per the EC Communication of 28 January 2009). Australia has submitted that it will commit to reduce its GHG emissions by 5-15% below 2000 levels by 2020.

Many developing countries have so far proposed that Annex I Parties meet a target of reducing emissions by at least between 40-45% of 1990 levels by 2020, and some developing countries also proposed a range between 85-95% by 2050.

South Africa has proposed that the target be at least 18% below 1990 levels in the commitment period 2013 to 2017, and at least 40% below 1990 levels in the commitment period 2018 to 2022. The Philippines has proposed that the target should be more than 30% below 1990 levels in the commitment period 2013 to 2017 and more than 50% below 1990 levels in the commitment period 2018 to 2022.

In a contact group, Bolivia said that the aggregate commitment for Annex I Parties needed to be larger than 45% in the period 2013-2017 due to the historical responsibility of developed countries for GHG concentrations in the atmosphere from the beginning of the industrial revolution.

Botswana has proposed that the target for Annex I Parties for the 2013-2017 period be determined according to the historical responsibility of Annex I Parties for current atmospheric concentrations of GHGs; the historical and current per capita emissions in developed countries; technological, financial and institutional capacities; and the share of global emissions required by developing countries in order to meet their social and development needs.

The informal consultations on this issue went on later than expected on the last day, due to disagreements over the draft conclusions proposed by the Chair (Harald Dovland from Norway) on the scale of emission reductions by Annex I Parties. The final disagreements centered around 2 issues.

The Alliance of Small Island States (AOSIS) wanted to have language referring to recent scientific analysis on stabilization of GHG concentrations in the atmosphere at levels below 350 ppmv (parts per million by volume), which would require Annex I Parties to reduce their GHG emissions by at least 45% below 1990 levels by 2020 and by at least 95% by 2050. This was finally referenced in a general way as follows -

“The AWG-KP took note of information provided by some Parties during its seventh session on recent scientific analysis on stabilization of GHG concentrations in the atmosphere at levels below ones assessed by the Intergovernmental Panel on Climate Change in its Fourth Assessment Report, hence a greater urgency to address climate change.”

The other disagreement was on the continued work on the aggregate scale of emission reductions by Annex I Parties at the next session of the AWG-KP. Developing countries wanted this to be a priority at the next session, since the seventh session had failed to reach conclusions on this matter as it was supposed to. According to some delegates, the Russian Federation would not agree to this language, and the final compromise was that the issue would be a “key focus” at the next session.

On legal matters, the discussions were equally heated. Developing countries wanted to stick closely to the mandate of Article 3.9 and to the mandate of the AWG-KP. They insisted that the work of the AWG-KP is defined by Article 3.9 of the Kyoto Protocol, which specifies how the subsequent commitment period for Annex I Parties is to be established, and the first CMP established the AWG-KP to carry out this work.

(There is no legal mandate for the AWG-KP to consider other matters, or to make amendments to the Kyoto Protocol beyond what is necessary for the subsequent commitment period for Annex I Parties.)

Developed countries have sought to introduce other issues to the work of the AWG-KP and possible amendments to the Kyoto Protocol beyond what is mandated in Article 3.9. A number of developed countries have also suggested replacing the Kyoto Protocol with a new Protocol and/or collapsing the outcome of the AWG-KP and the Ad hoc Working Group on Long-term Cooperative Action (AWG-LCA) under the UNFCCC, and negotiating a new legal treaty. They would like to have some developing countries take on GHG emission reduction targets.

The conclusions by the Chair on legal matters requests the Chair to prepare: “a proposal for amendments to the Kyoto Protocol pursuant to its Article 3, paragraph 9” and “a text on other issues

outlined in the report on its resumed sixth session”. Further views and proposal by Parties on these two matters will be compiled into a miscellaneous document. All these documents will be considered at the next session of the AWG-KP.

Most developing countries maintained that there must be a *proposed text* for amendments to the Kyoto Protocol for Annex I Parties’ next commitment period, and there could be a document on the other issues. They insisted that there has to be a clear distinction between the two.

The EU reportedly refused to negotiate on this matter, and instead threatened to have no text, and no basis for the work at the next session of the AWG-KP.

In the final plenary, Bolivia said that it had been put against the wall with all-or-nothing options, and that it did not see why it should engage with negotiations if this was going to be the attitude of some. It said that this is no longer the period of colonization where “we have to bow our heads and say ‘Yes Master’.”

Bolivia said that, “The mandate of Article 3.9 of the Kyoto Protocol and the mandate for the work of the AWG-KP established by Decision 1/CMP.1 is clear and unambiguous. The outcome of the work of the AWG-KP is to adopt an amendment to Annex B for the subsequent commitment periods of Annex I Parties, at the 5th CMP in December 2009.

“This is the only mandate for the work of the AWG-KP. Bolivia cannot accept expansions of the legal mandate at this point in time. There can be no derogation from this mandate by diluting it with other issues.

“This text on the amendment to Annex B establishing the quantified emission reduction commitment for Annex I Parties for the subsequent commitment periods must be communicated by June 2009, in order to respect the six-month rule, established by Article 20.2. We have until June to agree on a text for the subsequent commitment periods for Annex I Parties to be forwarded for adoption by the 5th CMP in Copenhagen.”

It said that it would like the following interpretative statement reflected clearly in the report of the meeting, and which should be read together with the Chair’s conclusions:

“1. Any document on other issues must be distinct from the legally mandated text on establishing the subsequent commitment period for Annex I Parties for adoption at the 5th CMP, in its format and nature.

“2. A “text on other issues outlined in the report on its resumed sixth session” as stated in the ‘Draft

conclusions proposed by the Chair’ on Legal Matters, is not a draft legal text proposing amendments to the Kyoto Protocol for adoption at the 5th CMP. The work on other issues should be addressed by the CMP in Copenhagen.

“3. The views and proposal by Parties on other issues which will be compiled together with views and proposal by Parties on amendments to the Kyoto Protocol pursuant to Article 3.9 in the so-called “miscellaneous document” referred to in the document on legal matters, shall not prejudice the strict mandate of the Kyoto Protocol and the AWG-KP to adopt an amendment to Annex B for the subsequent commitment periods of Annex I Parties, at the 5th CMP in December 2009.”

This was supported by India which said that there must be a clear distinction between the legal amendment text pursuant to Article 3.9 of the Kyoto Protocol and the mandate of the AWG-KP, with the proposed text related to other issues. It said that these texts “must be in full conformity with the Principles of the UNFCCC as well as its provisions and the relevant provisions of the Kyoto Protocol”.

It said that the text on other issues is not a draft legal text containing amendments for consideration at the 5th CMP, and that the views and proposals of Parties on other issues to be compiled into a miscellaneous document cannot prejudice the strict mandate of the AWG-KP to submit a draft amendment of Annex B for adoption by the 5th CMP, pursuant to Article 3.9 of the Kyoto Protocol.

Japan said that it had expressed concerns regarding the scope of the work of the AWG-KP. It emphasized the need for coherence and coordination with the AWG-LCA in order to establish “a fair and effective post-2012 framework”. It wanted its concerns put on record.

The Russian Federation said that it wanted a very active linking of the activities of the AWG-KP and the AWG-LCA for consistency, coherence and cooperation, and that it wanted a treaty that is fully global and comprehensive.

Australia stressed that there should be a new global agreement on climate change that is economically effective, achievable and fair, and that coherence and consistency should be ensured in the “post-2012” combined efforts of the AWG-KP and the AWG-LCA.

Turkey said that it would like to see a comprehensive agreement with as broad as possible participation of all the Parties, which should be flexible, fair, and equitable by including non-Annex I countries. Only then is the deal realistic, it said.

Canada emphasized that achieving an ambitious, comprehensive and effective agreement will require very close coordination between the AWG-KP and the AWG-LCA.

The Czech Republic speaking for the EU said that the mandate of the AWG-KP covers all the broad-ranging issues in the documents. It said that it would like to continue discussions based on the legal text for amendment of the Kyoto Protocol and CMP decisions. It said that there are many synergies between the AWG-KP and the AWG-LCA, and that the outcome of the AWG-KP will be part of the broader agreed outcome in Copenhagen in December 2009.

Ukraine said that a new global climate regime would require coherence and deliberate cooperation by Parties and in the process. It stressed that coherence between the 2 AWGs is very important.

Croatia agreed on the need for coherence. It said that the situation is different from 20 years ago when the Annex I category was established and that some non-Annex I countries have more capacity and have higher emissions than Annex I countries. There should be appropriate indicators and commitments for all Parties, and this should be established bottom up, by the Parties themselves, it said.

New Zealand considered that the AWG-KP's work was particularly challenged because it was not guided by a shared vision including a quantified long-term global goal. It said that there is a clear overlap between the AWG-KP and the AWG-LCA. It said that the other issues are aspects of the same issues, and may or may not require amending the Kyoto Protocol. This would not be delaying the process, but might hasten and enable it to be more ambitious, realistic, credible and achievable.

Belarus was satisfied with the work and decisions of the AWG-KP, and stressed that all countries should be listened to, and the proposals by all countries should be reflected. It was concerned by some parallels or inconsistencies between the work of the 2 AWGs, and urged for coordination so that the work can be stepped up.

Developing countries, on the other hand, expressed markedly different views.

