



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

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AND
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Differences in emphasis as new round of climate talks start

Bonn, 3 June (Lim Li Lin) – Significant differences of emphasis between developed and developing countries were evident when the UN Framework Convention on Climate Change (UNFCCC) started its set of meetings in Bonn on Monday (2 June).

The most high-profile of the meetings of the UNFCCC's subsidiary bodies is the second session of the Ad Hoc Working Group on Long-Term Cooperative Action (AWG-LCA). The AWG-LCA is the body under the UNFCCC tasked with following up on the Bali Action Plan, which was launched at Bali last December to "enable the full, effective and sustained implementation of the Convention", and which should reach an agreed outcome at the end of 2009.

At the opening session of the AWG-LCA, several developed countries gave hints that their priority is to get developing countries – or at least major ones among them – to enter some kind of commitments or obligations, beyond what is now mandated by the UNFCCC or its Kyoto Protocol.

Canada talked about the mitigation obligations of "major emitters", while New Zealand spoke of "all major economies" and Australia spoke of mitigation by "all countries." Japan stressed its "sectoral approach" (which developing countries are opposed to because they think it could lead to trade protectionist measures) and again suggested a committee to look at "legal issues."

Most developing countries that spoke stressed instead on the need for developed countries to implement their commitments to reduce their own emissions and to assist developing countries through finance and technology. China called for discussions to focus only on the core elements of the Bali Action Plan. India also asked for the Plan's five elements to be discussed instead of introducing new concepts, pointing out that there is no definition of "major emitters" or "sectoral approaches."

The 'Bali Action Plan', is the decision that launched the AWG-LCA process. It contains five elements: a "shared vision for long-term cooperative action, including a long-term global goal for emission reductions", enhanced action on mitigation of climate change, enhanced action on adaptation, enhanced action on technology development and transfer to support action on mitigation and adaptation, and enhanced action on the provision of financial resources and investment to support action on mitigation and adaptation and technology cooperation.

Ambassador Byron Blake of Antigua and Barbuda, speaking on behalf of G77 and China, stressed that the AWG-LCA does not replace other processes under the Convention, but builds upon and complements them. He stressed the urgency of the work that needs to be done and the special needs and circumstance of the most vulnerable countries and groups that are vulnerable to the adverse effects of climate change.

He emphasized that the work must be guided by the principles of the Convention, in particular, that it must be on the basis of equity and in accordance with common but differentiated responsibilities and respective capabilities. In this regard, developed country Parties should take the lead in combating climate change and the adverse effects.

Slovenia, speaking on behalf of the European Union, emphasized seeking progress on all the building blocks of the Bali Action Plan in a parallel way while addressing the strong interlinkages between them.

At the first session of the AWG-LCA in April, it was agreed that all the "building blocks" or elements of the Bali Action Plan would be on the agenda at each session of the AWG-LCA.

The EU also stressed the necessity to progress on an overarching “shared vision” of the future, which will help express a “long-term level of ambition, and provide for guidance for considering low-carbon and climate-safe development paths that will get us there”.

Barbados, speaking on behalf of the Alliance of Small Island Developing States (AOSIS), addressed the five elements of the Bali Action Plan. On the “shared vision”, it said that during 2008, the AWG-LCA should come to a common understanding on the possible elements of a “shared vision”, and that the avoidance of further climate change impacts on small island developing states (SIDS) must be one of the key benchmarks for assessing the appropriateness of any long-term goal.

On mitigation, Barbados made the point that “less mitigation will require more adaptation”, and that it is essential to look at the relationship between global investments in mitigation activities and impacts in this light.

On adaptation, it called for the full cost of adaptation measures to be provided for SIDS and other vulnerable countries. The costs of adaptation are not only economic, but social, environmental, cultural, human and political. It wanted a “Stern-type” report for SIDS, to examine the socio-economic and political costs in SIDS if the international community fails to address climate change in line with the science.

Where adaptation cannot fully address the impacts of climate change, the impacted countries should be able to seek compensation from those countries most responsible for the greenhouse gas (GHG) emissions. It proposed the establishment of an International Insurance Mechanism to help SIDS manage the financial risks from climate change impacts and assist in the rapid recovery and rehabilitation from climate-related extreme weather events.

On technology development and transfer, it said that renewable energy and energy efficiency policies and measures should form the central pillars of the Convention’s future climate mitigation strategy, and expanding access to these technologies should be the key strategy for engaging developing countries in mitigation efforts. Adaptation technologies should be appropriate to the needs and requirements of SIDS, and access to them needs to be significantly improved.

It said that the lack of adequate financing for adaptation is one of the major failings of the Convention process, as funding for adaptation has been almost completely eroded. A clear distinction

has to be made between financing for mitigation and adaptation.

It proposed the establishment of a Convention Adaptation Fund which would complement the Kyoto Protocol’s Adaptation Fund, and which is linked to GHG emissions, consistent with the ‘polluter pays’ principle. It also identified ten priorities for AOSIS, including that funding for adaptation through new initiatives should be channeled through the Convention process.

Maldives, on behalf of the least developed countries (LDCs,) called for reduction targets of GHG emissions on a global scale. It stressed the special needs and special situations of LDCs and the importance of adaptation. It raised serious concern about the level of funding for adaptation and called for innovative funding for adaptation.

On behalf of the Africa Group, Algeria asked what will a realistic yet ambitious package for post-2012 look like, and how will we get there?

Australia, on behalf of the Umbrella Group, stressed that mitigation action must be taken by all countries, according to their national circumstances. It stressed the importance of the long-term global goal.

Canada said that the AWG-LCA, the Ad Hoc Working Group on Further Commitments for Annex 1 Parties under the Kyoto Protocol (AWG-KP), and the 2nd review of the Kyoto Protocol are all key elements of the ‘Bali Road Map’ that will feed into the post-2012 agreement, and which should be guided by a long-term global goal.

It stressed that all “major emitting economies” should take binding action. For the work programme for 2009, substantive work needs to be done on mitigation, and workshops should be held on “comparability of efforts”, “measurement, reporting and verification”, legal issues, the aviation and maritime sectors, land use, land use change and forestry (LULUCF), and “shared vision”.

The long-term global goal must be global in its scale and application. It is a priority and a key element which is critical to the success of the agreement. Mitigation actions should be taken by all countries, and there should be strong action by all major emitters.

It said that while there has been less attention on adaptation, there could be a shared vision on adaptation which includes its relationship with disaster risk reduction. Financial flows need to be optimized and mobilized, but they cannot be discussed until the “measurable, reportable and verifiable” commitments by major emitters are understood.

Japan said that the long-term global goal must be set, and that global emissions must peak in 10 to 20 years, and be reduced by half in 2050, but that the “shared vision” must be non-binding. All countries should take mitigation actions in accordance with their respective capabilities.

It said that sectoral approaches could be a methodology for setting targets, but that they did not replace quantified national emissions reduction targets, and do not apply uniformly across all countries.

It identified four areas of importance: “shared vision”, “comparability of efforts” by developed countries, “measurable, reportable and verifiable” action by developing countries, and sectoral approaches. It suggested that an expert group on the AWG-LCA be launched this year to deal with cross cutting issues, and that a roundtable should also be held on legal issues of the AWG-LCA.

China, represented by Mr. Su Wei, stressed that the task of the AWG-LCA was clear and straightforward and that it should focus on finance, technology, mitigation and adaptation. Developed countries must undertake more commitments with regards to GHG emissions, while providing for technology transfer and finance to developing countries.

China said that within the framework of sustainable development, and with the support of developed countries, developing countries adopt effective measures for mitigation and adaptation. It emphasized that these are the core elements of the Bali Action Plan and that negotiations should focus on these four core issues.

The US highlighted three cross cutting points: that the agreements must be practical, simple, and attractive to a wide range of Parties; that the world

has evolved rapidly since 1990 and that a global response is needed that must reflect these realities; and that much work has already been undertaken on adaptation, finance and technology.

New Zealand also emphasized that work should be done on “measurement, reporting and verification”, on the “shared vision” and on the long-term global goals, and that this is a priority and deserves early attention, and should cover all major economies.

Saudi Arabia emphasized that transparency in the process was very important and necessary to make it possible to move back towards trust which was at the lowest possible ebb at this point in time. He said that one of the key issues was the social and economic changes in developing countries that depend on the export of fossil fuels, and proposed that this could be brought into the work programme for 2009.

It requested the Secretariat to be more cautious when making statements. For example, the Secretariat personnel had made speeches at various meetings, which could lead to misunderstandings and did not help the process. For example, a staff member had said that biofuels could be a useful alternative in the future. But this was still being negotiated, and such statements by the Secretariat could give the wrong impression and undermine the negotiations underway. They should not give the impression that something is concluded when it is still under negotiation.

India, responding to the statements made by some developed countries, stressed that the work should focus on the five pillars, instead of introducing new concepts. It pointed out that there is no definition of “major emitters” or “sectoral approaches.”

Developing countries concerned at slow pace of Kyoto talks

Bonn 3 June (Meena Raman) – Developing countries expressed disappointment at the slow pace of progress on negotiations to determine the rate of cuts of greenhouse gases by developed countries in a second commitment period under the Kyoto Protocol, after the first period ends in 2012.

The negotiations re-started on 2 June in Bonn as the Ad Hoc Working Group on Further Commitments for Annex 1 Parties under the Kyoto Protocol (AWG-KP) resumed the second part of its fifth session.

The first part of its fifth session was held in Bangkok from 31 March to 4 April. The AWG-KP was established to negotiate the further commitments for the Annex 1 parties (comprising developed countries) to reduce their emissions of greenhouse gases for the period following the expiry of the first commitment period under the Protocol from 2008 to 2012.

Mr. Harald Dovland of Norway, the Chair of the AWG, opened the session by recalling some of the main conclusions of the session in Bangkok. He said that the AWG agreed that emissions trading and the project-based mechanisms under the Kyoto Protocol should continue to be available for Annex 1 parties as means to meet their emission reduction targets and could be appropriately improved. This is an important signal to the carbon markets.

He added that the AWG-KP had also agreed that measures to limit or reduce greenhouse gas emissions and to enhance removals resulting from anthropogenic land use, land-use change and forestry (LULUCF) activities should continue to be available to Annex 1 parties as means to reach their emission reduction targets. He said that the AWG should complete its work by 2009 where conclusions will be submitted for decisions to be adopted by the Conference of Parties.

Ambassador Byron Blake, speaking on behalf of the G77 and China, said that the group had ex-

pressed its deep concerns in Bangkok that the discussions have not yet begun to focus on the quantified emission limitation and reduction objectives of Annex 1 parties. “In this regard, we urge parties to focus on the legal mandate of Article 3.9, which is to set further quantified emission reduction commitments for Annex 1 parties for the second and subsequent commitment periods,” he said.

“In order to ensure the continuity of the Kyoto Protocol and the integrity of the international climate regime, it is vital that these negotiations are completed well before the expiry of the first commitment period. Considering the length of time needed by countries to ratify amendments, we would reiterate the importance of urgently completing the negotiation of Annex 1 party commitments for the second commitment period at the latest by 2009.”

He added that in this process, it will be important to take into account potential environmental, social and economic consequences including spillover effects (as a result of emission reduction targets). “We expect the outcome of our discussions here in Bonn must make significant contribution to the setting of deep and ambitious quantified emission reduction commitments for Annex 1 parties”.

Algeria, speaking for the African Group, emphasized that Annex 1 parties need to reduce their emissions fast and deep enough to allow an equitable share of emissions by non-Annex 1 parties, who are still in the process of developing to meet the basic needs of their people. It said that the following is expected from the current session:

- Inclusion of further work on bringing deforestation and forest degradation into the negotiations.
- Annex 1 parties to take ambitious quantified emission limitation targets in the 2nd commitment period, at least in the range of 25 to 40% below 1990 levels by 2020.
- Ambitious legally binding commitments in

the second commitment period by all developed countries are important to send a signal on the continuation, the strengthening and the stabilisation of the carbon market.

- Commitments from Annex 1 parties to fund Clean Development Mechanism projects in African countries.

Tuvalu, speaking on behalf of the Alliance of Small Island States, said that actions taken under further commitments for Annex 1 parties must be predicated on ensuring that long-term temperature increases must peak well below 2 degrees Celsius.

“Recent scientific studies suggest that the upper safe limit for atmospheric carbon dioxide must not exceed 350 ppm. Therefore, we must ensure that actions to reduce emissions must bring us back to these levels as quickly as possible before we reach a tipping point that will have catastrophic effects.”

Tuvalu said that emission reduction commitments taken by Annex 1 parties must be on the basis of nation-wide targets, which are based on historical emissions. Further, work under this AWG should be completed by 2009.

In response to emissions trading and the project-based mechanism, Tuvalu said that use of the mechanisms must be supplemental to domestic action. On greenhouse gases, Tuvalu said that as regards new sectors, “we note the limited progress being made in the context of international aviation and maritime transport and believe that the Kyoto Protocol can lend momentum to measures that will

address emissions from these sources.” However, it stressed that any actions associated with addressing these sectors should not economically disadvantage island economies.

Tuvalu also drew attention to the fact that a large number of meetings are being conducted during the coming two weeks. This makes it very difficult for small delegations to effectively participate.

Maldives speaking for the LDCs appealed for deep and ambitious cuts by Annex 1 parties in their emissions target.

Slovenia, speaking for the EC, welcomed the discussions in Bangkok. It said that the EU will show real leadership for strengthened commitments on the part of the Annex 1 countries.

China stressed that commitments of Annex 1 countries to undertake quantified emission reduction targets in the second commitment period are a legal obligation that will have an impact on future international cooperation. It was concerned about the lack of progress in this regard. China also expressed dissatisfaction with some parties introducing unrelated matters to the discussions.

The AWG then proceeded to a roundtable discussion on the means to reach emission reduction targets on the part of the Annex 1 countries. The roundtable was organised into 3 panel discussions on emissions trading and project-based mechanisms; land use, land use change and forestry; and possible approaches targeting sectoral emissions and greenhouse gases, sectors and source categories. The round-table discussions are to continue on 3 June.

South concerned North trying to divert from emission commitment

Bonn, 4 June (Hira Jhamtani) – At the climate talks taking place in Bonn, developing countries have called on developed countries not to divert focus from their achieving real reduction in emission of greenhouse gases (GHG) for the second commitment period under the Kyoto Protocol (KP) of the UN Framework Convention on Climate Change (UNFCCC).

In a roundtable discussion, many developing countries voiced concern that under the current discussion in the Kyoto Protocol, the developed countries are trying to get developing countries to enter new obligations that were not mandated.

They are concerned this is being attempted through introducing a cross-border “sectoral approach” (that would set technology standards that would also apply to developing countries) and through standards of emissions in the aviation and maritime industries.

Under Article 3.9 of the KP, developed countries (listed in Annex 1) are to commit to binding emission targets. In the first commitment period, ending 2012, the overall emission target is 5%.

The Ad Hoc Working Group on Further Commitments for Annex 1 Parties under the Kyoto Protocol (AWG-KP) is tasked with deciding on the second commitment period, including on the percentage of emission reduction and how to achieve that reduction.

At a round table discussion on 2-3 June to discuss the means to reach reduction targets, some developing countries repeatedly stressed the need not to divert the focus of the mandate of Article 3.9 of the KP or to dilute commitments for increased emission reduction, by introducing new issues, such as the sectoral approach.

The roundtable discussed three issues: (1) emissions trading and project-based mechanism; (2) land use, land use change and forestry (LULUCF); and

(3) possible approaches targeting sectoral emissions and greenhouse gases, sectors and source categories.

On the first issue, Duan Maosheng of China said the Clean Development Mechanism (CDM), as one of the means to reach emission reduction, faces challenges such as low efficiency, increasing rate of registration, complicated methodological requirements and uncertainties regarding market demand and price. It also provides very limited contribution to technology transfer, i.e. less than half of the projects, as reported by the secretariat.

There is a need for a more efficient, equitable, transparent and simplified mechanism, as well as greater technology transfer. Deeper mitigation commitments by developed countries can create more carbon market demand. Duan outlined a proposal for clearer methodological requirements, adjustment of additionality test for certain types of technology such as wind power. He stressed that the CDM should be only a supplement to domestic mitigation actions by developed countries and should be project-based rather than using the sectoral approach.

Phil Gurnsey from New Zealand said there are problems with the international carbon market such as in project risk and lack of “fungibility”. The CDM should move away from the project-based mechanism to sectoral approaches. Introducing levies on emission trading (ET) and joint implementation (JI) would not provide a predictable flow of funding for adaptation. (At the moment only the CDM is subject to a 2% levy for the KP adaptation fund; CDM, ET and JI are three flexibility mechanisms under the Kyoto Protocol to help Annex 1 countries achieve emission reduction.)

The EU panelist Artur Runge-Metzger said the carbon market is a key instrument to achieve mitigation objectives. The EU is looking for ways to

achieve a broad, deep and liquid global market to deliver cost-efficient emission reductions and a transition towards a low-carbon economy.

This should be driven by binding caps on emissions in Annex 1 countries, conform the reductions needed to keep global temperature within a 2-degree limit and therefore it supported the focus range of 25-40% reduction commitments by developed countries in aggregate below the 1990 levels by 2020. A high level of ambition is key to ensuring a balance of supply and demand of tradable units which is to ensure a robust price.

He said that realizing this vision will require progressive transformation of the market from being based on offsetting mechanisms such as the CDM towards programmatic and sectoral mechanisms, followed ultimately by the cap and trade system in key sectors in major developing countries.

However, the carbon market may not be the most effective at delivering investment to some sectors, and needs to be complemented by other instruments. The EU also believes that the project-based mechanisms JI and CDM should continue beyond 2012. Both are important tools through which Annex 1 countries can contribute to sustainable development and technology transfer while creating flexibility in terms of achieving emission reduction. The role of the CDM in LDCs should also be promoted.

During the debate, many countries expressed disappointment at the absence of a panelist from Africa. Some developing countries agreed with China on the need to improve the CDM process. Bolivia and Burkina Faso said there is a need for equitable regional distribution of CDM projects, and also consideration of some sectors that have not been included properly such as LULUCF and Forests. They do not support a sectoral approach at this stage.

Ethiopia reminded that the CDM is meant to assist non-Annex 1 countries to foster sustainable development. Therefore there is a need to involve LDCs more and to recognize the comparative advantage of those countries in afforestation and reforestation. To this New Zealand replied that the CDM is aimed to create cost efficiency for developed countries, not to achieve regional distribution.

On this point, South Africa said that while they agree with the need to improve the CDM and the equitable regional distribution of projects, this is a discussion on the mechanisms to achieve emission reduction, of which the CDM is supplementary. While the CDM must be improved, there should be more discussion on Article 3.9.

South Africa also disagreed with New Zealand that said that putting levy on proceeds of JI and ET

is unpredictable and unsustainable. It asked the EU panelist to clarify what he meant by “major developing economies” as the term is not used in the convention.

The EU acknowledged that the term “major developing economies” is not in the convention. The context is that ultimately for the carbon market mechanism, it is clear that developing countries have differences, just as in the EU there are poorer countries and richer countries. This question must be tackled beyond the AWG-KP and needs to be discussed in the coming days, he said.

Canada said there is a need to revisit the three Kyoto mechanisms. For example rules on ET are needed, also linkages within and outside UNFCCC. Rules and whether they should be changed for the project-based mechanism need to be revisited for the post-2012 period. Canada said that the governance structure also needs to be revisited due to the high expectations.

The need to “change rules” was echoed during the discussion on LULUCF. Many developed countries such as Australia, Canada, and the EU, said that the potential for the capacity of LULUCF to reduce emission is great and thus it is important to apply this as one of the means to reach emission reduction. The rules need to be clear before they make commitments. In contrast, Ian Fry from Tuvalu argued that Articles 3.3 and 3.4 of the Protocol which deal with LULUCF should not be changed.

Tony Lempriere from Canada said that there is a need to focus on anthropogenic emissions and removals in terms of LULUCF, i.e. that sometimes forests are damaged through non-anthropogenic causes such as fire and pest attack. Canada said the rules should provide incentives and a range of options about how LULUCF can help reduce emissions.

Before any commitment is made there is a need to establish a “business as usual” baseline, reflect the natural disturbances and how management intervention can provide future sinks through managed forests. Then a new baseline should be set, using proper accounting on human management of managed forests. The important thing is the human management factor. This will be complex, said Canada.

Echoing the potentials of LULUCF for mitigation, Gregory Tucker from Australia said that rules on LULUCF should be clear for developing and developed countries and the need to link it to the AWG-LCA. There is a question of whether there should be new rules or a change in the structure to ensure that the potentials of LULUCF in emission reduction are realized.

Jim Penman from the EU said that quantified

emission limitation and reduction commitments were agreed at Kyoto with LULUCF as an additional flexibility to help fulfil those commitments. But this was agreed before the scope of LULUCF activities was agreed. The current provisions tend to limit potential incentives for Parties to protect and develop their carbon stock in forests, agricultural lands and grass lands as well as to use wood sustainably as a biomaterial and a source of energy.

There is now an opportunity to reverse the situation, i.e. make the rules first before agreeing to a commitment to emission reduction. This time LULUCF accounting rules can be integrated into the climate regime from the beginning so as to allow developed countries to incentivise additional anthropogenic mitigation actions while avoiding perverse incentives. LULUCF should take into account four activities: forest management, cropland management, grazing land management, and revegetation/devegetation as covered in Article 3.4 of the KP.

During the debate developed countries such as Norway and New Zealand added on the arguments for what is termed as “expanding LULUCF activities in a holistic, inclusive approach”. According to Norway, holistic means full coverage of activities, link to agriculture and is based on sound accounting rules. New Zealand suggested a two-track approach for the negotiation i.e. revise existing rules with modification, while identifying gaps and then creating entirely new rules based on identification and prioritization on the needs.

Developing countries such as China, India and Brazil provided strong counter-arguments. China said the negotiations on LULUCF for the first commitment period lasted seven years. In the CDM, there has been no progress scientifically in factoring out anthropogenic mitigation actions in LULUCF. We do not have the time now, therefore, to modify rules. The second period of commitment should be compatible to the rules during the first commitment period rather than complicate matters.

India said the LULUCF discussions should not be used to dilute the commitment of Annex 1 countries in reducing emission in the energy and transport sectors. LULUCF will face the issue of permanence in the same way that is being faced in the CDM for forests. The treatment should not be different. The emphasis of Annex 1 countries on LULUCF should also be done carefully by looking into possible impacts on the global food supply. Caution must be taken in increasing the LULUCF activities to help emission reduction.

Brazil complained about the unbalanced representation of the panelists. The Chair of the AWG-KP, Harald Dovland from Norway, agreed that has

happened and that it was beyond his control and that he is also disappointed.

Brazil said during 1990-2005, according to UNFCCC data, there is a 0.5% increase of emission in Annex 1 countries from the energy sector. So people seem to be diverting from the main focus. There is a lot of talk about how the LULUCF sector accounts for 20% of global emission, but that means 80% still comes from energy and transport and industrial sectors. Expanding the LULUCF activities may appear to be a significant effort to decrease emission when in effect this would be temporary due to the impermanence of the forests and the occurrence of disturbances, which would increase with the climate change situation.

Brazil said they are unhappy with the existing rules already, and warned that LULUCF expansion should not be used to divert focus from what needs to be done. We need to understand better the non-fungibility between forests and emission reduction. Brazil proposed that improvement be made on the present rules. There is currently no guideline or best practice model to be used. Annex 1 countries want rules, we also want to have the same based on best practices.

In response, Picker from Australia defended the Annex 1 countries by saying that for the post-2012 period there is a need for certainty on how to take the rules forward. India and Brazil’s impression is that the developed countries are using LULUCF activities as a “get out of jail free card”. He assured them that is not so. They just want to agree on rules first before making commitments.

Also, the AWG-KP is about Annex 1 countries and therefore there is a need to link it to the AWG-LCA, so that rules may be consistent across countries. The EU objected to being accused of diverting focus.

Ian Fry from Tuvalu said they seemed to be playing a “snakes and ladders” game. We have spent a lot of time talking about current rules, do we want new rules?

Some developing countries felt that another effort to divert from the real focus of the work of AWG-KP is through the discussion on sectoral approaches and emissions from international air and maritime transport.

The roundtable on the third issue was kicked off by Shuichi Takano from Japan, who showed a chart on the sectoral approach. According to him there are two broad categories. First is domestic target setting through effective estimation of economy-wide emission by accumulating sector-based mitigation potentials which could be materialized using best available technologies (BATs) or best practices

(BPs).

The second part is an internationally cooperative sectoral approach, which is mitigation by sector-based actions by cross-border sharing of BATs and BPs in accordance with common but differentiated responsibility. Takano said through this, we use equitable means to compare efforts by each country under objective standards, which is useful in dealing with carbon leakage.

He added that there is however a need to account for the costs and capability of each country. The sectoral approach will start with key sub-sectors, mentioning coal-fired power generation (which contributes 70% of the power sector emission), steel and cement industries (which contribute 50% of the industrial sector emission) and road transportation which contributes 70% emission from the transport sector.

He said Japan believes the work of the International Civil Aviation Organization (ICAO) and the International Maritime Organization (IMO) should be to facilitate finding global solutions in the international aviation and shipping sectors. Japan thinks that mitigation on international aviation and marine bunker fuel is very important. ICAO has a program of action that looks at fuel efficiency while IMO is developing a program to establish a framework to mitigate international shipping.

Marit Petterson from Norway said that emissions from international aviation and maritime transport are not covered in Annex 1 commitments but Article 2.2 of the Kyoto Protocol says that Annex 1 shall pursue limitation or reduction of emissions of GHGs not controlled by the Montreal Protocol from aviation and bunker fuels, working through ICAO and IMO.

She said that under ICAO and IMO there is no discrimination and no more favourable treatment of ships. Thus these two organizations can help in emission reduction, with a cap under the UNFCCC and a legally-binding, market-based mechanism to undertake the action. Petterson said that while 85% of ships are registered in developing countries, they are owned by developed countries, so developing countries might not be disadvantaged. She said IMO can establish a regulatory framework while a global sectoral approach can be under the AWG-LCA by establishing a cap.

Jose Romero, an expert from Switzerland, said that sectoral targets can be kept separate or integrated in national targets.

Another panelist, Harald Winkler from South Africa, said there seems to be two conceptual distinctions. Do we talk about efforts or agreements? Do we discuss domestic measures or transnational

measures? A domestic sectoral approach is distinct from an international approach. The AWG-KP should not distract from the central factor, i.e. for Annex 1 countries to reduce emissions, not to create a new transnational agreement. The sectoral approach for Annex 1 countries in this manner can be useful, but not to undermine equity and the CDR (common but differentiated responsibility) principle.

He added that the sectoral approach should not be used to impose trade sanctions. The bottom-up sectoral approach may be used by Annex 1 countries, but a cooperative sectoral approach should not be the focus of discussion. If Annex 1 parties want to help developing countries, the key is in finance and technology under discussion in AWG-LCA.

During the debate, Argentina said it is ready to discuss the issues of international aviation and maritime transport. But the work with IMO should be on a cooperation basis, with provision of balanced information. In the KP there is currently no agreement on maritime emission. But there is an agreement for Annex 1 countries to reduce emission. A discussion on maritime emission must be done without jeopardizing food supply. Currently, a large part of international shipping involves transporting raw materials for food production. Finally any rules on maritime emission must not undermine the KP, and should not be outside the current climate regime.

Saudi Arabia said the sectoral approach is too big an issue for the group to discuss. This group has the mandate to discuss emission reduction as under the KP, and there is no other agenda item. He reminded that Article 2.2 of the KP mandates “working through ICAO and IMO” for Annex 1 countries. The discussion of emission reduction from international transport must take into account the concerns of developing countries.

Indonesia asked Japan how it intended to link the CDR principle with the sectoral approach. To this Japan replied that it is through cooperation in transferring best available technology, giving the example of coal-fire power generation.

India said the sectoral approach should not be used to dilute deeper cuts but to meet the commitment of Annex 1 countries. It should not be used to restrict technology development in developing countries. There should not be an attempt to set standards for all countries. The sectoral approach should not be used in the national context.

Brazil said the sectoral approach should only be used for Annex 1 countries and it should not be a substitute for their national target. It also expressed concerns that the IMO is working on global standards for emission in the shipping sector, which is clearly overstepping its mandate. It should not regu-

late emissions, but should work with the UNFCCC to help Annex 1 countries.

China also said that the task of the group is to discuss commitments of Annex 1 countries, and it should not overstep that mandate. The UNFCCC and KP are the basic framework to deal with any climate change issues. It voiced concerns about the IMO setting emission standards. China said a lot of the emission increases in Annex 1 countries are from energy and domestic transport and these two sectors should be the focus for reduction in the second period of commitment.

Panama was most concerned about emissions from maritime transport as 25% of the flags of shipping are located in Panama, due to its geographic location. It said the flag country should not be held responsible for GHG emissions, as responsibility

should lie with the owners of the ships.

Petterson from Norway responded by saying the flag country would not be responsible, but rather the owner. She said that Article 2.2. of the KP is indeed ambiguous but that there is an understanding that only Annex 1 countries would work through ICAO and IMO to discuss the emissions from international transport. However, there is a need for clear language as to who Article 2.2 applies to.

She added that the emission from international transport should have a global coverage and the UNFCCC should adopt a target in line with discussion at AWG-LCA and Article 2.2. of the KP.

The roundtable closed with the Chair saying he would provide a summary and then will form contact groups. The groups are expected to produce papers with elements to be discussed during the next climate change talks in Ghana.

Developing countries call for new technology transfer mechanism

Bonn 5 June (Meena Raman) – Major developing countries have called for the creation of an international mechanism under the UN Framework Convention on Climate Change aimed at operationalising the transfer technology to developing countries and also assist them in adapting or developing technologies of their own to address climate change.

Concrete proposals were presented among others by China, Brazil, Ghana, India, Pakistan and Bangladesh (on behalf of LDCs) on barriers to technology transfer and the measures and institutional mechanisms for overcoming these, at a roundtable discussion at a meeting of the UNFCCC held in Bonn on 3 June.

The countries were addressing the issue of how best to accelerate, deploy, diffuse and transfer affordable, environmentally sound technologies from developed to developing countries to address the challenge of climate change. Technology transfer is one of the two main commitments that developed countries have made to developing countries under the UNFCCC, as well as the Bali Action Plan, the other being transfer of financial resources.

While most of the developing countries highlighted the need to address the effects of intellectual property on access to technology, and the need for government and international actions, major developed countries instead stressed the importance of intellectual property rights (IPRs) and asked developing countries to create a favourable environment to attract the private sector to invest and transfer technology. The US saw IPRs as strengthening access to technology instead of a barrier.

Parties at the Ad Hoc Working Group on Long-term Cooperative Action (AWG-LCA) were exchanging views at the workshop to consider effective mechanisms and enhanced means for the removal of obstacles to, and provision of, financial and other incentives for scaling up of the develop-

ment and transfer of technology to developing country parties.

According to the note by the Chair of the AWG-LCA, Luiz Machado of Brazil, the objective of the workshop was to deepen understanding and clarify elements contained in the Bali Action Plan. The interactive exchange is to contribute to the emergence of a common understanding of what needs to be negotiated in order to reach an agreed outcome.

China proposed an innovative international mechanism for the development and transfer of environmentally sound technologies (ESTs). The mechanism would comprise an institutional arrangement, an innovative financial mechanism, and performance assessment and monitoring.

It said that ESTs may only be effective when they work as a whole package which include hardware (devices, equipment, process and complementary technological system etc); software (awareness, knowledge, information, know-how, intellectual property rights, designs etc); human resources; financial resources to make development, diffusion and transfer happen and an enabling environment (regulatory framework by both developed and developing countries, appropriate institutional arrangement and infrastructure).

An innovative mechanism is needed to implement the technology transfer obligations under the Convention as well as the Bali Action Plan, as little progress has been made on this issue. The barriers to technology transfer need to be overcome, as ESTs play a crucial role. The development, diffusion and transfer of ESTs need to be speeded up to meet the challenge of climate change, said China.

It proposed that an intergovernmental body under the UNFCCC should be set up which would be implementation oriented and operational in focus. It would provide guidance, advice and recommendations; coordinate actions by different interna-

tional stakeholders as well as governments; guide and supervise the utilization of a special technology transfer fund which would be based on public finance; promote communication and information and knowledge sharing; and monitor and assess the performance and progress of technology transfer.

It proposed that the intergovernmental body under the UNFCCC could be a Subsidiary Body on the Development, Diffusion and Transfer of ESTs. Under this body would be a Strategic Planning Committee which would relate to a number of panels, including a technology needs assessment and information panel, intellectual property rights coordination panel, enabling policy panel, financial panel, capacity building panel, and monitoring and assessment panel.

It said that priority should be on policy dialogue, coordination for better incentives to the private sector and markets, financing basic research and development, and direct transfer and diffusion of publicly owned technologies.

China proposed the establishment of a Multilateral Technology Acquisition Fund (MFTA) for climate technologies. It said that the fund could be based on a public/private partnership framework for financing of the development, diffusion and transfer of ESTs by linking public and private sector finance. A significant amount of public finance from developed countries should play a leading role in guiding and attracting private financial resources, it said.

Public finance from developed countries can be sourced from research and development budgets, revenue from energy and environmental taxes and revenue from auction of carbon credits.

Among the incentives for the private sector, China proposed policy instruments such as tax exemptions for EST exports of companies in developed countries; subsidies to encourage research and development and transfer of ESTs; favourable conditions for EST-related export credits, subsidies etc. It also said that there should be removal of technology export bans and other regulations, policies and measures. Venture capital might be a typical form for private investment in ESTs.

China also proposed a system of performance assessment and monitoring on the speed of technology flows (to avoid lock-in effects of technology choices now being made in developing countries, and the needed time for innovation, research and development and diffusion of technologies) and the range of technology flows (which should cover most of the meaningful sectors with larger market share and penetration). It should also cover the effective-

ness in terms of emission reductions, access to affordable and least cost technologies, and expected benefits.

Brazil also called for a “coherent and comprehensive instrument” for technology development and transfer, under the UNFCCC. This could be a Technology Protocol or other approaches.

