Input to the EU Commission's stakeholder consultation: Towards a comprehensive and ambitious post-2012 climate change agreement

Submission of the Climate Action Network Europe
9 October, 2008

To provide stakeholders with the opportunity to provide inputs on post 2012, the EU Commission launched a stakeholder consultation on post 2012 that ran during September and October 2008. The following is CAN-Europe's input into the consultation.

Question 1 requested background information. The Commission's background text and questions are in blue.

2. The climate change challenge - a shared vision for the 21st century development

The Bali Action Plan agreed on 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, stabilizing greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. The EU determined already in 1996 its long term goal of limiting the global average temperature increase to no more than 2°C above pre-industrial levels. To achieve this, in 2050 global greenhouse gas emissions should be reduced by at least 50% compared to 1990 levels.

- Would this aspirational long term goal be appropriate in the light of the 2007 IPCC reports and latest scientific knowledge?

The answer to this question is less a matter of judgment but of scientific findings. In this context we find this question inadequate. However we note a strong inconsistency between the EU's overall target to limit global warming to below 2°C and its associated policies and levels of ambition. For CAN, the only acceptable level of ambition is one that is consistent with the ultimate objective of the Convention: "stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system". Based on the best available scientific evidence, CAN believes that global average temperature increases should be kept as far below 2ºC as possible, recognizing that at 2ºC there will be significant adverse impacts.

CAN-Europe is disappointed that the EU has so far chosen to focus efforts around a concentration target, 450ppmv, that has a maximal probability of only giving the planet a 50:50 chance of not crossing the 2º threshold. CAN-Europe therefore encourages the EU

reexamine this target in light of further scientific work on stabilization scenarios, as agreed at AWG4 *bis*, (FCCC/KP/AWG/2007/5 para.17).

As substantive input, CAN would like to draw the EU's attention to its AWG submission on indicative ranges for developed countries, which reviews literature containing stabilization scenarios below 450ppmv:
http://unfccc.int/parties_and_observers/ngo/items/3689.php Section H, including the reports annexed as additional information.

Although atmospheric equivalent concentrations of greenhouse gases are likely to cross 400pmm in the near term, staying below 2ºC is still achievable if emissions peak soon enough and then are brought to lower levels fast enough. This means that long term stabilization of GHG concentrations at or below 400ppm is still achievable if there is the political will to effect the necessary emissions reductions. Reducing the peak level of GHG concentrations to the lowest feasible level is critical to limiting warming to at or below 2ºC with any significant confidence and is indeed likely to be decisive as to whether the 2ºC objective can be reached at all.

Even for the (inadequate) 450ppmv scenario, a -50% by 2050 global reduction is the very minimum of what is needed. In the IPCC's assessment, to achieve stabilization in the range of 445-490ppmv CO_2-eq (implying a 2.0-2.4ºC temperature increase) CO_2 emissions need to be reduced by -50 to -85% from 2000 levels, or at lest -80% for the GHGs overall. This would almost certainly entail developed countries, including the EU ones, decarbonising their economies almost completely by 2050.

For stabilization at 450 ppm carbon dioxide equivalent, the AR4 (Box 13.7, page 776, WG III report Chapter 13) shows that developed countries should cut their emissions in the range 25 to 40% by 2020 and 80 to 95% by 2050. There would obviously be greater certainty in attaining the EU's long term goal if emission reductions were at the top end (greatest reductions) of these ranges.

CAN notes that according to the IPCC: 'Under most of the considered regime designs for low and medium stabilization levels, the emissions from developing countries need to deviate – as soon as possible – from what we believe today would be their baseline emissions, even if developed countries make substantial reductions. For the advanced developing countries, this occurs by 2020 (mostly Latin America, Middle East and East Asia).' (WG III report Chapter 13, page 775.)

- Is there a need for other elements to be part of the shared vision in order to ensure the transition to a sustainable low carbon economy?

The overarching vision of the agreement must be to fulfill the UNFCCC's ultimate objective of "prevent[ing] dangerous anthropogenic interference with the climate system". As stated in the previous question, for CAN, any level of ambition that has a high

probability of not being consistent with the 2ºC limit is unacceptable, as any higher temperature increases imply a higher probability of activating tipping points, causing catastrophic impacts on biodiversity and other natural systems, threatening yet further food production and sustainable economic development, in contravention of Article 2.

Within the context of the 2ºC limit, industrialized countries should state their intention to reduce emissions by the top end of the -80% to -95% range by 2050, thus providing the confidence in developing countries that industrialized countries do indeed intend to take the lead.

However, the vision must not be limited solely to mitigation, and should also be for all countries to achieve their development goals in a low carbon fashion that allows for sustained economic welfare and safeguards the climate. Early agreement on the medium and long term trajectories as part of the shared vision can and should provide long-term guidance for each country's national economic plan – necessarily a low carbon development plan, which countries must begin to implement. The vision should spell out that the action taken must be fair, just and equitable. We are living in a world of poverty and inequality, that is also facing a climate crisis, and that a needs an ambitious, comprehensive and fair, international agreement to deal with the threat. Developed countries will provide substantial technological, financial and capacity support for developing countries as they, over time, make their way to this transition. In addition, the shared vision should also acknowledge the need for ambitious adaptation support.