Sudan, speaking on behalf of the G77 and China, expressed its extreme disappointment that the AWG-KP did not have substantive discussions on the actual options for the number describing the scale of Annex I Party commitments in aggregate. It said that it strongly believed that this must be "compatible with their historical responsibility, capability, sustainable development and equity", and that these were not reflected in the Chair's conclusions.

It said that the work of the AWG-KP is now behind schedule, and that the other issues could be taken up in decisions of the CMP and could be negotiated in detail even beyond 2009. It emphasized that there must be a clear distinction between the legal amendment text pursuant to Article 3.9 of the Kyoto Protocol and the proposed text related to the work on the other issues, and that both texts must be in full conformity with the principles of the Convention.

Botswana said that it expects developed countries to take up their historical responsibility. It said that the mandate of the AWG-KP is to promote the implementation of the UNFCCC and the Kyoto Protocol. It said that concrete actions should be taken, as developing countries have been waiting for the last 15 years. There is no reason to kill off the UNFCCC and the KP even before they have been implemented, it said.

China expressed extreme disappointment on the slow progress of the AWG-KP and the failure of this session to reach meaningful conclusions particularly on the scale of emission reductions to be achieved by Annex I Parties in aggregate, in accordance with its mandate and the focus of its work programme.

It asked whether this is because some Parties are unwilling to move forward and are instead trying to link the work of the two AWGs. This betrays the agreement in Bali (in 2007), delays progress in the AWG-KP, and is in breach of legal obligations under the Kyoto Protocol, it said. The so-called 'coherence approach' between the AWG-KP and the AWG-LCA is completely unacceptable to China, it said.

It asked whether the developing countries should stop counting on Annex I Parties to agree to ambitious mid-term targets, especially after the interventions made by Annex I Parties.

"The reality is that developed countries keep ignoring their historical responsibilities and refusing to take the lead to deeply cut their GHG emissions. The reality is that the atmospheric space has been excessively over-occupied by Annex I Parties, which deny developing countries legitimate space for sustainable development. We believe this, the reality, should be changed, must be changed, and this is why we are here," China said.

Grenada expressed its disappointment that little or no progress was made on any of the issues even though the mandate was clear and specific. It said that Annex I Parties must take the lead, and put numbers on the table that are sufficiently ambitious to address the scale of the problem.

Lesotho speaking on behalf of the LDCs expressed disappointment that the accuracy of the science has been questioned and doubted, and stressed the need for ambitious QELRCs from Annex I Parties.

South Africa said that the AWG-KP has spent the last three years analyzing indicative and possible ranges on the scale of emissions that could be adopted by Annex I Parties in aggregate, their mitigation potential, and the means available to enable Annex I Parties to set their quantified emission reduction commitments for the next and subsequent commitment periods. It is now time to focus on the real mandated tasks, which are the further quantified emission reduction commitments for Annex I Parties for the subsequent commitment period, and which need to be captured in an amendment to Annex B of the Kyoto Protocol, it said.

In the next 8-9 months, the AWG-KP must focus on this task, it said. Any linkages including with the AWG-LCA will only result in further delay and distraction. The 2 AWGs meet at the same time, and in the same place every session. It said that it was fully aware of what is going on in both groups, and did not need to formally link them.

The Philippines expressed disappointment especially on the scale of emission reductions for Annex I Parties. It said that there are different understandings of the mandate, and that it was looking for rapid action to arrive at a conclusion, and for Annex I partners to take the lead by committing to deep reductions.

The US as an observer to the Kyoto Protocol said that times have changed, and that its own domestic climate programme is evolving, and that there were a number of issues in the Kyoto Protocol that it was also considering domestically, for example, a cap-and-trade system.

Friends of the Earth International (a member of Climate Justice Now!) said that all Annex I countries must commit to emission reductions strong enough to save the planet and begin to repay the climate debt owed to non-Annex I countries, with much lower per capita emissions and no historic responsibility.

It said that there must be “full repayment of the climate debt owed by developed countries for

the over-consumption of environmental space and the impacts this is causing in developing countries. These debts – for excessive emissions and the harm they cause – must be repaid by increasing the atmospheric space available to developing countries, and through substantial financial and technology transfers from North to South, subject to democratic control to achieve the necessary transformation to a sustainable and just society.”

Other statements were also made by Bangladesh, Indonesia, the Dominican Republic (on behalf of GRULAC, Korea (on behalf of the Environmental Integrity Group) and the Climate Action Network.

The AWG-KP also adopted conclusions on the following substantive issues: emissions trading and the project-based mechanisms; land use, land-use change and forestry; consideration of information on potential environmental, economic and social consequences, including spill-over effects, of tools, policies, measures and methodologies available to Annex I Parties; coverage of greenhouse gases, sectors and source categories, common metrics, possible approaches for targeting sectoral emissions and other issues considered under agenda item 5.

The candidacy for the non-Annex I Co-Chair of the AWG-KP was also finally resolved. The Africa Group withdrew its candidate from Algeria, Mr. Tahar Hadj-Sadok, and Ambassador John Ashe from Antigua and Barbuda was approved as Co-Chair during the final plenary. This means that he will chair the work of the AWG-KP to its completion in December 2009, with Mr. Harald Dovland from Norway as his Annex I Vice-Chair.

The eighth session of the AWG-KP is scheduled for 1-12 June, and the ninth session on 28 September-9 October. The Bonn meeting agreed on two additional meetings - an informal meeting of the AWG-KP on 10-14 August, and a resumed ninth session on 2-6 November. The final tenth session of the AWG-KP will be held at the Climate Change Conference in Copenhagen on 7-18 December, in conjunction with the 15th Conference of the Parties to the UNFCCC and the 5th CMP. All the meetings of the AWG-KP are held in conjunction with meetings of the AWG-LCA.

Climate Briefings for Bonn

Sustainable Agriculture: Meeting Food Security Needs, Addressing Climate Change Challenges

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An earlier version of this paper was presented as the keynote address at the National Conference on “Sustainable Agriculture: Moving from grassroots initiatives to mainstream policies”, organised by the Consumers’ Association of Penang and held in Petaling Jaya on 24 July 2008.

Introduction

The challenges facing agriculture today are immense. Of immediate concern is the global increase in food prices, starkly brought home by reports of food riots and food shortages in many countries around the world. During the first three months of 2008, international nominal prices of all major food commodities reached their highest levels in nearly 50 years while prices in real terms were the highest in nearly 30 years (FAO, 2008).

While the FAO food price index¹ rose, on average, 8 percent in 2006 compared with the previous year, it increased by 24 percent in 2007 compared to 2006. The increase in the average of the index for the first three months of 2008 compared to the same three months in 2007 was 53 percent. The continuing surge in prices is led by vegetable oils, which on average increased by more than 97 percent during the same period, followed by grains with 87 percent, dairy products with 58 percent and rice with 46 percent. The FAO estimates that the number of hungry people increased by about 50 million in 2007 as a result of soaring food prices.

In addition, the challenges of climate change are increasingly urgent. The Intergovernmental Panel on Climate Change makes it clear that warming of the climate system is “unequivocal”, as observations of increases in air and ocean temperatures, widespread melting of snow and ice, and sea level rise have made evident (IPCC, 2007). Agriculture will therefore have to cope with increased climate variability and more extreme weather events.

Climate change, coincident with increasing demand for food, feed, fibre and fuel, has the potential to irreversibly damage the natural resource base on which agriculture depends, with significant consequences for food insecurity (IAASTD, 2008). The relationship between climate change and agriculture is two-way; agriculture contributes to climate change in several major ways and climate change in general adversely affects agriculture.

¹ The FAO food price index is a trade-weighted Laspeyres index of international quotations expressed in US dollar prices for 55 food commodities.

Agriculture is thus at a crossroads. It has to find ways to feed the world while being environmentally, socially and economically sustainable. Yet, it is increasingly clear that the path that agriculture has been on is not sustainable nor can it feed the world without destroying the planet (IAASTD, 2008). With the spotlight once more on agriculture, and with many critical issues that need resolving, finding the answer to the question of the nature of agricultural development required has never been more pressing.

“Business-as-usual is no longer an option”

The International Assessment of Agricultural Knowledge, Science and Technology for Development (IAASTD) sought to examine this question. This is the most rigorous and comprehensive assessment of agriculture to date. Co-sponsored by the World Bank, FAO, UNEP, UNDP, WHO, UNESCO and GEF, its report clearly concluded that a radical change is needed in agricultural policy and practice, in order to address hunger and poverty, social inequities and environmental sustainability (IAASTD, 2008).

The report’s central message is that the business-as-usual scenario of industrial farming, input and energy intensiveness, collateral damage to the environment and marginalization of small-scale farmers is no longer tenable. While past emphasis on production and yields had brought benefits, such as afforded under the Green Revolution, this was at tremendous cost to the environment and social equity.

The Green Revolution drove widespread shifts in the agricultural sector from subsistence and low external input agriculture to monocropping with high yielding varieties (HYVs). This agricultural paradigm required the adoption of a ‘package’ of inputs, including irrigation, chemical pesticides and fertilisers, and hybrid seeds bred for disease resistance and high yield. Participating farmers often had access to credit and agro-processing facilities, transport and roads, machinery, marketing infrastructure and government price supports.