Giving the rationale for this proposal, Brazil said there was a need for a technology revolution, given the urgent challenges faced by developing countries due to climate change. Given the extraordinary challenges, it said that it is important to act clearly beyond the “business as usual scenario” and that there is need for a “beyond the box” approach.

Brazil spoke about existing technologies that are not under patents and that are patented, and about new technologies which need to be developed. It said it was necessary to identify and assess existing technologies to support action on mitigation and adaptation.

Multilateral funding to disseminate existing technologies, including those where the patents have expired, is needed. It called for the promotion of capacity building and dissemination of know-how to adapt, use and develop technologies, experience and equipments for mitigating and adapting to climate change.

As regards patented technologies, Brazil proposed a public multilateral fund for purchasing licences with a view to facilitate transfer. It stressed the need for the consideration of criteria for compulsory licensing considering the climate change situation, bearing in mind the example set by decisions in other relevant international fora related to intellectual property rights, such as the Doha Declaration on the TRIPS Agreement and Public Health.

It also called for the consideration of incentives to stimulate technology transfer within companies, with a view to strengthening capacity in subsidiary companies located in developing countries.

In relation to new technologies, Brazil said there was a need to foster the establishment of national and regional technology excellence centres to promote technology development, deployment and transfer, stimulate capacity building, improve access to information and establish an appropriate international cooperation environment. It suggested a venture capital fund based on a public/private partnership for development of breakthrough technologies in developing countries. It also stressed the need for North-South, South-South and triangular cooperation, including joint research and development.

Brazil concluded by proposing a coherent and comprehensive instrument for technology develop-

ment and transfer, through a Technology Protocol or other approaches. It stressed the need for enhanced institutional support under the UNFCCC for the identification of country/regional technology needs, and for mechanisms (including performance indicators) to measure, report and verify the effectiveness of technology transfer to developing countries. There is also a need for a funding mechanism under the UNFCCC to be managed and operated by the Conference of Parties (COP).

Ghana said that technology transfer is hindered by many barriers which include technical, political, financial and social aspects. Among some barriers it mentioned were inadequate technology information (including cost, performance, suitability etc); limited capacity for operation and maintenance; limited skills to manage and adapt the technologies; lack of an enabling environment from supply and demand sides, including the issue of intellectual property rights; investment risks; lack of financing or access to credit; high cost of technology and insufficient investment.

Ghana also stressed the need for an international mechanism for the development, diffusion and transfer of technology. It called for a multilateral technology cooperation fund to support such efforts. There is need for an enhanced institutional arrangement that supports a technology board (with sectoral technology panels to accredit international action on technology development and transfer), that endorses country programmes and monitors reporting and verification actions.

India said that realising the full potential of technology will require mechanisms across all stages of the technology cycle which is not just a question of transfer alone, but also of generating new technologies as well as research, development and deployment.

In the area of new technologies, the transfer of technology and know-how should be aided by a suitable IPR regime. For technologies owned by the private sector in developed countries, the respective governments could compensate the owners for their transfer and deployment in developing countries. As for mature technologies, India called for appropriate financing models.

On accelerating technology development, India proposed joint development with IPR-sharing through consortia involving the private sector and financing structures with cost-sharing. It also suggested a venture capital fund with global sourcing of resources for early-stage technology.

On accelerating transfer and diffusion, India stressed that technology transfer arises out of a spe-

cific responsibility of parties under the Convention without any requirement of reciprocity. It is distinct from purely market-based transfer arrangements. Global financing arrangements require global public procurement of IPRs and in ensuring the affordability of the products and services.

South Africa commented that it was interesting and clear that there were many areas of convergence in the proposals coming from the developing countries. It said that the life of a technology had many stages of maturity, which involved the retrofitting of old technology, the deploying of existing climate-friendly technology more widely at an affordable cost and the incentivising of new and emerging technologies.

In the wider deployment of existing technology, issues of finance include affordability and IPRs, it said. There should be preferential terms provided to developing countries with the LDCs obtaining the technologies for free.

Bangladesh, speaking for the LDCs, said that it was key to enable technology needs assessments, improving access to technology information and removing the barriers to deployment such as IPRs. It particularly stressed the need for technologies in adaptation. In relation to the institutional support necessary, it said that establishing a technology transfer and development board with a clearing house was important.

Pakistan said that a key concern that has been and should be at the centre of discussion and future actions is to make technology accessible to all those affected and for developing countries, these technologies should be made available to them at an affordable cost.

It said that the proposal to establish a multilateral fund has been positive and should be considered very seriously. The most critical area is the barriers to transfer of technology and whether the international regime, including that relating to IPRs, poses barriers or facilitates this.

In Pakistan's view, the IPR regime does both, in that it facilitates the development of technology by providing incentive and reward to the inventor or entrepreneur but at the same time it provides monopoly pricing power, which acts as a barrier in its diffusion. Consequently, additional measures are vital and necessary to remove these barriers to transfer of technology. Pakistan proposed the following:

- An international system or an agreement on compulsory licensing for climate-friendly technologies along the lines of what was undertaken in the health sector;

- Joint technological or patent pools providing and transferring technologies to the developing countries at low cost, an idea which is being discussed in the context of TRIPS and access to medicines;
- Limited time for patents. There can be reduction of the period of patents on climate-friendly technologies.
- The provision of incentives (tax exemption, subsidies etc) for the owners of technology so that they can put in place a system of differential pricing (in which developing countries are charged lower prices).

The EU, speaking on effective mechanisms for scaling up development and transfer of technology, said there is a need to define an enhanced framework for a Copenhagen agreement. A shared vision requires the deployment of ESTs for mitigation and adaptation at an unprecedented scale and pace, it said.

The EU added that different policy instruments are needed to stimulate investment in different technologies. It stressed the need for an effective enabling environment. For an enhanced framework for technology, the EU said that there was a need to stimulate the formation and development of national and international innovation systems and markets and create a favourable investment and enabling environment that engages the private sector.

This includes the need for developing countries to adopt appropriate policies and measures for attracting domestic and international investment, including both public and private financing. The EU said that the developed countries should do more to support existing and new financing mechanisms, exploring a range of technology-oriented agreements within and outside of the UNFCCC.

In response to the various developing country proposals, the United States said that given the magnitude of the level of resources needed, it was important to look at the private sector's contribution without the public sector. To sweeten the deal for the private sector, said the US, the reduction of taxes and tariffs was needed.

The US also wanted to know from India on how the terms of trade would be established as regards the public procurement of IPRs. The US stressed that IPR was a source of creativity and innovation. It did not see IPRs as a barrier to technology transfer. Instead it saw IPRs as strengthening access to technology.

India in response said that there was a need to have a balance between the public and private benefit. While ensuring rewards to the innovator, the public sector needs to take the technology on board and bring them to market where it is not able to perform the function. India said that it was not replacing the concept of IPRs but rather it was for the creation of an enabling mechanism or system that compensates the innovators and brings the technology to the market more quickly.

Canada said there was a need to reduce the barriers for the private sector in taking risk reduction towards greenhouse gas reductions. There are challenges in technology commercialisation and innovative policy approaches. It said that weak IPR regimes would dampen innovation. Canada suggested a roundtable in Poland (at the next meeting of the COP) with the private sector to address these challenges.

A "contact group" will further discuss the technology issue, after the Chair produces a paper summarising his views of the main points arising from the roundtable.

Developing countries ask for new UNFCCC financial architecture

Bonn, 6 June (Martin Khor) – Developing countries have put forward concrete proposals for establishing a new financial mechanism and “architecture” under the UN Framework Convention on Climate Change to take charge of the transfer of financial resources to assist the developing countries to address the climate change challenge.

Many countries, including Bangladesh (for the LDCs), China, India, Barbados (for small island developing states), Argentina, the Philippines, Malaysia and Saudi Arabia, called for a new financial mechanism and new funds relating to various areas (adaptation, technology, mitigation, etc), which would be under the authority and guidance of the UNFCCC’s Conference of Parties (COP).

It was the first time in recent years that so many developing countries and their groupings had put forward such concrete and systemic proposals on the Convention’s financial mechanism, said a long-time participant of the UNFCCC process.

Several of the countries referred to the large amounts of funds which are being planned for organisations outside the UNFCCC, particularly the World Bank, and said that these funds should instead be placed under the Convention, which is the body in charge of climate change negotiations and the implementation of the outcomes.

China notably stated that funds provided to organizations outside the Convention would not be counted as being in fulfillment of the developed countries’ commitments under the UNFCCC to provide financial resources to developing countries to help them take action on climate issues. India concurred with this view.

The Philippines said climate-related funds should be placed in the Convention and not other institutions, and if we are not serious (in making outside funds comply with the Convention’s principles and priorities) it did not see what future there would be for the Bali Action Plan.

The proposals of developing countries were made on 5 June at a workshop on investment and financial flows, which is an official part of the meeting of the ad hoc working group on long-term cooperative action (AWG-LCA) under the Convention. The group is tasked with implementing the Bali Action Plan and coming up with a decision by the end of 2009.

Besides the members of the G77 and China, other countries providing proposals included Mexico, South Korea and Switzerland, while Japan, the EU and US also spoke.

The first workshop presentation was by Bernaditas Muller of **the Philippines, on behalf of the G77 and China**. She said the G77 and China had identified basic principles under which they would like to work in the context of enhancing financial resources (a major element of the Bali Action Plan).

Muller (who is coordinator of the G77 and China in the AWG-LCA) said that at the first AWG-LCA meeting in Bangkok, members of the group had spoken about establishing various funds, such as an adaptation fund, a technology fund and a risk insurance fund. The G77 and China believed that this enhanced action should be guided by the following principles:

- Operate under the authority and guidance of and be fully accountable to the Conference of Parties of the UNFCCC.
- Have an equitable and balanced representation of all Parties within a transparent system of governance.
- Enable direct access to funding by the recipients.
- Ensure recipient countries’ involvement during the definition, identification and implementation of the actions.

Muller said the Group is developing a proposal based on the above principles, that take into account various provisions of the Convention, including Articles 4.3, 4.4., 4.7, 4.9 and in accordance with Article 11.

Bangladesh on behalf of the LDCs, said the investments of today determine the extent of climate change tomorrow. It put forward “principles and an architecture of a future funding mechanism.” These included: (1) Adequacy of funds, to meet the needs of adaptation, mitigation, and technology transfer. (2) The equity principle. (3) Likely sources of funding should be from developed countries in implementing their commitment under Article 4.3, and other possible sources include a levy on airline travel, an international fuel levy, an extension of the Adaptation Fund’s levy to other mechanisms, venture capital and the carbon market.

Barbados on behalf of the small island developing states (SIDS), represented by Selwin Hart, said the funds for adaptation were inadequate. Any resources must be additional to traditional Official Development Assistance (ODA). Referring to financing that is market-based, it said that markets don’t work well in small economies. Financing for mitigation is more readily available and easier to access than for adaptation (for example the private sector is not interested to build a seawall or restore coral reefs).

Barbados put forward a shared vision on adaptation financing in the UNFCCC: (1) New and additional funds above the current commitments on ODA and 0.7% target. (2) Predictability and stability in funding, which should be sourced from assessed contributions from developed countries and levies of carbon markets. (3) The funds should be in the form of grants rather than loans (as SIDS have to adapt to climate problems caused by emissions and lifestyles of other countries). This should also be consistent with the ‘polluter pays’ principle. (4) Priority access should be given to the most vulnerable countries. (5) The governance should be under the UNFCCC.

The SIDS also advanced these specific proposals: (1) Establish a Convention adaptation fund. The aim is to implement Convention articles including 4.3 and 4.4, in line with the ‘polluter pays’ principle. Access to recipients should be direct. Governance should be under the authority of the COP. (2) Establish an insurance mechanism. (3) Set up a Technology Fund. (4) We also support a Mitigation Fund.

The SIDS also stated that there are many bilateral and other instruments, but they are not under the UNFCCC. These should be channeled through the Convention process.

China made a formal presentation, putting forward a proposal on the elements and structure of multilateral funds operating under the Convention.

Represented by Ms. Huang Wenhong of the Finance Ministry, China said the Convention and the Bali Action Plan require developed countries to commit to give financial resources that are new and include grants. Existing funding is very limited, with \$3.3 billion by the Global Environment Facility (GEF) in 1991-2010, \$90 million in the Convention’s special climate change fund, \$180 million in the Convention’s LDC fund including new pledges and an estimated \$37 million in the Kyoto Protocol adaptation fund.

These compare with the estimates of finance needs, including \$65 billion in 2030 for mitigation estimated by the UNFCCC secretariat, and an Oxfam estimate of \$50 billion per year for adaptation. There is a huge gap between needs and available resources, said China.

China added that scaling up of funding is needed. If it remains at the same level, it will not meet the future requirements for adaptation and mitigation.

China then proposed the establishment of a set of new funds under the UNFCCC. The new financing would have the following elements: (1) The source of funding is the implementation of developed countries’ commitments under the UNFCCC. (2) The scale of funding should be a certain percentage of the GDP of developed countries, for example 0.5% of GDP, in addition to existing ODA. (3) The funds would be used to enhance mitigation, adaptation, R and D in technology, and technology transfer. (4) Any funding pledged outside the UNFCCC shall not be regarded as being in fulfillment of commitments by developed countries under Article 4.3 of the Convention.

China also proposed the following coordinated funding arrangements: (1) In the design, there would be the establishment of a number of specialized funds, including an Adaptation Fund, and a Multilateral Technology Acquisition Fund; (2) On Governance, (a) The Fund would be established under the authority and guidance of and fully accountable to the COP; (b) There would be equitable and balanced representation of all parties in the governance; (c) There would be easy access and low management costs.

Japan asked China to explain its statement that any funds outside the UNFCCC cannot be counted as part of developed countries’ implementation of their Article 4.3 commitment.

Would this mean China wants to make UNFCCC an aid agency?

China responded that the UNFCCC is not an aid agency, but it is the most appropriate forum to discuss climate change. The developed countries have an obligation to developing countries in the Convention. If Japan wants to pledge its money outside the Convention, that should not be counted as fulfilling part of its commitment under the UNFCCC.

India, represented by Mr. Surya Sethi, presented a comprehensive analysis of the status of climate financing, which he showed fell far short of financing needs, such as the Stern estimate of 1% of world GDP which in 2007 translates to \$540 billion.

He said the World Bank group is not in a position to handle the funds required. Any funding structure of the international financial institutions will remain outside of the UNFCCC. The funding mandate of the IFIs is economic development and the capacity of these should not divert to climate change. The IBRD disbursement in 2007 is minus \$6.2 billion, which means they receive more than they disburse. No wonder the World Bank wants to expand to climate change, he said.

India said that alternative means for predictable resource flows are needed. We need a new global fund, capitalised by developed countries at a level of 0.3% to 1% of GDP, said India.

India proposed the establishment of a new financial architecture in the UNFCCC. It should have the following elements:

- It must operate under the guidance of and must be accountable to the COP.
- There would be balanced representation in the governance.
- Direct access by parties to the funds.
- It should be demand driven, with recipients involved in definition of needs.
- It should be funded by developed countries and may accept other resources from the market and other sources.
- It should be organized in functional windows for technology, venture capital for emerging technologies, and a fund for research and development.
- Other funds should be integrated under the Convention.
- A Board would govern, and there should be a professional secretariat, aided by technical committees. This design was achieved under the Montreal Protocol, and under the Kyoto Protocol's adaptation fund.
- The unifying force of the various funds to be set up is a common governing architecture

which is under the control of the COP. Each window will grow under this architecture.

Argentina proposed the establishment of a multilateral fund, as a framework and an umbrella system. It can cover various areas including adaptation and technology. It will develop financial resources of existing funds that exist and that may come up in future. It can include elements mentioned by China and other countries.

Malaysia welcomed the idea of establishing a new funding mechanism. It should be under the COP. It should also enable direct access by recipients. This mechanism will be assisted by expert or technical panels. Funding will be by Annex I parties to fulfill their commitment in accordance with Article 4.3, and additional sources can be determined. The fund should complement the existing funds. Competing mechanisms outside the UNFCCC pose a serious challenge to the Convention and this is cause for concern.

The Philippines said the finance commitment was not being implemented, there has been inadequate funding and the agreed full incremental cost has not been given to developing countries. The Convention's parties had also decided that consistency must be ensured between the principles and priorities of the COP with bilateral and other funds on climate operating outside the Convention and that they must not impose new conditionalities.

Referring to recent initiatives outside the Convention to set up new climate funds, it remarked that if we are not serious about this issue, it did not see what future there would be for the Bali Action Plan. There are funds out there. They should not be put in bodies that impose conditionality on developing countries. They should be put in the hands of the parties of the Convention.

South Africa, on behalf of the Africa Group, emphasized the group's support for the G77 and China's principles presented by the Philippines. The scale of funding for adaptation must be scaled up 2 or 3 times. There is need for assessing costs, planning, national adaptation programmes of action (NAPAs), implementation for adaptation, mitigation technologies, wider deployment of existing technologies and R and D for new technologies.

Brazil said there was a need for funds to be in compliance with the UNFCCC. It stressed the need for a fund with a governance structure that is fair and transparent and reinforces the COP's capacity to guide climate change.

Saudi Arabia said there was a need to bring all the ideas of the funds together. There is need for

a solid structure in the UNFCCC where all the initiatives can be put together in a structure, as laid out by the G77/China principles. The goal is to bring under one umbrella a solid new architecture. It would operate under the authority and guidance of the Convention and be fully accountable to the COP.

Mexico pointed to the unpredictability of current funding and the need to overcome the atomization of current financing in many funds. The current financial system is totally insufficient to sustain the scale of actions needed.

It proposed a World Climate Change Fund covering mitigation, adaptation, and technology. All countries would contribute to it, with contributions to be agreed multilaterally and could be determined by criteria like greenhouse gas emissions, population and GDP size, as well as the 'polluter pays' principle, equity and efficiency and each country's capacity. The Fund should mobilize no less than \$10 billion a year, with \$200 billion by 2030.

Mitigation activities to be supported should yield measurable, reportable and verifiable mitigation results. Activities to be funded include forest, agricultural soils, biofuels, energy, green buildings, lower-emission vehicles.

Korea, represented by Raekwon Chung, advanced a proposal on carbon credit for NAMA (nationally appropriate mitigation actions) by developing countries, supported by finance that is measurable, reportable and verifiable. In this scheme, mitigation can be initiated by developing countries even without finance and technology, similar to a unilateral Clean Development Mechanism (CDM).

He suggested that Annex I countries undertake a deeper emission reduction target to facilitate more funds. Instead of developed countries offering to contribute to funds, they could instead buy credits for NAMA.

Switzerland presented a proposal on a "funding scheme for Bali Action Plan". It proposed a global carbon dioxide levy of \$2 per ton of carbon dioxide, in accordance with common but differentiated responsibilities. There would be three pillars in the scheme. Overall revenues would be \$48.5 billion, with \$18.4 billion to a multilateral adaptation fund or MAF (with a \$9.2 billion prevention pillar and a \$9.2 billion insurance pillar), and \$30.1 billion going to national climate change funds.

High-income countries will transfer 60% of their levy to the MAF, medium-income countries 35% and low-income countries 15%. Countries with below 1.5 ton of carbon dioxide emission are exempted from payment; Switzerland said these would mainly be LDCs.

Brazil commented that the Swiss proposal had taken current emission rather than historical responsibility on board when choosing who to tax. Switzerland replied that historical responsibility was counted if the future emissions are counted but not so in relation to past emissions.

Germany, for the European Union, said the challenge is to stabilize greenhouse gases at 450 ppm, restrict temperature rise to 2 degrees and reduce emissions. Finance is required for a transition to a low-carbon economy. Most funds for mitigation will be from the private sector and this won't change in future, but public funds are still needed to catalyse and leverage private investments.

In mobilizing financial flows, the main tool is the price of carbon as the carbon market is delivering a significant part of the flows. On innovative financing, the EU can discuss auctioning of carbon allowances and a levy on bunker fuel.

Norway proposed a scheme for "financing adaptation by auctioning" in which a small percentage of asset value can be auctioned or sold to finance adaptation. The task can be given to an international bank.

The United States, commenting on other countries' remarks on the World Bank climate funds, said that the clean technology fund under this is not meant for unmet contributions under the Convention. It will be supportive of the objectives of the Convention. It is hosted at the World Bank as it will provide rapid disbursement of funds and leverage other funds.

As the private sector gives most investments, the issue is how can governments encourage private sector flows to clean technologies. Countries with an enabling environment, open markets and respect for IPRs will attract more clean technologies.

Surya Sethi of India, responding to Japan and US relating to the World Bank climate funds, said that the funds to developing countries for climate must come in the form of resource transfer or grant. "If I borrow money I have to return it and it is not funding my full additional cost," said India. "Any mechanism must ensure the full incremental cost must be met and it won't be met by loans even if these are concessional."

The Chair of the AWG-LCA, Luiz Machado of Brazil, said the discussion had been rich, there were some areas of convergence and some new and innovative ideas. This was a very valuable brainstorming, which could be used for discussing future work. A contact group of the AWG-LCA will further take up the finance issue.

G77/China proposes road map for advancing technology issue

Bonn, 8 June (Meena Raman) – The G77 and China has put forward a “three-step road” to move forward concrete action on technology in the Bali Action Plan. The plan was announced in a contact group on technology at the meeting of the ad hoc group on long-term cooperative action (AWG-LCA) of the UN Framework Convention on Climate Change being held here.

At the contact group meeting on Friday 6 June, the G77 and China, represented by Bernaditas Muller of the Philippines, proposed a “three-step road” for concrete action on the deployment and transfer of technology under the Bali Action Plan involving:

1. Establishing common understanding of development and transfer of technology (DTT). Soft and hard components necessarily go together and discussions should cover together both adaptation and mitigation technologies; and how to address questions of ownership and adaptability;
2. An understanding of where we are (stocktaking) and the need for a quick review of the work under the Convention, including achievements and progress to date; identification of gaps in implementation, major barriers to DTT; building upon existing mechanisms and processes under the Convention.
3. How to enhance DTT for mitigation and adaptation: Putting in place new mechanisms to create and/or allow for management incentives, sustained financing, public-private partnership, options to overcome barriers, support for and promotion of North-South, South-South, and trilateral cooperation for transfer.

The G77 and China added that financing is crucial for technology, and a key for achieving a clean development pathway. It proposed following up proposals made at the technology workshop earlier in

the week, on a multilateral technology acquisition/cooperation fund established under the Convention.

It also proposed a mechanism and funding for technology to consider the three stages of technology maturity. This would involve public and private investment in long-term R & D for new technology, collaborative R& D, with sharing of IPRs; a Venture Capital Fund to commercialise emerging technology: demonstration and pilots; and scaling-up of financing for the transfer of mature technologies and funding for deployment of existing technologies.

The G77 and China also proposed moving ahead to implement Article 4.5 of the Convention through establishment of a Technology Transfer mechanism under the Convention. This would involve capacity-building for actual transfer, and take into account developing endogenous technologies.

It would also involve the development of an Action Plan that would include the identification of technologies available in the public domain; and conditions of access for technologies available and for sale, including funding to facilitate acquisition of these technologies.

The group also suggested the measurable, reportable and verifiable (MRV) transfer of technology as an enabling means, with specific guidelines to be developed for the full implementation of Article 12.3 of the Convention.

In response, the **Chair of the AWG-LCA**, Luiz Machado of Brazil, said the G77 and China’s ideas could be developed more; for example, what kind of mechanism and how it would operate under the Convention. Questions include what are the institutional aspects of the mechanism, and would it have a Board?

Slovenia for the EU said there is a clear need for a coordinating and enabling management function for technology transfer. A wide range of solutions exist, which should be defined. One way is to

create a new coordinating body under the UNFCCC. There is a need for details on how best to support an enabling environment. It supported having national contact points, for education, training and regulation.

There is a role for technology-oriented arrangements within and outside the UNFCCC, said the EU. In exploring details of existing and new technology-financing mechanisms, the EU suggested the following: tools focusing on capital and risk; leveraging private sector resources; financing of research and development and demonstration; financial networking; risk insurance. The EU said the issue has suffered for many years from lack of progress, and it would like to see substantial progress moneywise and institutionwise.

Japan said that to promote technology diffusion and transfer, we should start with a long-term goal for emission stabilisation, mentioning a 50% emission reduction by 2050. All countries must have a shared vision of a low-carbon society. Japan reiterated the role of a “sectoral approach” for quantified national emission targets and technology diffusion.

Ghana said it was important to establish proper institutional arrangements and management at international level. It is key to have a work plan on technology transfer and on how to measure, report, verify technology transfer (MRV). It proposed a workshop to discuss how MRVs would operate, for example, whether through national communications of Annex 1 countries, or the current review mechanism under the Convention.

The Chair agreed that MRVs are a very important issue. Those who favour a technology transfer mechanism and some other institutions may consider if MRVs would be done by a board, which would have all the information on the transfer and destination. The MRV activity would be simplified through the possible mechanism.

South Africa, speaking for Africa, said adaptation technology is critical, as well as technologies for low carbon development. There should be a look at barriers to technology for the different stages and financial support and options. It is also important to distinguish between the requirements for mitigation and adaptation technology as it is hard to get private sector finance for adaptation technology which has to be upscaled through public sector investment. IPRs are a major cost barrier and must be addressed, for example through a fund to buy out patents.

Brazil said a technology revolution is required. The responsibility for this is specific to governments, in financing (in which developed countries have to

meet their commitments) and in attracting the private sector to construct this technology revolution. Technology diffusion is in the interest of the world. There must be funds and a structure to transfer mature technologies, to get new ones on the market, and to undertake innovation for innovative technologies. We should work out the specific ways of doing this and the institutional arrangements for a positive way forward for a technology initiative, and to create oversight for international action within the Convention. It is essential to develop mechanisms by which MRV actions can operate for technology transfer, and to ensure we have information on what countries are doing on technology.

The US said that in recent years, there was a move away from a donor-based technology transfer paradigm to a more self-sustaining one with private markets playing an important role. Referring to the calls for new mechanisms to scale up technology transfer, the US cautioned that the practicability of this approach must be looked at. We should look instead at improved access to existing resources and finance through capacity building and technology assistance as needed.

Malaysia strongly supported the G77 proposal on creating a mechanism for technology diffusion and transfer. This mechanism must be accountable to the Convention and financing must be through the Convention. It proposed two principles of such a mechanism – to make technologies accessible to developing countries and to help developing countries develop their own technologies.

Barbados for the small island states associated with the G77 and China and supported the establishment of a new international mechanism for transfer of technology. We need something new and to abandon business-as-usual models and practices as they relate to technology transfer and diffusion. It wanted early warning systems and technologies to be considered as adaptation technology, which should be transferred to vulnerable developing countries on grant or highly concessional basis. In the World Trade Organisation, a decision was taken on behalf of access to medicines for developing countries. In climate change, the challenge is even greater and business as usual is untenable.

The Chair responded that it is important to consider the IPR issue, how to respect IPRs but at the same time look at possibilities of licensing those rights. He agreed that some technologies are specific to adaptation or mitigation and this should be looked at in dealing with future work.

Antigua and Barbuda said there is a lot of technology in the public domain. There are many

institutions in the public sector like UNIDO, FAO, UNESCO, CGIAR etc. However since 1992, there has been a shift to the role of the private sector, for example the new 1994 IPR regime (in the WTO). There is thus a need to organise public economic arrangements, and there is a need for public sector action and collaboration, at the international level.

China, referring to the US statement that the world has changed, said some things have not changed, such as the lack of progress in implementing technology transfer commitments by developed countries. We need an approach to technology in an integrated and coordinated manner. We do need a very solid and efficient mechanism, starting with institutional arrangements. For global public goods, the intergovernmental mechanism should be the driving force to move things forward. A subsidiary body (for technology) under the Convention is necessary.

Argentina supported an international technology mechanism under the Convention. It could support endogenous capacity building, adequate and predictable funds and avoid the proliferation of competing funds. It should cover different categories of technology. It can have a climate technology assessment panel and also report on state of the art of environmentally sound technologies.

Pakistan said an element that has been missing in the discussions is compulsory licensing. No element should be omitted which is important in an enabling environment. This issue should be highlighted. Another important element is joint cooperation in research.

A technology mechanism must have two aims – to make technology available at affordable cost and assist developing countries to develop their own technology. Barriers to affordable cost should be looked at in two cases – technologies where there are no patents or where patents have expired, and those technologies that are patented. The Secretariat provides an information note on which technologies are in the public domain and those which are in the hands of the private sector.

India stressed the need for supporting science and technology collaboration through an open platform such as open source approaches. There should be research consortia involving the sharing of IPRs. On technology transfer, there is a need to bring new technologies into the public domain and address the IPRs issue. Finance is also a crucial issue. There is an economic basis for giving a significant role to public funds especially in the context of climate change. There is also a need for capacity building in developing countries.

G77/China reaffirms climate funds should be within UNFCCC

Bonn, 9 June (Meena Raman) – The Group of 77 and China has stated that the developed countries' commitment to provide developing countries with financing for climate change should be carried out under the UN Framework Convention on Climate Change and its Conference of Parties.

“Any funding pledged outside of the UNFCCC shall not be regarded as the fulfilment of commitments by developed countries under Article 4.3 of the Convention,” said the group.

Also, the funds to be provided should meet the incremental costs for the implementation of developing countries' commitments, and they should be in the form of grants rather than loans.

The group's position was made known at a finance contact group meeting on 7 June afternoon under the UNFCCC's ad hoc working group on long-term cooperative action (AWG-LCA) which is tasked with following up on the Bali Action Plan (BAP), and to reach a decision by December 2009.

Finance and technology are the key issues being discussed at this second session of the AWG-LCA. Several developing countries have been tabling more concrete proposals on these two topics, and the G77 and China (which comprises over 130 developing countries) has also been providing more concrete ideas.

At the 7 June meeting, several developing countries including China, India, Argentina, the Africa Group and the small island states also presented statements, as did developed countries such as the United States, European Union and Japan.

The AWG's Chair, Luiz Machado of Brazil, said the issues should include the scale of financial resources needed and options for scaling up, and the scope of funds under the Convention, as well as new and additional resources under the Convention with the spirit of looking at now, up to and beyond 2012. The group may also look into a new financial framework along with elements and principles that should apply. He called for concrete ideas and proposals.

The G77 and China, represented by Bernardita Muller of the Philippines, said that the basis of the

group's position on financing under the BAP is Article 4.7 of the Convention.

[The article states that “The extent to which developing country Parties will effectively implement their commitments under the Convention will depend on the effective implementation of developed country Parties of their commitments under the Convention related to financial resources and transfer of technology and will take fully into account that economic and social development and poverty eradication are the first and overriding priorities of developing countries”].

Muller said that the finance objective under the BAP is full implementation of commitments for the provision of financial resources under Art. 4.3, 4.4, 4.5, 4.8, 4.9 of the Convention, in accordance with Article 11 defining the financial mechanism.

“The G77 and China have laid out the principles for enhanced action on the provision of financial resources and investment to support action on mitigation and adaptation and technology development and transfer: (1) operate under the authority and guidance, and be fully accountable to the COP; (2) have an equitable and balanced representation of all Parties within a transparent system of governance (Article 11.2) ; (3) enable direct access to funding by the recipients, and (4) ensure recipient country involvement during the stages of identification, definition and implementation, rendering it truly demand driven,” said the statement.

“The Group is developing a proposal based on these principles that would put financing for implementation of the Convention under the governance of the COP. The goal is to bring about coherence in the global financial architecture for financing under the authority and governance of the COP.”

The G77 and China outlined the elements for enhanced amount of financial resources provided under the Convention:

- The main source of funding would be the implementation of developed countries' commitments under Article 4.3, and “new and additional” financial resources, outside of ODA

(Official Development Assistance), to ensure predictable and stable funds;

- Any funding pledged outside of the UNFCCC shall not be regarded as the fulfilment of commitments by developed countries under Art. 4.3 of the Convention;
- Agreed full incremental costs for the implementation of developing countries' commitments under Art. 4.1;
- Agreed full costs for the preparations of national communications;
- The financial resources would be grant-based rather than loans.

On the design aspect, the G77 and China said that the Conference of Parties should establish specialized funds under its governance, such as a Convention Adaptation Fund, a multilateral technology acquisition fund, a venture capital fund, a risk management fund and an insurance mechanism. The fund may also be open to market sources and other sources.

The funds should also finance the implementation of action programmes, such as the NAPAs and TNAs, developed under the Convention, said the group.

China, supporting the China/G77 position, suggested an assessment of concrete proposals to see if they are in line with the focused mandate of the Convention. The UNFCCC is an international treaty with clear objectives and principles and commitments. Annex 1 parties are committed to provide for technology and finance, so that developing countries would join effectively to address climate change. Articles 4.3 and 4.7 make the direction clear, that the extent of developing countries' implementation is dependent on technology and finance from developed countries, not vice versa. Developing country actions depend on provision of financial resources. This should be clear.

In view of differences in understanding, the secretariat should prepare a technical paper on the Convention provisions to enhance implementation. On the ODA issue, China supported the Chair's understanding that funding under the Convention should be new and additional.

South Africa, speaking for the Africa Group, said a central element for a strengthened climate architecture is full accountability to the COP; as well as direct access and a country-driven approach. Most of the funding has gone to mitigation; the future climate regime must include finance for adaptation with emphasis on vulnerable countries.

Africa is extremely vulnerable, and has a low adaptive capacity. Funding for adaptation should be scaled up more than 100 times what is now available and it has to be additional. Sources of funding can include the carbon market. However the atmosphere is a global commons and a global public good, thus responsibility lies in the public domain through

governments. State parties have a central role in setting the parameters. Governments must take responsibility, including providing public funds.

The funding should include tailor-made packages that respond to priorities of regions. It proposed an Africa climate change facility as part of the broader financial architecture.

Brazil also stressed the principle of new and additional resources. The financing should be directed to meeting the full incremental costs of developing countries. If funding of full incremental costs had been met, then actions by developing countries could have been met and enhanced. On the "measurable, reportable and verifiable" (MRV) actions (mentioned in the BAP) this term cannot be considered as actions to attract financing. It is the enabling of support that must be measurable, reportable and verified. It is clear that financing for climate change is additional to ODA.