Developing countries tend to emphasize that the Convention objective must be reached while allowing development to proceed in a sustainable manner. Developing countries would argue that Article 2 already provides an aspirational long-term goal. It is contained in Article 2 of the Framework Convention, which has two sentences[1]. The developed world cannot ignore the goals for sustainable development goals in terms of adaptation, food security, biodiversity, etc,. These should also be quantified (where possible), e.g. quality of life (eg. HDI indicator), economic development (eg. GDP/capita) and ecological services resilience (qualitative indicator). Without a deal on development, a deal on climate change has dim prospects.

3. Mitigation commitments by developed countries

The EU is of the view that developed countries should continue to take the lead by committing to collectively reducing their emissions of greenhouse gases by 30 % by 2020 compared to 1990. They should do so also with a view to collectively reducing their emissions by 60 - 80 % by 2050 compared to 1990.

[1] UNFCCC Article 2: The ultimate objective of this Convention and any related legal instruments that the Conference of the Parties may adopt is to achieve, in accordance with the relevant provisions of the Convention, stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Such a level should 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.

- What should be the criteria for allocating emission reduction efforts among developed countries, considering also the need to ensure the "comparability of efforts" as agreed in Bali?

The EU's current level of ambition is inadequate according to the best available scientific analysis, particularly from the IPCC's Fourth Assessment Report and subsequent peer-reviewed literature. Deeper emissions reductions are needed in the north in order to have a passing probability of being consistent with the EU's goal of keeping global average temperatures well below 2 ºC. CAN-Europe notes with approval discussion in the Council around the need for developed countries to reduce their emissions by 80-95% by 2050 compared to 1990 levels, and encourages Ministers to endorse a target at the top end of this range.

CAN-Europe is interested in the extension of the concepts proffered by the Commission in the EU Climate and Energy package; that is, the allocation of emissions based on a GDP per capita basis. Using a 2005 base year for differentiation, but with targets based on 1990 emissions levels for all countries has the benefits of removing hot air from the system, improving he environmental integrity of the overall agreement, and avoiding rewarding countries with credits for non-additional actions.

If the EU's own effort sharing formula is applied to Annex I for the overall 30% reduction by 2020 (the very minimum necessary – CAN supports Kyoto style emissions reduction obligations for Annex I at least at the top end of the 25-40% range of the IPCC's Fourth Assessment Report), the EU would need to reduce its emissions by more than 40% by 2020.

In addition to the Kyoto style obligations as set out above, developed countries would have to accept an additional obligation to realize mitigation in developing countries. This is a consequence of sharing the global mitigation burden equitably according to both historic responsibility for causing climate change combined with economic capability to deal with it. From the developed countries' fair share of the global burden, they could be reasonably expected to achieve a proportion at home, as outlined above. The remainder they would realize in developing countries, through the measurable, verifiable and reportable provision of finance, technology and capacity building. See also answers given under 4.

CAN-Europe recognizes that other allocation factors could also be considered. Using GDP per capita adjusted for purchase power parity would enhance equity in target allocations, but add complexity in changing economic circumstances and would need to be reviewed for each commitment period. Other possible measures should also be evaluated.

A bottom-up approach, as supported by the Japanese, is useful only within individual countries (or those within the framework of a regional economic integration organization) in helping to define *how* to best achieve the overall emissions reduction target for that country, not *what* that target should be.

4. Mitigation actions by developing countries

The EU recognises the need for enhanced contribution by developing countries, whereby economically more advanced developing countries contribute adequately according to their responsibilities and respective capabilities.

- What type of mitigation actions should developing countries undertake? How should these be measured, reported and verified? What should be the scale and legal nature of these actions? How should differences in responsibility and capability of different developing countries be taken into account?

Different types of mitigation actions are appropriate for different developing countries; respecting the principles of common but differentiated responsibilities and equity, and acknowledging different national circumstances. Binding MRV mitigation support from developed countries is essential.

There is scope for no regrets measures that developing countries should be enabled to implement themselves, while developed countries should pay for the more expensive measures necessary. All developing countries should undertake sustainable policies and measures (SD PAMs) as a means of realizing clean development, reflecting national priorities and capabilities, while ensuring that no regrets measures are implemented and that co-benefits are realized. SD-PAMs are particularly important in regions where market mechanisms are not delivering investment in mitigation. The Least Developed Countries should receive MRV capacity building,, as well as financial, technical and technological support for implementing their SD PAMs from developed countries, but the actions they take should not be considered legally binding. Nationally-appropriate capacity building is, however, needed in all developing countries, including for capacity to MRV actions.

Market mechanisms can help to deliver decarbonization compared to BAU in some developing countries, and are a means of bringing private finance into mitigation efforts. The current mechanism for so doing, the CDM, will likely continue post 2012, and with appropriate circumscription can help to deploy energy efficient and clean technologies in many countries. However, the CDM will need to be greatly improved post 2012: currently the CDM at best only off-sets Annex I emissions, and without effective additionality testing and rigorous baselines, allows global emissions to increase in absolute terms. It is imperative to ensure that the CDM post 2012 moves beyond offsetting and in fact yields real, additional, net reductions in global emissions, as well as real benefits for sustainable development, additional to strong domestic emissions reductions in Annex I countries. If the environmental integrity of uncapped trading cannot be assured, it should be abandoned and other means of financing and technology transfer be explored. Whatever the mechanism used to achieve this, it will need to be substantially better designed and larger in scale and scope, shifting from a project to a programmatic approach, than the current CDM if it is to deliver large emissions reductions and large-scale changes in technological investments in developing countries. The CDM has existing modalities for MRVing its activities.