By the 1970s, Green Revolution-style farming had replaced the traditional farming practices of millions of developing country farmers. By the 1990s, almost 75% of Asian rice areas were sown with these new varieties. Overall, it is estimated that 40% of all farmers in developing countries were using Green Revolution seeds by this time, with the greatest use found in Asia, followed by Latin America (Rosset et al., 2000; Shiva, 1991).

The rapid spread of Green Revolution agriculture throughout most countries of the South was accompanied by a rapid rise in pesticide use (Rosset et al., 2000). This was because the HYVs were more susceptible to pest outbreaks. Promising increases of yield were thus offset by rising costs associated with increased use of chemical inputs. In the Central Plains of Thailand, yields went up only 6.5%, while fertiliser use rose 24% and pesticides jumped by 53%. In West Java, profits associated with a 23% yield increase were virtually cancelled by 65% and 69% increases in fertilisers and pesticides respectively (Rosset et.al., 2000).

Synthetic fertilisers, pesticides and herbicides are made from non-renewable raw materials such as mineral oil and natural gas or from minerals that are depleting such as phosphate and potassium. As the price of petroleum increases, so does the cost of external inputs and machinery, forcing small farmers who are dependent on these inputs into debt. The production of agrochemicals is also an important source of greenhouse gas (GHG) emissions. In particular, fertiliser production is energy intensive, accounting for 0.6-1.2% of the world’s total GHGs (Bellarby *et al.*, 2008). Industrial, chemical-intensive agriculture has also degraded soils and destroyed resources that are critical to storing carbon, such as forests and other vegetation.

The rise in use of chemical inputs has also had adverse environmental and health impacts on farmworkers and consumers. A substantial portion of pesticide residues ends up in the environment, causing pollution and biodiversity decline (Znaor *et al.* 2005). The extensive use of pesticides has also resulted in pesticide resistance in pests and adverse effects to beneficial natural predators and parasites (Pimentel, 2005).

The Green Revolution also brought about a shift from diversity to monocultures. When farmers opted to plant Green Revolution crop varieties and raise new breeds of livestock, many traditional, local varieties were abandoned and became extinct. And yet, maintaining agricultural biodiversity is vital to long-term food security as it is vital insurance against crop and livestock disease outbreaks and improves the long-term resilience of rural livelihoods to adverse trends or shocks (Pimbert, 1999).

Other costs of the Green Revolution, often underestimated, included the financial costs of building huge dams for irrigation, the financial costs of the energy required in the construction and operation of such projects, the health costs of a steadily affected population due to chemical contamination of food, the costs involved in soil losses from increasingly degraded soils, genetic erosion and the draining of groundwater aquifers (Alvares, 1996). Green Revolution farming systems also required substantial irrigation, putting further strain on the world's limited water resources.

Traditionally, local farming communities were close knit as seed exchange and farming knowledge were shared freely. The Green Revolution seeds however were hybrids, for which seed saving is undesirable, as the seed from the first generation of hybrid plants does not reliably produce true copies. Therefore, new seed must be purchased for each planting and this meant that farmers were no longer preserving and storing seeds for the next planting season. This trend not only incurs extra costs for the farmers but has an impact on social cohesiveness too (Sangaralingam, 2006).

Productivity declines: Rice as a case study

In recent years, the biggest claims of success of the Green Revolution model, its productivity gains, have not been easy to sustain, and in some cases, have become exhausted. This is best illustrated by the yield trends from long-term trials conducted on experiment stations, such as the long-term continuous cropping experiment conducted by the International Rice Research Institute (IRRI). The objective is to monitor maximum yields obtained over time, holding input levels and crop management practices constant. The trends indicate that, even with the best-available cultivars and scientific management, rice yields, holding input levels constant, decline over the long term (Pingali *et al.*, 1997; FAO, 2001).

At the farm level, declining yield trends are usually not observed since input levels are not held constant over time. However, in areas where intensive rice monoculture has been practiced over the past two to three decades, stagnant yields and/or declining trends in partial factor productivities, especially for fertilisers, and declining trends in total factor productivities, have been observed. Moreover, the rate of deceleration in yields is higher for countries with higher cropping intensities (Pingali *et al.*, 1997).

Farm-level evidence from the rice bowls of Asia thus indicates that intensive rice monoculture systems lead, over the long term, to declining productivities of inputs (Pingali *et al.*, 1997). Over time, farmers have been found to use increasing amounts of inputs to sustain the yield gains made during the Green Revolution years.

Intensive rice monoculture on the lowlands results in the following changes: (i) rice paddies flooded for most of the year without an adequate drying period; (ii) increased reliance on inorganic fertilisers; (iii) asymmetry of planting schedules; and (iv) greater uniformity of cultivars. Over the long term, the above changes impose significant ecological costs due to negative biophysical impacts (Pingali *et al.*, 1997). Adverse biophysical consequences that have reduced productivity have been: the build-up of salinity and waterlogging; declining soil nutrient status; increased incidence of soil toxicities; and pest build-up and reduced resilience of the ecosystem to pest attacks. Pingali *et al.* (1997) conclude that the practice of intensive rice monoculture itself thus contributes to the degradation of the paddy resource base and hence declining productivities.

Sustainable agriculture as an option

It is thus clear that agriculture needs to undergo a radical overhaul to become more sustainable. This is not just because it is important to take care of the environment, but also because sustainability is absolutely necessary for the continuation of the productivity of the agroecosystem. Threats to the environmental sustainability of agriculture threaten agriculture itself.

The IAASTD report (2008) makes this clear by saying that greater emphasis is needed on safeguarding natural resources and agroecological practices, as well as on tapping the wide range of traditional knowledge held by local communities and farmers, which can work in partnership with formal science and technology. It stresses that sustainable agriculture that is biodiversity-based, including agroecology and organic farming, is resilient, productive, beneficial to poor farmers, and will allow adaptation to climate change.

Sustainable agricultural approaches can be in many forms, such as agroecology, organic agriculture, ecological agriculture, biological agriculture, etc. Sustainable agriculture should (Pretty and Hine, 2001):

- Make best use of nature's goods and services by integrating natural, regenerative processes e.g. nutrient cycling, nitrogen fixation, soil regeneration and natural enemies of pests.
- Minimise non-renewable inputs (pesticides and fertilisers) that damage the environment or harm human health.
- Rely on the knowledge and skills of farmers, improving their self-reliance.
- Promote and protect social capital - people's capacities to work together to solve problems.
- Depend on locally-adapted practices to innovate in the face of uncertainty.
- Be multifunctional and contribute to public goods, such as clean water, wildlife, carbon sequestration in soils, flood protection and landscape quality.

Sustainable agricultural practices include:

- Crop rotations that mitigate weed, disease, and insect problems; increase available soil nitrogen and reduce the need for synthetic fertilisers; and in conjunction with conservation tillage practices, reduce soil erosion.
- Integrated pest management (IPM), which reduces the need for pesticides by crop rotations, scouting, timing of planting, biological pest controls.
- Management systems to improve plant health and crops' abilities to resist pests and disease.
- Soil-conserving tillage.
- Water conservation and water-harvesting practices.
- Planting of leguminous crops and use of organic fertiliser or compost to improve soil fertility.

Despite adequate global food production, many still go hungry because increased food supply does not automatically mean increased food security. What is important is who produces the food, who has access to the technology and knowledge to produce it, and who has the purchasing power to acquire it (Pretty and Hine, 2001). Sustainable agricultural approaches thus allow farmers to improve local food production with low-cost, readily available technologies and inputs, without causing environmental damage.

Sustainable agriculture is productive

One criticism of sustainable agriculture, especially organic agriculture, is that it cannot meet the world's food demands, primarily because of low yields and insufficient organic fertiliser. However, there is ample evidence to refute this argument. In general, organic yields can be broadly comparable to conventional yields in developed countries. In developing countries, organic practices can greatly increase productivity, particularly if the existing system is low-input.

A recent study has found that organic methods could produce enough food on a global per capita basis to sustain the current human population, and potentially an even larger population, without putting more

farmland into production (Badgley *et al.*, 2007). The researchers examined a global dataset of 293 examples, and found that on average, in developed countries, organic systems produce 92% of the yield produced by conventional agriculture. In developing countries, however, organic systems produce 80% more than conventional farms. Moreover, contrary to fears that there are insufficient quantities of organically acceptable fertilisers, the data suggest that leguminous cover crops could fix enough nitrogen to replace the amount of synthetic fertiliser currently in use.

In a review of 286 projects in 57 countries, farmers were found to have increased agricultural productivity by an average of 79%, by adopting “resource-conserving” or sustainable agriculture (Pretty *et al.*, 2006). A variety of resource-conserving technologies and practices were used, including integrated pest management, integrated nutrient management, conservation tillage, agroforestry, water harvesting in dryland areas, and livestock and aquaculture integration into farming systems. These practices not only increased yields, but also reduced adverse effects on the environment and contributed to important environmental goods and services (e.g., climate change mitigation), as evidenced by increased water use efficiency and carbon sequestration, and reduced pesticide use.