Algeria agreed that the financial mechanism under the Convention is crucial for process, and that financial resources must be available for developing countries to take actions at national level.

Bangladesh said funding so far is little compared to needs. Financing has to be new and additional, and not be from ODA. Arising from the proposals put forward, a new financial architecture is needed, a Convention Fund. The principles include equity, common but differentiated responsibilities, polluter pays, adequacy, grant financing for adaptation, simplified funding and direct access. Funding is urgently required now.

The US reaffirmed commitments to enhance finances under the Convention and that the US is meeting in full its obligations under Art. 4, mentioning full costs of national communications and agreed incremental costs. There are proposals before Congress on clean technology and reducing emissions from deforestation. It said the discussions should be based on reality. There is private capital in Annex 1 and non-Annex 1 countries. The funding mechanism should take into account the new reality of financial capacity, and also what governments can do to encourage the flow of private capital.

The US added we cannot commit to new funding unless we know what is it we are funding. It referred to enhanced action from developing countries. The UNFCCC is not a development aid convention. Scaling up financing will be under scrutiny from US tax payers. Developing countries should report their actions (in an MRV way) as measures to attract financing in clean technology investment.

India, represented by Surya Sethi, responded that listening to the US, it failed to understand the Convention. The US said all its obligations have been met and the private sector will take care of what remains. In that case "we can close shop and get out." It was intrigued to read the convention again. These incremental costs are to be met by resource trans-

fers. No private sector is transferring resources. Only the CDM mechanism is transferring resources. If negative emissions commitments are not undertaken by Annex 1 countries, there would be no carbon market left.

Mexico said it would formally propose to establish a world fund on climate change, which would have positive incentives for developing countries. The governance would be inclusive and transparent and there would be additional committees to provide effective support.

Slovenia, speaking for the EU, said the EU believes this issue can only be addressed in close connection with mitigation, adaptation and technology, and in particular the level of ambition for mitigation efforts and adaptation needs. The proposals should be part of a broader framework: a financial architecture based on all possible tools and means that address the climate change challenge.

The architecture should deliver predictable and sustainable resources and bring together existing and new instruments and initiatives in order to be coherent and cost-effective.

On the substance to be covered, the EU said the price for carbon is essential for mobilising private flows. Broadening and deepening the global carbon market is essential. Also, national policies supporting an investment-friendly environment play a significant role in leveraging flows, for example through energy efficiency targets, taxes, and subsidies.

Innovative financing approaches can mobilise the additional financial resources. The EU suggested focusing on mechanisms that leverage private investment flows, enhance mitigation and adaptation efforts and transfer of technologies, and generate predictable finance in relation to the needs. In addition we could also include auctioning allowances, global CO₂ tax, carbon levies on aviation and maritime transport.

The EU said the role of the financial mechanism under the Convention is to ensure enhanced efficiency and complementarity with other sources. The Global Environment Facility (GEF) currently has a unique role to play.

The fourth review should also examine ways to leverage private investments. It noted suggestions of creating new funds under the Convention. Many different and interesting proposals seem in particular to be calls for new funds to address adaptation and technology.

The EU also proposed to establish an “analytical platform”, including engaging private sector, IFIs and experts. It could analyse proposals made, considering potentials in terms of cost-effective delivery of finance with respect to different country needs. This will accelerate and deepen negotiations on finance.

On the way forward, the EU proposed that be-

tween now and Accra, Parties should submit more detailed views about this topic; in Accra, we would examine tools on the basis of cost-effectiveness, leveraging potentials, potential to support mitigation and adaptation efforts; and by Poznan, we should agree on which tools to develop, and how to develop them.

Norway reiterated its proposal on auctioning and South Korea mentioned its proposal on NAMA (nationally appropriate mitigation actions) credits, while Japan repeated its Cool Earth initiative and on Africa.

Barbados for the small island states said the role of the private sector was limited for small countries as foreign direct investment goes to where there are resource endowments, there will be return on investments, and is risk free. FDI thus is hugely concentrated in a few countries and we need to be honest about that. There is a need to differentiate between financing for mitigation and adaptation – both should be given equal priority.

In adaptation planning in Japan, to address sea level rise of 1 meter, \$93 billion is required. In the UK, \$1.2 billion is spent annually protecting coastal areas. Developing countries face the same challenges and now have to provide for new and additional challenges. Governments are going to have to do it. It will not come from the private sector. The funds would have to come from governments in developed countries. We should not adopt a business-as-usual approach in financing for adaptation.

Singapore said one proposed source of funding is a levy on international air travel and bunker fuels. However this will have an adverse impact on developing countries whose maritime and aviation industry would be affected.

Malaysia supported establishing a new financing architecture under the authority of the Convention, with equitable governance, and funds that are additional to ODA. Venezuela emphasised Article 11.1, a mechanism for provision of financial resources on grant or concessional basis.

India presented slides, with data showing that with a global emission reduction target of 50% by 2050, compared to 1990 levels, and with the current proposed cuts for Annex I parties, there would be buyers in the carbon market but no sellers. It concluded there would be no basis for a carbon market unless some parties agree to take on “negative emissions”.

The Philippines said that the nature of the investment flows is crucial, to ensure environmental soundness. It added that predictability of financing is important to enable developing countries to develop long-term strategies. The quality of the transfer is also key, which is why governance of funds should be in the Convention. If financing is put in another institution, will they do capacity-building and vulnerability assessments, for example?

Debate and gaps over “shared vision”, at heart of climate talks

Bonn, 10 June (Meena Raman) – Wide and basic gaps are still evident between countries on what they understand and mean about the ‘shared vision’ for long-term cooperation in addressing climate change. The differences emerged again at the current meetings being held in Bonn of the UN Framework Convention on Climate Change (UNFCCC). These differences on “shared vision” reflect the key issues at the heart of the climate change negotiations.

The Ad-Hoc Working Group on Long-Term Cooperative Action (AWG-LCA), tasked with following up on the Bali Action Plan, dealt with the ‘shared vision’ in a contact group on 9 June. As Brazil commented: “We don’t have a shared vision today. This has to be built.”

In Bali, parties agreed under the Bali Action Plan to “a shared vision for long-term cooperative action, including a long-term global goal for emission reductions, to achieve the ultimate objective 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”.

Discussions in the contact group in Bonn centred around the scope and priorities of a “shared vision”, various interpretations of the objective of the Convention, the socio-economic and developmental context in which a long-term global goal for reducing greenhouse gas emissions should be placed, whether it should be legally binding or not, and how and when such a goal should be set.

For the European Union, the “shared vision” primarily means a 50% global cut in greenhouse gas (GHG) emissions by 2050 compared to 1990 levels, which relates to limiting temperature rise to 2 degrees Celsius. Japan has a different base year; its goal is a 50% cut in 2050 compared to present levels. LDCs and small island states called for targets well below 450 ppm and well below 2 degrees. Several countries called for “early peaking” of emis-

sions, within 10 to 15 years.

Many developing countries (including through the G77 and China, and individually including China, India, Brazil, etc) viewed the “shared vision” as being comprehensive, encompassing finance, technology, adaptation and mitigation, with the two first issues being the priority as they are the enabling means to unlock action in developing countries on the latter two issues. They also called for the shared vision to be looked at comprehensively in the context of the provisions, principles and implementation of commitments in the Convention.

Luiz Machado of Brazil, the Chair of the AWG-LCA, explained his intention to focus on a step-by-step or incremental approach on parties’ concrete proposals and not just ideas, and to have texts by parties for their future work that can be adopted by the Conference of Parties (COP).

The G77 and China, represented by Bernaditas Muller of the Philippines, said that as concluded in Bangkok (where the last meeting of the AWG-LCA took place) there was a need to build a common understanding of the shared vision. This common understanding is based on two provisions of the Convention. Article 2 refers not only to the ultimate objective of the Convention (to achieve the stabilization of GHG concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system), but also parameters within which such a level should be achieved, i.e. “within a time frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure food production is not threatened and to enable economic development to proceed in a sustainable manner”.

Citing Article 3(1) of the Convention, that says that “Parties should protect the climate system for the benefit of present and future generations of humankind, on the basis of equity and in accordance with their common but differentiated responsibili-

ties and respective capabilities,” the G77 and China said that developed country parties should take the lead in combating climate change and the adverse effects thereof, which have historic responsibilities for creating this problem, but continue to this day to emit the greater part of emissions. Unsustainable consumption patterns in these developed countries continue to contribute significantly to increase in emissions.

“Any discussion on shared vision should clearly be informed about impacts that any proposed long-term target would mean to developing countries, in particular SIDs, LDCs and Africa,” said the group. The developed countries’ failure to pursue effective mitigation actions, even with the very low targets agreed to in the Kyoto Protocol, resulted in increasing adverse effects of climate change, affecting in particular developing countries that are least able to cope with these adverse effects. Therefore, the economic costs of meeting adaptation needs, and the economic and social costs of failing to address these needs in developing countries, particularly SIDs, LDCs and Africa, should likewise be an integral part of the discussions on a shared vision.

G77 and China said that in accordance with the principles of the Convention, the main role of developing country parties in addressing climate change and its adverse effects is to pursue sustainable development, a clean development path that will not repeat the mistakes of the past, for which developed country parties have obligations to provide financial resources and transfer of technology.

Switzerland, speaking for the Environmental Integrity Group, said that the shared vision should provide a framework for cooperation containing two elements. First, a long-term climate objective to respond to Article 2; it should promote a low-carbon development using the most environmentally friendly technologies, while promoting cost-effective action that will generate social and economic development and will allow reaching the Millennium Development Goals (MDGs). Second, the shared vision should contain ways and means to cooperate to reach the long-term climate objective. EIC countries see the need to enhance the technological cooperation and to ensure that the appropriate financial means are mobilized.

South Africa, speaking for the African Group, said the Bali Action Plan is clear on a shared vision now, up to and beyond 2012. It is not only about stabilisation of GHGs but also adaptation and about enabling sustainable development. It is also about the full, effective and sustained implementation of the Convention. Shared vision must be more than a number. On a long-term goal, South Africa said it

can only be an aspirational long-term goal, which requires binding emission reduction targets for Annex 1 countries of at least 25 to 40 percent by 2020 based on 1990 levels. The long-term goal must be ambitious and must have a base year of 1990 for global emissions to be reduced by 50% by 2050.

China said that it was clear from the Bali Action Plan that the long-term cooperative action is to achieve the ultimate objective of the Convention, which has clear parameters. The guiding principle on long-term cooperative action is to implement the Convention in a full, effective and sustained manner. The guiding principles for the shared vision are common but differentiated responsibilities and respective capabilities and equity. It does not mean the setting of concrete targets or numerical goals but rather it should have a long-term objective and the means available for achieving this.

China said the means is a very important element. In talking about an aspirational goal, we should have a clear picture of how the burden (of emission reductions) would be distributed. In view of the historical and cumulative emissions, how should the space for developing countries to reduce poverty be addressed? The shared vision should be comprehensive, covering all aspects of long-term cooperation including adaptation and sustainable development. The long-term action should focus on the full, effective and sustained implementation of the Convention.

Barbados, speaking for the Alliance of Small Island States, said the framers of the Convention recognised that at that time uncertainties on predicting climate change existed. Article 3.3 of the Convention provided that the lack of full scientific certainty should not be used as a reason to not act. Arriving at a common understanding on elements for a shared vision would allow the understanding of the means and tools to achieve the vision.

A decision for a long-term goal must be a central element and it must be based on best-available science, using impacts on SIDs, LDCs and other vulnerable countries as a benchmark for effectiveness. Any package of mitigation actions must be sufficient to ensure that global temperature rise is well below 2 degrees Celsius and to stabilise GHGs as far below 450 ppm as possible. Even at that level, global ambition would require a 50-80% reduction in GHGs by 2050 compared to 1990. Since the Intergovernmental Panel on Climate Change (IPCC)’s 4th report was published, other scientific findings show that the safe upper limit should be around 350 ppm, which makes work more urgent. There should be research on the full implications for SIDs of temperature increases at or in excess of 2 degrees Cel-

sus and on means and pathways to prevent impacts on SIDS, LDCs and other vulnerable countries.

Slovenia speaking for the EU said that on mitigation, a long-term goal based on 2 degrees Celsius requires reductions of at least 50% by 2050 compared to 1990 levels. But it also implies very urgent short-term action, as peaking has to happen in the next 10-15 years. It is the shared vision based on Article 2 of the Convention and in the light of the most recent science that implies urgent short-term action.

The EU said there is a clear difference between commitments for developed countries and actions by developing countries, in respect of the spirit of the Bali Action Plan. All developed countries have to take the lead. This means, for developed countries, binding reduction targets within the IPCC range of 25-40% by 2020, compared to 1990, for the whole group to be consistent with the long-term goal. Mitigation plays a decisive role within the shared vision.

But this shared vision is more than a long-term goal for global emission reductions. It should also translate the ultimate objective (in Article 2) into a common understanding on putting the world on a pathway towards a low-carbon economy that avoids dangerous climate change, safeguards the environment, strengthens climate resilience, and allows for sustained economic welfare. It has to acknowledge the need for adaptation but also acknowledge the limits for adaptation and the need for deep cuts in global emissions.

The shared vision and long-term goal should guide short and medium-term enhanced action. What we need to do on mitigation, adaptation, technology and finance will critically depend on the chosen pathway. A long-term goal provides a clear statement of global political will and clarity on the investment decisions needed to get us on a low-carbon pathway and provides guidance on the scale of the investment required to reach this long-term goal and to adapt to unavoidable climate change. It drives innovation by increasing the credibility of the policy framework that private investors are operating within.

New Zealand stressed on the long-term goal as essential to a shared vision. It must be informed by science and be feasible. It could be expressed in terms of GHG concentrations or as a minimum temperature. It should not be legally binding. It should not lead to burden-sharing and could lead to periodic reviews.

India said it is essential to take into account parameters of Article 2, that food production is not threatened and economic development in a sustainable manner is enabled. Of essential importance is

the principle of common but differentiated responsibilities and respective capabilities. Article 2 is a complex article which includes 3 elements. The first element is the method by which the ultimate objective is attained in accordance with the relevant provisions of the Convention. The provisions of the Convention, especially Articles 3 and 4, must be faithfully observed. (Article 3 deals with the principles of the Convention and Article 4 deals with the commitments). There can no departure from this.

The second element deals with that of the stabilisation of GHGs and the third element with the parameters within which stabilisation is achieved. Such a level is to be achieved within a time-frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner. This is the ultimate objective. It is not just about plucking figures from the air. All elements must be adhered to. There is a need to take these elements in totality, and the vision for the long-term cooperative action must faithfully adhere to and enhance the implementation of their respective commitments.

Bangladesh, speaking for the LDCs, said that there was a need to agree to the ways and means to achieve the ultimate objective of the Convention with a medium and long-term goal. The first task is to set global emission targets, with deep cuts with early peaking. By 2050, temperature rise should be kept well below 2 degrees Celsius and well below 450 ppm. For LDCs, it is important to have the right to climate resilient development within sustainable development. It stressed the importance of food security, energy security and pro-poor targets.

Chile called for new and more demanding targets. Annex 1 countries should provide sufficient technology and finance. The temperature rise should be kept below 2 degrees.

Malaysia said that the shared vision should be within the context of Article 2 and common but differentiated responsibilities and to allow for economic and social development in a sustainable manner. The shared vision is not only about emission reduction targets. It also refers to targets for finance and technology. Simulations of scenarios of global emission reductions of certain percentages and what this means for developing countries are needed. If developed countries undertake certain percentage cuts, an important issue is what the residual cuts for the developing countries will be. The data and simulations would help advance discussions.

Japan said that the long-term goal for emission reductions should be non-binding. Peaking should happen in 10-20 years and then decline to

50% from current levels by 2050. [Note: This is different from the EU's proposed base year of 1990]. Japan's Premier has announced that the long-term target for Japan for emission reductions is 60-80% from the 2005 level. Japan will announce mid-term quantified targets sometime next year.

It said the sectoral approach is a realistic solution to discuss target setting. It called for a common methodology through a bottom-up sectoral approach at the next Conference of Parties. Japan will start its emissions trading scheme this year. It pledged up to \$1.2 billion for the World Bank's climate investment funds.

Brazil stressed that parties did not have a shared vision today, and said that this must be built. The shared vision is a common understanding on the long-term cooperative action needed to ensure full implementation of the Convention, with a view to achieving the ultimate objective expressed in Article 2. Enabling sustainable development is, therefore, an essential element of the shared vision.

The shared vision is necessarily comprehensive. It cannot be reduced to any specific element, such as, for example, the long-term global goal for emission reductions, and demands ambition in all areas, particularly those that enable enhanced action, such as finance and technology. There is no point in discussing a numerical goal without discussing the process and conditions for it to be achieved.

The discussion must evolve before we are able to define specific numbers or the nature of the goal, for example, as aspirational or mandatory. The shared vision must consider equitable burden-sharing. Without specific definitions on burden-sharing, based on the principle of common but differentiated responsibilities, parties will not be able to organize a joint effort directed towards the ultimate objective of the Convention.

Brazil reiterated that it considers a long-term global goal an important orientation for national and international mitigation actions and believed it should be ambitious. All countries must contribute to the global goal, while remembering that the contributions of developed and developing countries will be different. The commitments of Annex I countries and the actions of non-Annex I countries are distinct in nature.

"We should not bring in new groupings of countries that alter this established and agreed distinction, said Brazil. National contributions to common mitigation efforts should be based on the historical responsibilities of countries for causing global temperature increase. The challenge faced today is not created today; it is the result of hundreds of years of emissions. Such a fact cannot be swept un-

der the carpet. We work today with a view to the future, but without forgetting the past," it added.

In relation to the long-term global goal for emission reductions, Brazil emphasized the importance of the best-available science. This entailed the readiness to adjust parties' view of such a goal as the knowledge of climate change advances. It also demands careful consideration and precise information on temperature increase limits and on the connections between such limits, GHG concentration stabilization levels and specific GHG emission paths. In this context, parties must avoid arbitrary choices that may create undue and unfair restrictions for sustainable development.

The United States said the shared vision should inspire the international community to accelerate its efforts to stabilize GHGs, while sustaining economic development. Elements of the vision are an affirmation of the need to achieve all the objectives in Article 2, not only in stabilising GHGs but also the need to ensure that economic development proceeds in a sustainable manner; a common commitment to take action individually and collectively; an acknowledgement of the evolving application of common but differentiated responsibilities and respective capabilities, taking into account social and economic conditions and other relevant factors, and in particular, the degree to which the world has changed and is changing, along with current and future realities relating to climate change; and a long-term goal for emission reductions that meets five criteria which are global, realistic, consistent with economic development, scientifically based and inspirational (as opposed to burden-shared or legally enforced).

The US said that meeting the goal will be dependent on the availability of not only new technologies, but other factors as well. For this reason, it does not see the goal as the basis of long-term target setting or burden-sharing but rather, that a future approach would need to reflect what countries are willingly prepared to contribute. It suggested a technical paper on the technology assumptions underlying specific long-term goals.

There is also a need for better understanding of the stabilisation scenarios in the IPCC 4th report. The lowest atmospheric concentration stabilization scenarios assessed by the IPCC all assume "overshoot" strategies. "Such overshoot strategies involve ultimately net negative global emissions. This would suggest the urgent need to develop and commercialise carbon capture and storage technologies that would enable removal of GHGs from the atmosphere, and should inform the nature of the global goal that is being sought," said the US.

Saudi Arabia stressed the need to shape the shared vision around the four blocks of mitigation, adaptation, technology and finance. Measures to combat climate change should not be arbitrary or be disguised restrictions on international trade. The long-term goal could be aspirational. It linked the need for ambition to the availability of technology and financial resources. It said that what is being offered is far from the reality, quoting a recent International Energy Agency report which said that USD 45 trillion would be needed in the next half-century to prevent energy shortages and GHG emissions growth from undermining global economic growth.

Pakistan agreed with Brazil that parties have yet to have a shared vision. A shared vision means enhancing the implementation of the Convention and should not deviate from the principle of common but differentiated responsibilities and takes into account intergenerational equity. It echoed the views of Malaysia in stressing the need for a technical paper which analyses the implications for developing countries of a long-term global target in the light of the targets proposed by developed countries that they would undertake.

Russia said the long-term goal should be non-binding, and the goal should not be “top down.” The change in the world economic situation should be taken into account in taking differentiated responsibilities.

Micronesia said that two elements must shape a shared long-term vision for cooperative action: the Convention’s objective and provisions, and the best-available science. Principles for the shared vision should include that (1) Actions reflect the principle of prevention (that States have the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of their national jurisdiction) and (2) Any new package of mitigation activities and mitigation goals, must be developed within the UN framework and must build on the Kyoto Protocol rather than replace it. Any mitigation goal is not to be developed within external process such as “major emitters or major economies meetings.”

On the long-term goal, any mitigation package must ensure temperature increases at well be-

low 2 degrees Celsius below pre-industrial levels and to stabilize GHGs as far below 450 ppm as possible. It also called for binding and ambitious mid-term targets. Citing the IPCC, it said that even keeping to a 2 to 2.4 degree Celsius limit requires a 50-85% reduction in global emissions by 2050 relative to 2000 levels. “Given what we have seen of the science since this report was issued, we see that the 85% end of the spectrum is where we need to be,” it added.

Some scientists recently suggested that the safe upper limit for atmospheric concentrations of CO₂ alone is no more than 350 ppm. On the question of being ‘realistic’, Micronesia said: “We are living in parallel universes when we say there’s a need to be realistic. For Micronesia and in other countries with low-lying islands and land areas, the reality of climate change impacts are very real and very immediate and this should be reflected in our shared vision on adaptation, mitigation, technology transfer and finance.

“For many low-lying countries, sovereign risk – the risk of losing countries completely due to sea level rise - is no longer a long-term concern as we are slowly seeing islands become inhabitable. Already, salt water intrusion is affecting water security and food security in many of our islands and forcing the movement of peoples. Our long-term shared vision must reflect the urgency of our collective endeavour, and must safeguard the most vulnerable Parties to the Convention from the impacts of climate change. This means using impacts on the most vulnerable Convention Parties – SIDS and LDCs, as a benchmark for the appropriateness of our shared vision and long-term goal and for the success of the post-2012 package as a whole.”

In relation to trade-offs between countries, it said that inputs into the work programme should enable all parties to clarify the trade-offs between countries – that is, between developed and vulnerable developing countries, in choices of targets and levels of ambition for global mitigation efforts. Vulnerable countries should not bear the costs of unsustainable lifestyles in developed countries and the loss of members of the international community cannot be contemplated by this process.

Kyoto Protocol group lays out 3 categories of issues

Bonn, 9 June (Hira Jhamtani) – Delegates have been discussing many issues regarding the second period of commitment for greenhouse gas (GHG) emission reduction in developed countries (termed Annex 1 countries in the UNFCCC) under the Ad Hoc Working Group on Further Commitments for Annex 1 Countries under the Kyoto Protocol (AWG-KP) during the Bonn climate talks.

The AWG-KP meeting began with a roundtable on three topics: emissions trading and project-based mechanisms; land use, land use change and forestry (LULUCF); and possible approaches targeting sectoral emissions and greenhouse gases, sectors and source categories.

On June 3 the AWG-KP's Chair, Harald Dovland from Norway, invited final general comments. Some developed countries stressed the need to get the means and rules formulated before setting a target for GHG emission. They said all means available need to be identified and some countries said the means to mitigation should achieve global emission reduction in the most cost-effective way.

They also stressed on the role of LULUCF activities not only as a means to achieve emission reduction but also as possible removals of CO₂. The EU also stressed the need now to start considering proposals as the issues and means have been identified during the roundtable.

The G77 and China (represented by South Africa), on the other hand, said a very wide range of proposals has been put forward and some go far beyond the legal mandate of the AWG-KP which is to determine further emission reduction among Annex 1 countries. It wanted a clear signal that this will happen. There are other processes with legal mandate that can take care of those issues not mandated under the AWG-KP. It gave the analogy of baking a cake based on a tested recipe. "If you try to improve and add up many elements, it will become a major mess. The new elements may be needed, but to bake

another kind of food, not a cake", it emphasized.

China supported this by saying that the group should focus on its mandate rather than introducing irrelevant matters. It will delay the work of the group and will not be conducive for the results. It recalled that last year in Vienna, a preliminary target for emission reduction of 25-40% from the 1990 level was proposed.

China added that developed countries can use various means to reach the target, such as through energy efficiency, renewable energy sources, changing lifestyle and technological innovation. Rules and methodologies have been set during the Marrakech Accord during COP 7. If adjustments are to be made to relevant rules and methodologies, we need to understand the impact on the emission reduction potential. If the rules weaken emission reduction, then the target ranges should be adjusted upward correspondingly.

Tuvalu said that the means must preserve the architecture of the KP. This was supported by Brazil. Ethiopia reminded of the need to address the regional inequitable distribution of Clean Development Mechanism (CDM) project, and for incentive mechanisms to develop clean technology for energy. Kuwait said the rules should not single out a greenhouse gas in the market. Currently it is only for CO₂, and thus all gases, all economic sources must be covered.

As a way to move forward and reach conclusions in the next climate talks in Accra, the Chair proposed to establish three contact groups. The first group is on emissions trading and project-based mechanism (contact group on mechanisms) co-chaired by Ms. Christiana Figueres Olsen from Costa Rica and Mr. Nuno Lacasta from Portugal; and the second group is on LULUCF, co-chaired by Brian Smith from New Zealand and Marcelo Rocha from Brazil. The third group (chaired by Harald Dovland himself) is called "AWG-KP other issues" to dis-

cuss three items: greenhouse gases, sectors and source categories; possible approaches targeting sectoral emissions; consideration of relevant methodologies.

The contact groups are to collect all the proposals and options in a bracketed text with a structure. If there is an agreement on certain issues, they can be unbracketed. The idea is to have a level of certainty for Annex 1 countries so that a clear target can be agreed to next year, after the texts are discussed in the next two climate talks in Accra and Poznan this year. The Chair will formulate a summary to help the contact groups but the summary will only be a summary and not a basis for discussion. The groups should finish work on June 11.

The Chair on 3 June produced a summary on the range of ideas and proposals put forward during roundtable discussions.

Contact Group on Mechanisms

During the first session of the contact group on mechanisms, the co-chair Christiana Figueres Olsen said the outcome should not be a legal text but a compilation of proposals. The discussion would be on CDM, Joint Implementation (JI) and Emissions Trading (ET), as the three flexibility mechanisms under the KP to help Annex 1 countries to achieve emission reduction. The fourth item is cross-cutting issues.

On June 4, the Chair produced a list of possible improvements for emissions trading and

project-based mechanisms. It contains elements to be elaborated further. The elements for CDM, JI and ET were scope, effectiveness and efficiency, accessibility, contribution to sustainable development, capacity to generate co-benefits and transfer of technology. Each element in each category had sub-elements that would be discussed further. The elements of cross-cutting issues are: review of carry-over restrictions, improved transparency regarding green investment schemes, reduce the number of unit types established under the KP, and extension of the share of proceeds.

The draft text issued on 6 June retained the above structure with slightly elaborated elements, as annex 1 attached to the text. The draft text says that in considering possible improvements to the mechanisms, due attention should be given to promoting the environmental integrity of the KP, the contribution of the mechanisms to sustainable development and that the use of such mechanisms shall be supplemental to the implementation of domestic actions at the disposal of Annex 1 parties.

It added the AWG-KP will also consider the implications for the carbon market, resulting from changes to the means that may be available to Annex 1 Parties to reach their emission reduction targets. The AWG-KP will continue its work at the first part of its sixth session using views of parties as contained in Annex 1 so that the conclusions may be adopted at that session.

[There will be separate reports on the discussion on the other two contact groups on LULUCF and "other issues"]

Debate on rules on LULUCF to reduce emissions

Bonn 10 June (Hira Jhamtani) – The Bonn climate meetings have been discussing Land Use, Land Use Change and Forestry (LULUCF) as one of the means to help developed countries (listed in Annex I of the UNFCCC) to achieve greenhouse gas (GHG) emission reduction under the Kyoto Protocol (KP). This topic has been the subject of differences between developed and developing countries.

The Contact Group on LULUCF under the Ad hoc Working Group on Further Commitments for Annex 1 Countries under the Kyoto Protocol (AWG-KP) first met on 3 June. The Co-Chair, Marcelo Rocha from Brazil, said the purpose of the contact group (CG) was to compile ideas and proposals for the next climate talks in Ghana in August.

He suggested to structure the discussion along the elements of Decision 16/CMP1 on Land Use, Land Use Change and Forestry. In that decision Parties adopted the definitions, modalities, rules and guidelines relating to land use, land-use change and forestry activities under Articles 3, 6 and 12 of the KP, and to be applied in the first commitment period.

Article 3 of the KP provides for LULUCF in 3.3 which says that the net changes in greenhouse gas emissions by sources and removals by sinks resulting from direct human-induced land-use change and forestry activities, shall be used to meet the commitments of Annex 1 countries to reduce greenhouse gas emissions by sources and removals by sinks.

Article 6 says Annex 1 countries may transfer to, or acquire from, any other such Party emission reduction units resulting from projects aimed at reducing anthropogenic emissions by sources or enhancing anthropogenic removals by sinks of greenhouse gases in any sector of the economy. Article 12 provides for the Clean Development Mechanism (CDM).

While some developed countries agreed to the Chair's suggestion, South Africa, on behalf of G77

and China, objected to the suggestion of using Decision 16/CMP1 because the decision has not been tested as yet, and therefore there is no real understanding of why it is being considered not applicable. Tuvalu added that opening up decisions is very sensitive; instead the Chair should ask for submissions on proposals before deciding if there is a need to revise anything.

The Chair said his suggestion was not to change Decision 16/CMP1 but to use the elements as a guide. He agreed that the CG is not a drafting exercise or to make amendments to existing rules. He also reminded that Decision 16/CMP1 is for the first commitment period and there is a need to look at it to see if Parties want to use it for the second period of commitment.

Brazil suggested that Parties can elaborate how to treat LULUCF without being prescriptive, but provide understanding, for instance what do some Parties mean when they say that there is a need to broaden LULUCF activities, or have an inclusive approach to LULUCF.

Some developed countries then supported using the Chair's summary as a basis for negotiations. The Chair suggested using point 24 of the Chair's summary to start discussion. It contains three proposals by Parties during the roundtable discussion: (a) making small adjustments to current definitions, rules and modalities; (2) amendments to the current rules; (c) using a more inclusive approach to LULUCF, aiming at a broad coverage of land. The Chair asked for comments on how to address the LULUCF in the second period of commitment.

Brazil said there is something wrong in the process. Developing countries are being given the impression that there is a need to change rules, but also that Annex 1 countries want incentives. There is also an indication they want to enlarge the LULUCF package. But just opening the box is going to give the impression that there is another box.

A confidence-building measure needs to be given to non-Annex 1 countries that this will not lead to something unmanageable. We need to be open on what is going to come out of it.

South Africa, for G77 and China, said the group has serious questions about the documents suggested by the Chair to be used as a basis for discussions. China reminded that the purpose of the AWG-KP is to focus on the future commitment period. Indonesia suggested the discussion be conducted in a careful way so as not to divert the commitment of Annex 1 countries. India said it is premature to use the elements of Decision 16/CMP 1 without a review first on what is the difficulty of the current rules for Annex 1 countries.

The UK raised concerns that if both using the Chair's text and Decision 16/CMP 1 are not acceptable, then what should the CG do? The issue is how to address LULUCF as a means to achieve emission reduction. Current rules are for the first commitment period. The question is should we use it again and what is the safe ground to start exchanging ideas. The Chair asked Parties to propose approaches that would make the group comfortable, under the time constraints, to start discussions and produce a document with elements and options to be discussed in Ghana.

Tuvalu suggested using the Bangkok document (from the first part of the fifth session of AWG-KP, held in March 2008) to start the discussion. Based on the Bangkok document, the Chair suggested that Parties provide elements for modalities, rules definitions and guidelines and asked that proposals be concrete. The Parties agreed on this and the first session was closed, to be followed by informal sessions.

The above differences in the positions of Annex 1 and non-Annex 1 countries are not new, they had already emerged during the Bangkok meeting. Developing countries are concerned about having new rules and new issues such as harvested wood products, without proper information on what the new modalities would be, what would be the impacts both on emission reduction in Annex 1 countries and on non-Annex 1 countries.

The accounting system is another contentious issue. Developing countries want to make sure that there is proper accounting not just for emission reduction, but also for emissions caused by LULUCF activities, which may be anthropogenic but will be claimed as due to natural disturbances. On harvested wood products, developing countries are not sure who the credit should go to, the source of the wood or the user of the wood products for keeping the carbon off the air.

Following informal consultations, the Co-Chairs produced a draft text on June 7. It said that the AWG agreed that principles to govern the LULUCF contained in Decision 16/CMP I should continue to apply to ensure the environmental integrity of the KP. It also encouraged Parties to share information to allow better assessment of the implications of options and issues identified in the annex before the 6th session of the AWG.

The annex of the text, titled 'Options and Issues for Consideration', contains four points. First, is on cross-cutting issues to be considered when exploring the options and issues such as consistency, continuity with current rules, factoring out, inter-annual variability, natural disturbances and the symmetry in the accounting of emissions and removals.

Second, is the range of options and issues identified by Parties which are divided into three categories: (1) Activity-based approach, with 3 sub-categories i.e. few changes (for legal reasons); more changes required for legal changes and on Article 3.4 on forest management of the KP; many changes that include, for legal reasons, Article 3.4 of the KP and other activities under Article 3.4; (2) Land-based approach in which current rules and modalities are to be changed aiming at full geographical coverage and inclusion of all GHG emissions and removals; and (3) Harvested wood products.

Third, is possible elements to be applied to the options, including that all activities be mandatory, land-use flexibility, and treatment of harvested wood products as part of consideration for forest management and Article 3.4. activities.

A final draft of this text is expected to be approved later this week.

Contentious talks on sectoral approach, aviation/marine fuels

Bonn, 11 June (Hira Jhamtani and Elenita Dano) – Two related issues – “sectoral approaches” as a means to reduce greenhouse gas (GHG) emissions, and emission reduction from international air and maritime transport – have become contentious in the Bonn climate talks.