Developing countries who contribute significantly to global emissions, will need to be provided with appropriate incentives to move away from project-based CDM towards mitigation efforts that ensure that there is overall substantial deviation from baseline, as is necessary to have any probability of the 2ºC limit not being exceeded. To ensure the environmental integrity of the agreement, there will need to be a stronger element of MRV and that actions have a more binding character e.g. being included in a legal instrument and being subject to third-party verification.. CAN emphasizes however that QELROs are not appropriate for developing countries, although some non-Annex I countries can no longer be considered developing. Also, only some of the mitigation action that should happen in developing countries should be framed as an obligation of these countries. Mitigation action needed to deviate from emission baselines that goes beyond what can be expected from developing countries under a fair and equitable burden sharing should be considered an obligation of developed countries – which these countries would realise through binding commitments to deliver finance, technology and capacity building, expressed in mitigation efforts achieved in developing countries.

MRV for actions by developing countries will need to be differentiated by mechanism, with lower requirements for actions undertaken through a country's own policies and measures, distinct MRV procedures for those supported by or through international public funding, while those operating through market mechanisms will require a higher level of certainty that credits generated actually reflect emissions reductions.

CAN would welcome the Commission evaluating interactions of an improved CDM with any new mechanisms proposed under the Bali Action Plan and under discussion in the Article 3.9 review.

- To what extent and how should those actions be supported by technology and financial assistance from the developed countries? What kind of supporting tools could be developed at the international level to support domestic action and should there be respective roles for the public and private sector, including the carbon market?

To stay even within a 450ppmv CO_2-eq trajectory, emissions in developing countries will need to deviate substantially from their baselines, as states in the IPCC's Fourth Assessment Report. Estimates from Ecofys and the Wuppertal Institute (2008) indicate that this would require emissions reductions of at least 5.7Gt below BAU in 2020. However, while emissions in developing countries need to go down, half of the necessary action should be considered an obligation not of the developing countries themselves but of the developed countries that realise the mitigation through the provision of MRV finance, technology and capacity building. About half of the required effort can be achieved by developing countries themselves through no-regret and co-benefit mitigation measures. However, roughly the other half of emissions reductions will need to be realized by MRV finance and technology transfer from developed countries, by supporting policies and programs in developing countries for limiting GHG emissions or through participation in

the carbon market – the burden to achieve these other 50% should be considered an obligation of developed countries.

This support from developed counties must be quantified, binding and additional to the 30% (above it says 25-40, and 40 for EU) domestic emissions reductions that they must achieve by 2020, compared to 1990 levels.

With the EU-27 representing around 30% of the Annex I GHG emissions in 1990, the European Community and its Member States have to take up around 0.8Gt worth of mitigation support for developing countries.

Both the public and private sectors will need to contribute to the mitigation efforts through a variety of mechanisms, including the carbon market, but also fund mechanisms and other mechanisms for transferring clean technologies. While carbon markets are undoubtedly useful, particularly for addressing emissions from large point sources, they are not a panacea for all mitigation action and simply not appropriate for some countries and for some types of emissions sources.

As well as mobilizing market mechanisms where appropriate, CAN reiterates its call for these mechanisms to contribute towards raising funds for adaptation: in the first commitment period, through the Article 9 review, the share of proceeds should be extended to emissions trading and JI. For post 2012, CAN supports the auctioning of AAUs as a key measure for generating finance on the scale necessary to support adaptation in developing countries.

- How should technology and financial assistance by developed countries to developing country mitigation and adaptation actions be measured, reported and verified and should they be compared?

To address the challenge of climate change, including mitigation, all countries need to do more. This includes mitigation actions by developing countries to ensure that their emissions are reduced in relative terms, i.e. deviate below baseline. However, the extent of developing countries' mitigation efforts will continue to depend on support by developed countries. This means that MRV applies to mitigation actions and the support (finance, technology and capacity-building) must be made measurable, reportable and verifiable.

- A 2020 or 2030 target for the scale of financial flows to support mitigation in developing countries must be set : targets for such support must be supplemental to domestic emissions reduction targets
- MRV support could be expressed in terms of achieved mitigation, i.e. tons CO2e avoided. This could be done by e.g. EU taking up an additional "overseas mitigation obligation" of the above-mentioned 850 Mt. It would be left up to them how to achieve it but that could be done through provision of FTC, but so that can the support given can be converted to tons CO2e avoided. One obvious way would be that the EU buys 850m CERs and retires them (i.e. not pass on to the market), but they could also instead

invest in additional mitigation projects (i.e. an amended CDM that doesn't issue tradable credits but "Overseas Mitigation Credits".

- Annex II countries should give support linked to GDP per capita and historical emissions
- In order to demonstrate measurable, reportable and verifiable progress towards the targets, each developed country Party must report financing and technology transfer in Annex I national communications
- Measures such as those used by the OECD DAC might be of interest, but will have to be opened to a transparent process, publicly measured and reported and verifiable by developing countries.
- For technology, part of MRV will be the funding of technology development, commercialization, diffusion and transfer. In addition, the performance indicators for technology transfer developed by the joint SBSTA/SBI contact group can provide a basis for further enhancing the measurement, reporting and verification of actual movement of climate-friendly technology.
- While recognizing the existing capacities and action, enhanced institutional capacity is a key constraint in many developing countries. A facilitative mechanism is needed to build the capacity of institutions to deliver on both adaptation and mitigation, at the scale required.
- This facilitation will be helpful in helping to begin to establish emissions baselines in more detail

5. Carbon market

- How should the existing Clean Development Mechanism and Joint Implementation be improved in order to increase their environmental integrity and effectiveness?