The work built on earlier research, which assessed 208 sustainable agriculture projects. The earlier research found that for 89 projects for which there was reliable yield data, farmers had, by adopting sustainable agriculture practices, achieved substantial increases in per hectare food production - the yield increases were 50-100% for rain-fed crops, though considerably greater in a number of cases, and 5-10% for irrigated crops (Pretty and Hine, 2001). Disaggregated data show:

- Average food production per household rose by 1.7 tonnes per year (up by 73%) for 4.42 million small farmers growing cereals and roots on 3.6 million hectares.
- Increase in food production was 17 tonnes per year (up 150%) for 146,000 farmers on 542,000 hectares cultivating roots (potato, sweet potato, cassava).
- Total production rose by 150 tonnes per household (up by 46%) for the larger farms in Latin America (average size 90 hectares).

There are many other specific examples of increased yields following the application of sustainable agricultural practices, which are summarized here (Parrott and Marsden, 2002; Pretty and Hine, 2001):

- Soil and water conservation in the drylands of Burkina Faso and Niger have transformed formerly degraded lands. The average family has shifted from being in cereal deficit of 644 kg per year (equivalent to 6.5 months of food shortage) to producing an annual surplus of 153 kg.
- In Ethiopia, some 12,500 households have adopted sustainable agriculture, resulting in a 60% increase in crop yields.
- Participatory irrigation management in the Philippines has increased rice yields by about 20%.
- 45,000 families in Honduras and Guatemala have increased crop yields from 400-600 kg/ha to 2000-2500 kg/ha using green manures, cover crops, contour grass strips, in-row tillage, rock bunds and animal manures.
- The states of Santa Caterina, Paraná and Rio Grande do Sol in southern Brazil have focused on soil and water conservation using contour grass barriers, contour ploughing and green manures. Maize yields have risen from 3 to 5 tonnes/ha and soybeans from 2.8 to 4.7 tonnes/ha.
- The high mountain regions of Peru, Bolivia and Ecuador are some of the most difficult areas in the world for growing crops. Despite this, farmers have increased potato yields by three fold, particularly by using green manures to enrich the soil.
- In Brazil, use of green manures and cover crops increased maize yields by 20-250%.
- In Tigray, Ethiopia, yields of crops from composted plots were 3-5 times higher than those treated only with chemicals.
- Yield increases of 175% were reported from farms in Nepal adopting agroecological practices.
- In Peru, restoration of traditional Incan terracing led to increases of 150% for upland crops.

- Projects in Senegal promoted stall-fed livestock, composting systems, green manures, water-harvesting systems and rock phosphate. Yields of millet and peanuts increased dramatically by 75-195% and 75-165% respectively.
- In Honduras, soil conservation practices and organic fertilisers have tripled or quadrupled yields.

Sustainable agriculture can raise incomes

The productivity of sustainable agriculture often translates into increased incomes for farmers, who at the same time are also able to reduce or eliminate the costs of purchasing chemical inputs. Sustainable agriculture also often adds new productive elements to the system, and, by maintaining or improving on- and off-farm biodiversity, allows farmers to market non-cultivated crops and animals.

Moreover, if organic produce is sold, these carry a premium price on the market. For example, a comprehensive review of the many comparison studies of grain and soybean production conducted by six US Midwestern universities since 1978 found that the organic cropping systems were always more profitable than the most common conventional systems if organic price premiums were factored in (Welsh, 1999). When the higher premiums were not factored in, the organic systems were still more productive and profitable in half the studies. This was attributed to lower production costs and the ability of organic systems to outperform the conventional in drier areas, or during drier periods.

Fifteen-year results from the Rodale Institute in the US showed that after a transition period with lower yields, the organic systems were competitive financially with the conventional system (Petersen *et al.*, 1999). While the costs of the transition are likely to affect a farm's overall financial picture for some years, projected profits ranged from slightly below to substantially above those of the conventional system, even though economic analyses did not assume any organic price premium. The higher profits for the organic farms came largely from higher yields (of corn, in this case), which nearly doubled after the transition period. When prices or yields were low, organic farms suffered less than the conventional and had fewer income fluctuations, as they had a diversity of crops to sell. Expenses on the organic farms were significantly lower than on the conventional - the latter spent 95% more on fertilisers and pesticides. Overall production costs on the organic farms were 26% lower.

In developing countries, evidence from hundreds of grassroots development projects shows that increasing agricultural productivity with agroecological practices not only increases food supplies, but also increases incomes, thus reducing poverty, increasing food access, reducing malnutrition and improving the livelihoods of the poor. Agroecological systems lead to more stable levels of total production per unit area than high-input systems; they give more economically favorable rates of return, and provide a return to labour and other inputs for an acceptable livelihood (Pretty, 1995).

Sustainable agriculture mitigates climate change and has climate adaptation potential

Sustainable agriculture, by its very definition, reduces harm to the environment, for example through the reduction or elimination of polluting substances such as pesticides and nitrogen fertilisers, water conservation practices, soil conservation practices, restoration of soil fertility, maintenance of agricultural biodiversity and biodiversity etc. An FAO review summarises many of these environmental benefits in relation to organic agriculture (Scialabba and Hattam, 2002).

Importantly, sustainable agriculture practices can also mitigate climate change. Organic agriculture, for example, uses less fossil-fuel-based inputs and has a better carbon footprint than standard agricultural practices. This is because conventional agriculture production utilises more overall energy than organic systems due to heavy reliance on energy-intensive fertilisers, chemicals, and concentrated feed, which organic farmers forgo (Zeisemer, 2007). Organic agriculture performs better than conventional agriculture on a per-hectare scale, both with respect to direct energy consumption (fuel and oil) and indirect consumption (synthetic fertilisers and pesticides), with high efficiency of energy use (Scialabba and Hattam, 2002).

Agriculture has the potential to change from being one of the largest GHG emitters to a net carbon sink, while offering options for mitigation. The solutions call for a shift to sustainable farming practices that build up carbon in the soil and use less fertiliser (Bellarby *et al.* 2008). There are a variety of sustainable farming practices that can reduce agriculture's contribution to climate change, which are easy to implement. These include crop rotations and improved farming design, improved cropland management (such as avoiding leaving land bare, using an appropriate amount of fertiliser, no burning of crop residues in the field, reducing tillage), nutrient and manure management, grazing-land and livestock management, maintaining fertile soils and restoration of degraded land, improved water and rice management, and set-asides, land-use change and agroforestry (Bellarby *et al.*, 2008; Niggli *et al.*, 2008).

A report by the International Trade Centre UNCTAD/WTO and FIBL (Research Institute of Organic Agriculture, Switzerland) (2007) provides a detailed assessment of the benefits of organic farming regarding climate change. The benefits are summarized as follows (Khor, 2008):

- Organic agriculture has considerable potential for reducing emissions.
- In general it requires less fossil fuel per hectare and kg of produce due to the avoidance of synthetic fertilisers. Organic agriculture aims to improve soil fertility and nitrogen supply by using leguminous crops, crop residues and cover crops.
- The enhanced soil fertility leads to a stabilization of soil organic matter and in many cases to a sequestration of carbon dioxide into the soils.
- This in turn increases the soil's water retention capacity, thus contributing to better adaptation of organic agriculture under unpredictable climatic conditions with higher temperatures and uncertain precipitation levels. Organic production methods emphasizing soil carbon retention are most likely to withstand climatic challenges particularly in those countries most vulnerable to increased climate change. Soil erosion, an important source of carbon dioxide losses, is effectively reduced by organic agriculture.
- Organic agriculture can contribute substantially to agroforestry production systems.
- Organic systems are highly adaptive to climate change due to the application of traditional skills and farmers' knowledge, soil fertility-building techniques and a high degree of diversity.

The study concludes that: "Within agriculture, organic agriculture holds an especially favourable position, since it realizes mitigation and sequestration of carbon dioxide in an efficient way... Organic production has great mitigation and adaptation potential, particularly with regard to topsoil organic matter fixation, soil fertility and water-holding capacity, increasing yields in areas with medium to low-input agriculture and in agro-forestry, and by enhancing farmers' adaptive capacity. Paying farmers for carbon sequestration may be considered a win-win-win situation as (a) carbon dioxide is removed from the atmosphere (mitigation); (b) higher organic matter levels in soil enhance their resilience (adaptation), and (c) improved soil organic matter levels lead to better crop yield (production)."

Crucially, for farmers who have to face increased climate variability and extreme weather events in the near future, sustainable agriculture, by increasing resilience within the agroecosystem, increases its ability to continue functioning when faced with unexpected events such as climate change. For example, organic agriculture builds adaptive capacity on farms as it promotes agroecological resilience, biodiversity, healthy landscape management, and strong community knowledge processes (Borron, 2006). Improved soil quality and efficient water use also strengthen agroecosystems, while practices that enhance biodiversity allow farms to mimic natural ecological processes, which enables them to better respond to change. Sustainable farming practices that preserve soil fertility and maintain, or even increase, organic matter in soils can reduce the negative effects of drought while increasing crop productivity (Niggli *et al.*, 2008).

Mainstreaming sustainable agriculture

There is a clear need for a systematic redirection of investment, funding, research and policy focus towards sustainable agriculture. This is the key recommendation of the IAASTD (2008) report.

While interest in agriculture has been increasing given the food crisis, there are still many complex issues to resolve. Over the past few decades Green Revolution methods have been the cornerstone of agriculture in many countries. Yet, many agricultural systems are presently in a state of ecological degradation. The productivity, stability and durability of these systems are being threatened, thus endangering the continued provision of food.