Developing countries are concerned that the two issues would be used to involve them in making commitments that they are not ready for. They fear the “sectoral approach” being pushed especially by Japan could lead to international harmonization of standards within sectors, and that this could eventually prepare the ground for trade measures.

They are also worried that proposals by developed countries to reduce emissions from fuels used in air and maritime transport may raise costs and reduce competitiveness in their airline, shipping and tourist industries.

These issues are being discussed under the Kyoto Protocol’s Ad Hoc Working Group on Further Commitments for Annex 1 Countries (AWG-KP). A contact group on “other issues” is dealing with these two issues, and up to early this week it could not find common ground on formulating elements related to them.

The AWG-KP is discussing the means to achieve emission reduction for the developed countries (termed as Annex 1 in the UNFCCC). The Contact Group (CG) on Other Issues discussed three topics: greenhouse gases, sectors and source categories, possible approaches targeting sectoral emissions and consideration of relevant methodological issues. Both the AWG and this CG are chaired by Harald Dovland from Norway. While methodological issues were discussed in a workshop on June 7, the other two items were dealt with in the CG.

The CG session began on June 6 with the Chair outlining three sub-topics as agreed in the Bangkok Climate Talks in March 2008 i.e. consideration for broader types of GHGs, possible approaches target-

ing sectoral emissions and consideration for reducing emission from air and maritime transport.

On the issue of new GHGs to be considered, the Chair said that the idea is not to decide on what gases would be added to Annex A of the Kyoto Protocol (Annex A lists the gases and the sectors/sources categories to be targeted by the KP. The gases are: Carbon dioxide (CO₂); Methane (CH₄); Nitrous oxide (N₂O); Hydrofluorocarbons (HFCs); Perfluorocarbons (PFCs); Sulphur hexafluoride (SF₆). The sectors/sources are energy, industrial processes, agriculture and waste).

Rather, he said, there is a need to consider the data on the gases, a structure to collect the data, to include gases not covered under the Montreal Protocol and to ensure they are of anthropogenic source, and those that may be increasing GHG emission in future.

The EU said that to ensure the environmental integrity of the KP, there is a need to identify gases with Global Warming Potentials (GWPs), as considered by the IPCC (Intergovernmental Panel on Climate Change) fourth assessment report. A lot of new HFCs and PFCs have been identified in the GHG inventory report of Annex 1 countries. The EU would also like to consider the fluorinated ethers and perfluoropolyethers which are not listed in the IPCC report, because they are used recently for testing purposes and are not controlled by the Montreal Protocol. More knowledge is needed about these new gases and the UNFCCC secretariat needs to produce a technical paper on these.

Norway agreed with the EU. Switzerland said there is a need to clarify the current production, geographical distribution of production and methodologies and asked that the secretariat collect more information.

South Africa on behalf of G-77 and China said the group has not had an opportunity to assess the proposal to look at the new gases but said the AWG-

KP must narrow the focus. We are looking at implementation of the KP, and it would be harmful to have a long list of issues. We must be pragmatic with the mandate of the AWG and make sure not to amend the protocol. The issue of new gases can be discussed in other fora under the UNFCCC, like SBSTA (Subsidiary Body for Scientific and Technological Advice).

The EU said that the AWG-KP is the right forum to discuss this issue. We need to include the latest scientific knowledge in order to make decisions for emission reduction. If the gases are not listed, the Annex 1 countries would not be able to reduce their emission later on. Japan was open to discuss the new gases based on scientific knowledge, while Australia said there seemed to be agreement to discuss the new gases, but the question is in which forum.

India said that in Bali, the AWG-KP agreed to consider the suggestion to reduce emission by 25-40% in Annex 1 countries. The new gases were not considered when these figures were looked at. Therefore the IPCC should be requested to look at the percentage of GHG emission reduction by taking into account emissions from these new gases. The reduction ranges should be revised if new gases are added. The Chair intervened by saying IPCC might take a long time to fulfill this request and it would delay the process of the AWG-KP. India responded that it is then inappropriate to discuss the new gases until IPCC can give the appropriate range of reductions, taking into consideration these new gases.

China agreed with India, saying it wants to know if new gases are added, what are the mitigation potentials of Annex 1. We should focus on major problems such as energy and transport. These have the most potential for reducing emission in Annex 1 countries and focus should not be diverted to other issues.

The EU said that the fluorinated gases have not been used for commercial production yet, but may be in future. Thus there is no reduction potential. But if they are not put into the list, they will be excluded from future commitments. Saudi Arabia said that adding new gases is in line with the UNFCCC, but there should be a limit to this and care must be taken so as not to postpone implementing the commitments of Annex 1 countries.

The Chair concluded that the Parties agreed to add the new gases into the list for future emission reduction but need more information.

On the sectoral approach, Japan said it is not to replace the national target (that developed countries have to adopt for emission reduction), but rather to strengthen technology transfer (to developing

countries) for sectoral development.

The EU said there are currently differences in understanding on the sectoral approach, rather like five men trying to describe an elephant in the dark room, each describing only one part of the elephant that he is touching. It recognized there are anxieties on the part of the G-77 and China and this needed to be solved. We need clarity from different Parties about the concept. The EU sees three different interpretations. First is the Japanese concept of the sectoral bottom-up discussion, leading to national emission reduction. Second is the cooperative approach outside the global market and third is the sectoral approach within the global market.

On the first concept, the EU sees it as an analytical tool to inform national mitigation efforts depending on the capabilities of each sector, but not to replace national targets. The second concept is a cooperative approach combined with technology and finance to support developing countries' sectors. This would not involve crediting the reduction, but is a broader issue and belongs in the Ad Hoc Working Group on Long Term Cooperative Action (AWG-LCA). The third is sectoral emission trading approaches to help Annex 1 countries to achieve their emission reduction target, using the carbon market mechanism, trading with the emission reduction in developing countries on a sectoral basis. This belongs to the group dealing with flexibility mechanisms under the AWG-KP.

Kuwait said developing countries need more time to understand this approach. Every time we read something on the sectoral approach, we need to know more. We hear terminologies such as potential actions, global, international, bottom up, CDM, credit etc and their linkages. Kuwait asked for a definition on this approach.

Brazil reminded that the mandate of the AWG-KP is to discuss possible approaches targeting sectoral emissions in the context of the second period of commitment by Annex 1 under the KP. The group must resume using this term (possible approaches targeting sectoral emissions), with a clear definition and real reduction in all sectors especially in transport.

Canada said more time is needed, the issue should be discussed in Ghana, and took note of the anxiety of some developing countries.

Tuvalu commented on the three concepts suggested by the EU. On the first concept, it did not see the need for an agreement from this group. Annex 1 countries can apply any sectoral approach to reduce emission and there is no need to discuss this in the group. On the second concept (cooperative sectoral approach), Tuvalu said there is a need for further

scrutiny in the AWG-LCA. On the third concept, there is a need to elaborate the concept further through focused discussions.

South Africa speaking on behalf of G-77 and China said the issue of sectoral approach does not belong to the AWG-KP and reiterated that the sectoral approach is to target sectoral emissions but should not replace the national targets. There was no conclusion yet on this discussion.

On June 8 the CG discussed emission reduction in international air and maritime transport. Kuwait and Saudi Arabia asked that the issue not be discussed in AWG-KP as they are concerned it is being used as a medium to shift the Annex 1 commitment to developing countries.

The EU explained that the future of the climate regime should be comprehensive, and nothing should be singled out. It is the responsibility of Annex 1 countries to achieve all measures to reduce emission. GHG emission from air and maritime transport is huge and that is why it is mentioned in the KP (Article 2.2). Eleven years after the KP was adopted in 1997, the emissions from international air and maritime transport have not been regulated. We need to do it now, and Annex 1 countries are responsible for the major share of the emission. That would need a comprehensive approach and coordination between the AWG-KP and the AWG-LCA.

The EU did not agree that the emission reduction from international air and maritime transport be dealt with in other organizations (There were earlier suggestions to let the International Civil Aviation Organization or ICAO and the International Maritime Organization or IMO deal with these issues). Climate change is the responsibility of the UNFCCC, therefore it must have leadership over ICAO and IMO.

Brazil stressed that the emission reduction from air and maritime transport should be the responsibility of Annex 1 countries and not involve non-Annex 1 countries. Tuvalu, while agreeing to the relevance of discussing this issue for the second period commitment of Annex 1 countries, reminded that the common but differentiated responsibilities principle be preserved.

Singapore was not averse to the view of Annex 1 countries to address domestically the emission reduction from air and marine transport, but said that ICAO and IMO are the bodies to do this. It added that many non-Annex 1 countries have anxiety about this as countries need transport for development process, if not they will be subjected to poverty. Additional tax on transport will impede development.

Norway wanted to conclude this issue by COP 15 in Copenhagen. It saw the need to link possible

reductions to long-term goal and therefore preferred a global approach and the need to coordinate between AWG-KP and LCA. Argentina insisted that when considering emissions from international air and maritime transport, the consequences for developing countries must be considered, particularly on the transport of agriculture goods to geographically isolated places.

Saudi Arabia strongly opposed the discussion of aviation and maritime emissions at the UNFCCC. It said that the appropriate fora to discuss these are ICAO and IMO which are totally independent of the UNFCCC but have roles to play in the implementation of Art. 2.2 of the KP. It stated that this issue is closed as far as Saudi Arabia is concerned, and reminded that commitments to reduce emissions in the KP apply only to Annex 1 countries.

New Zealand supported a global approach and close coordination between ICAO and IMO. The appropriate forum at the UNFCCC to discuss this issue is the AWG-LCA. Australia stressed the importance of global actions on maritime and aviation emissions, and said the discussion was deciding on the forum since the issues must be definitely addressed.

Brazil insisted that there is no link between the AWG-LCA and AWG-KP processes. It explained that discussions in the AWG-KP are not for global approaches but for Annex 1 countries. This issue can be used as an entry to the sectoral approach and then might drag developing countries into setting emission reduction targets.

China reiterated that AWG-LCA and AWG-KP are separate and are not linked, and said that the discussion should not focus on specific targets but rather on the means. South Africa recognized emission from air and maritime transport is a problem but this should be discussed in another forum, in which the ICAO and IMO might have a role to play. But, this should only apply to Annex 1 countries and should not replace emission caps in developed countries.

Russia said including aviation and maritime emissions in the agenda would require months of methodological work. Switzerland suggested an in-session discussion of "sectoral approach" in Accra to have better understanding of the basis of decisions on how the different allocation options contribute to the Annex 1 countries' responsibilities for their emissions. Australia wanted a Secretariat study on aviation emissions.

Slovenia, for the EU, said that studies should be conducted to identify the negative consequences of aviation and maritime emissions on the SIDS and on development in general. It wanted inclusion of aviation and maritime emissions in the "future re-

gime”, taking into account the impacts on the implementation of the CDM, on “carbon leakages”, and on the stiff competition in the aviation and maritime industry. Possibilities to generate financial resources should be discussed.

Saudi Arabia said there is no consensus on whether maritime and aviation emission will be considered as an issue or not. It would not accept the proposals for studies by the secretariat, and called instead for a decision on whether emissions from aviation and maritime sectors will be considered as issues or not.

Argentina corrected the EU on its earlier reference to the “future regime”, which should be an “enhanced regime”, and said discussions should focus on the more effective operationalization of the means of implementation at the end of the current commitment period.

The EU clarified that it does not require an extra report from the secretariat, but only to compile studies that are already available. It also clarified that by “future regime”, it actually means an “enhanced regime”.

The Chair provided a short summary of the discussions, concluding that there has been no consensus reached but all the issues taken up will be included in the list for discussion in Accra. He said there is indeed no formal link between AWG-KP and AWG-LCA, and stressed that there is a need for collaboration among UNFCCC, ICAO and IMO.

On Monday 9 June the Chair produced a draft text covering all the issues in this CG. The draft said that the AWG-KP had considered three issues: (1) how approaches targeting sectoral emissions could be used by Annex 1 Parties as a means to reach reduction targets; (2) possible broadening of the coverage of GHGs, sectors and source categories and

its implications, based on sound science; and (3) how approaches to limit or reduce emissions of GHG not controlled by the Montreal Protocol from aviation and marine bunker fuels can be used by Annex 1 Parties as a means to reach their emission reduction targets.

The text has an annex listing the views of Parties compiled by the Chair, consisting of three sub-items. The first is “possible approaches targeting sectoral emissions”, which stated that these should not (1) replace national targets; (2) lead to commitments for non-Annex 1 Parties; and (3) constitute a means for unjustifiable discrimination or disguised restriction of international trade.

Types of approaches targetting sectoral emissions include: (1) bottom-up sectoral analysis to inform setting emission targets for Annex I Parties; (2) cooperative sectoral approaches supported and enabled by finance and technology; (3) sectoral crediting in non-Annex I Parties; and (4) complementary sector-specific goals for Annex I Parties.

The second sub-item is on GHGs, sectors and categories to be covered.

The third sub-item is emissions from aviation and maritime bunker fuels as a means for Annex I Parties to reach their emission reduction targets. Under this are 4 points: (1) Coverage and scope of limiting or reducing emissions; (2) Limiting or reducing emissions from aviation and marine bunker fuels as a means for Annex I Parties; (3) Need for progress on discussions on Article 2.3. of the KP; and (4) Apply fiscal instruments to emissions from aviation and marine bunker fuels as a source of revenue for financing adaptation.

This draft text is under discussion and a final draft is expected to be adopted at the end of the week.

Important exchange at Bonn on climate mitigation actions

Bonn 12 June (Meena Raman) – Developing countries through the G77 and China as well as individually stressed during the Bonn climate talks that actions to mitigate climate change are different in nature between developed and developing countries. Citing the Bali Action Plan, they reiterated that developed countries had commitments on mitigation, while developing countries would take action if enabled by technology and finance provided by developed countries.

There were nuanced differences in developed countries' positions. The European Union recognised the nature of differences in actions required, while the United States stressed "common elements" in what is asked of developed and developing countries.

The question of what is "reportable, measurable and verifiable" in the mitigation actions of developed and developing countries was one of the most important issues raised by various countries.

Another contentious issue was the "cooperative sectoral approach", pushed by Japan and supported by the US. This refers to a global approach to emission reduction by sectors. The G77 and China and many developing countries (who suspect this approach will lay the ground for trade measures on products that do not meet globally-set standards) spoke against it, saying it is not in the mandate, while Japan and the US highlighted its importance.

The exchanges on mitigation actions related to climate change took place in a contact group on mitigation on 9 June, under the Ad-Hoc Working Group on Long-Term Cooperative Action (AWG-LCA). The group is tasked with following up on the Bali Action Plan (BAP) adopted by the UN Framework Convention on Climate Change (UNFCCC)'s conference of parties in December 2007.

It was one of the most important discussions so far, as the session heard many groupings and countries putting forward their positions on mitigation

actions, which many see as the most difficult aspect of the complex climate negotiations taking place.

The Bali Action Plan, in paragraph 1(b), addressed enhanced national/international action on mitigation of climate change. This is divided into consideration of the role of developed countries in sub-paragraph (i), and the role of developing countries in sub-paragraph (ii).

Para 1 (b)(i) states: "Measurable, reportable and verifiable nationally appropriate mitigation commitments or actions, including quantified emission limitation and reduction objectives, by all developed country Parties, while ensuring the comparability of efforts among them, taking into account differences in their national circumstances" (This paragraph is aimed at getting the US, which is not a Party to the Kyoto Protocol, to make comparable commitments as other developed countries that are Protocol members and which have undertaken legally binding quantified emission limitation and reduction commitments under the Protocol).

Para 1(b)(ii) states: "Nationally appropriate mitigation actions by developing country Parties in the context of sustainable development supported and enabled by technology, financing and capacity-building, in a measurable, reportable and verifiable manner". (This was a hugely contested paragraph in Bali, as to whether the words "measurable, reportable and verifiable" (MRV) should be in the beginning of the sentence or at the end. What eventually prevailed was the developing countries' insistence to have the words at the end of the sentence).

Luiz Machado of Brazil, the Chair of the AWG-LCA, explained that the purpose of the contact group was to focus on mitigation, which is centred on the shared vision of the Bali Action Plan. He called for concrete ideas for submissions by Parties and for suggestions for technical papers needed.

The **G77 and China** stressed that the Bali Action Plan (BAP) was about enhancing the implemen-

tation of the Convention. It said that under the Convention, the developing countries did not have commitments. It said that in the BAP sub-paragraph 1(b)(i) and sub-paragraph 1(b)(ii) are clearly distinct, in that the former relates to commitments by developed country Parties which will be “measurable, reportable and verifiable” to allow for comparability of efforts among developed country Parties, while the latter relates to mitigation actions of developing country Parties which are supported and enabled by technology, financing and capacity-building in a “measurable, reportable and verifiable manner.”

In relation to paragraph 1(b)(iv) of the Bali Action Plan which deals with “cooperative sectoral approaches and sector-specific actions” by Parties, the G77 and China said that this sub-paragraph should be seen in the light of Article 4.1(c) of the Convention which relates to the development, diffusion and transfer of technologies that control, reduce or prevent greenhouse gas (GHG) emissions in all relevant sectors.

(Some developed countries especially Japan have advocated a global sectoral approach for mitigation actions which goes beyond the mandate of Article 4.1(c) of the Convention, which only relates to international cooperation in technology development, diffusion and transfer).

The group also drew attention to the need to address the economic and social consequences of response measures.

Barbados, for the Alliance of Small Island Developing States (AOSIS), said that the group has a vested interest in an ambitious outcome on mitigation. Without ambition in mitigation, adaptation will be meaningless. It reiterated that some scientists recently suggested that the safe upper limit for atmospheric CO₂ concentration is not more than 350 ppm. We have already exceeded the safe limit. Based on these findings, the 25-40% range identified by the IPCC is clearly insufficient.

Therefore, commitments by developed country Parties must be drastically enhanced to reflect the present state of science. On how to define the “comparability of effort” under BAP paragraph 1(b)(i), the issue will be complicated if developed country Parties continue to propose different “effort parameters” such as different base years, different metrics for measuring mitigation outcomes (such as the difference between reduction in emissions intensity compared with absolute emissions reductions) and different reduction targets (such as national targets compared to sectoral targets).

To ensure credibility in the outcome and ensure that the international community is capable of

measuring comparable efforts, AOSIS sees the need to standardise the benchmark against which efforts are measured. Developed countries should use the same base year, the same metric for measuring emissions reductions and use quantified emission reduction commitments based on national targets.

It is not appropriate for developed countries to have the option of picking certain sectors only. Once a common set of parameters are agreed on, then individual developed countries can interpret those parameters to suit their domestic context. A country could set a national target for emission reductions but within their own national context they may wish to identify various reduction targets for certain sectors.

On paragraph 1(b)(ii), AOSIS wants a process to clearly identify the necessary financial and technological incentives such that these actions can be measurable, reportable and verifiable. This is a crucial step in the development of a new agreement under the Convention. A possible approach on national appropriate mitigation action would be for individual developing countries to identify voluntary actions in sectors which they could take towards emission reductions. Within this context, it is useful to design a range of positive incentives to encourage national appropriate mitigation actions within sectors.

On consequences of response measures, it is useful to explore the economic and social consequences of taking actions to address climate change, in some emerging sectors and processes such as biofuels production, trade policies associated with food miles and flower miles, and the implications for countries dependent on tourism. A workshop on these issues may be useful.

India said that the operative part of paragraph 1(b)(i) refers to mitigation commitments and actions of developed country Parties. Particularly significant is the reference to “quantified emissions limitation and reductions objective”. This is of fundamental importance and its meaning should not be distorted. All developed country Parties should accept quantified emissions limitations regardless of whether the Party is describing the mitigation as a ‘commitment’ or ‘action’, it added.

India said that given the negotiating history, the MRV in 1(b)(ii) (i.e. the actions by developing countries), applies to the case of mitigation actions supported and enabled by external sources. India recalled that the words “measurable, reportable and verifiable” were removed from the beginning of the paragraph and placed at the end of it, before the adoption of the BAP in Bali.

It will be taking several mitigation actions which it will measure and report, but this will not be subject to international verification. There is at present no review requirement for developing countries and it did not wish to depart from that clear position. It added that MRV will apply internationally when measures are internationally enabled, and it is to apply domestically when domestic resources are employed.

As regards the sectoral approaches, India deals with sectors solely in the context of Article 4.1(c) of the Convention, which refers to cooperative approaches only in the context of technology diffusion and transfer and not in any other context. It is important that Parties do not go beyond this very specific context. Questions of universally accepted standards or best practices fall outside the scope of the BAP. The question of universal standards would be in contradiction to principle 11 of the Rio Declaration as standards would entail high economic and social costs to the developing countries.

Brazil said that the objective of the long-term cooperative action is to enhance the implementation of the Convention. In the consideration of mitigation, the text and spirit of the Convention must therefore be respected. The BAP confirms the principle of common but differentiated responsibilities by addressing, on the one hand, mitigation commitments for Annex I Parties and, on the other hand, mitigation actions by non-Annex I countries in the context of sustainable development.

Annex I mitigation commitments and non-Annex I mitigation actions are different in nature. In the first case, developed countries must reduce their emissions to comply with their quantified targets. In the second case, developing countries, implementing nationally appropriate mitigation actions in the context of sustainable development, will seek to reduce the rate of emissions growth, as indicated in the IPCC's Fourth Assessment Report. All countries should contribute to the common effort of mitigation, but the difference in nature between their contributions reflects distinct responsibilities, capabilities and needs regarding economic and social development and poverty eradication.

Comparability regarding mitigation efforts of Kyoto Annex I Parties and non-Kyoto Annex I Parties is an essential element of the BAP. It will establish the needed parameters to position all Annex I countries within an institutional framework that is fair and adequate to their level of development and capacity.

Brazil gave its view on the difference between measurability, reportability and verifiability in the

case of Annex I countries and non-Annex I countries. What must be measured, reported and verified, in the case of Annex I countries, is the extent to which emission limitation and reduction complies with quantified objectives. This must follow Convention guidelines for Annex I inventories. On the other hand, what will be measured, reported and verified, in the case of non-Annex I countries, is implementation of sustainable development actions that reduce the rate of emissions growth.

Non-Annex I countries will implement measuring, reporting and verifying according to nationally defined procedures. Such procedures will define the level of implementation achieved by sustainable development actions, expressed in physical quantities that are easily verified. Additionally, the sustainable development impact of such actions would also be reported. Brazil said that additional information on the results of actions by non-Annex I countries would generate enhanced international recognition of their significant contribution to the global effort to face climate change. This is an issue that often remains neglected.

Although developing countries have not waited for international support to act, the extent of their actions depends on the level of enabling technology, finance and capacity-building they receive. Brazil's position is that it will continue to act nationally, to the full extent of its capacity. However, it is ready to do more, if international positive incentives are established.

Regarding sectoral approaches and sector-specific actions, Brazil recalled the specific reference of the BAP to Article 4, paragraph 1(c) of the Convention, which deals with promoting and cooperating on technology development and transfer. There is no basis here for discussions on sectoral mitigation commitments or international sectoral benchmarks. Nor is there space to introduce issues extraneous to climate change, such as international competitiveness.

China said the BAP had a clear mandate. With a heavy agenda and limited time, Parties should concentrate on the mandate and not raise extraneous issues. "Let us just focus on the plain meaning of the Bali Action Plan and stop introducing new concepts and in redefining the Convention," said China. On paragraph 1(b), the general principle is the differentiation between developed and developing countries. For developed countries, it refers to mitigation commitments and actions, including quantified emission limitation and reductions and targets.

Also, the comparability of efforts by all developed countries is important. The target referred to

by the EU for a 25-40% emissions cut by developed countries by 2020 can be an indicative point of reference for comparability.

Another aspect of differentiation to be maintained is the different procedures in relation to nationally appropriate actions between developed and developing countries. China agreed with Brazil in this regard. Climate change is a global challenge and all countries need to take action in implementing the Convention. For developing countries however, the mitigation actions are in the context of sustainable development, which is supported and enabled by technology, finance and capacity-building, in a measurable, reportable and verifiable manner.

New Zealand said the concept of MRV deserves thorough discussion, as information is not up to date. It said that MRV can provide an audit of GHGs and progress on goals and targets, especially for all major economies.

Saudi Arabia said that mitigation efforts must be in line with sustainable development for all countries. In order to ensure that mitigation actions do not constitute problems, they should be carefully analysed. It suggested elaboration on this through a workshop next year as well as technical and economic papers and analysis. The extent of success of negotiations will depend on the commitment of Parties to stay within the mandate.

Argentina said that we are in a race to a climate-safe future. Parties are in training and are debating the destination. What will propel Parties forward is the need for more significant action from developed countries and to make contributions to developing countries in the areas of mitigation, innovation and access to technology. R and D can generate applications for mitigation technology for all.

South Africa said a firewall should be maintained between mitigation commitments and actions as set out in paragraphs 1(b)(i) and 1(b)(ii) and that this was important for the future climate regime. It stressed that there is no category of "major economies" under the Bali Action Plan or the Convention. The MRV in both paragraphs is different in nature. Referring to the Convention's Article 4.7, it said that while developing countries undertake sustainable development and policy measures as part of their mitigation efforts, further action will depend upon the level of support in terms of finance and technology from the developed countries.

Pakistan said that it is prepared to undertake voluntary action on mitigation if assisted and supported by technology and finance from developed countries, in line with the common but differenti-

ated responsibility and the 'polluter pays' principles. The efforts undertaken must be in line with sustainable development, economic growth and poverty eradication. While welcoming statements by Annex 1 countries to reduce their emissions to certain percentages, it encouraged the undertaking of deeper cuts and negative emissions, taking into account their historic responsibilities.

It also asked for data on what are the implications for developing countries of the proposed cuts for Annex 1 countries together with the proposed global cut (by 2050), in terms of the emissions that are left for developing countries to have. These implications would also have to keep in view the doubling of the developing countries' population and the need to ensure inter-generational equity. It asked for this issue to be addressed.

The **United States** said that it favours ambitious mitigation action that is environmentally effective and economically sustainable. A mitigation outcome should be simple, effective and attractive to all Parties. Countries have a diversity of capabilities and different opportunities to act, reflecting their unique circumstances, and these differences will be reflected in each country's mix of national actions. The US said this is inherent in the concept of 'nationally appropriate mitigation actions'. An effective outcome will be one in which all countries are acting effectively in accordance with their diverse national circumstances and capabilities.

It agreed that mitigation efforts will need to support sustainable development efforts and particularly economic development in both developed and developing countries. Parties need to take into account the economic and social consequences of response measures on both developed and developing countries, as well as the impact of implementation of response measures on developing countries. An outcome that does not reflect this reality will not be attractive to Parties.

Differing from the views of the G77 and China, the US noted that paragraphs 1(b)(i) and 1(b)(ii) have a number of common elements. The outcome of the BAP with respect to mitigation will be encompassed in actions or commitments that are 'measurable, reportable and verifiable' both for mitigation actions themselves and for supporting and enabling technology, financing and capacity-building. The US said it will be essential whether developed or developing countries have a common basis for understanding the nature of Party contributions and gauging progress toward achieving them.

The US is interested in information from the Secretariat on how Parties have measured their ac-

tions, both individually and in the aggregate in national communications, how they have projected the growth of their emissions, and the experience that exists with verification of this information under the Convention. It said there is a lack of basic information on GHG emissions. It complained that even the most advanced non-Annex 1 countries will report data that are ten years old in their next national communications. Annex 1 countries have been reporting their emissions yearly since 1992.

On the MRV issue, the US envisioned three areas of work – avoided deforestation and forest degradation, cooperative sectoral approaches and sector-specific actions, and common elements of paragraphs 1(b)(i) and 1(b)(ii).

On cooperative sectoral approaches and sector-specific actions, the US is of the view that the coverage includes both domestic as well as international actions. It suggested a technical paper on the mitigation potential of the sectors in various regions. On common elements between paragraphs 1(b)(i) and 1(b)(ii), this should be considered in an integrated manner, looking at the common elements and discussing how differentiation would occur, both between and among developed and developing countries. Discussions should commence at the first meeting in 2009.

Slovenia for the EU said that on mitigation, it wanted to underline the need for developed countries' leadership. This required binding targets that lead to an emissions reduction as a group of 25-40% by 2020 compared to 1990 levels. There is need to address how developing countries can contribute appropriately to the mitigation of climate change. Action by developing countries needs to be recognised. This action is different in nature from those of developed countries. We need to investigate further the issue of MRV in relation to both actions and support. Certainly, in advanced developing countries, we want these actions to lead to a substantial deviation from baseline emissions, said the EU.

The EU added that there are large differences between countries, also within the group of developing countries, not just in the relative amount they emit, but also in the opportunity and capacity to undertake mitigation action. LDCs should have special treatment on mitigation and adaptation.

The EU stressed the benefits of the carbon market, which through cap and trade systems in developed countries drives mitigation action and stimulates development and deployment of new technologies. Also, linking it to the crediting systems in developing countries ensures that it directly supports

action in those countries. The carbon market can raise substantial revenue if auctioning is applied and this could be an innovative financing for developing countries.

The EU wanted the reduction of emissions from bunker fuels to be discussed, with clear and meaningful targets to be agreed on.

Mexico on behalf of the Environmental Integrity Group (EIG) said that all states must make efforts in climate mitigation. Developed countries should take the lead. For developing countries, technology and finance is paramount for mitigation actions.

Japan stressed the role of the sectoral approach in mitigation efforts. There are two tiers to the approach – one tier that will be contributed by providing the science by examining the sector-specific potentials for mitigation and this could be applied to developed nations in the comparability of their efforts; and the other tier would accelerate technology transfer through identified best practices. The sectoral approach does not replace quantified national targets. It does not apply uniformly to all countries with the same standard. It is important for comparability of efforts while addressing equity. Japan stressed the introduction of the sectoral approach in the MRV, through improving national communications.

Canada said it would reduce emission reductions by 60-70% by 2050. A global cut of at least 50% by 2050 is critical. It acknowledged that the nature of commitments and actions by developed and developing countries will differ. It is possible to incorporate a wide range of different approaches including sectoral, energy efficiency, and regulation. All relevant technologies should be considered, including carbon capture and storage. All major emitters should have a special focus on emissions from coal-fired power plants.

Australia said that there is a need to be ambitious in mitigation, with a global regime that will deliver credible actions by developed and developing countries. It called for binding international commitments consistent with common but differentiated responsibilities. The nature and scale of developing countries' actions would differ but they need to play their part.

Iceland supported the limiting target of 2 degree Celsius. For this, global action to enhance sinks is needed, including in having a long-term global goal. It said that the potential for reduction in emissions from deforestation, degradation, land use and land-use change is significant.

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As Bonn talks end, G77/China calls for urgency and a “new mindset”

Bonn, 13 June (Meena Raman) – While climate change is already threatening development, livelihoods and the very existence of many developing countries, there is not yet a sense of urgency among governments, said the Group of 77 and China at the closing of the meeting of the group on long-term cooperative action at the UN Framework Convention on Climate Change (UNFCCC).

The climate crisis demands a “new mindset and approach” from all of us, said Ambassador Byron Blake, chair of the G77 and China. But the Group is concerned it had detected little appreciation for the approach needed to get the outcome in the year ahead.

The G77 and China statement was made as the Ad-Hoc Working Group on Long-Term Cooperative Action (AWG-LCA) concluded its second session on 12 June 2009 in Bonn. The Group, which is tasked with following up on the Bali Action Plan (BAP) adopted by the UNFCCC’s conference of parties in December 2007, had begun its work on 2 June.

Following three workshops on ‘Advancing adaptation through finance and technology’, ‘Development and transfer of technology’ and ‘Investment and financial flows to address climate change’, a contact group was established which met five times to advance work on the BAP, addressing the elements of shared vision, mitigation, adaptation, technology and finance.

Mr. Luiz Machado of Brazil, the Chair of the AWG-LCA, prepared a draft set of conclusions which was adopted by Parties. Among the major conclusions were the following:

- Parties are invited to submit ideas and proposals, and where appropriate and to the extent possible, specific textual proposals on the elements of the BAP, taking into account the interlinkages among the elements and the subparagraphs under each of the elements, in order to focus the consideration of all the five elements by the AWG-LCA.
- Parties are invited to submit ideas and proposals on the subjects of the AWG-LCA workshops

scheduled for 2008. (These workshops are on (1) reducing emissions from deforestation and degradation in developing countries, (2) cooperative sectoral approaches and sector-specific actions, (3) risk management and risk reduction strategies, (4) cooperation, research and development of current, new and innovative technology and (5) shared vision for long-term cooperative action).

- Subject to the availability of financial resources, the secretariat was invited to prepare and make available for consideration at its fourth session technical papers on (1) Challenges and opportunities for mitigation in the agricultural sector; (2) Mechanisms, including innovative insurance tools, that can be used to manage financial risks from direct impacts of climate change in developing countries, including consideration of unique circumstances of the most vulnerable developing countries, especially LDCs, SIDs and countries in Africa, and the design of appropriate mechanisms bringing together inputs from technical experts in the fields of insurance, reinsurance, and hazard assessment; (3) An update of the technical paper on investment and financial flows to address climate change and (4) An information note on adaptation related to activities within the United Nations system.

Further, for the work programme for 2009, it was confirmed that four sessions would be held of a total duration of up to eight weeks to advance further work.

In the concluding statements, **Slovenia for the EU** said that there had been a fruitful exchange of ideas and proposals by parties. The progress in Bonn was one step further to reaching a common objective in 2009 and there was no time to waste.

Ambassador Byron Blake from Antigua and Barbuda, for the G77 and China, said that the Group has always emphasized that climate change poses serious risks and challenges particularly to developing countries and therefore demands urgent

global action and response.

He said that the Group, "is concerned about the fact that while the adverse effects of climate change and associated phenomena threaten the sustainable development, livelihoods and the very existence of many developing countries and in particular Africa, the LDCs, the LLDCs, SIDs and disaster prone developing countries, the scientific evidence in support of our claim is now globally recognised and the COP in Bali established a plan for urgent immediate and long-term action; we are yet to see that urgency in response by Parties.

"We have made some progress here but we must judge our progress against the COP resolution to urgently enhance the implementation of the convention in order to achieve its ultimate objective in full accordance with its principles and commitments."