For CDM, see also Question 4a.
CAN suggests that the CDM shift away from the project-by-project approach to more comprehensive approaches, variously discussed as policy-based or sectoral approaches: offsetting should be discontinued, as the climate crisis demands real emissions reductions and greater technology and financial transfers are required than the CDM has effected. No-lose targets may be appropriate for some developing countries. Policy-based crediting would mean to reward specific policies which result in reduced emissions compared to an agreed reference level. Sectoral crediting would look at the performance of a sector as a whole, i.e. the transport sector in a country or province, and would generate reduction units for sale if the sector's emissions stayed below the baseline. No-lose targets would function very similarly to sectoral crediting, with credits being awarded if the target is overachieved but no penalties applied if the target is not met. They would have the added advantage that the target would be negotiated. However it must be stressed that great care would need to be taken to ensure that the targets adopted would result in real emission reductions.

Sectoral crediting approaches to the CDM, however, also entail some important new risks. In particular, the quantification of emissions and reductions at the sectoral level will have to rely on modeling and projections, which always possess a degree of uncertainty and may be subject to the same problems of gaming that currently are observed in the CDM.

Projections at the sectoral level may prove even less reliable than project-by-project additionality testing. It is therefore imperative to assess the reliability of quantifying developing country reductions at the sectoral level before scaling up uncapped trading.

If the project-based CDM is retained instead of or alongside sectoral approaches, major reforms would be needed, in particular to drastically strengthen additionality testing. There should be exploration of the reforms that would be required, and their implications.

CAN also has strong concerns regarding the environmental and social sustainability of many CDM projects to date. CDM projects must be required to meet the CDM Gold Standard[2] to ensure that they positively contribute to sustainable development in host countries, as required by Article 12. To prevent projects with high social and environmental costs from being registered under the existing or future mechanisms, international sustainability standards, and procedures for stakeholder consultations, including full and prior informed consent of customary land owners and local communities, that have been adopted by many international entities such as the World Commission on Dams should be applied to the CDM, in the first commitment period, as well as post 2012.

JI shares the fundamental flaw of the CDM in that it is generally not possible to demonstrate that an investment would not have taken place under business-as-usual conditions. CAN supports exploration of ways in which JI can be progressively replaced by domestic cap-and-trade emission trading systems in all industrialized countries.

6. Carbon leakage

- How could the delocalisation of emissions from developed countries with binding emission caps to other parts of the world be minimized?

There is inadequate study of the extent to which sectoral leakage is a real issue for many of the sectors for which it is usually discussed in this context (cement, steel, aluminum…). Any approach must be based on evidence that there is a real and verifiable risk that delocalization of emissions is an issue. For cement, for example, there is limited evidence of international trade, and so a case would have to be made as to whether leakage would be an issue at all. Whether there is leakage also depends on the scope and degree of constraints on carbon: the framework that will define this will be decided in Copenhagen.

Developing countries also need to reduce their emissions substantially from baseline, aided by MRV developed country support; major point sources, such as energy-intensive industry installations would be obvious candidates for early action, which would help to neuter the ‘competiveness’ arguments used by those that do not want real action on climate change.

There is also a question of whether these products continue to be needed in the quantities currently used, and whether more environmentally-friendly alternatives should be

[2] http://www.cdmgoldstandard.org/

deployed where different applications allow alternatives. Development and marketing of such alternatives is an opportunity for European entrepreneurship and could be aided by measures to reduce demand for products of the energy-intensive industries.

In any case, energy intensive sectors represent a paltry 1-2% of the EU economy. If, after a global deal is concluded, specific installations truly should be affected negatively in their competitive position from the EU ETS or from other capped constraints, the new EU state aid guidelines, appropriate structural and cohesion funds utilisation, as well as direct investment for energy efficiency and/or renewables development in these industries is amply sufficient to deal with the problem.

7. Sectoral approaches

- What type of sectoral approaches could effectively contribute to global emission reductions?

Sectoral approaches must not replace QEROs for developed countries.

As developing countries consider nationally appropriate mitigation actions, a sectoral approach could be an attractive option for them to consider as a means to contribute to overall global emission reductions. Sectoral approaches in the areas of power generation, housing, or transportation, for example, may enable developing countries that lack the capacity to undertake economy–wide measures. If used, they should be implemented with clear incentives to build capacity to monitor and verify emission reductions. These enhanced sectoral actions should receive appropriate capacity building, technology and finance support from developed countries, above no regrets measures. Other emission reductions measures that should be considered as possible actions by developing country parties include, SD PAMs and National Mitigation Action Plans. All of these approaches should be encouraged, and should be supported by adequate MRV financial and technology support from developed countries, in addition to their own domestic emissions reductions.

The financial support may be provided through carbon and non-carbon market mechanisms (i.e. funds). The carbon market mechanisms currently under discussion include sectoral CDM, sectoral no-lose targets, and sectoral trading: to ensure the environmental integrity of the post 2012 agreement, real reductions must be achieved in addition to any remaining offsets. The choice between carbon market mechanisms and non carbon market mechanisms is both a political question and a capacity question. A developing country must have the ability to define baseline (absolute or relative) given the maturity of the sector, and must have appropriate emissions data for the sector and also must have the institutional capacity to implement sectoral policies. A uniform standard set only by a developed country or countries is unacceptable.