In reaction to these developments, practices that fit better with the economic, ecological, social and cultural/religious conditions of the farming and fishing community are needed. They should retain the productivity, stability and durability of the systems without causing harm to the environment or threatening public health. They should also promote the economic and social independence of the farming and fishing community and ensure the provision of food.

Most policy measures to support agriculture currently act as powerful disincentives against sustainability. In the short term, this means that farmers switching from modern high-input agriculture to resource-conserving technologies can rarely do so without incurring some transition costs. In the long term, it means that sustainable agriculture will not spread widely beyond the types of localised success.

The principal problem is that policies simply do not reflect the long-term social and environmental costs of resource use. The external costs of modern farming, such as soil erosion, health damage or polluted ecosystems, are not incorporated into decision-making. Policies framed to deliver increased food production will have to be changed if they are to help deliver environmental and social benefits too.

Agricultural policies that encourage Green Revolution-type farming by subsidizing farm inputs, such as pesticides, fertilisers, credit and irrigation, have reduced the economic viability of sustainable agriculture technologies for pest management. In Indonesia, for example, it was only the removal of pesticide subsidies in 1986, coupled with the banning of 57 rice pesticides, that allowed farmer-field schools to flourish and allowed farmers to successfully make the transition to pesticide-free or low-pesticide rice farming. The trend in some OECD countries now is to levy taxes on pesticides so as to reduce their use.

Some recommendations

Sustainable agriculture can contribute significantly to increased food production, as well as make a significant impact on rural people's welfare and livelihoods. However, without appropriate policy support at a range of levels, these improvements will remain at best localised in extent, or worse, will wither away. A thriving and sustainable agricultural sector requires both integrated action by farmers and communities, and integrated action by policy makers and planners. It is also vital for farmer-to-farmer learning and sharing of experiences to be encouraged and facilitated.

The following are some suggestions to move towards mainstreaming sustainable agriculture, at a national level:

- (1) Conduct an in-depth integrated assessment of general agriculture policies, programmes and plans to see where the gaps are, in terms of sustainable agriculture. Policies that provide disincentives against sustainable agriculture need to be changed.
- (2) General and sustainable agriculture policies should support each other to the greatest extent possible to promote effective policy coherence.
- (3) Agriculture has always been closely associated with the environment. Better integration of agricultural and environmental policies would provide mutual benefits. The goal is to move rapidly toward "environmentally friendlier" sustainable agricultural practices.

(4) Develop a sustainable agricultural policy and action plan, with clear objectives, targets and timeframes. This process should be participatory and involve relevant agencies, farmers and their organisations, the private sector and NGOs. A lead agency/department should be identified to carry the work forward.

(5) Promote and facilitate the adoption of sustainable and lower-input agriculture, and environmentally friendly technologies and practices. This may include the use of economic instruments and incentives for farmers to switch to sustainable agriculture, including organic agriculture.

(6) Promote and facilitate practices that encourage local biodiversity and endemic varieties. Encourage local seed banks so that traditional and diverse varieties of seeds are maintained.

(7) Plan with reference to water management, including growing traditional crops that do not have high water demands and integrating soil management using organic matter, which has higher water-holding capacity.

(8) Ensure sufficient resource allocation towards research and projects on sustainable agriculture. This should include (Khor, 2003):

- reassessing the concept and measurement of agricultural productivity, giving due recognition to the value of traditional and ecological farming and enabling a scientific comparison with conventional Green Revolution methods;
- studying sustainable agriculture systems, their operations and dynamic inter-relationships, their problems and solutions to these problems;
- sustainable agriculture experiments, test farms and demonstration farms.
- training programmes for farmers, policy and extension officials, and NGOs on sustainable agriculture;
- support for farmers' programmes and government programmes for implementation of sustainable agriculture, including eventually on a large scale;
- support to farmers, community groups and governments for establishing community-based seed banks to revive and promote the use of traditional varieties, support for subsequent exchange of seeds amongst farmers, and for improvement of seed varieties using appropriate traditional breeding methods.

(9) Farm advisory and extension services should promote sustainable agriculture. General awareness-raising about sustainable agriculture and its benefits should be carried out.

(10) Sustainable agriculture should be integrated into the education system, including at the tertiary level. Specialised institutions involved in training for sustainable agriculture should be supported.

(11) Further encourage farmers' markets, without middle agents, including for sustainable agriculture and organic products.

(12) Encourage decentralization of processing industries as well as commercial centres, so as to address rising transportation and fuel costs.

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Understanding the European Commission’s Climate Communication

Third World Network

The European Commission has circulated its climate communication, entitled “*Towards a comprehensive climate change agreement in Copenhagen*”, to the European Parliament, Council, Economic and Social Committee, and Committee of the Regions, as the basis of a common European position in ongoing negotiations under the UN Framework Convention on Climate Change (UNFCCC).¹

These negotiations are taking place under the Bali Action Plan, which was agreed at the UN Climate Conference in Bali, Indonesia in December 2007. The Plan launched a “comprehensive process to enable the full, effective and sustained implementation of the Convention through long-term cooperative action, now, up to and beyond 2012”.

Europe plays a central role in climate discussions, as a major emitter of greenhouse gases (GHG) and as a key contributor to the negotiations, so understanding the EC Communication is of first importance not merely to Europeans but to all engaged in climate policy including developing countries.

An ambitious outcome in Copenhagen

An ambitious outcome is required at the December 2009 UN Climate Conference in Copenhagen. Such an outcome must satisfy the standards of equity and effectiveness and set society on a path towards stabilizing the Earth’s climate system and advancing the objectives agreed by all countries in the UNFCCC.

Equity and effectiveness each demand that developed countries take the lead in demonstrating a low-carbon economy is possible and affordable. Atmospheric GHG concentrations have increased markedly since 1750 and now far exceed pre-industrial levels.² By 2004, developed countries with 20% of the world’s population had contributed 75% of accumulated emissions.³ According to the IPCC:

Because the industrialized nations are the source of most past and current GHG emissions and have the technical and financial capability to act, the Convention places the heaviest burden for the first steps in mitigating climate change on them. This is enshrined in the principle of “common but differentiated responsibilities” (*high agreement, much evidence*).⁴

The need for an ambitious outcome in Copenhagen is even greater in light of new scientific information based on IPCC data, which suggests that atmospheric concentrations as at 2005 may have *already* committed the planet to a warming of 2.4°C above pre-industrial levels.⁵ This level exceeds proposed 1.5 and 2°C objectives, overshoots currently perceived thresholds for tipping points and abrupt climate changes, and risks run-away warming with potentially catastrophic consequences. In light of developed countries’ contribution to levels of committed warming, it calls on these countries to increase their efforts to implement UNFCCC commitments.

The EC Communication

The EC Communication is being considered by EU Member States. It was recently considered by the European Council of Environment Ministers when adopting conclusions on the further development of the EU's position for the Copenhagen Climate Change meeting to be held in December this year.

The Communication addresses proposals to various elements of the Bali Action Plan. These include the creation of a shared vision, enhanced action on mitigation, adaptation, technology and finance, as well as the need for new institutional arrangements.

The EC Communication calls for an "ambitious and comprehensive" outcome in Copenhagen; but the substance of the statement, when read in light of the EU's existing commitments under the UNFCCC, suggests other ambitions.

A shared vision

The Communication identifies the EU's objective as limiting "average global temperature increase to less than 2°C", saying that to have a reasonable chance of achieving this objective "global GHG emissions must be reduced to less than 50% of 1990 levels by 2050", and characterizing this as a "global goal".

Some developing countries have called for higher levels of global ambition, suggesting that temperature increases of 2°C could have "devastating impacts".⁶ The Least Developed Countries (LDCs) and the Alliance of Small Island States (AOSIS) have called for efforts to limit temperature increase to below 1.5°C, and atmospheric concentrations to below 350ppm CO₂eq.⁷ According to AOSIS, this will require global emissions to reduce by more than 85% by 2050.⁸

Even these levels of global emission reductions may prove inadequate if the most recent scientific studies are correct. Averting the threat of abrupt climate changes and with them the potential of run-away climate change with catastrophic consequences will likely require an early and unprecedented effort to reduce emissions, enhance sinks and advance other strategies – significantly more ambitious than any so far conceived.

Mitigation commitments by Annex I countries

The EC Communication acknowledges recent scientific information, but does not respond to it. Rather, it restates the EU's existing offer to reduce emissions by 30% from 1990 levels by 2020 "in the context of an ambitious and comprehensive international agreement".

It says developed countries should reduce emissions "by an amount consistent with the 2° objective", and that the IPCC's Fourth Assessment Report indicates this requires emission reductions "in the range of 25-40% by 2020 and 80-95% by 2050". Accordingly, it says that "in order to limit the global average temperature increase to not more than 2°C above preindustrial levels, developed countries as a group should reduce their emissions to 30% below 1990 levels in 2020".