The G77 and China said there is a two-year period to produce the required programme and six months have expired. Against that clear mandate of the AWG-LCA's work towards enabling the full, effective and sustained implementation of the Convention through long-term cooperative action, now, up to and beyond 2012, the Group noted, with deep concern, the efforts on the part of some Parties to link AWG-LCA with other processes.

"This threatens to dilute the goal of the AWG-LCA," said Blake. "We wish to reiterate that the AWG-LCA builds upon other processes under the Convention but does not replace them. We heard all Parties express their desire to advance the Bali process.

"However, we have also witnessed inconsistencies in their proposals with regards to enabling mechanisms such as national communications, the Nairobi Work Programme, financial mechanism, development and transfer of technology and capacity building. Progress on these issues is an integral part of the process of building trust and confidence and a demonstration of preparation to address the future.

"The Bali Action of Plan is geared towards the enhancing action to enable the full, effective and sustained implementation of the convention. It requires us, on the basis of a shared vision for long-term cooperative action and in accordance with the provisions of the Convention, in particular the principle of common but differentiated responsibilities and respective capacities to do the following:

- Make the monumental effort required to mitigate climate change, in the shortest possible time;
- Enhance the level of adaptation to the damage already done and that being done with each day we delay mitigation action;
- Provide for development and transfer of technology to support action on mitigation and adaptation;

- Provide the financial resources and investment to support action on mitigation adaptation and technology cooperation."

The magnitude of these requirements demands a new mindset and approach from all of us, said Blake. "The Group is concerned that we have detected little appreciation for the approach we need to take to get to the quality recommendations which will be required in Poznan and more so in Copenhagen." (Poznan in Poland will host the 14th conference of Parties of the UNFCCC in December 2008 while Copenhagen will host the 15th COP in December 2009).

The Group underscored its view that work during the upcoming sessions should be guided by the principles of the Convention and Parties' obligation to protect the climate system for the benefit of present and future generations of humankind on the basis of equity and in accordance with their common but differentiated responsibilities and respective capabilities. In this regard, the Convention mandates developed country Parties to take the lead in combating climate change and its adverse effects. It is essential that this be proven, it said.

Selwin Hart from Barbados, speaking for AOSIS (Alliance of Small Island States), said that the group continues to believe that an ambitious and comprehensive outcome at Copenhagen remains within reach. "We are however concerned that AOSIS' sense of urgency and level of ambition might not be shared by all Parties. The science is clear – the opportunity to avoid irreversible and potentially unimaginable damage to the climate system will be lost if urgent and ambitious global efforts are not taken.

"Our job is to translate this overwhelming scientific evidence into appropriate political response, guided by the BAP. The time for rhetoric and gamesmanship is over. We must act boldly and we must act together to protect our planet for future generations. We reject the notion that by being 'realistic' we should not be ambitious".

The Chair of the AWG-LCA in conclusion said that the Bonn sessions had advanced a common understanding of the issues and had provided many proposals and ideas. He invited Parties to submit concrete proposals of texts on all elements of the BAP to advance further work. He said that in order to facilitate future work, a scenario note will be issued as early as possible as a guidance to Parties.

The AWG-LCA is one of the subsidiary bodies of the UNFCCC meeting in Bonn. Three other subsidiary bodies – the Ad hoc Working Group on Further Commitments for Annex I Parties (developed countries) under the Kyoto Protocol, the Subsidiary Body for Implementation, and the Subsidiary Body for Scientific and Technological Advice, were still completing their work on Friday afternoon.

Conclusion of meeting of UNFCCC's implementation body

Bonn, 15 June (Meena Raman) – The Subsidiary Body for Implementation (SBI) of the United Nations Framework Convention on Climate Change (UNFCCC) concluded its two-week 28th session on 13 June. The SBI was established to assist the Conference of Parties (COP) in the assessment and review of the effective implementation of the Convention.

Among the issues that had contentious aspects, especially between developing- and developed-country parties, were national communications from developing countries; the review of the Global Environment Facility (GEF); and the review of the Kyoto Protocol. The SBI was chaired by Ambassador Bagher Asadi of Iran.

1. NATIONAL COMMUNICATIONS FROM DEVELOPING-COUNTRY PARTIES

Under the UNFCCC, all parties must report on the steps they are taking or envisage undertaking to implement the Convention. In accordance with the principle of “common but differentiated responsibilities”, the required contents of these national communications and the timetable for their submission are different for developed-country parties (Annex I) and developing-country parties (non-Annex I).

Each developing-country party is to submit its initial communication within three years of the entry into force of the Convention for that party, or of the availability of financial resources (except for the least developed countries, who may do so at their discretion). National communications from developing countries are compiled and synthesized by the secretariat but are not subject to in-depth review.

The GEF, as an operating entity of the financial mechanism of the Convention, provides financial assistance in accordance with the guidance of the COP to non-Annex I parties through its implementing agencies (UNDP, UNEP and the World Bank) for the preparation of the national communications. Guidelines for the preparation of initial national communications from non-Annex I Parties were adopted in 1996, and in 1999, the COP estab-

lished a Consultative Group of Experts (CGE) on National Communications from parties not included in Annex 1 in order to improve the process of preparation of the national communications.

At COP 8 (New Delhi, 2002), parties adopted revised guidelines for the preparation of national communications and decided to continue the mandate of the CGE. The New Delhi COP also decided to review the mandate and the revised terms of reference of the CGE at its 13th session. However, parties were not able to reach conclusions on this matter at the 13th session in Bali and agreed to continue deliberations on this matter in Bonn.

The CGE's activities include the examination of national communications of non-Annex I parties; conducting regional hands-on training workshops on greenhouse gas inventories, vulnerability and adaptation assessments and mitigation assessments in the context of the preparation of national communications; and preparation of technical reports to the SBI, such as ways to improve access to financial and technical support for the preparation of national communications.

In Bonn, the parties once again were not able to reach consensus as regards the mandate and the terms of reference of the CGE. The SBI decided to continue consideration of this matter at its 29th session in December 2008 based on a draft text in an annex with a view to recommending a decision for adoption by the next COP. The draft text was heavily bracketed.

Brazil, speaking for the G77/China, said that most developing countries appreciate the work of the CGE. It stressed the need for the CGE to work in coherence with the Convention and that its work should be driven by the needs of developing countries. The Philippines underscored the need for the work of the CGE to be in complete coherence with the provisions of the Convention.

Mexico, for the Environmental Integrity Group, expressed regret that consensus could not be reached. It said that the CGE had contributed substantially and could support national teams to pre-

pare their national communications.

Slovenia, for the EU, said that the CGE's mandate was to support the improvement of national communications. Through a future mandate, the CGE could also provide support for the Ad-Hoc Working Group on Long-term Cooperative Action (AWG-LCA) on the issue of "measurable, reportable, and verifiable."

(The developing countries are concerned by moves by developed-country parties to impose further obligations on developing countries on the quality of the national communications and in attempting to review the information they provide, so that such information can be "measurable, reportable and verifiable", a term used in the Bali Action Plan.)

Another issue debated in Bonn was the provision by the GEF of financial and technical support to developing countries to prepare for their national communications. At its 27th session in Bali, the SBI asked the GEF to give information on its activities relating to the preparation of national communications by developing countries, including information on the dates of approval of funding and disbursements of funds.

In Bonn, the SBI considered the information provided by the GEF and its concluding document said that the information was incomplete. It then invited the GEF to continue to provide information, and to ensure that it is detailed and complete, on its activities relating to the preparation of national communications by developing countries, including information on the dates of approval of funding and disbursement of funds, for its consideration at its next session in December 2008.

Brazil, speaking for the G77 and China, said that developing countries need adequate information so as to prepare their national communications. It stressed that for the second time, the information supplied by the GEF was incomplete. The GEF must be more responsive to the requests of the COP and to provide the information needed. It said that the GEF is accountable to the parties and that the information was important.

Brazil added that it was unacceptable that the agreed full costs for the preparation of national communications are deducted from national or group allocations from the Resource Allocation Framework (RAF). (In 2005, the GEF Council adopted the RAF, a system for allocating GEF resources to recipient countries.) "Such a procedure is not mandated by the COP," it said.

The Philippines agreed with Brazil that there must be full information from the GEF on the agreed full costs. "The importance of national communications cannot be over emphasised. There can be no nationally appropriate mitigation or adaptation actions without the national communications. How can there be enhancing of national actions if there is no appropriate financing for national communications,

asked the Philippines.

It expressed concern that some parties seem to be shifting discussion of financing national communications from one group to another. "In the process, the ping-pong ball gets lost. We will ensure that this issue stays in the discussion on national communications and financial mechanism," it said.

Slovenia, for the EU, said that it recognises that full cost funding for national communications is vital for their quality, usefulness and timely submission. It said that in future, the CGE could through a future mandate provide support for the Ad-Hoc Working Group on Long-term Cooperative Action (AWG-LCA) on the issue of "measurable, reportable, and verifiable."

2. REVIEW OF THE GLOBAL ENVIRONMENT FACILITY (GEF)

The SBI at its 28th session in Bonn was tasked with recommending a draft decision for the COP to adopt in December 2008 on the assessment of the funding necessary to assist developing countries in fulfilling their commitments under the Convention over the next replenishment cycle of the GEF.

Parties could not reach consensus on the draft decision to be forwarded to the COP. Instead, the SBI decided to continue discussing issues under the review of the financial mechanism at its 29th session in December 2008 on the basis of a draft text with a view to recommending a draft decision to the COP in December.

The draft text reached in Bonn is mostly bracketed. The bracketed parts include the need for the GEF Council to address the serious concerns raised by developing countries over the implementation of the RAF, the lack of transparency in the RAF allocation and procedural concerns affecting access to funds.

The Philippines, for the G77 and China, said that there were very big concerns over the actual operations of the financial mechanism. "There is one operating entity (the GEF) and we are looking to widening this as allowed by Article 11 of the Convention so that it is fully under the governance of the COP," it said. (It was referring to the G77 and China proposal to establish more climate-related funds under the COP).

3. DEVELOPMENT AND TRANSFER OF TECHNOLOGIES

On the development and transfer of technologies, the SBI was tasked at its current session to agree on the terms of reference or review and assessment of the effectiveness of the implementation of Article 4, paragraphs 1(c) and 5 which deal with the promotion, facilitation and finance of the transfer of or access to environmentally sound technologies and know-how from developed to developing countries to address climate change.

The SBI could not conclude its work on this and requested the Chair of the SBI to prepare draft terms of reference for the review and assessment of the effectiveness of the implementation of the Article, taking into account the submissions from the parties for its consideration at its next session in December.

The Philippines said that after almost 14 years of the Convention being in force, it is regrettable that there are still no terms of reference for the review of the implementation of the Article. This showed how difficult it is to implement the Convention, it said. Technology development and transfer is an important building block of the Bali Action Plan and for a shared vision. Parties are taking so much time for such a review and this is essential to address climate change. The EU also said that it was unfortunate there was no agreement on terms of reference.

4. REVIEW OF THE KYOTO PROTOCOL PURSUANT TO KYOTO PROTOCOL'S ARTICLE 9

In December 2008, the Conference of Parties serving as the meeting of parties to the Kyoto Protocol (CMP) will undertake the second review of the Protocol. To prepare for this review, the CMP in Bali invited parties to submit their views on how the following issues should be addressed in the second review:

- (a) Extending the share of proceeds to assist in meeting the costs of adaptation to joint implementation and emissions trading;
- (b) Relevant procedural elements for inscribing commitments for Annex I Parties in Annex B to the Kyoto Protocol;
- (c) Privileges and immunities for individuals serving on constituted bodies established under the Kyoto Protocol;
- (d) The scope, effectiveness and functioning of the flexibility mechanisms, including ways and means to enhance an equitable regional distribution of clean development mechanism projects;
- (e) The minimization of adverse effects, including the adverse effects of climate change, effects on international trade, and social, environmental and economic impacts on other developing countries.

The SBI in Bonn was tasked to consider the submissions and to prepare a report to the CMP. At the concluding session, the SBI recalled that the second review of the Kyoto Protocol shall aim to further enhance implementation of the Protocol and further elaborate upon a number of its elements, in particular adaptation and that it shall not lead to new commitments for any party.

It recommended that the CMP, in undertaking the second review, should: (a) address issues among

those identified for the second review, on which appropriate decisions could be adopted by the CMP for implementation and (b) identify issues that require further consideration and refer them to the appropriate body.

It further recommended that the CMP may give attention to other issues raised by parties including funding, insurance and transfer of technology in relation to adaptation to the adverse effects of climate change and the impacts of response measures; commitments (nature and modalities, base year and burden-sharing); entry-into-force requirements; the compliance mechanism; land use, land-use change and forestry; and emissions from international aviation and maritime transport.

At the meetings on this issue, developing-country parties have been stressing that the second review should be confined to the implementation issues of the Protocol and not lead to new commitments for any party.

Brazil at the opening plenary of the SBI on 6 June, said that the second review of the Kyoto Protocol "shall aim to further enhance the implementation of the Kyoto Protocol", in particular adaptation. It considered that this mandate is very clear. "However, given the views expressed by other parties, we have strong concerns on scope and content of this second review. We acknowledge that some issues have linkages to the AWG-KP (Ad-hoc working group on the Kyoto Protocol). Nevertheless, Brazil considers that other issues that have not been discussed under the AWG-KP and are not listed in paragraph 6 of Decision 4/CMP 3 are completely extraneous to this second review."

Brazil emphasised that the words "in particular" in paragraph 6 of the decision do not mean "inter alia" and therefore it is not an open list for other issues to be brought in. It also stressed that following the earlier decisions of the CMP, the second review shall not lead to new commitments for any party. "Therefore, this must be the parameter of negotiations," said Brazil.

"We must have in mind that there are two tracks to negotiate the future of the climate change regime and there is the Convention track, under the Ad-hoc Working Group on Long-term Cooperative Action, and the Protocol track, under the AWG-KP. There is no third track to consider the future of the regime and certainly Article 9 related discussions cannot be the forum for this non-existent track," said Brazil.

At the end of the SBI plenary on 13 June, the Chair of the SBI, Bagher Asadi, said that there were a number of areas for the body to address in Poznan in December which will require focused negotiations, as six processes will be under way (the COP, MOP, AWG-LCA, AWG-KP, SBI and SBSTA) and that this will be complicated.

Kyoto Protocol Working Group adopts three Conclusions

Bonn, 15 June (Hira Jhamtani and Neth Dano) – The climate talks that took place in Bonn on 2-13 June included a session of a working group negotiating the greenhouse gas emissions reduction for developed countries after 2012. At a closing plenary session, the group adopted Conclusions on three main issues - emissions trading and project-based mechanisms, land use and forestry, and “other issues”, some of which turned out to be controversial.

The Ad Hoc Working Group on Further Commitments for Annex 1 Parties under the Kyoto Protocol (AWG-KP) had been discussing the analysis of means to reach emission reduction targets and identification of ways to enhance their effectiveness and contribution to sustainable development.

Under the Kyoto Protocol of the UN Framework Convention on Climate Change (UNFCCC), developed countries (listed as Annex 1 countries under the UNFCCC) are committed to reduce greenhouse gas (GHG) emission by 5% in the first commitment period in 2008 to 2012. Parties to the Protocol are negotiating the emission reduction for the second period of commitment after 2012, and the means to achieve the reduction.

In Bonn, the AWG-KP held a roundtable discussion, followed by negotiations in three contact groups. At a final plenary on 12 June, the group discussed conclusions prepared by the group’s Chair Harald Dovland from Norway with the help of the co-chairs of the contact groups.

The three contact groups were on: (1) Emissions trading and project-based mechanisms; (2) LULUCF (land use, land-use change and forestry); and (3) other issues, which focused on greenhouse gases, sectors and source categories; possible approaches targeting sectoral emissions; consideration of relevant methodologies.

Discussions at the AWG-KP revolved around the means for Annex 1 countries to reach their emission targets, before they actually set the target. The

change in means might mean a change in target. The idea is to achieve targets in the most cost-efficient way.

During the talks, the Annex 1 countries often said that the change is needed to improve the environmental integrity of the Kyoto Protocol; while developing countries often also said there is a need to ensure the environmental integrity of the KP but without changing the architecture of the Protocol, i.e. taking care not to replace the Protocol, but to improve its performance.

The AWG-KP agreed, for instance, to broaden the scope of LULUCF activities, considered as a means that can help reduce emission targets. But the AWG-KP considered that LULUCF activities in project-based mechanisms need to be informed by outcomes from its consideration of the issue of non-permanence and other methodological issues as part of its work on LULUCF. The AWG-KP stated that it will also consider the implications for the carbon market, resulting from changes to means that may be available to Annex 1 parties to reach their emission reduction targets.

Each contact group report has an annex which lists the options and issues as expressed by parties on each item discussed. Each annex is clear that the list is a compilation of views of Parties and does not prejudge any actions by the AWG-KP, i. e. it is a shopping list to be explored further in subsequent climate talks.

EMISSIONS TRADING AND PROJECT-BASED MECHANISMS

The group considered possible improvements to emissions trading and project-based mechanisms as a means available to Annex 1 countries to reduce emission. It also considered ways to enhance the effectiveness of these means and their contribution to sustainable development and to achieve the ulti-

mate objective of the Convention. It also reiterated that these mechanisms should be supplemental to the implementation of domestic actions at the disposal of Annex 1 parties.

There are two annexes to the conclusions of this issue. Annex 1 contains views on possible improvements (for the second commitment period, i. e. after 2012) to emissions trading and project-based mechanisms. The second annex contains issues relating to the same, that may be considered for possible application within the current commitment period (i. e. 2008-2012).

The means and issues under each broad category are further sub-divided under the three flexibility mechanisms in the Kyoto Protocol, namely, the CDM, Joint Implementation and Emissions Trading.

The AWG-KP agreed that its “further consideration of possible improvements to emissions trading and the project-based mechanisms should not prejudice or limit other work by other bodies under the Convention and its Kyoto Protocol”.

It was also agreed that conclusions on means for Annex 1 Parties to reach their emission reduction targets in the future commitment period through emissions trading and the project-based mechanisms will be adopted at the next AWG-KP meeting in Accra in August 2008.

On the other hand, the issues for possible application within the current commitment period will be referred to the Conference of the Parties in December 2008.

At several points in the deliberations of the contact group, several Parties cautioned that some proposals may have substantial implications on the provisions and may involve revision of the Kyoto Protocol itself.

The Co-Chairs had to consult with the Secretariat on these questions at some point to ensure that the proposals do not go beyond recommending improvements in the current system on emissions trading and project-based mechanisms as provided in the Protocol.

The compilation of views included a number of controversial means that are currently being discussed in other processes within the Convention. Among these are LULUCF activities, carbon dioxide capture and storage (CCS), nuclear activities, sectoral CDM for emission reductions below a baseline defined at a sectoral level, sectoral crediting of emission reductions below a previously established no-lose target, and crediting on the basis of nationally appropriate mitigation actions – which are all considered for possible modification of the scope of the CDM in the future commitment period.

The proposals under the CDM involve a number of contentious views that aim to introduce substantive reforms to improve its effectiveness, efficiency, accessibility and contribution to sustainable development, capacity to generate co-benefits and the transfer of technology.

Another controversial item that was included in the compilation under the scope of Joint Implementation (JI) is the “modalities for graduation of Parties from CDM projects to joint implementation projects”. Some delegates were concerned about the introduction of the concept of “graduation” in the AWG-KP discussions as it is not included anywhere in the Kyoto Protocol.

In the same sub-category, the list also included a proposal to include activities to reduce emissions from deforestation and degradation under the JI as a possible means for Annex 1 Parties to reach their emission reduction targets in the next commitment period.

Meanwhile, a heated debate on the forest issue is still taking place in the Subsidiary Body for Scientific and Technical Advice (SBSTA).

The concept of sectoral targets has also been introduced in Emissions Trading, as well as the linking of national and regional emissions trading schemes. A controversial proposal on disclosure of information on transaction of Kyoto Unit types, as a means to promote transparency of emissions trading markets, is also included in the compilation.

Observers noted that the wide diversity and nature of the views and issues included in the compilation of possible improvements to emissions trading and the project-based mechanisms as a means that may be available to Annex 1 Parties to reach their emission reduction targets for the future commitment period are expected to be very contentiously debated in the next sessions of the AWG-KP leading to Copenhagen.

A number of these issues, as identified earlier, will have to be addressed individually and separately in other contact groups within the AWG-KP, such as LULUCF, CCS and sectoral approach, and the way they are currently proceeding does not give much optimism on how the contentious issues will be settled soon.

LULUCF (LAND USE, LAND-USE CHANGE AND FORESTRY)

The AWG-KP considered how to address the definitions, modalities, rules and guidelines for the treatment of LULUCF in the second commitment period. The conclusion said that further discussions should take into account the principles that govern

the treatment of LULUCF, as set out in Decision 16/CMP 1. It encouraged parties to share information to allow better assessment of the implications of options and issues identified in the annex, including implications for accounting. Parties will continue to exchange their views on the implications of the options and issues identified in the annex, at the next meeting of the group.

The annex, titled 'Options and Issues for Consideration', lists the cross-cutting issues to be considered when exploring the options and issues identified by Parties (in this annex), i.e. consistency, continuity from the current rules, factoring out, including age structure and indirect climate change effects, inter-annual variability, natural disturbances and the symmetry in the accounting of emissions and removals, sustainable forest management and co-benefits including biodiversity.

Paragraph 3 of the annex lists the range of options and issues identified by Parties for consideration. On the item 'activity-based approach' based on Articles 3.3 and 3.4 of the KP, the AWG-KP retained the three sub-items: (i) few changes; (ii) more changes; and (iii) many changes. "Few changes" contains two lists: (1) Legally required, explained by a footnote "when only legally required changes are considered, the current treatment of the activities will be retained"; (2) Definitions, modalities, rules and guidelines that apply in the first commitment period that could carry over to the second commitment period.

"More changes" also has two lists: (1) Legally required; (2) Article 3.4, forest management. "Many changes" contains: (a) Legally required; (b) Article 3.4, forest management; (c) Other activities under Article 3.4; (d) Merging Article 3.3. with 3.4.

The second item in paragraph 3 is land-based approach based on the reporting under the Convention: current rules and modalities are changed aiming at full geographical coverage and inclusion of all GHG emissions and removals, and include emissions and removals from all land use and land-use changes in the base year. The third item is harvested wood products.

The discussion on changes in rules and new issues has been a cause of anxiety for many developing countries as this may mean opening up the Kyoto Protocol for renegotiation. Developing countries are concerned that these issues could divert from the mandate of the AWG-KP which is to set targets for the second period of emission reduction by Annex 1 countries.

Next on the annex are the elements that could apply to the options in paragraph 3. These elements are: additional and all activities to be mandatory;

land-use flexibility, temporary removal from the accounting of areas subjected to natural disturbances; treatment of harvested wood products; potential activities; discounting factors; limiting the magnitude of LULUCF for Annex 1 compliance; national circumstances.

Paragraph 6 of the annex lists the project-based mechanisms that contains: (a) Few changes; legally required; (b) More changes: (i) Non-permanence, (ii) Leakage, measurements, definitions and others as necessary.

OTHER ISSUES

The contact group on "other issues" discussed greenhouse gases, sectors and source categories to be covered, and possible approaches targeting sectoral emissions. The AWG-KP considered three issues: (a) how approaches targeting sectoral emissions could be used by Annex 1 Parties as a means to reach their emissions target; (b) possible broadening of the coverage of greenhouse gases (GHGs), sectors and source categories and its implications, based on sound science; (c) how approaches to limit or reduce emissions of GHG not controlled by the Montreal Protocol from aviation and marine bunker fuels could be used by Annex 1 Parties as a means to reach their emission reduction targets, taking into account Article 2.2 of the KP. This contact group was one of the most contentious during the Bonn climate talks mainly due to the first and third issues.

The AWG-KP noted that the approaches targeting sectoral emissions could be used by Annex 1 Parties as a means to reach, not replace, their emission reduction targets. It took note of views expressed by Parties on these issues, and compiled by the Chair of AWG-KP.

The Chair's conclusions contain three issues. First is the possible approaches targeting sectoral emissions. Developing countries insisted that it be made clear that these approaches are meant only for Annex 1 countries and would not involve the developing countries.

The conclusions said that approaches targeting sectoral emission in Annex 1 Parties could assist Annex 1 Parties in reaching their national emission targets and could cover both producing and consuming sectors. (India, during the sessions, had repeatedly asked that the sectors include production and consumption, taking note of the consumption level in Annex 1 Parties). These approaches should lead to a real benefit for the climate.

The conclusion also included phrases that the developing countries had wanted, i.e. that approaches targeting sectoral emissions should not replace na-

tional targets of Annex 1 Parties, lead to commitments for non-Annex 1 Parties and constitute a means of discrimination and disguised restriction on international trade.

The types of approaches include: (a) bottom-up sectoral analysis to inform discussion on mitigation potentials of Annex 1 Parties; the footnote says that is relevant for discussions under mitigation potential; (b) cooperative sectoral approaches supported and enabled by finance and technology. (This aspect has been of concern for developing countries which fear it can be used to create global standards and thus draw developing countries into making emission reduction commitments through sectoral approaches); (c) sectoral crediting in non-Annex 1 Parties, with a footnote saying that this is relevant for discussions under emissions trading and the project-based mechanisms also at the AWG-KP; (d) complementary sector-specific goals for Annex 1 countries.

This categorisation of sectoral approaches was mainly derived from the EU's interpretation of the Japanese proposal as well as views of the Parties during the roundtable and at the contact group.

While the conclusion clarifies that these approaches are relevant for Annex 1 Parties, it is likely that some developed countries will continue their efforts to draw developing countries into taking part in a sectoral approach involving global standards in future discussions.

On the second issue of greenhouse gases, the AWG-KP considered the implications of adding new gases for mitigation potentials and national action in Annex 1 countries, and for the carbon market, in particular the supply and demand for tradable units under the KP. (Countries had agreed to add the new gases, but the forum in which to discuss this had not been actually agreed on during the sessions).

According to the conclusion, the group would further consider adding to Annex A of the Kyoto Protocol, the new gases to the group of hydrofluorocarbons and perfluorocarbons as referred to in the IPCC fourth assessment, and new groups of GHGs including fluorinated ethers and perfluoropolyethers referred to in the IPCC assessment.

The AWG-KP will also consider the possible implications of broadening the coverage of sectors and source categories of GHGs, taking into account: (1) results of consideration of adding new GHGs; (2) results of consideration of the application of 2006 IPCC Guidelines for National GHG Inventories; (3) results of consideration of the definitions, modalities, rules and guidelines for the treatment of LULUCF in the second commitment period.

Based on the implications of these, the AWG-KP will make any necessary changes to the coverage of sectors and source categories under Annex A of the KP.

The third issue is emissions from aviation and maritime bunker fuels. This issue itself was placed within brackets as countries could not come to an agreement on it. This issue had been proposed by Norway with support from many developed countries, with many of them saying that this is a global problem that needs global solutions.

Some developing countries, particularly Saudi Arabia, Kuwait and Qatar, said the issue should not be put up for discussion. They argued that according to Article 2.2 of the KP, this issue is only meant for Annex 1 countries, and that work on it had to be through the ICAO and IMO (the aviation and marine organizations). Some other developing countries were not averse to discussing the issue, but in another body rather than in the AWG-KP, and the discussion must consider the implications of this to development and food security in developing countries.

There are four items in the Chair's conclusion:

- (1) Limiting or reducing emissions from aviation and marine bunker fuels as a means for Annex 1 countries to reach their emission reduction targets in accordance with Article 2.2 of the KP;
- (2) The scope for the above actions, i. e. the ICAO and IMO to take the lead and emissions to be reported separately from national totals in accordance with UNFCCC and KP reporting guidelines; UNFCCC to agree on mitigation objectives while ICAO and IMO to implement the objectives; UNFCCC to take the lead by allocating emissions to national totals while ICAO and IMO to provide technical expertise.
- (3) The need to progress on discussions on Article 2.2 of the KP.
- (4) Apply economic instruments to emissions from aviation and marine bunker fuels as a source of revenue to finance, inter alia, adaptation and reduction of emissions from deforestation and forest degradation in developing countries.

Closing statements: At the end of the closing plenary of the AWG-KP, the Chair said that countries need more time to understand the terms and implications of the proposal to include sectoral ap-

proaches and emission reduction for aviation and marine bunker fuel, as well as the implications.

He reminded that the conclusions contain views of Parties compiled at the responsibility of the Chair. He also said the work at the AWG-KP has been tremendous and difficult. If the same speed is used in Accra, he is not convinced that the group can adopt a conclusion. He said that there is a need for a new spirit of cooperation, otherwise, the goals of the work programme cannot be reached.

Slovenia, on behalf of the EU, said that if Annex 1 Parties are to achieve high reduction, we need to be innovative and open-minded. It agreed that the AWG-KP discussion has not progressed much, but the issues were complex and difficult. It also agreed that a new spirit of cooperation is needed and that it wants to work with partners to show the world what can be achieved.

Antigua and Barbuda, on behalf of the G77 and China, said it welcomes the possible improvements in the means for Annex 1 Parties to achieve deeper emission cuts during the second commitment period. To ensure there is no gap between the first and second period of commitments, to improve the environmental integrity of the KP, the discussions must be concluded well before the expiry of the first commitment period, i.e. by 2009.

The G77 is concerned that some proposals from Annex 1 countries go beyond the AWG; they

should be aligned to the mandate of Article 3.9 of the KP. The AWG-KP should not take on board issues that distract the mandate and delay the work. It also supported the call for a new spirit and new approach to the negotiations.

China agreed that the AWG-KP is working slowly, especially on the core mandate, i.e. further commitments of the Annex 1 Parties. Meaningful progress is critical and it hoped that political will to do so will be shown in Accra. It further said, we must refrain from issues that impede the progress.

India agreed with China and is concerned at the absence of real progress on further commitments of Annex 1 in the second period of commitment. "We have dealt at length with the peripheral issues, but have been silent on quantifiable emission reduction commitments", it said. We have been beating around the bush and must address the work with greater adequacy, said India.

Tuvalu was also concerned about the slow movement on committing to deep GHG emission reduction after 2012. Tuvalu wanted an ambitious package to avoid more dangerous impacts of climate change.

The Chair closed the session by concluding that everyone is concerned about the slow pace of the work, and "let us do something about this in Accra", he said.

Climate Briefings for Bonn

Note on Access to Technology, IPR and Climate Change

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May 2008*

1. If developing countries are to moderate their emissions growth and eventually cut their emissions, while still having the capacity to have economic growth (of the appropriate type, consistent with sustainable development), the key is for them to have access to climate-friendly technology at affordable prices.
2. Climate change is perhaps the most important and serious problems of our times. "Business as usual" ways of producing, consuming and doing business are no longer an option. Innovative thinking – outside-the-box in many cases – is called for. In this emergency situation, the survival of the planet and of humanity is of top priority. Narrow interests must give way to the general public good, which in turn must incorporate the public interest internationally.
3. A global framework of negotiations and agreements on climate change is imperative and must be fair and effective. The UNFCCC, together with its Kyoto Protocol, is the global framework. Technology development and transfer, together with finance, is the key component of a fair agreement under the UNFCCC. The Convention recognises this in several provisions, including article 4.3 (developed countries shall provide financial resources including for technology transfer needed by developing countries to meet their agreed full incremental costs of implementing measures), art. 4.5 (developed countries shall take all practicable steps to facilitate and finance transfer of and access to environmentally sound technologies and know-how particularly to developing countries; and shall support the development and enhancement of endogenous capacities and technologies of developing countries) and art. 4.7 (the extent to which developing countries will implement their commitments will depend on effective implementation of developed countries' commitments on financial resources and technology transfer).
4. The Bali (Dec 2007) decision on long-term cooperation contains sections on actions on technology transfer and financial resources. These should be provided to developing countries in a measurable, reportable and verifiable manner.
5. Despite the central role of technology transfer, there has been in fact very little, if any, practical transfer of climate-friendly technology under the UNFCCC. The operation of the principles, the establishment of mechanisms, and the actual transfer of technologies have yet to be put into effect. These are now urgent tasks.
6. Technology transfer is not merely the import or purchase of machines etc. at commercial rates. A central aspect of technology transfer is the building of local capacity so that local people, farmers, firms and governments can design and make technologies which can be diffused into the domestic economy. In the first stage of technological development, developing countries can go through three stages: (a) initiation stage, where technology as capital goods are imported; (b) internalisation stage, where local firms learn through imitation under a flexible IPR regime; (c) generation stage, where local firms and institutions

innovate through their own R and D. (UNCTAD 2007). In stage 1, the country is dependent on capital imports, some of which (that are patented) may be extra high in cost because of the higher prices enabled by monopoly margins. In stage 2, costs may be lowered by the “generic versions” locally produced. In stage 3, the local firms are able to design and make their own original products. Technology transfer may involve the purchase and acquisition of equipment; the know-how to use, maintain and repair it; the ability to make it through “imitation” or reverse engineering; to adapt it to local conditions; and eventually to design and manufacture original products. The process of technology transfer involves progressively climbing through all these aspects.

7. Several conditions have to be present for technology transfer and development to take place. The absence of such conditions can form barriers to technology transfer. Among the barriers that are normally listed are poor infrastructure, inadequate laws and regulations, shortage of skilled personnel, lack of finance, ignorance of technology issues, high cost of certain technology agreements, problems created by equipment suppliers, and intellectual property rights.

8. Whether IPRs constitute a barrier or an important barrier depends on several factors, such as whether or not the particular technology is patented, whether there are viable and cost-effective substitutes or alternatives, the degree of competition, the prices at which it is sold, and the degree of reasonableness of terms for licensing, etc. Some technologies are in the public domain, or are not subjected to patents. But many key technologies are patented. And many technologies of the future will also be patented.