8. Emissions from international air and maritime transport

- How could emissions from international air and maritime transport be effectively addressed?

Emissions from the transport sectors, including international aviation and shipping are a fast growing source of greenhouse gases: in the EU alone, aviation emissions almost doubled in the period 1990-2005, while maritime emissions increased by 80%. It is imperative that these sectors are addressed in the international regime, respecting the UNFCCC principle of common but differentiated responsibilities.

Emissions from international aviation are technically simple to address, certainly for developed countries. Emissions should be allocated to the point of sale of the fuel that gives rise to them, reported in the country's national inventory and accounted for in its overall national emissions total (assigned amount). A multiplier, in line with the IPCC's report on aviation, should be applied to account for the non-carbon dioxide effects of aviation emissions upon the atmosphere.

Administratively, responsibility for abating aviation emissions should be removed from the remit of the International Civil Aviation Organisation (ICAO) and accounted for under the UNFCCC like all other emissions, except those from international shipping. ICAO has come up with no constructive ideas over the past decade, except to recommend that aviation emissions should be included in an 'open' emissions trading scheme, which would likely look identical to the Kyoto emissions trading scheme. CAN-Europe encourages the EU to come to Poznan with a detailed proposal to address aviation emissions, to complement Norway's proposal for maritime emissions.

Accounting for emissions from international shipping cannot be dealt with by the same means as aviation, both because it is very easy to change the flag status of ships (their country of registration) and because tankering is often an easy option. (Tankering is where ship's captains choose to fill their fuel tanks at the cheapest port). This is not normally an option for aviation where space in fuel tanks is strictly limited and slight changes in flight plans can lead to significant increases in fuel consumption and hence costs.) Ships can thus change their 'nationality' and the place where they buy fuels to best suite their needs at a particular time.

To circumvent this difficulty, it would be best to allocate responsibility for emissions to ship owners or to ships, as proposed by Norway. The unique circumstances of shipping makes a sectoral approach the only way to meaningfully address these emissions. In developing this type of solution, care will need to be taken that developing countries, and especially small island ones, are not disadvantaged.

9. Emissions from deforestation and forest degradation

- What should be sources of financing emission reductions from deforestation and degradation?

Key to reducing emissions from deforestation and degradation will be delivering sufficient finances to negate the drivers for deforestation, which Stern conservatively estimates at about US$10 billion per year. The costs of drivers of course vary; with clarifying land tenure generally being low cost or net beneficial, then slash and burn for agriculture (e.g. Africa), conversion to cattle ranching (eg South America), conversion to soya (South America), and finally conversion to oil palm (SE Asia) at the top - $20 or 30 tonne or twice that, with a growing N American and EU biofuels boom.

To deliver these levels of finance, there would appear to be two main options: a market linked sectoral approach, as proposed by PNG, or use of hypothecated auction revenues. A third approach might be that proposed by Greenpeace which would oblige Annex I countries to purchase a certain proportion of REDD credits that would then be distributed via an international board. In CAN-Europe's opinion, a straightforward fund to which developed countries would voluntarily contribute would raise sufficient resources.

Each option has potential disadvantages. The market-based approach involves offsetting and both the hypothecation and Greenpeace approaches involve setting up a reliable means of disbursing large sums of money. We note that for any of these approaches to work effectively, a high carbon price is required. (i.e. tight caps on developing countries), otherwise too little money will be forthcoming to slow and eventually halt deforestation, as well as driving the essential technological changes in energy-using sectors. It is ironic that a common argument against the market-based approach is that it would flood the market with cheap credits whereas, for REDD to work well, credits need to be expensive.

- How financing of emission reductions from deforestation and degradation should be monitored taking into account non-permanence, leakage and liability issues?

To address leakage, any REDD regime must be nationally based. That is, nations will take on some sort of obligation to reduce emissions from deforestation and they will be responsible for delivering those emissions, not private companies although states may choose to develop their own domestic markets with private participants. Although a national approach should eliminate sub-national leakage, it will not eliminate international leakage although may generally be less of a concern, depending on the driver for deforestation. For example, poor farmers dependent on subsistence agriculture and slash and burn are very unlikely to move continents or even countries. Oil palm plantation owners, on the other hand, can and do move from country to country. It is therefore important that participation in any REDD regime be as broadly based as possible.

Non-permanence is also less of a difficulty under a nationally based approach than it would be under a project-based approach. Amazonas is, for example, unlikely to burn down overnight whereas the trees in a small area project might. Nevertheless, it remains a

problem that needs to be addressed. In the shorter term, withholding a proportion of forest 'credits' in a reserve is an option that could address inadvertent forest loss. Somehow, however, a means of factoring out natural phenomena (perhaps including human-induced climate change) needs to be developed. For example, according to studies by the Hadley Research Centre, a large area of rainforest in Northeast Brazil is likely to dry out due to climate change and Brazil is concerned how this issue would be addressed by a REDD regime as the government can clearly to nothing to stop the forest loss. Of course, this loss would not be directly due to deforestation but it would represent a huge loss of carbon stocks and it is by changes in carbon stock is how REDD is most likely to be assessed.