This characterization of the IPCC report is at best imprecise. First, the IPCC Report does not evaluate a 2°C objective. Rather it summarizes "several studies" incorporating "different assumptions about the pathway, specific national efforts and other variables".⁹ For the most stringent scenario (Scenario A in Box 13.7) only two studies estimated the likelihood of staying below 2°C, and a number considered pathways that would overshoot 450ppm CO₂-eq thus increasing the likelihood of exceeding 2°C to over 50 percent. It is therefore not accurate to suggest these scenarios as a whole "aim to limit global temperature increase to 2°C".¹⁰

Nor does the IPCC Report conclude that the 25-40% range is "consistent" with a 2°C objective. Rather, 25-40% is a range of "emission allocations" summarized from the underlying studies. It is based not merely on "scientific" considerations, but also on the equity and political assumptions of a small number of authors

who wrote the studies that were summarized by the IPCC, and of the authors of Box 13.7 who chose to exclude scenario variants which examined more ambitious reductions by developed countries (e.g. 47% and 50%) as “outliers”.¹¹

Even if the EC Communication’s characterization of the IPCC Report were accurate – which it is not – it has been superseded by new findings on climate change. Disappearance of Arctic sea ice and other observed changes, combined with new scientific information on the climate system, suggest that the emission reductions proposed by the EU for developed countries are fundamentally inadequate on both effectiveness and equity grounds, and that much deeper reductions will be required.

The responsibility for undertaking these reductions, and for supporting efforts in developing countries, lies principally with the developed countries. As stated in the UNFCCC “the largest share of historical and current global emissions of greenhouse gases has originated in developed countries” (Preamble). Consequently, developed countries must demonstrate they are “taking the lead in modifying longer-term trends in anthropogenic emissions consistent with the objective of the Convention” (Article 4.2). Additionally, the extent to which developing countries will effectively implement their commitments depends on “effective implementation by developed country Parties of their commitment under the Convention related to financial resources and transfer of technology” (Article 4.7).

Developing countries have called for higher levels of ambition from developed countries in Copenhagen. The G77 and China says “much deeper reduction commitments are required and ... must reflect their historical responsibility as well as evolving scientific evidence”.¹² LDCs call on developed countries to accept targets of “at least 40 percent by 2020”¹³ and AOSIS for reductions of “more than 40%”.¹⁴

Some developing countries have called for levels of ambition higher than reflected in any of the ranges so far proposed in the negotiations,¹⁵ calling on developed countries to be ready to reduce well beyond 100% of 1990 levels (including through enhancement of sinks on their territories) on the basis that cuts in this order are required to avoid risks of abrupt climate change, provide sufficient atmospheric space for developing countries, and ensure a predictable basis for financing, technology, and compensation for lost development space and adaptation impacts.¹⁶

Mitigation actions by developing countries

The EC Communication proposes that developing countries limit their emissions by 15 to 30% below baseline levels, citing “a recent scientific report”¹⁷, which calculates this range as a residual amount associated with the EU’s proposed global and developed country emission reductions (i.e. global reduction – developed country reduction = developing country reduction).

Developing countries have noted the ethical and methodological flaws with this approach¹⁸:

- It draws on possible emission reduction ranges summarized by the IPCC, which reflect the “equity assumptions” of the authors of underlying studies, and not Parties to the UNFCCC. The IPCC and its authors have not been tasked with defining a global burden sharing framework and do not claim to.¹⁹
- It bases emission allowances on developed countries’ current (and excessive) emission levels and not on their contribution to the current atmospheric concentrations of greenhouse gases and the associated levels of current and “committed” warming that threaten dangerous interference with the climate system;
- It fails to reflect these “accumulated” emissions in more ambitious reduction targets that reflect developed countries’ current and historical responsibilities under the UNFCCC, and so leverages inequitable past pathways into new arrangements and forgives a major environmental debt.
- It fails to acknowledge that the initial allocation of emission rights between developed and developing countries set within a global goal is a distributional question that will profoundly affect the future distribution of resources and wealth in the world.

- Most importantly, it apportions the Earth's atmosphere by securing the needs of a small minority and considering as "residual" the needs of the majority in developing countries without verifying whether the balance is compatible with their needs for socio-economic development.

Developing countries have proposed alternative, more "equity-oriented" approaches to identifying appropriate contributions by developed countries to global emission reductions.

During the Kyoto Protocol negotiations, Brazil proposed that Annex I countries' emission allowances should be based on their contribution to increases in global-average surface temperature over a certain period of time.²⁰ This approach was matched with a penalty mechanism called the "clean development fund" to be supported by non-complying Annex I Parties, which would pay a financial penalty for every ton of carbon above their target. The revenue was to be used to fund projects for non-Annex I Parties.²¹ The proposal was considered extensively in the SBSTA which concluded that "the results of the work may be relevant to the work of Parties under other bodies and within other processes under the Convention and its Kyoto Protocol."²²

China has recently offered the concept of "per capita accumulative emissions" as a way of evaluating historical and current responsibility.²³ This approach takes into consideration the historical use by different countries of the global "carbon space" during their process of development. It reflects that the carbon space has been excessively occupied by developed countries, and consequently these countries should greatly cut their emission to make space for developing countries. Convergence of per capita accumulative emissions through time reflects the principle of equity, it says.

Algeria suggested that an "equity-oriented approach" to shared vision could be sketched as follows²⁴:

- Defining, along with the global emissions profile, an extrapolation of current developing countries emissions, ensuring the same economic growth and social benefits as a business-as-usual path, but taking advantage of win-win emissions reduction opportunities. This amount of environmental space would be apportioned to developing countries, and the balance to developed countries, in case financial and technological transfers remain insignificant.
- Defining an ambitious package of financial and technological transfers to help developing countries reduce their emissions without incurring any welfare losses. A corresponding lower emissions path for developing countries would thereby be defined. This would free environmental space that would enable developed countries to follow a less stringent emissions reduction path than above.
- Past excess emissions of developed countries would be considered an additional basis for the provision by developed countries of financial, technological and capacity-building support for adaptation.

This would define an equity-oriented long-term approach to cooperation that is consistent with the provisions of the Convention and Bali Action Plan in which developing and developed countries would confront together the climate change challenge in decades ahead, it said.

The role of carbon markets

The concerns raised by the Communication's proposal for burden sharing among developed and developing countries are heightened by its proposed role for carbon markets, which would shift an additional burden of mitigation to developing countries.

According to a scientific report used by the EU to justify its proposed commitments for developed and developing countries, the ranges summarized by the IPCC are "assumed to be achieved domestically by both groups of countries".²⁵ The Communication, however, proposes to achieve its emission reductions "in part through domestic action and in part by using credits resulting from emission reductions in developing countries".

According to the Communication, these emission reductions in developing countries would be additional to those undertaken to achieve its proposed departure by developing countries of 15-30% from baseline.²⁶

This proposal, in other words, shifts the burden of mitigation further to developing countries, which would be required first to limit their emissions from baseline, and then to reduce emissions by an additional amount to supply cheap credits to developed countries.

The proposal would allow Europe to shift a substantial portion of its mitigation burden abroad, and to avoid an equivalent domestic effort. The extent to which it intends to do so is indicated by proposals currently under consideration in the EU, which would allow 50% of industrial and over 70% of non-industrial emissions to be off-set – taking the EU’s domestic action to well below the ranges considered by the IPCC.²⁷

Obvious concerns about equity are compounded by other potential problems with this approach, including the following:

- It sets up carbon markets to compete with – rather than support – efforts by developing countries to limit emissions below baseline, as credits funded through carbon markets would be transferred to developed countries and would not be counted against those baselines.
- It risks allowing developed countries to appropriate “low-hanging” emission reductions, leaving more expensive and challenging ones to developing countries in current or subsequent periods. This problem may be exacerbated by EU proposals to allow Members to “bank” credits against later periods – potentially encouraging a “land grab” for cheap credits in developing countries.
- It creates a “moral hazard” for developed countries. Do they fulfill their commitments to support developing countries as required by the UNFCCC and Bali Action Plan? Or do they minimize support, and maximize the role of the market, allowing them to purchase cheap emission reductions with financing that should otherwise have helped developing countries achieve their own emission reductions?

The EC Communication justifies carbon markets on efficiency grounds (i.e. suggesting in background information that they reduce the global cost of emission reductions, and reduce very substantially the cost of emission reductions by developed countries). But it is silent about the implications of its proposal for equity. Indeed the term “equity” is used nowhere in the EC Communication’s discussions of mitigation.²⁸

Financial support to developing countries

Just as the Communication would shift the burden of mitigation directly to developing countries through commitments, and indirectly through carbon markets, it seeks to limit its responsibility for supporting developing countries with financing and technology, despite its obligations to do so under the UNFCCC.

The UNFCCC calls for efforts to fund the “agreed full incremental costs” of action by developing countries.²⁹ The Bali Action Plan calls for “full, effective and sustained implementation of the Convention” and for “enhanced action on the provision of financial resources and investment to support action on mitigation and adaptation and technology cooperation”. It calls for enhanced mitigation actions by developing countries to be “supported and enabled by technology, financing and capacity-building, in a measurable, reportable and verifiable manner.”

The EC Communication states that a “comprehensive Copenhagen agreement must be underpinned by adequate financial resources to enable its implementation”. But in practice, its proposals seek to narrow the actions eligible for support, limit the financing available, and pass on costs to developing countries.

The Communication (unlike the UNFCCC or Bali Action Plan) divides developing countries’ mitigation actions into three categories, defining some as “autonomous” and so unsupported by developed countries, and others as “action generating credits for transfer through carbon markets” and so contributing to developed and not developing countries’ domestic mitigation efforts.