9. For technologies that are in the public domain, international cooperation is also required to facilitate its transfer. Importantly, the space for technology in the public domain should be expanded. Governments in developed countries play an important role in funding R and D programmes. The programmes are implemented by government institutions or are in partnership with the private sector. About 40% of annual national R and D spending within some OECD countries was publicly funded (UNCTAD 1998). In addition governments sponsor a range of R and D that underpin private sector investments in developing environmentally sound technologies (ESTs). (IPCC 2000 Ch. 3, p 95). A paper for UNFCCC surveyed government R and D funding of ESTs in the US, Canada, UK and Korea. It found that in most countries, governments allocated their rights (patents, copyrights, trademarks etc) to the recipient research institutions to a significant degree. As a result, the diffusion of climate-friendly technology would “typically be along a pathway of licensing or royalty payments rather than use without restriction in the public domain.” (Sathaye et al, 1995). The IPCC study (2000) calls on OECD countries to influence the flow of such technology directly through their influence on the private sector or public institutes that receive funding from government for their R and D to be more active in transferring technologies to developing countries. It cites Agenda 21 (ch 34 para 34.18a) that “governments and international organisations should promote the formulation of policies and programmes for the effective transfer of environmentally sound technologies that are publicly owned or in the public domain.” Products that emerge from publicly funded R and D should be placed in the public domain. Those that are partially funded should be in the public domain to the extent to which it is publicly funded.

10. As part of international cooperation, there can be R and D programmes jointly planned and coordinated by governments (developed and developing). If certain products are wholly publicly funded, they could be placed in the public domain, or else made available through affordable licenses. This can make the technologies much more affordable.

11. For technologies that are patented, there must be an understanding that patents should not be an obstacle for developing countries to have access to them at affordable prices. According to the TRIPS agreement, if there is a patent on a product, a process or a technology, a firm or agency in a country in which the patent is operating can request for a voluntary license from the patent holder, in order for the firm to make or import generic versions of the patented product or technology. The patent holder will normally charge a price (royalty or license fee) for granting the license. If the patent holder refuses to give a license, or if the price charged is too high, the firm or agency can apply to the government to grant it a “compulsory license”.

Alternatively, a government that wants to have access to generic versions of a product or technology can itself take the initiative to issue a compulsory license.

12. The firm or agency granted a compulsory license would normally have to pay a royalty or remuneration to the patent holder. In the case of pharmaceutical drugs, the royalty rate offered in recent compulsory licenses by developing countries such as Malaysia, Indonesia, Thailand, ranges from 0.5 to 4 per cent of the price of the generic drug.

13. Under the TRIPS agreement, there is considerable flexibility provided to WTO member states on grounds for issuing compulsory licenses. These grounds are not restricted, as confirmed by the WTO Ministerial Declaration on TRIPS and Public Health (Doha 2001). It is not necessary to declare a state of emergency, for example. Certainly the fact that a country requires a product or technology in order to meet its objectives or responsibilities to mitigate climate change or to adapt to climate change is a most valid ground for compulsory licensing.

14. Compulsory licensing is not a unique or exceptional policy. In developed countries like the US and the UK, there have been many compulsory licenses granted by the government to facilitate cheaper products and technology in the industrial sector. In many developing countries, compulsory licenses have been issued for the import or local production of generic drugs. There is a type of compulsory license known as “government use” which many developing countries have made use of. This is when the product to be imported or produced in a generic version is to be for public, non-commercial use, for example for medicines distributed by the government in clinics and hospitals. In such cases, prior negotiation with the patent holder is not necessary, although remuneration or royalty to the patent holder is required.

15. Thus, compulsory licensing is an option that developing countries can seriously consider for those patented climate-friendly technologies for which they have a need, which are expensive, and in cases where negotiations with the patent holder do not yield results in lowering the prices to reasonable levels. The Brazilian Foreign Minister Mr. Celso Amorim, in his speech at the plenary of the Bali climate conference in Dec 2007, said that inspiration should be drawn from the case of TRIPS and medicines, and that a similar statement regarding TRIPS and climate-friendly technologies should be considered. Strictly speaking, it is not necessary for such a statement to be made by Ministers before a country exercises rights that it now has to issue compulsory licenses for climate technologies. The flexibility rights already exist in TRIPS. However, when countries exercise these rights, they may be penalised by other countries. Therefore, developing countries find it useful that an international declaration is made, so that when they exercise their rights they are to some extent more protected politically, which adds to their confidence of exercising what is already their rights under international law (i.e. TRIPS). However, there is no guarantee that the political declaration will protect a country that exercises its rights – Thailand has been placed on the IP Watch List of the USA (which implicitly carries a threat of future trade sanctions) following its issuing compulsory licenses on some drugs.

16. Another value in a TRIPS and Climate Change Technologies declaration may be in extending the lifting of the restriction under TRIPS for compulsory licensing (i.e. that it be restricted to production of products “predominantly for the domestic market”) from pharmaceutical drugs to climate-friendly technologies and products as well. This will enable a more adequate supply of “generic” technologies and products to countries that lack productive capacity to produce their own such products.

17. It is also possible to raise the level of ambition for sustainable development, by proposing that environmentally-friendly technology should not be patented in the first place (so that the process of compulsory licensing etc is not even required). There is a strong rationale for this, at least for climate-friendly technology and products. If climate change is truly the serious crisis threatening human survival, and there are only a few years left to start very strong action, then the situation is similar to emergency war-like conditions. In such conditions, individual commercial interests such as patents are suspended so that there can be concerted national action in the most effective way, to face the enemy. Developing countries require technolo-

gies at the cheapest possible prices. If they obtain the needed technology at one-quarter the price, they can increase the rate of change to put into effect mitigation and adaptation measures many times faster and more effectively.

18. There can be many variations for the relaxation of IP in relation to climate- friendly products and technologies. For example: (a) An exemption for patents on climate-friendly technologies and products; (b) An exemption on patents in developing countries only, while patents can still be granted in developed countries, to allow for recovery of innovation cost, and provide incentive; (c) Developing countries, if they so desire, are allowed to exclude patents on climate-friendly technologies and products. (d) Voluntary licenses must be automatically granted on request, which will be free of royalty; (e) Voluntary licenses are automatically given and compensation is provided.

19. There are some examples of developing countries and their firms being hampered from adopting climate-friendly technologies or products due to there being patents on these products, and due to the unreasonable demands made by the patent holders on companies in developing countries that request a voluntary license from the patent holder. A study on transfer of technologies for substitutes for ozone-damaging chemicals under the Montreal Protocol has given details for some cases in which technology transfer to developing countries' firms was hindered by either high prices or other unacceptable conditions imposed by companies holding patents on the chemical substitutes onto companies in developing countries that wanted a license to manufacture the substitutes. Examples include: (a) The case of HFC-134a, a chemical used in to replace harmful CFCs in refrigeration. When Indian companies requested a license from a US company owning the patent for HFC-134a, in order to manufacture the chemical, they were asked to pay a very high sum (US\$25 million) which was far above the normal level, or to allow the US company to own a majority equity stake in a joint venture and with export restrictions on the chemical produced in India; both options were unacceptable to the Indian producers. (b) Korean firms also faced difficulties when they wanted to replace CFCs with acceptable substitutes HFC-134a and HCFC-141b, which had been patented by foreign companies in Korea. "South Korean firms are of the opinion that the concession fees demanded by technology owners represent a lack of intention to transfer the alternative technology." (Anderson et al 2007 p 262-265). (c) The case of HFC-227ea: This chemical (known also as FM-200) is a substitute for halon-1301 for fire protection applications. The US owner of FM-200 patent requires that licensed fire protection systems satisfy certain design and inspection requirements and only 3 enterprises (in the US, the UK, and Australia) have satisfied the approvals. The patent owner offered joint ventures with majority share holding but did not want to license the technology to wholly locally owned firms, and thus Indian firms were unable to avail themselves of this product (Anderson 2007 p 265). (d) Many of the technology agreements between Korean firms and their partners in Japan and the US contain restrictions such as they are not allowed to consign to a third party, to export, and that the improved technologies should be shared (Anderson 2007).

20. In conclusion, any WTO member state is already allowed by the TRIPS agreement to take measures such as compulsory licenses and parallel importation to obtain technologies or products (that are patented) at more affordable prices. But the processes of negotiating with the patent holder and of issuing compulsory licenses etc. can be quite cumbersome to countries not familiar with the procedures. It is better that developing countries be allowed to exempt such technologies from patenting. Developed countries should not treat patents or IPRs as something sacred that has to be upheld at all costs. That would send a signal that climate change is not a serious threat, as commercial profits for a few are more important on the scale of values and priorities than are the human lives that are at stake due to global warming. Technology transfer to developing countries to enable them to combat climate change should be the far-higher priority. Developed countries should not treat climate technology as a new source of monopoly profits, as this would damage the ability of developing countries to phase in existing or new climate-friendly technologies for both mitigation and adaptation. The post-Bali process should therefore adopt the principle that developing countries can exempt climate-friendly technologies from patents. Such a principle would demonstrate that developed countries are serious about resolving the global climate crisis and about assisting developing countries. It would also help developing countries to take on mitigation and adaptation measures, which are dependent on the technologies.

No Additionality, New Conditionality: A Critique of the World Bank's Climate Investment Funds

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Introduction

The World Bank¹ is planning to establish a portfolio of climate investment funds (CIFs) to provide financing for climate-related activities. The stated objective of the funds is 'to bridge the financing and learning gap between now and a post-2012 global climate change agreement' by providing 'additional concessional financing' to developing countries 'to integrate both climate resilience and low carbon growth paths into their core development planning and budgeting' (World Bank, 2008a: 1). These funds, which will be established separately from the Bank's core operations, will deliver donor resources for ring-fenced projects and programmes, through multilateral development banks (MDBs), of which the World Bank is one.

The climate investment funds are the latest efforts on the part of the Bank to capitalise on current global concerns with climate change and form a key pillar of its larger proposed strategic framework on climate change (World Bank, 2008b). In contrast to previous financing initiatives, these proposed funds are expected to attract significant donor support. The combined target size of the CIFs is expected to exceed the combined total of funds held in existing trust funds administered by the Bank. In 2006, the total funds held in trust by the Bank were US\$10.3 billion (World Bank, 2006: 2) while the Bank and key donors are expecting to raise a total of US\$10 billion over three years for the CIFs (Okada and Sato, 2008)².

The funds have come under fire from developing countries and civil society since details of the proposal to establish them were leaked in February this year. In particular, many have been concerned at the significant speed at which the funds have been designed, promoted and implemented with limited consultation with stakeholders. Although plans for the CIFs were made public only in April this year, the Bank and key G8 country proponents of the CIFs – the UK, US and Japan – expect to unveil the CIFs at the G8 summit in Hokkaido, Japan in July.

This briefing paper examines the modalities for the proposed climate investment funds and considers the impact these funds will have on existing global measures to tackle the causes and effects of climate change. In particular, the paper demonstrates how the Bank's role in climate change financing may create parallel frameworks of climate change governance which may undermine existing multilateral climate change regimes, despite claims to the contrary. It is argued here that while significant revisions have been made to the CIF proposals since they were first circulated, these funds remain problematic because of the manner in which they have been designed and implemented and because of their inherent conflict with established principles of climate change regulation and cooperation.

While the most recent documents on the CIFs address some of the criticisms, the new proposals do not address the fundamental problems with the establishment of this portfolio of funds under the auspices of the World Bank and through what remains an essentially donor-led process outside ongoing multilateral negotiations on climate change. To this end, the paper will consider briefly some of the alternatives to Bank-driven instruments for climate change financing. The paper maintains that such funds should be placed under the authority of the United Nations Framework Convention on Climate Change (UNFCCC) as it is the only universal, science-based and legally binding multilateral regime charged with climate change regulation.

I. Background and Aims of the Climate Investment Funds

The World Bank's proposal for the portfolio of climate investment funds stems from the institutions' dialogues with a tripartite of G8 countries – the UK, the US and Japan – and builds upon the UK's establishment of the Environmental Transformation Fund International Window (ETF-IW), the US's proposed Clean Technology Fund and Japan's Cool Earth Partnership. Countries reached agreement to create the funds at the third design meeting in Potsdam, Germany in the latter half of May 2008 with a view towards unveiling final plans at the G8 Summit in Hokkaido, Japan in July 2008.

Although plans for the funds have been in the pipeline since last year and proposed documents have been circulating internally at the Bank and within donor governments since early this year, the proposals were only made public by the Bank in the run-up to their Spring Meetings in Washington DC in April. Following discussions at the second design meeting in Washington DC during that period, interested parties were invited to review the draft proposals and provide written comments and proposals for revision by early May. Revised proposals subsequently formed the basis of discussions at the third design meeting.

Initially, the World Bank had proposed the creation of three specific funds – a Clean Technology Fund (CTF) (with a target size of US\$5-10 billion), a Forest Investment Fund (US\$300-500 million) and an Adaptation Pilot Fund (US\$300-500 million) – along with a Strategic Climate Fund (SCF) which would be established as an umbrella vehicle for the receipt of donor funds and disbursements to specific funds and programmes aimed at piloting new development approaches or scaling up activities aimed at a specific climate change challenge or sectoral response (World Bank, 2008c).

Currently, plans have moved towards the immediate establishment of the CTF and the SCF with the possibility of creating a Forest Investment Fund in late 2008 or early 2009. According to the World Bank, the funds are aimed at encouraging 'early action by both private and public sectors and market-based solutions to the climate change challenge with transformational impact' (World Bank, 2008b: 19, para 47). Achieving this 'transformational impact', the Bank says, requires 'investments at significant scale, market enabling activities, a country focus and a programmatic approach' (ibid: para 48).

The CTF aims to 'accelerate transformation to low carbon growth paths through cost-effective mitigation of greenhouse gas emissions' (World Bank, 2008a: 2) and 'demonstrate how financial and other incentives can be scaled-up to accelerate deployment, diffusion and transfer of low-carbon technologies' (World Bank, 2008c: 5, para 11). The SCF, on the other hand, 'will be comprised of targeted programs with dedicated funding to provide financing to pilot new approaches with potential for scaling up' (World Bank, 2008a: 2) and 'will focus on accelerating and scaling up transformational low carbon and climate resilient investments while at the same time promoting sustainable development and poverty reduction' (World Bank, 2008d: 11, para 17).

The Adaptation Pilot Fund, renamed the Pilot Programme for Climate Resilience (PPCR), will be established as a programme under the SCF framework at the outset although it will have a separate oversight committee. The PPCR aims at exploring 'practical ways to mainstream climate resilience into core development planning and budgeting' (World Bank, 2008a: 2) by providing developing countries with 'technical and financial support to routinely consider climate information, impacts, risks and cost effective adaptation options in their normal planning, budgeting and regulatory processes' (World Bank, 2006e: annex A, para 4).

The climate investment funds are to be established as trust funds within the World Bank Group and the Bank will act as overall coordinator for the CIF partnership and trustee of the funds. Financing will take the form of credit enhancement and risk management tools, such as loans, grants, equity stakes, guarantees and other support (World Bank, 2008c: 9, para 25; 2008d: 11, para 17) mobilised through donor contributions to the respective trust funds (see section 2 below) and implemented in collaboration with the regional development banks³.

The CIFs will serve as the central instruments through which donor resources are collected and disbursed for climate-related financing to the various multilateral development banks (MDBs), including the World Bank Group. Resources from the CIFs will, in effect, subsidise the financing made by the MDBs to developing countries for climate-related activities, including co-financing arrangements with the MDBs and buying down of interest and repayments on MDB loans to increase the concessionality of financing for the projects (see World Bank, 2008c: annex A, 22-27; 2008d: annex A: 6, para 16).

It is proposed that ‘the MDBs have fair and equitable access to financing from the funds and rely on their own policies and procedures in developing and managing activities financed by the funds’ in accordance with the objectives, priorities and criteria for financing established by the CIFs (World Bank, 2008c: 12, para 41). According to the Bank, the CIFs ‘would build on the ability of [the MDBs] to work across multiple sectors and to engage at both policy and project levels; their presence in the field, their ability to innovate and their convening power to support the new funds in achieving their targeted objectives’ (World Bank, 2008b: 19, para 47).

The climate investment funds have come under heavy fire from developing countries and civil society, notably for the stealth and speed at which they were designed and promoted. At the UNFCCC climate change talks in Bangkok in April 2008, developing countries expressed regret that the CIFs were designed without guidance from parties to the UNFCCC, without due transparency and are at risk of undermining efforts and commitments of the international climate change regime.

In particular, developing countries questioned the transparency of the process of designing and implementing the proposals for the funds which took place outside the UNFCCC negotiating framework and expressed concern that the sizeable amount of resources the funds are targeting from donor countries threatens to dwarf and divert away resources available under existing financing mechanisms of the Convention. ‘There is clearly money for climate actions, which is the good news, but the bad news is it is in the hands of institutions that do not necessarily serve the objectives of the Convention,’ said Bernarditas Muller, chief negotiator for the Group of 77 developing countries and China in the Ad-Hoc Working Group on Long-Term Cooperative Action (AWG-LCA) (Khor, 2008a)⁴.

In response to criticisms, the revised CIF proposals have stressed their consistency with international climate regime principles and deference to the United Nations as the pre-eminent body for agenda-setting for international climate change policy and regulation. The current proposals also tie the CIFs to the establishment of an ‘effective’ financing architecture under the UNFCCC. This means that the Bank’s climate investment funds are expected to cease operations once a financial mechanism under the UNFCCC becomes operative, with both the CTF and SCF containing specific sunset clauses ‘linked to the agreement on the future of the climate change regime’ (World Bank, 2008c: 5, para 11; 2008d: 8, para 12; see also section IV below). There has also been some revision to the proposed governance structure of the funds incorporating some developing country participation but many of the fundamental problems inherent in the design and creation of the funds remain.

II. Types of Climate Investment Funds

Initially, the climate investment funds will be made up of the Clean Technology Fund with ring-fenced financing objectives and the general Strategic Climate Fund which will provide an umbrella mechanism for receipt of donor contributions to be disbursed through targeted programmes established under the SCF, through the CTF or any new funds created under the CIF portfolio, or through other funds addressing climate change.

a) Clean Technology Fund

The Clean Technology Fund (CTF) will aim to provide new financing and complement existing financing for the purposes of transformation to low-carbon economies and mitigation of greenhouse gas (GHG) emissions and to promote international cooperation on climate change (World Bank, 2008c: 6, para 13). The CTF aims to ‘finance transformational action’ by, *inter alia*, ‘providing positive incentives for the demonstration of low carbon development and mitigation of greenhouse gases through public and private sector investments’; ‘promoting scaled-up deployment of clean technologies by finding low carbon programs and projects’; ‘promoting realization of environmental and social co-benefits’; ‘supporting agreement on the future of the climate change regime’ and ‘providing experience and lessons in responding to the challenge of climate change through learning-by-doing’ (ibid).

The CTF will provide resources in the near-to-medium term for investment financing supporting ‘rapid deployment of innovative low carbon technologies’ and increasing ‘energy efficiency’; ‘optimize blending’ with MDB, bilateral and other sources of finance ‘to provide incentives for low carbon development’; provide financial products to ‘leverage’ private sector investments and provide financial instruments ‘integrated into mainstream development finance and policy dialogue’ (ibid: 8, para 24). Proposed investment sectors include the power sector, transportation and energy efficiency in buildings, industry and agriculture (ibid: annex A, 16, para 1).

Investment selection criteria will be developed by the trust fund to assess projects and programmes for ‘the potential for lifetime GHG reductions’ and ‘the potential for transformational action’ (ibid: 7, para 14). Investment plans will therefore be assessed and prioritised based on four sets of criteria: potential for long-term GHG emissions savings; demonstration potential; development impact and implementation potential (ibid: annex A, 18, para 7). The latter includes assessment of countries’ technology development or commercialisation status and/or capacity to support or develop technology adoption in the short-term; ‘minimum level of macroeconomic stability and stable budget management’; and ‘commitment to an enabling policy and regulatory environment’ (ibid).

One of the main objectives of the CTF is to provide middle-income or ‘blend’⁵ countries with concessional financing to invest in ‘low-carbon’ technologies (ibid: annex a, 22, para 16). Hence, CTF financing will be used to provide a grant element to an MDB project or programme, covering ‘the identifiable costs of the investment necessary to make the project viable’ and such projects or programmes ‘*may* include complementary financing for policy and institutional reforms and regulatory frameworks’⁶ (ibid: 9, para 25).

Eligible countries thus include both middle and low-income countries eligible for official development assistance (ODA) under the OECD guidelines⁷ and be based on the existence of ‘an active MDB country program’, that is ‘where an MDB has a lending program or an on-going dialogue with the country’ (ibid: 7, para 17). Financing from the CTF could take the form of 100 percent grants, concessional loans and guarantees with a significant grant element or a combination of these. For loans, the CTF will adopt lending terms similar to loans from the World Bank’s concessional lending facility, the International Development Association (IDA) which typically includes long maturity periods (up to 40 years) with a grace period of 10 years with no interest but a service charge of 0.75 percent (ibid: annex A, 24, para 25 – 26).

Financing will be provided for both public and private sector investments. Public sector financing will be channelled to national governments, to national governments for lending to sub-national entities or to sub-national entities directly (ibid: 23, para 22). Lending to sub-national entities will be secured by project revenue and assets and for those that are sufficiently ‘creditworthy’ by MDB standards, guarantees from the government or government entity will be required (ibid, 23: para 22).

Private sector entities will be able to access CTF funds via private sector programmes run by different MDBs through regular project finance instruments such as equity, subordinated debt or incentivised credit lines or loans⁸, with the expectation that private sector projects will seek to blend CTF financing with MDB

financing (ibid: annex B). Criteria for assessing private sector investments will include considerations of financial sustainability, financial leverage from other resources, and plans to mitigate market distortion (ibid: 43-44, para 10).

The target size of this fund is between US\$5 and US\$10 billion. Presently, about US\$5 billion have been pledged by donors to the fund.

b) Strategic Climate Fund

The Strategic Climate Fund (SCF) will act as an umbrella vehicle for the receipt of donor funds to be channelled into specific programmes related to climate change adaptation or mitigation. The fund aims, *inter alia*, to ‘promote and channel new and additional financing for addressing climate change’; to provide incentives for ‘scaled-up’ and ‘transformational’ action for adaptation and mitigation and for solutions to climate change challenge and poverty reduction in developing countries; and to provide incentives ‘to maintain, restore and enhance carbon-rich natural eco-systems (ibid: 10, para 16).

Targeted programmes with dedicated funding will be established under the framework of the SCF to meet the objectives of the SCF and donor resources ‘will be mobilised and pledged to specific programs to be financed within the SCF’ (World Bank, 2008d: 11, para 18). Programmes can be established under the SCF if they meet the following criteria: ‘multi-donor interest in establishing a program’; ‘broad applicability of lessons to be learned’; ‘sufficient resources to finance activities at scale’; ‘complementary to any other multilateral financial mechanism or initiative’; and the ‘link between climate change and development’ (ibid: 12, para 21). Each programme will have its own governance framework but creation of new programmes will have to be approved by the SCF Trust Fund Committee and plans for them have to be submitted to the World Bank Executive Directors ‘for information’ (ibid: para 22; also see section III below).

The SCF will also act as a mechanism to transfer donor funds to other trust funds, such as the Clean Technology Fund or other funds agreed with the SCF Trustee in consultation with the Administrative Unit⁹ (ibid: 12: para 23). This means that resources from the SCF can be channelled through targeted programmes established as part of the SCF; through separate funds established as part of the CIF portfolio, such as the CTF; or via other funds addressing climate change, such as the Forest Carbon Partnership Fund (ibid: 10, para 16). When donors enter into a Trust Fund Agreement with the World Bank as Trustee, it will designate to which SCF programmes or other funds its resources will contribute towards (ibid: 12, para 23).

Pilot Programme on Climate Resilience

The first programme established under the SCF will be the Pilot Programme on Climate Resilience. The PPCR is aimed at providing technical assistance and financing for capacity building in mainstreaming climate risk and resilience into development planning and budgeting in ten pilot countries over a three to five-year period. Funds from the PPCR will support two types of activities: 1) technical assistance to build on existing work ‘to integrate climate resilience into core development plans and budgets’; and 2) additional financial resources to fund ‘public and private sector investments identified in the climate resilient plans’, with ‘an emphasis on budget support, sector-wide approaches, coordinated investment programs across key sectors and blending with national financing and/or existing international support mechanisms’ (ibid: annex A, 5, para 15).

According to the Bank, ‘significant resources’ under the PPCR will be made available in the form of grants or highly concessional lending, with additional costs of technical assistance and institutional adjustment to be made through grants (ibid: 6, para 16). Like financing under the CTF, the PPCR will blend fund resources with other forms of financing in support of the fund/programme’s objectives – in this case, ‘the blending of grant and concessional finance with domestic public and private financing (ibid).

Country eligibility will be similar to country eligibility under the CTF, that is, based on ODA-eligibility and the existence of ‘an active MDB country program’ (ibid: 8, para 26; see also discussion on the CTF above).

The final selection of pilot countries under the programme will rest with the PPCR Sub-Committee¹⁰ with priority being given to ‘countries eligible for MDB concessional funds’, such as those eligible from the IDA, or small-island developing states (SIDS) (ibid).

The Bank stresses that the programme ‘is designed to be complementary to existing sources of adaptation funding’ and ‘supportive’ of the ‘evolving operation’ of the recently established Adaptation Fund (AF)¹¹ (ibid: 4, para 9). The PPCR aims ‘to provide lessons that might be taken up by the development committee and under the climate change regime in the future and in particular by the Adaptation Fund’ (ibid, 4, para 8). The PPCR is also aimed at providing finance in the short-term, with identification of recipient countries and funding occurring during 2008-2009 and no approval for financing activities taking place after 2012 (ibid: 9, para 32).

The size of this fund is US\$500 million.

III. Governance of the Climate Investment Funds

The climate investment funds are to be established as trust funds through the World Bank’s Multilateral Trusteeship and Innovative Financing Department (MTIF) under its Concessional Finance and Global Partnerships Vice-Presidency (see Box 1). The governance structure of the CIFs will comprise:

- (i) a Trust Fund Committee for each fund
- (ii) a Partnership Forum
- (iii) a Trustee
- (iv) a Multilateral Development Bank Committee; and
- (v) an Administrative Unit

The World Bank will host the Administrative Unit or secretariat for the CIFs and act as the Trustee for the funds. MDBs will serve as ‘partner agencies’ of the investment funds.

A Governance Framework document will be prepared for the CTF and SCF based on the terms in the proposal documents. It will be a legal document setting out ‘the overall framework of governance and operation of the CTF and SCF, respectively, and serve as a constituting document for the partnership among the participants in CTF and SCF activities (World Bank, 2008e: para 1).

a) Trust Fund Committee

Each investment fund would have a separate governing committee called the Trust Fund Committee to oversee the operations and activities of the trust funds. Members of the committee would be based on an equal representation of donor and recipient countries at a yet-to-be-determined figure (World Bank, 2008c: 9-10, para 28-29; 2008d: 12-13: para 24).

However, if there are less than the requisite number of donors in the first year of operations, ‘potential donor countries, identified through a consultation among donor and potential donor countries may serve as representatives from donor countries’ (ibid). If there are less than the requisite number of donors in subsequent years, ‘the number of donor country representatives and recipient country representatives, shall be reduced to equal the number of donors contributing to the [respective funds]’ (ibid).

A senior representative from the World Bank and a representative from the MDBs (chosen by the MDB Committee) will also sit on the respective Trust Fund Committees although they will not be entitled to vote. Members of the MDBs and the Trustee may attend Trust Fund Committees as observers (World Bank, 2008c: 10, para 29-30; 2008d: 12-13, para 25). In the CTF, whenever the Trust Committee considers a country’s investment plan, ‘the recipient country concerned will be invited to participate in the Trust Fund Committee during its deliberations on the work program, program or project’ (World Bank, 2008c: 10, para 29).

On the CTF Committee, the two co-chairs will be made up of a representative from the donors and one from the recipients (World Bank, 2008c: 10, para 32). Meanwhile on the SCF Committee, one co-chair will be elected from members of the Committee (alternating between donor and recipient) while the other co-chair will be the World Bank Vice-President for the Sustainable Development Network (World Bank, 2008d: 13, para 27).

The SCF will also establish Sub-Committees for each of the programmes created under the fund, consisting of ‘at least two members of the Trust Fund Committee, one member from a donor country and one member from a recipient country’ (ibid, 14, para 31). It may also include any members designated by the Trust Fund for this purpose (ibid). Each Sub-Committee will elect its own co-chairs.

Each Trust Fund Committee will be responsible for the overall governance, strategic decisions and resource allocation of each trust fund. However, the SCF Committee will not be able to approve investment proposals, programming priorities, operational criteria nor financing modalities for resources disbursed from individual programmes. Its function is to approve the establishment of programmes under the SCF and ensuring the strategic orientation of the SCF is guided by its objectives and ‘the principles of the UNFCCC’ as well as conducting various administrative tasks, including approving administrative budgets under the trust (World Bank, 2008d: 14, para 29).

The CTF Committee and SCF Sub-Committees will thus be primarily responsible, among others, for approving investments, operational criteria and financing modalities and approving trust fund financing for programmes and projects (World Bank, 2008c: 11, para 34; 2008d: 15, para 32).

Decision-making on the Trust Fund Committees and Sub-Committees will be by ‘consensus’ of the voting members. If consensus is not obtainable, ‘then a proposed decision will be postponed or withdrawn’ (World Bank, 2008c: 10-11, para 33; 2008d: 13-14, para 28).

The Committees will meet at a frequency they decide on but not less than once a year and the CTF Committee and SCF Sub-Committees may review and approve trust fund financing for projects and programmes as needed through applicable ‘means and procedures’ (World Bank, 2008c: 11, para 35; 2008d: 14-15, para 30 & 33).

Box 1: World Bank Trust Funds

World Bank trust funds are run by the Bank’s Trust Fund Unit under the World Bank’s Concessional Finance and Global Partnerships Vice-Presidency. Trust funds administered by the Bank do not form a core part of the Bank’s operations and the Bank manages such funds for a fee as a service for donors. Donors can include sovereign states, inter-governmental organisations, private foundations and other non-governmental organisations and the private sector.

There were 926 trust funds administered by the World Bank Group (IBRD, IDA, IFC and MIGA) at the end of the fiscal year of 2006 with a combined total of US\$ 10.3 billion (World Bank, 2006: 2). Trust funds form an increasing part of the Bank’s operations, constituting around ten percent of the World Bank Group’s activities, with the amount of resources channelled through such funds almost doubling since 2000 (Powell, 2005).

More than half of the resources held in trust funds in 2006 belonged to the three high-profile global trusts – the Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM) (US\$2.6 billion), the Global Environmental Facility (GEF) (US\$ 2.1 billion) and the Heavily Indebted Poor Countries (HIPC) Trust Fund (US\$865 million) (ibid: 22).

There are several types of World Bank trust funds, including *global and regional trust funds*, such as the GFATM and GEF; *operational trust funds* (including co-financing funds and debt relief funds), such as the HIPC Trust Fund; and *funds which support specific Bank activities* such as research, policy and operational work. The minimum trust fund size is US\$200,000 (World Bank, 1997, footnote 8).

A trust fund is administered in accordance with the terms of the Trust Fund Administration Agreement between the World Bank and the donor (World Bank, 1997: paras 1 & 7). The Bank is to ensure that the resources held in the trusts are used only for the purposes specified in the Trust Fund Administration Agreement (ibid: para 9) and the trust funds are administered under applicable Bank policies and procedures, including those governing procurement of goods, works and services (ibid: para 10).

The Bank’s Operational Policy also states that the institution should accept only trust funds ‘that support activities not traditionally financed under the administrative budget’ and that it should not accept trust funds ‘that may present a conflict of interest’ (ibid: para 4).

Sovereign donors remain the top contributors to trust funds and the UK has now emerged as the lead donor, contributing US\$1,190 million in 2007, followed by the Netherlands (US\$766 million) and the US (US\$747 million). The World Bank Group itself contributed US\$408 million from its net profits to various trust funds in 2007.

b) Partnership Forum

It has also been proposed that an outreach forum of donors, recipients and stakeholders be convened annually. This will include the participation of ‘donor and eligible recipient countries, MDBs, UN and UN agencies, GEF, UNFCCC, the Adaptation Fund, bilateral development agencies, NGOs, private sector entities and scientific and technical experts’ (World Bank, 2008c: 11, para 37; 2008d: 16, para 38 - 39). The cost of holding the forum will be met from the administrative budget of the CIF partnership.

This Partnership Forum, chaired by the World Bank Vice-President for the Sustainable Development Network and a country representative elected by participating countries, will ‘provide a forum for dialogue on the strategic directions, results and impacts of the CIF’ (ibid). The forum ‘will not lead to written outcomes, such as agreed texts, which could be used as a basis for discussion in the UNFCCC’ (ibid).

c) Trustee

The World Bank (or specifically, the IBRD) will act as Trustee for the climate investment funds and will be responsible for the following:

- (i) establishing and maintaining appropriate records and accounts to identify contributions and other receipts;
- (ii) recording all funding decisions made by the Trust Fund Committees to monitor funding status of the CIF;
- (iii) making commitments to be financed out of the proceeds of the funds and transferring cash to the MDBs in accordance with the decisions of the Trust Fund Committees;
- (iv) preparing financial reports and audit coordination for each of the funds;
- (v) investing the proceeds of the funds, including currency conversions and cash management (World Bank, 2008c: annex B, 55, para 1; 2008d: annex B, 11, para 1).

The climate investment funds will be managed in accordance with their respective Trust Fund Administration Agreements. These agreements, entered into between the Trustee and each of the donors to the CTF and SCF, will set out the terms and conditions by which the Trustee will administer the donors’ contributions on their behalf and incorporate the Governance Framework by reference (World Bank, 2008e: para 2). As World Bank trust funds, they will also be governed by the Bank’s Operational Policy 14.40 on Trust Funds which sets the basic guidelines for all Bank-administered trusts (World Bank, 1997; see Box 1).

The MDBs will be responsible for ensuring the financing is disbursed in accordance with their own fiduciary policies and procedures (World Bank, 2008c: annex B, 55, para 3; 2008d: annex B, 11, para 3). The Bank will therefore act as a financial intermediary between the CIF’s contributors and proceeds administered by the MDBs but will not be responsible for the use of proceeds over and above that contained within the agreements between the relevant trust fund and MDBs (ibid). The Trustee will enter into a Financial Procedures Agreement with each MDB, ‘setting out the terms and conditions of commitment and transfer of funds by the Trustee to the MDBs’, including remedies for breach of agreement and reporting requirements (World Bank, 2008c: annex B, 55, para 5; 2008d: annex B, 11 - 12, para 5; 2008e: para 3).