Liability is likely to be a difficult issue because although the PNG proposal is for a sectoral 'commitment', it is a moot point what the word 'commitment' means in the context of developing countries and how legally binding it might be. Also, a REDD commitment would, in effect, last forever and liability is bad at dealing with forever. We have discussed this with a number of national leads on REDD and Brazil, in particular, is worried about entering into a commitment of indefinite duration, which is partly why they propose a fund that would not absolutely bind them to action but essentially pay them trying to cut deforestation with rewards for succeeding.

10. Adaptation needs and support for most vulnerable countries

- What mechanism should be used to finance cost-efficient adaptation action in the most vulnerable countries, in particular LDCs, SIDS and African countries?

The mechanism to finance adaptation should lead, as the Bali Action Plan states, to sustainable, predictable equitable and adequate funding. Adequacy of funding for adaptation means the mechanism must generate upwards of $50bn per year, based on conservative estimates, for adaptation in developing countries. It is crucial that funding should be sustainable and predictable and therefore not at the whim of national annual budgeting processes. It should be innovative, because existing funding mechanisms are not generating funding of the necessary order of magnitude, and linked to the polluter pays principle. Of the proposals so far put forward, one in particular has the potential to meet these critieria. This is the Norwegian proposal of using the revenues from international auctioning of emissions allowances. If a small portion of permits were to be withheld from national quota allocation, and auctioned by the appropriate international institution, the resulting revenue could then be placed in a fund to be used on adaptation actions. At current prices, auctioning 2% of AAUs might generate around $14bn; auctioning 10% could raise between $17 and 125bn.

The adaptation funding from this mechanism would fit with the "polluter pays principle". Those that contribute to climate change should bear a proportion of the adaptation costs according to their contribution.

Additional innovative sources may be needed, and another one such would be a levy on aviation and maritime fuels. This would also be innovative, in the sense of being new and

additional to ODA, as well as international, predictable, and grant-based. An aviation levy has a further interesting equity feature, in that it levies funds from polluting individuals who are better off to help the less well-off victims of their pollution, purely on grounds of individual capability. A further benefit would be that such a levy could result in reduced demand for short-haul flights, which are demand elastic, so reducing emissions. For the demand-inelastic air travel (long-haul business flights), significant funds could be raised. An annual total of between $4-10bn is estimated.

- How should the effectiveness of adaptation measures be monitored and assessed?

The first challenge in addressing this question is that effective adaptation has not been adequately defined under the UNFCCC. Active work – both in academic research and action-research programmes implemented by international and national development agencies, is under way to identify ways of maximizing the efficacy of adaptation measures, with particular reference to the communities most vulnerable to climate change.

What is clear already is that adaptation is context specific, and therefore depends upon the climatic factors in the location, the socio-economic context of the affected communities and the nature of their (probably multiple) vulnerabilities, as well as cultural issues governing what adaptation to livelihoods would be appropriate. The uncertainty of climate predictions, particularly over short time periods, means that adaptation has to take place under conditions of uncertainty. It is therefore premature to identify, for any given location or ecosystem, 'best practice.' This lack of certainty is no reason for not funding programmes of adaptation activities, since 'learning by doing' will be key in developing guidance for the future, as well as the justice issue of helping those communities and countries already facing severe impacts of climate change.

We would therefore suggest some general principles which would underpin 'good' adaptation:

Focus on the most vulnerable. Adaptation planning should entail the identification of the most vulnerable people and prioritize reduction of their vulnerability. This is in line with human rights obligations that most developed and developing countries have committed to.

Access to information. Adaptation activities should be conducted in a transparent way, and should draw on knowledge and learning from similar programmes, while formulating locally appropriate programmes.

Inclusiveness. Adaptation projects and programmes should actively and meaningfully involve all stakeholders in adaptation decisions - including the most vulnerable, who are often marginalized.

Subsidiarity. Adaptation decisions should be made at the lowest possible level.

Learning by doing. Effective adaptation requires the development and implementation of flexible programmes through which learning can be captured, mistakes rectified, and future

activities adjusted, and avoidance of lock-in to technologies that might be seen as a panacea, but are appropriate only for one particular future climate scenario.

In order to monitor progress and capture learning, we consider there is a need for an expert body, and we set out how such a body might operate in the section below. The role of such a body would develop guidelines for preparations of the NAPs distilling the existing information with regard to adaptation implementation and policy relevance. The body would consider progress of adaptation implementation and recommend further action on adaptation to the COP, working with a multi-stakeholder committee with government, expert, civil society and private sector participation. Such multi-stakeholder committees could also be a valuable element on the national level, to guide adaptation policies and practice.

- What should be the catalyst role of the UNFCCC, considering notably the role and contribution of other relevant international organisations addressing the impacts of climate change on their area of competence?

The catalytic role of the UNFCCC should take several forms. One is to co-ordinate the work of other international organisations, through an enhanced Nairobi Work Programme, with active websites for the findings from research and implementation, and workshops to progress thinking on particular aspects of adaptation. In addition, we suggest that the UNFCCC should oversee the establishment of **regional adaptation centres and regional information systems** on short, medium and long-term climate change risks in developing countries, to facilitate effective adaptation in the regions. These centres would facilitate and support national governments linking adaptation practice to national policy and the learning from the NWP. The centres would not necessarily be new institutions, but would be situated within existing regional bodies working on linked issues, such as CCCCC in the Caribbean and SPREP in the Pacific.