The Communication’s third – and much narrowed – category of supported actions would be financed not for “agreed full incremental costs” as required by the UNFCCC, but for those incremental costs “that cannot be sustained by the country itself”.

In other words, rather than receiving “full incremental costs”, developing countries would be called on to carry the full costs of “autonomous” actions, as well as whatever proportion of incremental costs they can “sustain”, while supplying a significant number of low-cost emission reductions to developed countries.

As well as supporting themselves at the national level, developing countries would be called on to contribute to supporting themselves at the international level through “innovative international funding sources” to which developing countries (except LDCs and SIDS) would “make increasing contributions over time”.

According to the EC Communication, the development of “low carbon development strategies” by developing countries would be made a “prerequisite for access to international support for mitigation actions”. This would effectively reverse the basic relationship between the commitments of developed and developing countries under the UNFCCC, which, as noted above, states that effective implementation by developing countries depends on “effective implementation by developed country Parties of their commitment under the Convention related to financial resources and transfer of technology”.

Technology support to developing countries

The UNFCCC commits developed countries to take “all practical steps” to promote and finance technology transfer to developing countries. The Bali Action Plan calls for “enhanced action on technology development and transfer to support action on mitigation and adaptation”. Implementing UNFCCC commitments on technology is an essential step in reducing atmospheric GHG concentrations in practice, and is a political prerequisite to success in Copenhagen.

It is thus notable that the term “technology transfer” arises nowhere in the body of the Communication. Instead, it refers to the “research, development and demonstration” (RD&D) phases of the technology cycle, calls for a commitment to scale up “energy-related RD&D” by a factor of four by 2020, and says “a commitment to do so should form an integral part of the Copenhagen Agreement”.

It cites the need to provide financing for capacity-building and technology cooperation, but is silent on the level of financing required for developed countries to fulfill their basic commitment to provide “agreed full incremental costs” of technology diffusion and transfer in all relevant sectors, as required by the UNFCCC.

To reduce the costs of technologies, it instead calls for the elimination at the WTO of trade barriers on environmental goods and services – a proposal questioned by developing countries on the basis it would: 1) favor products of export of interest to the developed countries; 2) impose disproportionate tariff cuts on developing countries; 3) affect endogenous technologies and capacities; and 4) promote merely the sale, rather than the transfer, of technology.

While the Communication supports the reduction of “market barriers”, it ignores developing countries’ concerns about the barriers associated with intellectual property rights. It rather proposes to “strengthen IPR frameworks” – thereby ensuring that developing countries, after eliminating their own tariffs, would pay full commercial prices for technologies.

The EC Communication seeks to lower rather than raise expectation for enhanced institutional arrangements at Copenhagen by suggesting that a Copenhagen agreement will need to establish a “consultative group” that brings together government, private sector, civil society and other stakeholders’ expertise to provide strategic guidance for research and technology development and international cooperation.

Developing countries, by contrast, have called for a major scaling up of institutions under the UNFCCC, building on the successful experiences of other agreements including the Montreal Protocol, and seeking to spur the revolution in technology development and transfer required to curb global emissions and avoid dangerous climate change.

They have called for a Technology Action Plan addressing all phases of the technology cycle, supported by a new Executive Body on Technology (including a Strategic Planning Committee, a series of technical panels, a verification group and appropriate secretarial support) and funded by a Multilateral Climate Technology Fund. The EC Communication's almost systematic failure to deal with these proposals is disappointing.

Adaptation

The Communication's proposals on mitigation, financing and technology are paralleled by those in the area of adaptation, where it seeks to scale back financial commitments, shift the burden to developing countries and alter the balance of rights and obligations under the UNFCCC.

The UNFCCC calls on all Parties to "cooperate in preparing for adaptation to the impacts of climate change" and the Bali Action Plan calls for enhanced action on adaptation. The Communication, by contrast, suggests that financial and technological support should be provided to the "most vulnerable and poorest" countries.

It seeks then to shift the burden of supplying this support to developing countries and carbon markets through expansion of the Kyoto Protocol's Adaptation Fund, a "solidarity fund" supported not by public funds from developed countries but by a levy on CDM projects in developing countries.

According to the Communication, the Adaptation Fund would be insufficient to support adaptation in all developing countries, requiring innovative funding sources. As in the case of mitigation, developing countries (excepting LDCs and SIDS) would be called on to support innovative financial mechanisms with "increasing contributions over time".

While scaling back and shifting financial commitments, the EC Communication proposes new responsibilities for developing countries through a "framework on adaptation" including recognition of "a need for all to adapt" and a shared "commitment to systematically integrate adaptation into national strategies".³⁰

By converting a right to develop into an obligation to adapt, and transforming "common but differentiated responsibilities" into "shared" ones, it would shift legal as well as practical responsibility for the rising impacts of climate change to developing countries thus limiting Europe's exposure to climate-related claims of cost and damage.

Consistent with these proposals, the EC Communication sets low expectations for enhanced institutional arrangements at Copenhagen by recommending, as its principal vehicle to pool experience on adaptation, "a technical panel", and by saying a "multilateral insurance pool to cover disaster losses should be explored to complement existing funding mechanisms", without actually committing to one.³¹

To enhance actions on adaptation, a group of developing countries have called for a suite of institutions – including a consolidated work programme; support for national planning, technology transfer and capacity-building; a Subsidiary Body on Adaptation; a new Convention Adaptation Fund (including efforts to provide insurance, compensation and risk management components). Again, the EC Communication's failure to engage systematically with the full range of these proposals is disappointing.

Institutional arrangements

The Communication proposes a "Facilitative Mechanism for Mitigation Support" to match proposed developing countries' mitigation action with appropriate bilateral and multilateral support mechanisms, and calls on developing countries to register all autonomous and supported actions in a "registry".

Whereas it proposes robust institutions for the oversight of developing countries, it proposes weak institutions in areas of interest to them, including a "technical panel" for adaptation³², a "consultative group" on technology and a "high-level forum" on finance – effectively talk shops without political power or executive capacity.

Nor does it propose a similar level of oversight of developed countries – oversight warranted by the almost systematic failure by Annex I Parties to demonstrate they are taking the lead in modifying emissions under the UNFCCC or to meet their Kyoto obligations.

To “frontload” financing, the Communication proposes a financial mechanism (termed the Global Climate Financing Mechanism) to deliver around €1 billion to vulnerable and poor countries between 2010 and 2014. While this may be sufficient to acquire the allegiance of some SIDS and LDCs, it is insufficient to meet their needs, would exclude the bulk of developing countries and offers a fraction of UNDP’s estimated \$86 billion required from 2015. As a point of comparison, a single project by one European government – the MOSE project to protect Venice from flooding – is expected to cost over €4.2 billion.

The EC Communication’s low level of ambition for Copenhagen on financing is difficult to reconcile with either current estimates of financial needs for mitigation, adaptation and technology, or with the likely increased needs for support associated with recent scientific information about the scale and pace of climatic changes. Its low level of ambition is confirmed by the draft version of the EC Communication which suggests that “the scale of financial support will need to reach a magnitude up to €30 billion in 2020”, comprising €10 billion in support for adaptation and €20 billion for mitigation. These figures have been removed from the final version of the Communication, which now simply says that “staying below 2°C will require significant financial resources for emission reduction and adaptation”.

The Communication’s institutional proposals stand in stark contrast to those of developing countries, which call for a major scaling up of institutional arrangements under the UNFCCC. To complement institutions for adaptation and technology (noted above), they have called for an enhanced financial mechanism under the Conference of Parties including a Board reflecting an equitable and balanced representation of all Parties, a Fund or Funds (including those for adaptation and technology), a set of expert groups or committees on finance-related issues, a Trustee or Trustees appointed through a process of open bidding, as well as a Secretariat.

Renegotiating the UNFCCC?

In sum, the EC Communication seems focused on redefining the UNFCCC, despite agreement in the Bali Action Plan to launch a process to ensure the “full, effective and sustained implementation of the Convention”.

A careful reading of the Communication reveals an unstated ambition to misstate the findings of the IPCC Fourth Assessment Report to justify inadequate emission reductions for developed countries, to establish significant “residual” commitments for developing countries under the guise of “science”, and to shift the burden of mitigation further to developing countries through the carbon market.

It seems aimed at limiting support for adaptation to a small number of the “most vulnerable and poorest” countries, excluding the bulk of developing countries, burdening them with additional costs through the Kyoto Protocol’s Adaptation Fund, and imposing new legal commitments as part of a “framework for adaptation” that risks shifting the legal and practical burden of adaptation further to the South.

Whereas the Bali Action Plan calls for enhanced action on technology transfer and financing, the Communication is silent on financing for technology transfer, and would scale back financial commitments to cover “supported” but not “autonomous” actions, and fund only those incremental costs “that cannot be sustained by the country itself” where the UNFCCC requires funding for the “agreed full incremental costs”.

It offers weak institutions in areas of interest to the South – for adaptation, technology, finance and oversight of developed countries’ commitments (all four Bali “building blocks”) – while seeking strong oversight of developing countries’ mitigation actions, thus raising questions about the “comprehensiveness” of the EC’s envisaged outcome in Copenhagen.