Pending disbursements of the proceeds, the Bank will invest the CIFs’ resources ‘in accordance with World Bank policies and procedures for the investment of trust funds it administers’ (World Bank, 2008c: annex B, 55, para 2; 2008d: annex B, 11, para 2). Income earned from the investments will be credited to the relevant CIFs (ibid). Under the SCF, if a donor chooses to designate another fund to receive its contributions other than the CIFs, the Trustee will make relevant arrangements to transfer those funds and the administrator of the recipient fund will be directly accountable to the donor for the use of those funds (World Bank, 2008d: 11, para 4).

d) Multilateral Development Bank Committee

As implementers, the multilateral development banks will report directly to the respective Trust Fund Committees on operational matters. An MDB Committee will be established to ‘facilitate collaboration, coordination and information exchange among the MDBs’ and will meet at a frequency to be determined by the Committee but no less than once a year (World Bank, 2008c: 12 – 13, para 42; 2008d: 17, para 42).

It is proposed that the MDB Committee will, among other things, identify specific areas of MDB cooperation to harmonise their climate change programmes and actions, linking their initiatives to the relevant CIFs; review agendas for meetings of the Trust Fund Committees; review recommendations proposed by the secretariat on programmes for approval; monitor country progress in programme and project implementation and compliance with policies of the trust funds; review reports; serve as a forum for exchange of information and experience; liaise with other development partners; and advise the secretariat on the implementation of ‘a comprehensive knowledge management system, results measurement system and learning program, taking into account opportunities for synergies with the activities of the MDBs’ (ibid).

e) Administrative Unit

The Administrative Unit or secretariat for the climate investment funds will be hosted by the World Bank based in the Bank’s Sustainable Development Network (SDN). The secretariat will undertake the following responsibilities:

- (i) prepare, in consultation with the MDB Committee, all documentation required for review by a Trust Fund Committee, including developing an agenda for a Trust Fund Committee meeting, which will first be reviewed by the MDB Committee;
- (ii) make recommendations, in consultation with the MDB Committee, on program criteria and priorities and the activity cycle for approval by the Trust Fund Committee;
- (iii) conduct background research and analyses as requested by the Trust Fund Committee or Sub-Committee in the case of the SCF;
- (iv) prepare an annual consolidated report on the funds’ activities, performance, and lessons, including details of the funds’ portfolio, status of implementation, funding allocations for the previous period, pipeline of projects and funding projections, costs incurred to administer the funds, and other pertinent information;
- (v) manage a comprehensive database of the CIF activities, knowledge management system, result measurements system and learning program;
- (vi) service the meetings of the Trust Fund Committees;
- (vii) manage partnerships and external relations, including convening meetings of the MDB Committee and the Partnership Forum;
- (viii) collaborate with the Trustee to ensure that the Trustee receives all the information necessary to carry out its responsibilities; and
- (ix) perform any other functions assigned to it by the Trust Fund Committees (World Bank, 2008c: 13 – 14, para 43; 2008d: 18, para 43).

e) Cost Recovery

The fees to the World Bank for acting as secretariat and trustee for the funds will be based on full cost recovery for administrative services (World Bank, 2008c: 30 – 34). The Bank defines administrative services to include ‘all services and activities not linked directly to project management but effective participation of an entity in the corporate activities of the Trust Fund (ibid: 30, para 42). Administrative costs incurred by the MDBs related to their interaction with the Trust Fund Committees, the Trustee and the Administrative Unit will also be recoverable from the respective trust funds.

However, project management costs – ‘MDBs’ expenditures related to the identification, preparation, appraisal, approval, supervision and evaluation of a specific project’ are to be recovered as fees from the borrowers (ibid: 34, para 49). Administrative budgets are to be approved by the Trust Fund Committees on an annual basis (ibid: 34, para 48).

IV. Problems with the Climate Investment Funds

1. Donor-Centric Design and Governance

The design process for the climate investment funds has remained a donor-driven endeavour, shaped by the most part by World Bank staff and stemming from the institution’s dialogue with and building upon the early initiatives of a tripartite of G8 countries – the UK, US and Japan. Developing countries and civil society have been largely marginalised from the design of the CIFs and the subsequent inclusion of developing countries in the design process and the proposed management or governance structure of the funds was only ring-fenced around existing operational plans. Stakeholder comments were only invited on the blueprint drafted by Bank staff and there was no opportunity to discuss whether or not the Bank was the most appropriate institution to be helming this initiative¹².

Discussions on the design of the CIFs have primarily been conducted through a series of closed door meetings with selected, invited participants within a tight timetable for completion. In fact, the first meeting for the CIFs which took place in Paris in March was called a ‘donors’ meeting rather than a ‘design’ meeting, reflecting the locus of the CIF design. While consultations with the private sector took place in February 2008, the first consultation with observers from partner agencies, recipient countries and NGOs only took place in mid-April at the second design meeting following the World Bank’s Spring Meetings in Washington DC. There was a short window of consultation between the second design meeting and the first week of May where the views of civil society and other non-governmental stakeholders were sought.

The agreement to create the funds was reached at the third design meeting in late May and Bank Executive Board approval is expected to be sought in July and additional resources raised for the funds in the autumn. The UK, US and Japan are expecting to announce the funds as a key G8 deliverable at their summit in Hokkaido, Japan in July. The short timeline in which these funds are being pushed forward has limited not only the consultation period but also the actors involved in their design. While including developing countries in the CIFs at this juncture will enable them to participate in the implementation of the funds’ objectives and policies, their very exclusion from the design stage precludes any real engagement with the funds’ conceptual and substantive design.

Moreover, the design of the CIFs remain premised on an aid framework for climate change financing which places the parties to the financing in a donor-donee relationship contrary to international climate change principles and obligations. Climate change financing premised on such a relationship means that the strategic priorities of financing are determined by the donors and, despite amendments to the draft proposals, the CIFs have reflected the financing concerns of the donors rather than the potential recipients and will continue to do so. This is evidenced, for example, by the fact that the World Bank has prepared detailed plans as ‘illustrative investment programs’ for financing under the CTF, including estimates of financing plans and assessment of implementation readiness of potential recipients before the trusts have been established or potential recipient countries consulted (World Bank, 2008f).

It is also the donors’ choice as to which funds their contributions will support and within the SCF, which programme it will support (see Section II (b) above). Thus, although decisions on which country and what project or programme to finance rest with the Trust Fund Committees or Sub-Committees, financing commitments can only be made ‘to the extent that such resources are available in the trust fund’ or relevant programme in the case of the SCF (World Bank, 2008c: 14, para 48; 2008d: 15, para 36). This means that a donor can pick and choose its own financing basket, contrary to the principle of country ownership which the CIFs claim to be premised on and making funding flows unpredictable.

Further, as discussed below, financial resources for climate change should be provided as part of developed countries' obligations under the international climate change regime of the UNFCCC and should not be considered as donor funds. Therefore, disbursement of financial resources through a donor-driven facility based on the principle of conditionality (see point 2) is contrary to multilaterally negotiated commitments of the developed country contributors to these funds, particularly if the resources provided to the CIFs by these countries will not constitute any additional resources to funds set aside to meet these or other internationally agreed development obligations.

The proposed governance of the CIFs is donor-centric, exacerbated by the fact that the funds are hosted by the World Bank with its asymmetrical governance structure favouring developed countries. While there have been some changes to the proposed governance structure of the CIFs, notably that the Trust Fund Committees which will oversee the funds will now consist of representatives from *both* donor and recipient countries identified through consultation with respective countries, there is no guarantee that this representation will translate into *actual voice (or decision-making powers)* on the committees. At the same time, recipient country membership of the Trust Fund Committees or Sub-Committees is contingent upon the number of donors to the respective trust funds and will be reduced if the number of donors is reduced (see section III (a) above).

Decision-making in the Committees, as mentioned in section III above, will be by 'consensus' but, as the CIF proposals themselves recognise, consensus 'does not necessarily imply unanimity' as the 'dissenting decision-maker(s)' may not be satisfied with the decision but may not wish to block a decision by 'remaining silent or registering its lack of support' (World Bank, 2008c: 10 – 11, para 33; 2008d: 13, para 28). In a donor-recipient framework of engagement such as that of the CIFs, the pressure not to block a consensus on the part of recipient countries may be quite significant, especially if the decision is supported by the donors.

In fact, it is envisaged that most donor and recipient countries will not have much say in the day-to-day running of the funds either. Although the Trust Fund Committees are responsible for approval of projects and programmes, it is anticipated that the staff of MDBs will be given a wide berth in implementing the financed programmes or projects, especially where CIF financing is blended with their conventional financing instruments.

Multilateral development banks, as partner agencies, will be primarily responsible for conducting missions and discussions in the run-up to the development of an investment plan for financing from the CIFs once the investment plans are approved by the Trust Fund Committee or Sub-Committee, 'further processing of a program or project will follow the MDB's policies and procedures for appraisal, MDB Board approval and supervision' (World Bank, 2008c: 7-8, para 18; 2008d: annex A, 9, para 30). Given that the MDBs remain donor-driven institutions, financing from the CIFs which are routed through these facilities will remain subject to donor oversight and strategic preferences.

2. Inconsistency with International Climate Change Regime

In order to address criticisms that the CIFs were inconsistent with the provisions of the UNFCCC and threatened to undermine negotiations under the Convention, the new proposals for the CTF and SCF now include introductory pages reciting various provisions of the UNFCCC and reiterating the funds' consistency with the UNFCCC process. Both fund proposals now incorporate references to the United Nations as 'the appropriate body for broad policy setting on climate change' and state that the multilateral development banks (MDBs) as implementing agencies of the CIF 'should not pre-empt the results of the climate change negotiations' with climate change actions to 'be guided by the principles of the UNFCCC' (World Bank, 2008c: 2-5; 2008d: 3-10).

However, this reiteration reflects a poor understanding of the international climate change regime and remains inconsistent with the principles of the UNFCCC despite claims to the contrary, including a selective reading of the Convention which ignores the negotiating history and the views of developing countries within the UNFCCC (Tan, 2008). According to a key developing country negotiator in the UNFCCC who has been involved in the process since its inception, rather than reflecting consistency with the UNFCCC,

the Bank's new proposals demonstrate limited knowledge of the treaty provisions and, in some cases, distort the meaning of obligations under the Convention (*ibid*).

Moreover, the language in the draft proposals implies recognition of the UNFCCC principles as merely guidance for policy agendas of the CIF rather than as binding internationally negotiated commitments of state parties which must be respected. They also demonstrate a lack of familiarity with the principles negotiated under the Convention and the legal status of commitments under the UNFCCC. This is evidenced in the basis for which the CIF financial resources are mobilised and disbursed, that is, on the premise of an aid framework.

Here, the notion that financing provided for climate change activities is official development assistance rather than resources provided to fulfil internationally binding obligations under a treaty is an inaccurate reflection of the current framework for climate change regulation. Instead, it is the legally binding obligation of developed country parties to provide the necessary 'new and additional' financial resources to meet the costs incurred by developing countries to implement all their obligations under the Convention, and not just for mitigation and adaptation (*ibid*).

The framework of the CIFS would therefore appear to contradict internationally agreed principles on climate change, in particular that of the UNFCCC and Kyoto Protocol regime which state that, as historical polluters and due to their higher technological and economic capabilities, developed countries should shoulder the main burden for resolving the crisis (see UNFCCC, 1994, Articles 3 and 4). Due to their 'common but differentiated responsibilities' in this regard, developed countries have undertaken two types of commitments vis-à-vis climate change under the UNFCCC: 1) reduce emissions and 2) assist developing countries with finance and technology transfer to comply with their obligations under the Convention (UNFCCC, 1994, Article 4; see also Khor, 2008b: 2).

The fact that the funds will not come under the authority of the UNFCCC's Conference of Parties (COP) in itself is also a reflection of the CIFS' inconsistency with the UNFCCC provisions and in disregard of developing countries' demands under the Convention. Although Article 11 of the UNFCCC (used by the World Bank to justify the CIF) states that 'developed country parties may also provide and developing country parties avail themselves of financial resources related to the implementation of the Convention through bilateral, regional and other multilateral channels' (see World Bank, 2008c: 2, para 4; 2008d: 3, para 8), the UNFCCC COP had decided that such funding through channels 'outside the Convention' should be consistent with the policies, programme priorities and guidance provided by the parties¹³. This is not the case with the CIFS which have their own governance framework outside the COP's jurisdiction.

Furthermore, developing countries under the Convention have called strongly for 'direct access' to any funds established for the purposes of meeting obligations under the UNFCCC and not access mediated by secondary institutions, such as MDBs and other agencies, as is the case with the CIFS (*ibid*). Not only does this lead to a proliferation of financing instruments outside the UNFCCC process, it creates additional administrative and other costs, some of which will have to be repaid by recipient countries. Thus, although the revised CIF proposals allude to the UNFCCC, they do not locate the CIF within the framework of the Convention nor enable access to financing in accordance to the guidance of the UNFCCC state parties.

Furthermore, as discussed in point 3 below, the conditionalities attached to the loans and grants under the CIFS may also have the effect of extracting emissions targets and other commitments from developing countries outside the multilateral framework of negotiations. In order to secure financing, developing countries must demonstrate that they have, among other things, an enabling regulatory framework in place to achieve a low-carbon development path. This is contrary to the UNFCCC regime which emphasises that implementation of commitments by countries is contingent upon the availability of financing and technology and not the other way around.

Additionally, the CIF proposals mistakenly conflate the UNFCCC with the United Nations system generally. The CIF proposals refer to the 'UN' as the relevant organisation for agenda-setting on climate change but it is the UNFCCC which represents the only multilateral regime on climate change, that is, constituting a

negotiated, internationally binding treaty that is separate from the UN agencies. Developing countries have argued that financial resources disbursed in fulfilment of obligations of developed countries under the UNFCCC should be placed under the authority (and not just guidance) of the Convention's COP, not under the UN system¹⁴.

The Bank's reading of the Bali Action Plan and the function of the Global Environmental Facility (GEF), another World Bank trust fund which acts as trustee for three funds under the UNFCCC, has also been criticised as inaccurate. The CIF proposals which designate the GEF as '*the* financial mechanism of the Convention' (World Bank, 2008c: 6, para 12; 2008d: 3, para 6) are inaccurate as the GEF is only '*an* operating entity' of the financial mechanism of the UNFCCC¹⁵. And although the GEF's activities are 'guided' by the UNFCCC COP, practice has demonstrated that such guidance remains to be interpreted by the governing body and implemented in accordance with the policies of the implementing agencies, such as the World Bank and other MDBs¹⁶.

Although the GEF remains the only entity under the mechanism at present, this does not preclude the parties to the Convention designating another facility as an operating entity to carry out the task of providing financing under the treaty. Developing countries have consistently rejected the notion that GEF is 'designated as the financial mechanism of the Convention' as the Bank asserts, because they 'do not believe that it fulfils an important criterion of the financial mechanism' – that it has 'an equitable and balanced representation of all parties within a transparent system of governance'¹⁷.

3. No Additionality

The climate investment funds will be providing *loans* as well as grants to eligible developing countries. This means that developing countries will have to *pay* for dealing with a problem that has been caused by developed countries while at the same time facing other major developmental challenges. This comes at a time when many developing countries, due to debt relief initiatives and rising commodity prices, are beginning to shake off the shackles of debt which have circumscribed their social and economic development for almost three decades.

As discussed above, the current international climate change regime therefore recognises that developing countries will not be able to respond to the challenges of climate change and implement their obligations if there are insufficient financial resources and technology transfer to do so. The regime also recognises that efforts to combat climate change in developing countries must 'take fully into account that economic and social development and poverty eradication are the first and overriding priorities' of the developing countries (UNFCCC, 1994, Article 4(7)).

While the loans under the CIFs will be provided on a concessional basis, these loans are also expected to be ring-fenced around specific projects and programmes and will have to be repaid in the future by developing countries¹⁸. Given that many developing countries will continue to be reliant on external financing for other aspects of development financing, loans will only add to their debt burden in the long run and affect their ability to generate sustainable resources for long-term economic growth and development.

As discussed above, for many developing countries, finance is a crucial component of present and future climate change negotiations and developing countries have accordingly 'been disappointed by the low quantum of financial resources' and by the institutional frameworks of provision of such financing (Khor, 2008b: 17). Developing countries see the provision of financing for climate change mitigation and adaptation not as 'a donation but an obligation of developed countries' who are largely responsible for the problems of climate change today (Khor, 2008b: 17).

The UNFCCC provides that the developed country signatories to the Convention 'shall provide *new and additional financial resources* to meet the agreed full costs incurred by developing country Parties to comply with data collection and communication of national measures to implement the Convention' as well as providing 'financial resources, including for the transfer of technology, needed by the developing country Parties to meet the agreed full incremental costs of implementing measures' under the Convention, including

for mitigation and adaptation purposes (UNFCCC, 1994, Article 4(3), emphasis added). Developed countries also undertook commitments to developing countries that are ‘particularly vulnerable to the adverse effects of climate change in meeting costs of adaptation to these adverse effects’ and also to ‘take all practicable steps to promote, facilitate and finance’ the transfer or access to ‘environmentally sound technologies and know-how’ to all developing countries (UNFCCC, 1994, Article 4(4) and 4(5)).

The UNFCCC Secretariat estimates that by 2030, financial flows to developing countries should be around US\$100 billion annually in order to meet the costs of mitigation and between US\$28 – US\$67 billion for adaptation and the World Bank itself has recognised that these resources are required in *addition* to present levels of official development assistance (ODA) so as not to compete with financing for achieving the Millennium Development Goals (MDGs) (World Bank, 2008b: 2, para 5).

However, there is a fear that the World Bank’s climate investment funds will establish a parallel process for financing climate change adaptation and mitigation which will *not* result in additional resources for developing countries. Again, although the CIF proposals stress that CIF financing should be ‘new and additional’ (World Bank, 2008c: 6, para 12; 2008d: 8, para 13), there is no definition of what this ‘additionality’ will mean, especially in light of the fact that the bulk of financing will be disbursed in the form of loans and includes fees for MDBs’ management of the programme or project cycle (see section III (e) above).

Developing countries and civil society groups are concerned that significant portions of the aid budgets of donors will be diverted into the CIFs and counted as part of their annual ODA commitments. While this may be considered as ‘additional’ to existing *aid flows*, it does not necessarily represent additionality in terms of developed countries’ existing commitments *to aid targets*, that of 0.7 percent of GNI. Contributions to the CIF will be classed, in most, if not all, donor countries as constituting towards this target and not additional to such targets. The UK’s contributions to the CIFs, for example, will count towards the UK meeting this target (DEFRA and DFID, 2008).

It is also not unusual for donors to classify non-traditional disbursements to developing countries as ODA. The OECD reports, for example, that the spikes in ODA levels in 2005 and 2006 were mainly due to debt relief which was counted as ODA, including significant cancellation of Iraqi debt and the cancellation of Nigerian commercial debt by OECD member states (OECD, 2007: 2). Of the total US\$104.4 million in ODA in 2006, US\$18.9 million was for debt relief grants (*ibid*: 10, Table 1.A). The experience of the debt relief initiatives provides examples of how calculations of financial resource flows may be distorted once the issue is hooked onto the aid agenda.

4. New Conditionality

Access to resources under the CIFs will be contingent upon recipient countries fulfilling the criteria of the respective trust funds. Countries will have to submit investment plans which will be assessed by the respective Trust Fund Committees according to the criteria established to meet the objectives of the respective trust fund or programme (see section 2). These financing criteria have primarily been drawn up by the World Bank and based on existing World Bank and/or other MDB policies.

Under the Clean Technology Fund, for example, the World Bank takes a lead on the joint programming mission, along with a relevant regional development bank, to begin a dialogue with a potential recipient country after an expression of interest from the country (World Bank, 2008c: annex A, 6, para 2). The country will then have to draw up an investment plan in accordance with a template to reflect the transformational objectives to be achieved by the financed programmes and/or projects. These plans are submitted to the Trust Fund Committee ‘for review of the eligibility criteria and priorities for individual investment operations, identification of support needed for a program of investment operations, and a general description of a potential pipeline of projects’ (*ibid*: 22, para 14). The plans may be supported by a variety of financial instruments used by MDBs for investment lending (*ibid*: 22, para 13).

Upon endorsement by the Committee of a resource envelope for individual projects and authorisation for ‘the designated MDB to proceed with the development and preparation of individual investment operations

for CTF co-financing', individual loans or grants under the country programme would then be processed by the MDBs involved (ibid: 22, para 14 – 15). Each financing operation 'would follow the investment lending policies and procedures of the MDB, including its fiduciary standards and environmental and social safeguards' (ibid). In the case of the World Bank, all operations financed by the CTF 'will follow the Bank's operational policies and procedures for investment lending' regardless of whether there is IBRD or IDA co-financing (ibid: 35, para 1).

This means that aside from specific climate-related criteria, access to the CIFs will also be based on the Bank's traditional criteria for financing, including tight fiscal discipline and implementation of economic and other structural and policy reforms. For example, as mentioned in section III above, access to funds from the CTF would be judged not only on the applicant's demonstrated potential for transformation to low-carbon development but also its potential for such implementation, assessed by evidence of a 'minimum level of *macroeconomic stability and stable budget management*' as well as a 'commitment to an *enabling policy and regulatory framework*' (World Bank, 2008c: annex A; 18, para 7, emphasis added).

The Bank's track record in managing other trust funds, including the HIPC Trust Fund, demonstrates that it has significant leverage over determining the conditions for access and use of resources by recipient countries, including the imposition of policy conditionalities which may not necessarily be relevant to the objectives of the trusts administered. The same goes for the other MDBs who act as implementing agencies of the resources held by the CIFs who may subject recipient countries to different financing conditionalities, including compliance with the guidelines of the Paris Declaration on Aid Effectiveness, another donor-driven framework for aid disbursement and management.

There is also a danger that the climate investment funds will create onerous obligations on developing countries to comply with emissions targets and other rules under the international climate change regime for which they have been exempt on grounds of their differing responsibilities and capacities. As discussed above, access to financing under the CIFs will be contingent upon countries' demonstrated readiness to transit to a low-carbon economy and, there are concerns that there will not be adequate assessment of what impact such a transition will have on a country's overall development and poverty reduction efforts in the context of other extenuating economic circumstances.

Further, in the case of the CTF, as mentioned in section II above, MDBs may be able to bundle 'complementary financing for policy and institutional reforms and regulatory frameworks' as part of their financing package (ibid: 9, para 25). This means that CTF financing may be used to leverage policy reform in countries similar to what occurs under a structural or sectoral adjustment loan to developing countries from the MDBs.

This is in effect, conditionality through the back door. The enforcement through financing conditions goes against the principles underpinning the UNFCCC and the Kyoto Protocol which states that developing countries' commitments should be non-binding in recognition not only of their lower financing and technological capabilities, but also of 'their negligible historical role in the build up of greenhouse gases in the atmosphere' and their continued need for social and economic development (Khor, 2008b: 8; see also discussion below).

5. Market-Based Solutions to Climate Change

The World Bank's climate investment funds appear to prioritise market-based solutions to dealing with the problems of climate change in developing countries. In its outline for the rationale of the Clean Technology Fund, the Bank states 'a priority for the international community has been the further development of innovative financing mechanisms designed to promote market-based solutions and trigger private investments in low carbon development' (World Bank, 2008a: annex A, para 1) while the Forest Investment Fund aims, among other things, to complement existing carbon finance instruments and to facilitate investments in forestry products and biomass and biofuel supplies as well for access to international markets for these products (ibid: annex B: para 5).

The Bank is also actively promoting private sector investments and partnerships as part of the CIFs and its overarching Strategic Framework Climate Change on Development (SFCCD) (see discussion below). Two of the six pillars underpinning the proposed SFCCD will be that of ‘expanding the World Bank Group’s role in developing new markets’ and ‘tapping private sector resources for climate friendly development’ (World Bank, 2008b: 7, para 18). In tandem, these two pillars aim to create a role for the Bank in development of new markets, including carbon markets and in financial intermediation for climate-related products, as well as creating an enabling environment for the participation of the private sector in low carbon and adaptation projects in developing countries (ibid: 22 – 24). This includes addressing the problem of what the Bank terms ‘policy and regulatory barriers’ creating ‘disincentives’ to private sector investment in these areas (ibid: 22).

Once again, civil society groups have expressed concerns that these market-based solutions are driven by commercial interests and may serve to create new sources of revenues for logging companies and investors without the necessary safeguards for the environment or communities which depend on natural resources for their livelihoods and residence (Bretton Woods Project, 2007a: 1). The CIFs, notably the CTF, will effectively use public money to subsidise private sector investments through a combination of project finance instruments, such as joint equity rights with the investors, subordinated debt instruments (loans with a lower repayment priority) and loans with reduced interest rates and/or performance bonuses (see World Bank, 2008c: annex B).

Additionally, the Bank’s current carbon trading and financing activities, such as brokering carbon purchases through its Prototype Carbon Fund, have already been criticised by civil society as facilitating commercial gains without corresponding benefits for the climate. For example, NGOs have argued that the Bank’s carbon funds have had ‘a disgraceful record of contracting to buy credits from projects that would likely be completed regardless of whether they received carbon credits’, going against the ‘additionality’ principle of carbon trading, enabling financial incentives for project developers without preventing greenhouse gas emissions (NGOs, 2006: 12; see also Redman, 2008: 3 – 4).

A report by the Washington-based think tank, the Sustainable Energy and Economy Network (SEEN), notes that there has been little evidence that the World Bank’s carbon trading deals ‘actually reduce emissions that cause climate change’ (Redman, 2008: 3). According to the study, while the exact impact of the Bank’s carbon finance on GHG emissions is not known, ‘data on the CDM website confirms the World Bank’s own 2006 assessment that progress on lowering emissions has been slow’ (ibid: 22). It found that of the 83 active projects in the database, ‘only nine have delivered Certified Emissions Reductions (CERs)’, with the vast majority of emissions coming from a single project in China (ibid).

The report also notes that in such carbon trust funds, ‘the Bank has crafted the rules of the investment game in such a way that deflects financial responsibility back onto trust fund donors, developing country project sponsors and the communities in which projects take place while protecting itself from any losses’ (ibid: 37). In such arrangements, the seller of carbon credits in developing countries assumes the ‘project risk’ of the investment and if the project fails to generate the promised amount of emission reductions three years in a row, or an unforeseeable event makes it impossible for the project sponsor to meet its obligations under a carbon contract, the Bank can terminate the contract and the burden for financial costs incurred falls on the developing country partner (ibid).

There is also the concern that dependence on market mechanisms, such as the aforementioned carbon trading, as a source of financing climate change mitigation and adaptation, is inadequate for meeting the financial needs of the public sector in developing countries which will be charged with the responsibility of implementing climate change commitments and dealing with the social, economic and ecological dislocations caused by climatic changes. Khor, for example, argues that the ‘public sector’s financial requirements (in terms of its own investment, consumption and policy work as well as in giving directions to the private sector and the public) have been under-appreciated’ under current financing mechanisms and a proper ‘needs assessment’ should be conducted to determine more appropriate financial mechanisms with projected financial flows (Khor, 2008b: 18).

6. Parallel Structures and Undermining of Climate Change Regime

The World Bank's climate investment funds may create parallel structures for financing climate change adaptation and mitigation outside the ongoing multilateral framework for climate change negotiations and within a process dominated by G8 countries. Although the revised CIF proposals have stressed the primacy of the UNFCCC process and ongoing negotiations under the Bali Action Plan and tied the operations of the funds to an agreement for financial resources under the UNFCCC, there remain significant concerns about their impact on current multilateral climate change negotiations.

As discussed in point 2 above, the placing of climate change financial resources in mechanisms outside the control of the UNFCCC Conference of Parties is inconsistent with decisions taken by the COP on this issue. Under current UNFCCC negotiations on long-term cooperative action, only financial resources that are taken up within the auspices of the Convention with the coherent guidance of *all* the signatory parties to the Convention and consistent with the objectives of the Convention are acknowledged as meeting the financial resources and technology transfer commitments under the regime. Donor governments channelling their resources through mechanisms established outside the Convention therefore run the risk of not having their contributions recognised under the Convention.

Although proponents of the climate investment funds claimed that there was an absence of similar instruments providing financing for climate change activities to be financed by CIF resources, this view has not been supported by its critics. According to a developing country negotiator, 'there already exist within the Convention a number of mechanisms and processes for identifying needs, setting programmes and priorities, setting eligibility criteria, conducting needs assessments (vulnerabilities, technologies, financial), capacity building and mechanisms for reporting, measuring and verification, which we must all strengthen rather than set aside so that another institution which claims it know the Convention than the Parties do can do it'¹⁹.

The so-called 'sunset clauses' proposed for the CIFs may also subvert rather than support the development of a viable financial mechanism under the UNFCCC. According to the World Bank, recognising that 'UNFCCC deliberations on the future of the climate change regime include discussions on a future financial architecture and funding strategy for climate change, the CIF will be an interim measure designed for MDBs to assist in filling immediate financing gaps' with the insertion of 'specific sunset clauses linked to the agreement on the future of the climate change regime' (World Bank, 2008d: 8: para 12). This means that the CIFs will 'take necessary steps to conclude [their] operations once a new financial architecture is *effective*' and the trustee will 'not enter into any new agreement with donors for contributions to the trust fund once the agreement is *effective*' (World Bank, 2008c: 15, para 53; 2008d: 20, para 52, emphasis added).

This means that there is no fixed date for the cessation of the CIFs, rendering the existence of a 'sunset clause' meaningless. The tying of the CIFs' termination to the creation of a financial mechanism under the UNFCCC may derail rather than speed up the negotiations for the establishment of such a fund as developed countries will have less of an urgency and incentive to create such a fund under the auspices of the UNFCCC.

There is evidence that many such 'interim' funds established under the auspices of the World Bank have expanded rather than shrunk over the years. For example, the Prototype Carbon Fund (PCF) was aimed at providing a temporary instrument for pioneering carbon transactions while the Clean Development Mechanism was being developed and made operational. However, according to SEEN, nine years on and US\$2 billion later, 'the World Bank's carbon portfolio has expanded to 11 funds and carbon financing has become a "mainstream" part of its overall lending program' (Redman, 2008: 13).

In addition to parallel financing structures, there are also concerns that these structures will create parallel climate change governance policies outside the multilateral process. In particular, NGOs have expressed concerns that the inclusion of the US-driven Clean Technology Fund within the portfolio of funds 'could imply support for the US Major Emitters Meeting process which lies outside the UN track of negotiations' (NGOs, 2008). The UK government has also expressed its desire to use the CIFs as leverage for the

negotiations on a new post-2012 climate change deal (UK, 2008: para 114). According to the UK's Department for International Development (DFID), the provision of funding under the CIFs 'will demonstrate the commitment of developed countries to scale-up climate-related financing thus building confidence and so increasing the prospects that the post-2012 deal is ambitious and effective' (ibid).

This is despite developing countries' repeated assertions that there is no mandate to negotiate a new agreement on climate change under the UNFCCC. Negotiations under the Bali Action Plan aim to secure 'full, effective and sustained implementation of the Convention, now, up to and beyond 2012'²⁰ and not to renegotiate existing commitments. The fact that a key CIF donor has expressed its intention to use their contributions to the CIF to influence country positions in climate change negotiations is not only worrying but also undermines the CIF proponents' assurance that the funds will not create conflict or undermine the UNFCCC process.

The UK has also stated its intention for the World Bank to assume a strong environmental role (DEFRA and DFID, 2008). However, the World Bank is not an environmental agency and should not be used as a means to create parallel climate change governance policies outside the UNFCCC process. By insisting that the Bank play a more active role in climate change financing, there is a danger that it will be creeping into uncharted waters of climate change regulation through its financing policies and conditionalities (see point 2 above). This is an international environmental governance role which the Bank has neither the constitutional mandate nor technical competence to perform.

7. Poor Track Record and Questionable Climate Impacts

It is ironic that the World Bank is establishing itself as a lead player in the global fight against climate change given its poor track record in managing social and environmental impacts of its projects and programmes. Furthermore, despite its claims to the contrary, the institution remains heavily committed to investments in carbon-intensive energy projects and reforms in energy sectors that focus on large-scale, privatised energy provision without corresponding safeguards to ensure universal access.

Civil society groups have highlighted the inconsistencies between the Bank's rhetoric on climate change and its operational policies and practice. In particular, NGOs have argued that the Bank's core energy portfolio continues to be focused on supporting conventional fossil fuel production over renewable energy (NGOs, 2008). According to Oil Change International, the World Bank Group remains the single largest multilateral leader in oil aid²¹, subsidising about US\$8 billion in oil and gas investments since 2000 (Oil Change International, 2007: 2). In spite of the recommendation by the Extractive Industries Review (EIR), the Bank-commissioned independent evaluation of its activities in extractive industries, that the Bank end immediately support for coal projects and phase-out support for oil by 2008, the World Bank's support for fossil fuel projects grew by 93 percent from US\$450 million to US\$869 million from financial year 2005 to 2006 (ibid: 10).

In 2006, the World Bank increased its energy sector commitments from US\$2.8 billion to US\$4.4 billion (ibid). NGOs report that 'in 2006, oil, gas and power commitments accounted for 77 percent of the bank's total energy programme, while "new renewables" accounted for only 5 percent' (Bretton Woods Project, 2007b: 2; Oil Change International, 2007: 2). Meanwhile, 40 percent of what the Bank calls 'low-carbon lending' in financial year 2007 consists of large hydropower projects with questionable environmental impacts, with support for hydropower the highest since 1996 (Bretton Woods Project, 2007b: 2). The other 40 percent of its 'low-carbon' portfolio focuses on carbon finance (ibid). In 2007, the Bank's private sector arm, the International Financial Corporation (IFC)²² 'provided more than US\$645 million to oil and gas companies', an increase of 'at least 40 percent from 2006' (Oil Change International, 2007: 2).