Adaptation is a complex issue, because of the diverse nature of climate change impacts and the diverse nature of the communities who will need to be supported to adapt. We would like to see the establishment of a **permanent adaptation body** under the Convention with the specific task to give guidance to the preparation and implementation of NAPs (see below), consider progress of adaptation implementation and propose and negotiate further action under the Convention. That body could take the form of an adaptation implementation expert group, an adaptation committee or a similar institutional form, and it could be devolved into regional groups based in the proposed regional adaptation centres to support and guide their work.

The multi-faceted nature of adaptation requires that countries consider how every sector of the economy and of society might need to adapt to climate change. We are aware that a number of EU countries are already far into the preparation of such plans, involving cross-departmental committees and multiple levels of government. We therefore consider that the UNFCCC should fund and technically support the development of integrated **National Adaptation Plans (NAPs) for developing country Parties,** with a priority for those which

are most vulnerable, to include vulnerability assessments, prioritising the poorest, most vulnerable groups and communities and outlining priorities for both urgent short-term and longer term action, integration of adaptation into sectoral and national planning, development of disaster reduction strategies in collaboration with the disaster risk management community, building on experience inter alia gained through the development of the NAPAs (but going beyond urgent needs, to include the integration of longer term adaptation needs in development planning and Poverty Reduction Strategies).

11. Technology cooperation

- Is there a need for specific support schemes for the development, demonstration or deployment of certain technologies? If so, for which ones and how should these be structured?

New arrangements to provide for technology and finance for adaptation and mitigation in developing countries are fundamental to the successful agreement in Copenhagen and to limit warming well below 2°C.

All financial and technological support as well as the emissions reductions and other resulting benefits of the support will need to be measurable, reportable and verifiable.

Both the International Energy Agency[3] and IPCC[4] have recognized the crucial role of technologies improving energy efficiency, which together have potential to deliver half of all emission cuts needed in the energy sector. The support schemes and cooperation needs to focus on energy efficiency and renewable energy technologies, which will also serve the goals of poverty alleviation, sustainable development and energy security.

Under the new Technology Cooperation Mechanism two new funds should be established. The R&D fund would grant co-financing for projects and facilitate R&D cooperation, involving public and private actors. The fund should also help build the necessary human and institutional capacity to implement technology related R&D agreements at the national level.

A Diffusion Fund would provide blended finance through a range of different instruments in order to rapidly scale-up the use of near market solutions. It should also ensure that the tacit know-how exists in each country to be able to fully utilize clean and sustainable technologies.

To be eligible to receive support form the Funds, a developing country would have to prepare a Low Carbon Development plan and an assessment of its technological needs, identifying the gaps in domestic capacities which must be met through international technology cooperation.

[3] IEA: Energy Technology Perspectives, 2008.
[4] IPCC: Fourth Assessment Report, 2007.

While the new Mechanism will have to address the specific needs in the specific countries, it must also provide timely support for technologies that are essential in a global scale. Therefore, Global Technology Roadmaps that outline strategies for R&D, demonstration, deployment and diffusion for a key set of technologies and set joint milestones, would have to be developed and supported.

The Mechanism could be governed by an Executive Board (EB) with equitable representation, appointed by and reporting to the COP of the UNFCCC. The EB would oversee the management of the fund or funds as well as the operation of Regional Centers, which would tender and oversee contracts in their region and coordinate regional strategies. It would review the TNAs of developing countries and identify priority technological areas to be addressed on a global level and create respective Expert Panels to help develop and oversee the global Technology Roadmaps. The EB would be assisted by a permanent secretariat.

Where IPRs are recognized as a barrier, an approach is needed that maintains incentives for technological advancement, but recognizes the need for rapid and affordable diffusion of existing and new advanced technologies. This will include, but not be limited to, using existing IP flexibilities and exceptions, as well as preventing anti-competitive practices that limit access.

Getting a price for carbon is an effective way to incentivise technological change. The Copenhagen outcome needs to provide incentives for developing countries to link their whole sectors into carbon markets. The Clean Development Mechanism should be substantially changed. Countries that fulfil a set of criteria (emissions, capacity to act) would no longer be permitted to use a project-by-project mechanism but rather would move to a broader mechanism whereby full national sectors or national policies would be included. Least developed countries and SIDS that wish to continue using the project based CDM may do so, but utilising a set of revised rules that substantially improve the sustainable development and social criteria and additionality rules.

Coordination between regulatory measures (funded by the technology funds) and market-based measures needs to be ensured to avoid perverse incentives.

- How to strengthen enabling environment for the deployment of the many existing clean technologies?

Capacity-building is a key enabling mechanism in developing countries, and needs to be addressed as a matter of priority within any future mechanisms to develop, deploy and diffuse technology. This relates to technical as well as regulatory and institutional capacities.

Other key elements for enabling environments are a) clear and common global long term vision, which is an essential signal for the private sector b) access to funding and c) enabling policy frameworks.

Different approaches are needed in different countries and sectors. A new Technology Cooperation Mechanism would link MRV funding from developed countries with MRV actions by developing countries, encouraging the receivers to take actions to improve their policy conditions for low carbon development. At the same time mechanisms linking developing countries' sectoral and programmatic action to carbon markets need to play a role as well.