Many of its proposals – including those on adaptation financing, incremental costs, and the creation of “prerequisites” for access to support – are facially inconsistent with the EU’s existing commitments, and would alter the balance of rights and obligations set out in the 1992 UN Framework Convention on Climate Change.

It is consequently no surprise that the EC Communication calls for a new agreement to lay “the basis for a long-term international framework that raises overall ambition and increases contributions from both developed and developing countries”.

The need for an alternative approach

Experience with other forums, including the World Trade Organization, suggests that a failure to address in earnest the equity and development dimensions of negotiations is a recipe for deadlock and delay. Whereas the world can afford to wait for trade negotiations, climate change waits for no one.

As European Ministers and Heads of State continue to convene around Europe’s climate agenda it is hoped they will craft a fairer and more courageous vision for Copenhagen. One that is capable of galvanizing the international community into undertaking the bold initiatives that are required to support development while shifting economies and societies onto a low-carbon development path.

A more equitable approach is necessary as the scenario offered by the EC Communication – unless substantially revised – will continue a trend of inadequate implementation and broken promises by the developed countries. Developing countries will not, as stated by one prominent official, sign a “suicide pact”. Nor will they consent to any proposal that threatens, rather than supports, their right to development. Or that weakens, rather than strengthens, the UNFCCC. This should come as no surprise.

A more equitable approach is also right; developed countries have the historical responsibility and current capacity to demonstrate that a low-carbon development path is both possible and affordable. They must address climate change through deep reductions at home and through a genuine step-change in efforts abroad to support actions in developing countries.

Getting developing countries to curb their emissions will not be achieved by simply committing them to do so in a new treaty. Or by continuing, with moderate adjustments, business-as-usual. It requires a new order of cooperation that enables and supports them through technology transfer, finance and effective institutions. This has been the approach of other successful treaties, such as the Montreal Protocol.

If climate change truly is the great challenge of our generation, then nothing less than a massive increase in ambition by developed countries, combined with active and honest engagement on issues of concern to developing countries, will create the trust necessary for political consensus in Copenhagen and pave the way for the practical actions required world-wide to bend the curve of our emissions, build resilient communities and countries, and ultimately stabilize the Earth’s climate.

Endnotes

- 1 Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, “*Towards a comprehensive climate change agreement in Copenhagen*”, Brussels, 28 January 2009, COM(2009) 39 final. The Communication is accompanied by additional background information contained in Commission Staff Working Document, SEC (2009) 102.
- 2 Intergovernmental Panel on Climate Change, Fourth Assessment Report, Climate Change 2007: Synthesis Report, Summary for Policymakers, at page 4.
- 3 China, “China’s Further Submission on the Shared Vision for Long-term Cooperative Action” in UNFCCC document FCCC/AWGLCA/2008/Misc.5/Add.2 (Part I) at page 146.
- 4 Intergovernmental Panel on Climate Change, Fourth Assessment Report, Contribution of Working Group III, at page 33.
- 5 See, for example, Ramanathan V, Feng Y, On avoiding dangerous anthropogenic interference with the climate system: Formidable challenges ahead, in *Proceedings of the National Academy of Sciences USA* 105:14245-14250 (2008) (drawing on IPCC estimates of greenhouse forcing and climate sensitivity and recent evidence relating to the “masking” of temperature increases by aerosols).
- 6 AOSIS Submission on Shared Vision to the Chair’s Assembly Document, in FCCC/AWGLCA/2008/Misc.5/Add.2 (Part I) at page 46.
- 7 *Id.*, see also Statement Delivered by the Maldives, Chair of the LDC Group at the Opening Session of Ad-Hoc Working Group on Long-term Cooperative Action, at the Climate Poznan Conference, 1 December 2008, Poznan, Poland.
- 8 *Id.*, at page 47
- 9 Contribution of Working Group III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, Chapter 13, page 776.
- 10 See the Federated States of Micronesia, Submission to the AWG-LCA and to the Chair’s Note summarizing “Ideas and proposals on paragraph 1 of the Bali Action Plan” in FCCC/AWGLCA/2008/Misc.5/Add.2. See also, Paul Baer, Exploring the 2020 global emissions mitigation gap (Dec. 4, 2008) (updates available at www.globalclimatenetwork.com).
- 11 *Id.*
- 12 The Philippines on behalf of the G77 and China, “Submission of the G-77 and China, Contact Group on Mitigation and Means of Implementation” in FCCC/AWGLCA/ 2008/MISC.5/Add.2 (part II) at page 48.
- 13 Statement Delivered by the Maldives, Chair of the LDC Group at the Opening Session of Ad-Hoc Working Group on Long-term Cooperative Action, at the Climate Poznan Conference, 1 December 2008, Poznan, Poland
- 14 AOSIS Submission on Shared Vision to the Chair’s Assembly Document, in FCCC/AWGLCA/2008/Misc.5/Add.2 (Part I) at page 47.
- 15 See, for example, the submissions of Pakistan and the Federated States of Micronesia in FCCC/AWGLCA/2008/Misc.5/Add.2.
- 16 Pakistan also notes that “The quantification of national commitments for developed countries is an issue to be addressed within the AWG-KP and not the AWG-LCA”.
- 17 The report is not directly identified in the EC Communication. The report identified by the European Union at previous UNFCCC meetings to substantiate their proposed 15-30% deviation for developing countries from baseline is, Michel den Elzen & Niklas Hohne, *Reductions of greenhouse gas emissions in Annex I and non-Annex I countries for meeting concentration stabilization targets*, Climate Change (2008) 91:249-274.
- 18 See, for example, the submissions on behalf of Algeria, China, Bolivia and the Federated States of Micronesia in FCCC/AWGLCA/2008/Misc.5/Add.2 (Part I).
- 19 It is also worth noting that studies considered by the IPCC included scenario variants examining emission reductions by Annex I countries of 47% and 50% from 1990 levels by 2020 but these were excluded by IPCC authors as “outliers”. See the Federated States of Micronesia, in FCCC/AWGLCA/2008/Misc.5/Add.2 (Part I). See also See Paul Baer, Exploring the 2020 global emissions mitigation gap (Dec. 4, 2008) (available at www.globalclimatenetwork.com).
- 20 See, Brazil, Proposed Elements of a Protocol to the United Nations Framework Convention on Climate Change, Presented by Brazil in Response to the Berlin Mandate, in FCCC/AGBM/1997/MISC.1/Add.3.
- 21 During the Kyoto Protocol negotiations the concept of a “compensation mechanism” was converted into the Clean Development Mechanism, which, rather than requiring developed countries to meet their emission targets domestically, allowed them to fund emission reduction projects in developing countries. Rather than penalizing Annex I countries for failing to achieve their emission reductions through domestic action, it created a vehicle for them to achieve their emission reductions abroad.
- 22 See, Report of the Subsidiary Body for Scientific and Technological Advice on its twenty-eighth session, held in Bonn from 4 to 13 June 2008, (FCCC/SBSTA/2008/6) at page 19.

- 23 See China, “China’s Further Submission on the Shared Vision for Long-term Cooperative Action” in UNFCCC document FCCC/AWGLCA/2008/Misc.5/Add.2 (Part I) at page 146. See also, China’s presentation to the Workshop on Shared Vision for Long Term Cooperative Action held in Poznan, Poland available at http://unfccc.int/meetings/ad_hoc_working_groups/lca/items/4668.php
- 24 See Algeria, An equity-oriented proposal for a shared vision for long term cooperative action, in FCCC/AWGLCA/2008/Misc.5/Add.2 (Part I) at page 7.
- 25 Michel den Elzen & Niklas Hohne, *Reductions of greenhouse gas emissions in Annex I and non-Annex I countries for meeting concentration stabilization targets*, *Climate Change* (2008) 91:249-274 (stating “The ranges given in the box [13.7 of IPCC Fourth Assessment Report, Contribution of Working Group III] and in this paper are assumed to be achieved domestically by both groups of countries. If Annex I countries plan to achieve a part of their emission targets outside of their territory, through credit transfer mechanisms such as the CDM, then first the ranges presented in the box and in this paper would have to be achieved and the credit transfers would have to occur in addition”) at page 271.
- 26 This is illustrated in Figures 1 and 2 of the EC Communication, which also states that the 15-30% reduction from baseline proposal “exclude the impact of reductions that result in the transfer of carbon credits to developed countries as illustrated in Figure 2” (see page 5).
- 27 See EU Parliament Decision P_6TC1-COD (2008) 0014 and Directive 2003/87/EC establishing the European Union Greenhouse Gas Emission Trading Scheme.
- 28 The term “equity” is used only once in the whole body of the EC Communication, as part of a list of seven criteria of relevance to the international financial architecture to support efforts to tackle climate change. No reference in relation to mitigation is made to the principles of equity or of common but differentiated responsibilities.
- 29 UNFCCC, Article 4.7.
- 30 The draft EC Communication used the phrase “commitment to adapt” where the final document uses the phrase “a need for all to adapt”.
- 31 The EC Communication also proposes a “frontloading” Global Climate Financing Mechanism to be supported by EU Member States to “allow for an immediate reaction to urgent adaptation needs with a high return such as disaster risk reduction”, which is discussed below under the heading “Finance”.
- 32 It also suggests that a multilateral insurance pool to cover disaster losses “should be explored” to complement existing funding mechanisms, without committing to one.

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