The negative impacts of the Bank's infrastructure investments have been significantly documented over the years. Aside from social and environmental dislocations caused by large projects for energy extraction and production, such as oil pipelines and hydropower dams, the Bank's support for privatisation and deregulation of energy sectors in developing countries have also resulted in energy insecurity, especially for the poor. In a report released last year, Christian Aid noted that Bank policy advice and financing conditionalities to

developing countries have prioritised ‘centralised, large-scale, grid-based fossil fuel and hydropower projects as well as the privatisation of public power and electric utilities’ which have not only contributed towards high carbon emissions but also reduced poor people’s access to energy (Christian Aid, 2007).

This supplements the findings of a 2004 study which revealed that 82 percent of the World Bank Group’s oil extraction projects since 1992 are designed for export²³, rather than the alleviation of energy poverty (Vallette and Kretzman, 2004: 2, 5). The study found that in most cases, the principal beneficiaries of Bank financing to oil, coal and gas projects in developing countries were developed countries’ consumers and corporations, facilitating ‘a massive transfer of developing countries’ oil and gas resources to feed the north’s energy demands rather than supplying energy to the poor in developing countries (ibid: 2). This comes at a time when energy inequality is at its highest where people living in high-income countries consume over 20 times more energy per capita than people in low-income countries (NGOs, 2006: 21).

Moreover, the CIFs’ proposals for private sector involvement in the climate change agenda, particularly the use of official development financing to leverage private investment, highlight the World Bank’s schizophrenic approach to public subsidies. While on the one hand, the institution claims that public sector financing can assist in creating enabling environments for private sector development and securing private financing flows in the area of climate change (World Bank, 2008c: annex B, para 1), the Bank does not necessarily apply these principles in other aspects of its operations, notably through conditionalities in its policy-based lending which require the removal of state-backed subsidies to domestic economic sectors and local firms. Therefore, while championing subsidies in one arena, the Bank, through its other financing operations, continues to remove the right of the public sector in developing countries to support its domestic private sector through policies of privatisation and liberalisation.

The Bank’s poor track record in climate-friendly energy investments will be compounded by the fact that the proposed climate investment funds would provide financing to some ecologically-questionable projects, even through the Clean Technology Fund. There is also as yet no consensus on what constitutes ‘clean technology’ energy. NGOs have argued that many of the Bank’s proposed ‘clean’ technologies for investment are reliant on carbon-emitting, non-renewable resources, such as coal and natural gas, or on unproven technologies such as carbon capture and storage, or on technologies with questionable environmental and social impacts, such as nuclear power and hydropower (NGOs, 2006: 17).

For example, the Bank has promoted the use of ‘clean coal’ in developing countries – coal chemically washed of minerals and other impurities which, while less polluting than normal coal when burned, still emits significant greenhouse gases and relies on environmentally and socially damaging mining practices (ibid). It has also promoted the development of ‘integrated gasification combined cycle’ (IGCC) power plants using synthetic gas created from heating up (as opposed to burning) coal as the main fuel for energy production as well as carbon capture and storage from such facilities, both of which require significant financial investment with debatable climate outcomes while perpetuating reliance on a dirty energy source (ibid). While there is an aim to increase the share of renewable energy in recipient countries under plans for the CTF, the main focus of the CTF would be on the rehabilitation or upgrading of existing coal-fired power plants, switching from coal plants to gas plants and to reduce energy transmission inefficiencies through the building of new grid connections and reducing distribution losses (see World Bank, 2008e).

8. Mission Creep, Conflict of Interest and Credibility Issues

The climate investment funds will form a major pillar in the Bank’s new ambitious climate strategy, outlined in its Strategic Framework on Climate Change and Development (SFCCD), which will be presented to the Bank’s Executive Board for approval in September 2008 and for discussion at the institution’s Annual Meeting (World Bank, 2008b). Through the administration of these climate investment funds and leveraging other aspects of its operations for climate-related financing, technical assistance work and efforts to play a leading role in the development of carbon markets and markets for ‘energy efficiency goods and services’ (ibid), the World Bank is setting itself up to be a key, if not *the* key, player in the governance of climate change.

The World Bank is clearly using the current strategic importance of climate change to capture the market on climate change financing, a process that it had begun building up to over the past few years and efforts which have earned the institution the name of ‘climate profiteer’ (Redman, 2008). The encroachment of the Bank into climate financing reflects its attempt to reclaim credibility and legitimacy lost in recent years due to high-profile controversies over its leadership and operational relevance.

The CIFs represent a means for the Bank to leverage donor financing and recipient client business to sustain its financial operations, particularly that of the IBRD. Most notably, the CTF will follow the precedent set by some Bank-based trust funds in disbursing concessional finance to middle-income countries (see sections II and III above). Resources from the CTF will be used to augment MDB financing to middle-income countries by subsidising the loans and other financial instruments and making them more attractive to such borrowers who have been leaving the World Bank in droves in recent years.

According to the Bank, middle-income country governments ‘are reluctant to borrow on non-concessional terms for projects and programs that generate little revenue’, such as those related to climate change, MDGs and other global public goods, and concessional finance from MDBs ‘could help unlock *demand* for financing of such projects and programs’ (World Bank, 2008c: 22, para 16 – 17, emphasis added). ‘Blending’ CTF resources with MDB financing could therefore increase the volume of financing available for the MDBs to lend, through the co-financing of MDB non-concessional loans or providing ‘additional financing of new component within ongoing investment lending operations, on concessional terms’ (ibid).

Thus, aside from its poor environmental track record, as a potential beneficiary of the CIFs, the Bank’s appointment as trustee, secretariat and overall coordinator for the funds represents a clear conflict of interest, particularly when its performance in the delivery of global public goods and technical assistance and development policy advice remains questionable at best.

In its proposed portfolio of CIFs the Bank exhorts its ‘comparative advantage’ in financing global public goods and its competence to deliver strategic policy reforms to address climate change challenges in developing countries (World Bank, 2008b). However, the Bank’s performance in managing trust funds for the delivery of financing for global public goods also remains questionable, particularly in the quality of technical assistance delivered to client states where these form a core part of the programme. In 2004, the institution’s Independent Evaluation Group (IEG)’s evaluation on the Bank’s global partnerships programme found that evidence on the value-added of these programmes in terms of development outcomes varies, with many programmes lacking ‘clearly defined objectives’ in programme design and implementation (World Bank, 2004: xxvii).

The evaluation unit found that it is unclear whether the knowledge disseminated under these programmes was ‘sufficiently evidence-based, quality-tested, and contextual to add value to what the Bank’s client countries themselves do, need, or want or what the Bank can achieve working through country-level partnerships’ (ibid: xxvi). Additionally, ‘[p]erformance indicators to assess changed donor or international agency behavior do not exist [and] when they exist at all, are focused on the behavior of developing countries’ (ibid). This is compounded by the fact that the voices of developing countries in these programmes are ‘inadequately represented’ and that such programmes, including the trust funds, ‘have increased overall aid very little’ (ibid).

V. Alternatives to the Bank-Driven Climate Financing

Any legitimate effort to increase the amount of resources for climate change adaptation and mitigation must therefore be placed within a genuine multilateral framework which provides for adequate representation for both developed and developing countries, especially as financial resources remain the main impediment to developing countries meeting climate change challenges.

Given that the UNFCCC remains the only truly international framework which is not just scientifically-based but also guided by multilaterally negotiated principles and has almost universal membership, effective and sustainable financing for meeting climate change commitments of both developed and developing countries must be located within this framework.

Efforts must therefore be focused on developing a genuinely multilateral fund for climate change financing under the auspices of the UNFCCC which is governed by the UNFCCC membership on the basis of regional representation. This would give developing countries due representation and voice within the governance structure and ensure that the resources set aside for climate change are used in accordance with internationally agreed principles and meet the objectives of the multilateral climate change regime.

A precedent has already been established for the creation of funds directly under the control of the state parties to the UNFCCC and the Kyoto Protocol as was created under the Montreal Protocol. The Multilateral Fund (MLF) for the Implementation of the Montreal Protocol provides funds to help developing countries comply with their obligations under the Protocol to phase out the use of ozone-depleting substances at an agreed schedule (Multilateral Fund, 2007). It consists of three main institutions – the Executive Committee, the MLF secretariat and multilateral implementing agencies – and supplemented by a network of bilateral agencies and national and regional units (UNFCCC, 2006: 12, para 18).

The MLF operates under the authority of the parties to the Montreal Protocol who decide on the fund's overall policies. Its governing body, known as the Executive Committee, was established by the state parties to the Protocol 'to develop and monitor the implementation of specific operational policies, guidelines and administrative arrangements' and members of the Executive Committee are selected on the basis of 'a balanced representation' of developed and developing parties under the Protocol, ensuring that neither set of countries dominate the decision-making (ibid: 8, para 3 & 9: para 5).

The chair and vice-chair of the Executive Committee are selected, one each, from the two different groups and alternate each year between them (ibid: 9, para 5). Decisions are reached by a two-thirds majority vote of the members, representing a majority of the parties in each of the two groups, but to date all decisions have been adopted by consensus (ibid). The Executive Committee is responsible for, among other things, developing the Fund's policies and guidelines; approving country programmes and specific projects, or groups of projects; reporting on the Fund's performance to the meeting of the parties each year; and overseeing the Fund's administration (Multilateral Fund, 2007).

The Fund's secretariat is based in Montreal and reports to the Executive Committee. Crucially, the secretariat is *independent* from the implementing agencies which are contracted through agreements between the Executive Committee and the respective agencies (UNFCCC, 2006: 12: para 18). At present, there are four multilateral agencies – the UNDP, UNEP, the United Nations Industrial Development Organization (UNIDO) and the World Bank – as well as several bilateral agencies and national and regional units and networks (ibid).

These implementing agencies deliver financial and technical assistance (through grants and concessional loans) to eligible countries under the MLF, primarily through the multilateral agencies although up to 20 per cent of the contributions of the developed country contributors can also be delivered through their bilateral agencies in the form of eligible projects and activities (Multilateral Fund, 2007). The Fund is replenished on a three-year basis and pledges have amounted to US\$2.2 billion over the period 1991 to 2007 (ibid).

Learning from the implementation of the Montreal Protocol, a new multilateral fund or funds can be established within the UNFCCC to finance aspects of climate-related activities decided upon by the UNFCCC members. The fund or funds can have a democratic governance system and a secretariat functioning under the Convention. The fact that the Montreal Protocol operates in this fashion and has handled over US\$2 billion in funds successfully shows that this can be achieved under the UNFCCC.

Conclusion

The World Bank's mission creep into the area of multilateral environmental governance and delivery of climate-related global public goods must be placed within the context of declining relevance and waning revenue streams for the international financial institution. The Bank maintains that the proposed portfolio of climate investment funds discussed above will contribute significantly to the global fight against climate change, particularly in assisting developing countries transit towards a low-carbon and climate-resilient economy.

However, the funds must be seen in the context of the Bank's overarching strategy to capture the climate change debate. They are part of a larger Bank-wide effort to position itself as a one-stop shop for developing countries on climate change, coming at a time when the Bank's main source of business – lending for development projects – is in steep decline with the migration of many traditional borrowers to international capital markets and other alternative sources of financing. The commercial incentives for the Bank to stake a claim in global climate change negotiations are therefore abundant.

Given the Bank's chequered history in the promotion of fossil fuel investments and privatisation of natural resources in developing countries, the institution is ill-placed to manage and regulate either the sources or the impacts of climate change. Providing the bulk of climate change resources through a non-UNFCCC and developed country-driven entity such as the World Bank-led CIF mechanism will not only be counter-productive to the aims of achieving global GHG emission reductions (which are key to combating climate change) but also be contrary to the provisions of the UNFCCC to which most of the CIF contributors are signatories. Moreover, as the Bank itself is a potential beneficiary of financing from the CIFs, there is a significant conflict of interest between its roles as trustee and secretariat of the funds and its role as an implementing entity.

According to South African environment minister, Marthinus van Schalkwyk, the World Bank should keep a distance from global climate talks due to the heavy influence of developed countries in the Bank. "The World Bank shouldn't become a player in the negotiations – the donors via the World Bank and basically then the developed countries – because that will load the dice against developing countries," he told *Reuters* recently (Fogarty, 2008).

Creating parallel structures for climate change regulation would also enable developed countries to migrate away from existing multilateral channels for implementing their international climate change commitments and may add to the undermining of existing multilateral negotiations. Developing countries, especially those facing the most immediate and severe threat from the effect of climatic changes and with the least resources to deal with these impacts, will be substantially short-changed in this process.

The solution to the problem of climate financing for developing countries must therefore rest with a genuinely multilateral framework for mobilisation and disbursement of financial resources which reflects the needs and priorities of the countries in receipt of such financing and which is in line with internationally agreed principles on climate change. There are several alternative models available and instruments which are much more suited to the delivery of climate change financing than that of the World Bank's proposed climate investment funds and these options must be explored in the context of a genuinely participative and equitable framework of discussions and negotiations.

Endnotes

- ¹ The term ‘World Bank’ here is used in reference to the International Bank for Reconstruction and Development (IBRD) and in some instances, to the Bank’s concessional lending facility, the International Development Association (IDA), which both share the same board of Executive Directors. The term ‘World Bank Group’ will be used to refer to the IBRD, IDA and the private sector arms of the International Finance Corporation (IFC) and the Multilateral Investment Guarantee Agency (MIGA).
- ² Earlier drafts of the CIF proposals indicated that the target size of the proposed Clean Technology Fund alone is between US\$5 and US\$10 billion (World Bank, 2008c: annex A, para 7; see section 1 below). The UK, US and Japan have already pledged at least US\$5.5 billion to establish the funds, with the UK alone contributing US\$1.6 billion (£800 million) (Okada and Sato, 2008; Vidal, 2008).
- ³ These include the African Development Bank, the Asian Development Bank, the European Bank for Reconstruction and Development and the Inter-American Development Bank.
- ⁴ This is the negotiating group charged with following up on the Bali Action Plan, adopted by the UNFCCC Conference of Parties at Bali in December 2007 to work towards effective and sustained implementation of the Convention up to and beyond 2012, including decisions on mitigation, adaptation, financial resources and technology transfer.
- ⁵ ‘Blend’ countries refer to countries which are eligible for financing from both the standard as well as concessional facilities of the MDBs.
- ⁶ Otherwise known as ‘policy conditionality’ (see discussion in section 4(2) below).
- ⁷ See OECD, 2007.
- ⁸ Most of these instruments are regularly used by the MDBs’ private sector arms, notably the World Bank Group’s IFC.
- ⁹ See section III below for details on the funds’ governance structure.
- ¹⁰ See section III below.
- ¹¹ The Adaptation Fund was established by the UNFCCC Conference of Parties in Bali in December, 2007 to channel funds for adaptation in developing countries derived from the share of proceeds from the Clean Development Mechanism (CDM). The CDM, defined in Article 12 of the Kyoto Protocol, allows a country with an emission-reduction or emission-limitation commitment under the Kyoto Protocol (industrialised countries) to implement an emission-reduction project in developing countries. Such projects can earn saleable certified emission reduction (CER) credits, each equivalent to one tonne of CO₂, which can be counted towards meeting Kyoto targets (see UNFCCC website: http://unfccc.int/kyoto_protocol/mechanisms/clean_development_mechanism/items/2718.php, 28 May 2008).
- ¹² At a meeting with civil society groups in Washington DC, the Bank’s SDN Vice-President, Kathy Sierra had admitted that the Bank ‘did not do a good job’ in bringing civil society and other actors into the initial stage of the CIF discussions (Minutes of a meeting with civil society organisations on the climate investment funds, 25 April 2008, Bank Information Centre, Washington DC).
- ¹³ Interview with developing country negotiator, 22 May 2008.
- ¹⁴ Ibid.
- ¹⁵ The GEF is trustee to the Adaptation Fund which is, in turn, supervised and managed by an Adaptation Fund Board represented by developed and developing countries. Although the secretariat for the fund will be held by the Bank-based GEF, this is meant to be temporary and the secretariat would have to report to the aforementioned board and the GEF’s status as secretariat will be reviewed after three years (UNFCCC, 2007; UNFCCC 2006: paras 1-5; One World, 2007).
- ¹⁶ *Supra*, note 13.
- ¹⁷ Ibid.
- ¹⁸ The UK, for example, classifies its contributions to the CIFs as ‘capital’ as well as ODA consistent with the UK’s budgetary approval for the resources and this is why the UK had lobbied for the resources to be disbursed primarily in the form of concessional loans and not grants (DEFRA and DFID, 2008). It is understood however that the US government is in favour of grants as opposed to loans for the CIFs.
- ¹⁹ *Supra*, note 13.
- ²⁰ Ibid.
- ²¹ ‘Oil aid’ is defined as state practice of using public resources to subsidise the international oil and gas industry (Oil Change International, 2007: 1).
- ²² The IFC provides loans and guarantees to private companies investing in developing countries.
- ²³ The authors define ‘export-oriented’ fossil fuel projects as ‘those where fuels extracted or transported with World Bank Group assistance are primarily consumed in Western Europe, Canada, the United States, Australia, New Zealand and/or Japan’ (Vallette and Kretzmann, 2004: 5).

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Food Crisis, Climate Change and the Importance of Sustainable Agriculture

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A. INTRODUCTION

This statement deals with the crisis of food prices and shortages, and also the issue of agriculture and climate change. The importance of food security and of expanding sustainable agriculture practices in its economic, social and environmental aspects is stressed.

B. FOOD SECURITY CRISIS

The current global crisis of high food prices, and of shortages in some countries, has given prominence once again to food security concerns. In recent years there was complacency about food security and national self-sufficiency, as it was thought that cheaper imports would be always or usually available, and local food production was not so necessary as previously thought. Many developing countries reduced food production, many of them under advice of the international financial institutions.

The rising world prices of many food items in the past couple of years have meant more expensive imports, and inflation of food prices in local markets. There have also been cases of shortages, as some countries placing orders for example for rice have found that the supply is not forthcoming or guaranteed, sometimes because of export restrictions by the exporters of the food items. Many developing countries have been caught in this situation, resulting in street protests as families found it difficult to cope.

Because of this new situation, the paradigm of "food security" has suddenly shifted back to the traditional concept of greater self-sufficiency, instead of prioritizing the option of relying on cheaper imports. It is now recognized that in the immediate period, there is need for emergency food supplies to affected countries, but that a long-term solution must include increased local food production in developing countries. This raises the question of what constitute the barriers to local production and how to remove these barriers.

Factors for this crisis include climatic factors (such as drought for example affecting wheat production in Australia), the rising cost of inputs especially oil and oil-based products, and the switch of land use from production of food to biofuels. However a longer-term reason is the decline in agriculture in many developing countries, in most cases due to the structural adjustment policies of the IMF and World Bank. The countries were asked or advised to (1) dismantle marketing boards and guaranteed prices for farmers' products; (2) phase out or eliminate subsidies and support such as fertilizer, machines, agricultural infrastructure; (3) reduce tariffs of food products to low levels.

Many countries that were net exporters or self-sufficient in many food crops experienced a decline in local production and a rise in imports which had become cheaper because of the tariff reduction. Some of the imports are from developed countries which heavily subsidize their food products. The local farmers' produce were subjected to unfair competition, and in many cases could not survive. The effects on farm incomes, on human welfare, on national food production and food security were severe.

The case of Ghana illustrates this. The policies of food self-sufficiency and government encouragement of the agriculture sector (through marketing, credit and subsidies for inputs) had assisted in an expansion of food production (for example in rice, tomato, poultry). The policies were reversed starting from the mid-1980s and especially in the 1990s. The fertilizer subsidy was eliminated, and its price rose very significantly. The marketing role of the state was phased out. The minimum guaranteed prices for rice and wheat were abolished, as were many state agricultural trading enterprises and the seed agency responsible for producing and distributing seeds to farmers, and subsidized credit was also ended.

Applied tariffs for most agricultural imports were reduced significantly to the present 20%, even though the bound rate was around 99%. This, together with the dismantling of state support, led to local farmers being unable to compete with imports that are artificially cheapened by high subsidies, especially in rice, tomato and poultry.

- Rice output in the 1970s could meet all the local needs, but by 2002 imports made up 64% of domestic supply. Rice output in the Northern region fell from an annual average of 56,000 tonnes (in 1978-80) to only 27,000 tonnes for the whole country in 1983. In 2003, the US exported 111,000 tonnes of rice to Ghana. In the same year, the US government gave US\$1.3 billion subsidies for rice. A government study found that 57% of US rice farms would not have covered their cost if they did not receive subsidies. In 2000-2003 the average cost of production and milling of US white rice was US\$415 per tonne, but it was exported for just \$274 per tonne, a price 34% below its costs.

- Tomato was a thriving sector, especially in the Upper East region. As part of a privatization programme, tomato-canning factories were sold off and closed, while tariffs were reduced. This enabled the heavily subsidized EU tomato industry to penetrate Ghana, and this displaced livelihoods of tomato farmers and industry employees. Tomato paste imported into Ghana rose from 3,200 tonnes in 1994 to 24,077 tonnes in 2002. Local tomato production has stagnated since 1995. Tomato-based products from Europe have made inroads into African markets. In 2004, EU aid for processed tomato products was \$298 million euros, and there are many more millions of euros in indirect aid (export refunds, operational funds for producer organisations, etc).

- Ghana's poultry sector started its growth in the late 1950s, reached its prime in the late 1980s and declined steeply in the 1990s. The decline was due to withdrawal of government support and the reduction of tariffs. Poultry imports rose by 144% between 1993 and 2003, and a significant share of this was heavily subsidized poultry from Europe. In 2002, 15 European countries exported 9,010 million tonnes of poultry meat for Euro 928 million, at an average of Euro 809 per tonne. It is estimated that the total subsidy on exported poultry (including export refunds, subsidies for cereals fed to the poultry, etc) was Euro 254 per tonne. Between 1996 and 2002, EU frozen chicken exports to West Africa rose eight fold, due mainly to import liberalization. In Ghana, the half million chicken farmers have suffered from this situation. In 1992, domestic farmers supplied 95% of Ghana's market, but this share fell to 11% in 2001, as imported poultry sells cheaper.

In 2003, Ghana's parliament raised the poultry tariff from 20% to 40%. This was still much below the bound rate of 99%. However, the IMF objected to this move and thus the new approved tariff was not implemented. The IMF representative in Ghana told Christian Aid that the IMF pointed out to the government that the raising of tariffs was not a good idea, and the government reflected on it and agreed. Many farmers' groups and NGOs in Ghana have protested on this to the government.

Some developments in the trade negotiating arena are also a source of concern. The Doha negotiations at the WTO are mandated to substantially reduce domestic support in developed countries. However, to date, the

offers of the US and EU indicate their overall trade distorting support (OTDS) would be reduced at the bound level, but not at the applied level. Also, the figures in the Chair's latest agriculture text (19 May 2008) would not reduce the actual present domestic support for the US. The maximum or bound OTDS level for the US would be \$13 to 16.4 billion, while the actual support in 2007 is reported to be around \$7-8 billion.

Another source of concern is the new US Farm Bill. According to several analyses, including those made by the US administration, the Bill will continue the present system of subsidies, and in some ways or for several commodities, it will expand the support. For example the Bill guarantees that 85% of the domestic market for sugar will be met by local production. The bill also allows a farm family with an income of up to US\$1.5 million to obtain subsidies, compared to the limit of \$200,000 per farmer proposed by the Bush administration. The Bill thus "locks in" the US system and levels of subsidies for the next 5 years, and it also constrains what the US negotiators can offer in the WTO's Doha negotiations.

A major loophole in the WTO's agriculture agreement is that countries are obliged to reduce their bound levels of domestic support that are deemed "trade distorting" but there are no constraints on the amount of subsidies deemed non-distorting or minimally distorting, which are placed in the so-called Green Box. Recent studies have shown however that many of the Green Box subsidies are also trade distorting. The Doha negotiations are unlikely to place new effective disciplines on the Green Box. Therefore, the major subsidizing countries can change the type of domestic subsidies they give, while reducing the "trade distorting subsidies" and continue to provide similar levels of farm subsidies.

Meanwhile the developing countries are being asked to reduce their agricultural tariffs further. The Chair's proposal at the Doha talks is for a maximum 36% tariff cut for developing countries, and 24% for small vulnerable economies. This is sizable, and compares with the 24% cut in the Uruguay Round. Most developing countries are advocating that the instruments of special products (SP) and special safeguard mechanism (SSM) be set up as part of the WTO talks to promote food security and farmers' livelihoods and rural development. SPs would exempt important food products from tariff cuts or at least allow for more lenient cuts. SSM would enable a developing country to impose an additional duty on top of the bound rates in situations of reduced import price or increased import volume, in order to protect the local farmers. However there is considerable opposition from some exporting countries to having these instruments that can work in an effective way.

In the bilateral or regional FTAs involving developed and developing countries, the developing countries are asked to reduce or eliminate their tariffs by even more. For example, in the Economic Partnership Agreements between ACP countries and the EU, the ACP countries are asked to eliminate their tariffs on 80% of their tariff lines over different time periods. Agricultural products are among those affected.

Conclusions and Proposals

1. The economic and trade policies followed by many developing countries, often at the advice of international financial institutions, or as part of multilateral and bilateral trade agreements, have contributed to the stunting of the agriculture sector in developing countries. The developing countries must be allowed to provide adequate support to their agriculture sector and to have a realistic tariff policy to advance their agriculture, especially since developed countries' subsidies are continuing at a high level. The developed countries should quickly reduce their actual levels of subsidy.
2. The agriculture policy paradigm in developing countries must be allowed to change. Countries should have the policy space to expand public expenditure on agriculture. Governments in developing countries must be allowed to provide and expand support to the agriculture sector.
3. Developing countries should place high priority on expanding local food production. Accompanying measures and policies should thus be put in place. The countries should be allowed to calibrate their agricultural tariffs in such a way as to ensure that the local products can be competitive and the farmers' livelihoods and incomes are sustained, and national food security is assured.

4. The proposals of developing countries (led by the G33) on special products and special safeguard mechanism, aimed at food security, farmers' livelihoods and rural development, at the WTO should be supported. Effective instruments that can meet the aims should be established.

5. The policies of the World Bank, IMF and regional development banks should be reviewed and revised as soon as possible, so that they do not continue to be barriers to food security and agricultural development in developing countries.

6. The actual levels (and not just the bound levels) of agricultural domestic subsidies in developed countries should be effectively and substantially reduced. There should also be new and effective disciplines on the Green Box subsidies to ensure that this category does not remain an "escape clause" that allows distorting subsidies that are detrimental to developing countries.

7. There should be a review of many of the FTAs between developed and developing countries, including the EPAs between the EU and ACP countries. In light of the food crisis and the changing paradigm on food security, developing countries that have signed or are in the process of negotiating FTAs should ensure that the FTAs provide enough policy space to allow sufficiently high tariffs on agricultural imports that enable the fulfillment of the principles of food security, farmers' livelihoods and rural development.

C. AGRICULTURE AND CLIMATE CHANGE

Climate change affects developing countries' agriculture, while agricultural practices also contribute to climate change. These problems need to be addressed urgently.

Effects of climate change

According to various studies, cited in a paper by IFPRI's Director General, Joachim von Braun (2008), many poorer developing countries are in tropical and sub-tropical regions that are vulnerable to global warming and in semi-desert areas threatened by water scarcity. By 2080, agriculture output in developing countries may decline by 20% due to climate change and yields could decrease by 15% on average. The number of under-nourished people in Sub Sahara Africa may rise from 138 million in 1990 to 359 million in 2050. Responses to climate-related threats in agriculture underestimate the problem and there is little work on how the negative effects can be mitigated, according to IFPRI.

According to the recent report of the IAASTD (Independent Assessment of Agricultural Knowledge, Science and Technology for Development), climate change can irreversibly damage the natural resource base on which agriculture depends. Some negative impacts are already visible in many parts of the world. Water scarcity and the timing of water availability will increasingly constrain production. Climate change will require a new look at water storage to cope with the impacts of more and extreme precipitation, higher seasonal variations and increased rates of evapotranspiration in all types of ecosystems. Extreme climate events (floods and drought) are increasing and are likely to adversely affect food and forestry production and food security (IAASTD 2008).

On the other hand, agriculture is a major contributor to climate change. Agriculture is the main emitter of nitrous oxides and methane. The total global contribution of agriculture (direct and indirect emissions) is between 8.5 and 16.5 billion tonnes of carbon dioxide equivalent, representing 17 to 32 percent of all global human-induced greenhouse gas emissions, including land use changes (Greenpeace 2008).

Direct contribution to Emissions

According to the IPCC, the agricultural sector annually emits 5.1 to 6.1 billion tonnes of carbon dioxide equivalent in 2005. Of these, (1) methane (which has 20 times more global warming potential than carbon dioxide) accounts for 3.3 billion tonnes equivalent; (2) nitrous oxide (which has 300 times greater global

warming potential than carbon dioxide) accounts for 2.8 billion tonnes annually; and (3) carbon dioxide emissions are 40 million tonnes (ITC 2007). This represents 10-12% of total greenhouse gas emissions.

Of the direct emissions, the main forms are: (1) nitrous oxide emissions from high nitrogen levels in the soils from synthetic fertilizers (2.128 billion tonnes), which are mainly associated with nitrogen fertilizers and manure applied to soils. Fertilisers are often applied in excess and not fully used by the crop plants, and some of the surplus is lost as nitrous oxide to the atmosphere; (2) enteric fermentation of cattle (1.792 billion tonnes); (3) biomass burning (672 million tonnes); (4) rice production (616 million tonnes), (5) manure handling (413 million tonnes) (Greenpeace 2008).

According to current projections, total greenhouse gas emissions from agriculture will reach 8.3 billion tonnes of carbon dioxide equivalent in 2030, compared to the current level of about 6 billion tonnes (ITC 2007).

Indirect Contribution to Emissions

Agriculture also contributes indirectly to emissions, through the following:

(1) The production of fertilizers is energy intensive and adds 300-600 million tonnes of carbon dioxide equivalent per year, or 0.6 to 1.2% of total greenhouse gas emissions. The greatest source of emissions from fertilizer production is the energy required, which emits carbon dioxide. With the intensification of agriculture, the use of fertilizers has increased sharply.

(2) Other farm operations (such as tillage, seeding, applications of agrochemicals and harvesting) also emit 60 to 260 million tonnes of carbon dioxide equivalent, irrigation emits 50 to 680 million tonnes while the production of pesticides emits 3 to 140 million tonnes annually.

(3) Change in land use (from other uses to agriculture) is estimated to be also a major source of emission, about 2.9 to 5.9 billion tonnes annually (or 6-17% of all greenhouse gas emissions) (Greenpeace 2008).

Mitigation potential

Greenpeace (2008) has suggested many mitigation actions. The large mitigation potential can change agriculture from the second largest emitter 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).

Because there is low carbon concentration in croplands, there is great potential to increase carbon content through beneficial management practices. On agricultural lands, restoration of the carbon content in cultivated organic soils has a high per-area potential and is the area of greatest mitigation potential in agriculture (Greenpeace 2008).

Proposals for mitigation by Greenpeace include: (1) Cropland management (avoiding leaving land bare; using an appropriate amount of nitrogen fertilizer; no burning of crop residues in the field; reducing tillage) (mitigation potential of 1.45 billion tonnes); (2) grazing land management (mitigation potential 1.35 billion tonnes); (3) restoration of organic soils that are drained for crop production and restoration of degraded lands to increase carbon sinks (mitigation potential of 2 billion tonnes); (4) improved water and rice management; (5) set-asides, land use change and agro forestry; (6) increasing efficiency in manufacturing of fertilizer; (7) consumer behaviour change, in eating less meat.

In the Greenpeace analysis, 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) have led to high environmental and social costs that may undermine future capacity to maintain required levels of food production.

In April 2008, the IAASTD launched its report in Johannesburg, which was approved by 57 governments. The IAASTD was an inter-governmental process, co-sponsored by FAO, UNDP, UNEP, GEF, World Bank, with over 400 authors 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.

Its conclusion was that while the past emphasis on production and yields brought some benefits, this was at the expense of the environment and social equity. While promoting agro-ecological methods, it did not support genetically-modified crops, preferring to highlight the doubts and uncertainties surrounding them, rather than the claimed benefits. The report concluded that for poor farmers, genetically modified crops are unlikely to play a substantial role in addressing their needs, and longer-case assessments of the environmental and health risks and regulatory frameworks are needed (Lim 2008).

A report by the International Trade Centre and FIBL (Research Institute of Organic Agriculture, Switzerland) provides a detailed assessment of the benefits of organic farming regarding climate change. A summary of the benefits is as follows:

- 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 fertilizers. 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 agro forestry 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).

The study recognizes that organic agriculture also has weaknesses, mainly related to productivity and yield losses in some crops and production areas, and this highlights the need for research. Total European research funding for organic agriculture currently represents less than 1% of the total food and agriculture research budget.

Moreover in some areas, organic farming performs better, for example in conditions where there are water constraints. Yields from organic agriculture where water is limited during the growing period, and under subsistence farming, are equal or significantly higher than those from conventional agriculture. The ITC report cites a comparison of 133 studies from developing countries concluded that organic plant and livestock yields were 80% higher than their conventional counterparts, and for crops only the yield increase was 74% (Badgley et al., 2007).

Another review of sustainable agriculture practices, covering 208 projects in 52 countries, shows that 9 million farmers have adopted sustainable agriculture practices on 29 million hectares in Africa, Asia and Latin America (Pretty and Hine 2001, cited in Lim 2003). Farmers have achieved substantial increases in food production per hectare: 50-150% for rain-fed crops; 5-10% for irrigated crops. 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).

Conclusions and proposals

Agriculture both seriously affects climate change and is in turn seriously affected by it. Both these problems should be addressed urgently.

- (1) There should be more research and action on adaptation measures in agriculture, especially in developing countries in order to assist farmers in developing countries to reduce the adverse effects of climate change on agriculture.
- (2) Action plans for mitigation measures for agriculture should be urgently researched and implemented.
- (3) Financing assistance for adaptation and mitigation measures in the agriculture sector in developing countries should be prioritized.
- (4) Arrangements should be made for the sharing of experiences and the transfer of good practices in agriculture that can constitute mitigation and adaptation.
- (5) 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, while more natural farming methods are phased in, with research and training programmes also promoting better production performances in sustainable agriculture.

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