To be eligible to receive support from the Funds under the Technology Cooperation Mechanism, a developing country would be expected to prepare a Low Carbon Development Plan (LCDP), which would set out country's overall goal, strategy and means (incl. policies and measures) for shifting to a low carbon development path, with a specific view on endogenous technologies and a Technology Needs Assessment[5], which would describe the technological and financial capacities needed to implement the LCDP and National Adaptation Programme of Action, and identify the gaps in domestic capacities which must be met through international technology cooperation. The LCDPs would become mandatory after a certain phase-in period, at least for more advanced developing countries. The country's existing national communication may provide useful basis for a LCDP. These assessments and plans will provide necessary information and tools for overcoming barriers in enabling environments.

Intellectual property rights will have to be assessed, and in areas where existing IPR provisions limit access to climate-friendly technology, improvements made. It should be acknowledged that the need for initiatives may differ between countries and sectors, and action should therefore be differentiated. A framework agreement on IPR and technology licensing could be established to encourage patent sharing, joint ventures and public private partnerships.

Countries should agree to the principle of 'protect and share', in order to increase accessibility to key climate friendly technologies that are protected by IPRs, while strengthening incentives for R&D through IPR protection for those countries that are ready to participate in such a scheme.

Within the framework the possibility of a "Patent library" should be explored, as a solution for innovators as well as buyers of climate friendly technology. Knowledge and inventions on the different selected technologies relevant for adaptation and mitigation will be pooled into a database, to which users can buy access for a set percentage of their profit – e.g. 10 pct. The profits are then pooled into the library and divided among the innovating parties according to the number of times, their knowledge has been used. Furthermore dissemination and facilitation of existing possibilities for IPR sharing within the TRIPS system should be strengthened.

[5] Existing TNAs may not be directly applicable because of their heterogenic quality.

12. Finance and investment

- How should additional public support be organised and which should be the three top priority areas for financial support in developing countries?

Substantial new and additional public funding is essential in order to a) leverage much greater amounts of private financing for the mobilization of climate friendly technologies b) provide funding for activities that do not attract private money, like majority of the adaptation activities.

The priority areas for financial support in developing countries need to be adaptation, leveraging massive clean technology uptake and reducing emissions from tropical deforestation and degradation.

The magnitudes of public funding have to meet the assessed needs and cover the agreed incremental costs. The rough estimations so far indicate that the developing countries' needs of public financing could be in the order of 80 – 105 billion $/year (57 – 73 bln €/yr), or which the share of adaptation would be 50 bln $[6], incremental costs of mitigation 25 – 50 bln $ [7] and protecting tropical forest 5 bln $[8].

The most promising revenue stream to make up the huge difference between existing and needed public funding is the auctioning of assigned amount units, as has been proposed by Norway.

There are other promising sources of financing as well, such as those involving aviation and maritime fuels, which also should be explored. Meanwhile, the approach of auctioning of AAUs has a number of attractive features which, in CAN's view, make this option jump to the front of the line.

First, it ***can mobilize the scale of funding that is required***. Auctioning just a small percentage of developed country AAUs could generate a significant amount of money. As Norway stated in their proposal, setting aside just 2% of AAUs could lead to the creation of $15 to 25 billion in funding per year. Or to take another scenario, setting aside 10% would generate between $75 billion and $125 billion. At this stage the figures are only indicative. The mechanism should include a maximum limit for the overall purchase of AAUs per country.

Second, it ***can help to deliver predictable and sustainable funding*** that isn't at the whim of the annual budget process in capitals around the world. Rather, establishing this approach will guarantee a stream of financing over the life of the agreement.

Third, the emissions reductions achieved through this mechanism ***would contribute additional reductions to our global efforts*** to address climate change. As they would not replace or offset emissions reductions in Annex I countries, they would "add to" the

[6] Oxfam
[7] UNDP Human Development Report 2007 / Watson, World Bank, 2007
[8] Stern report, 2005.

reductions achieved in meeting these targets. To assure these additional efforts, it is imperative that the "carve outs" do not reduce the level of ambition of the negotiated assigned amounts to fulfil the 25 to 40% below 1990 by 2020 range.

Lastly, the adaptation funding from this mechanism would be more ***closely aligned with the "polluter pays principle"***. After all, those that contribute to climate change should share a greater proportion of the adaptation needs according to their contribution.

Provision of all financing, the use of those funds, and the results achieved in terms of mitigation of developing country emissions, must establish detailed and transparent mechanisms for measuring, reporting and verifying. This will build greater trust, ensure that money is actually flowing (not just promised), and avoid the inefficient use of our precious financing resources to help developing countries adapt to climate change and make the transition to low-carbon development.

Whether these funds should be directed to, and managed by, only one fund or several funds, and whether there is a need for a totally new institution is to be assessed. However, management of these funds needs to be representative and transparent and the mechanism needs to be closely linked with the guidance of, and the principles set by the COP.

The GEF that is based inside the World Bank, has managers and decision makers outside of the UNFCCC process and is not trusted by the developing countries is unlikely to serve as an optimal institution for managing these massive new funding streams.

- How could private sector be involved in mobilising additional finance?

One clear way to mobilize private sector finance would be to implement full auctioning of ETS permits combined with earmarking of the reveniues for adaptation in the EU and in developing countries. This would help to introduce a polluter-pays principle to mobilizing the necessary finance.

Private-sector investments constitute the main share (86 %) of investment and financial flows in the energy sector today and they will remain key in the future as well. Deepening and widening emission reduction commitments and expanded carbon market with adequate price signal can play a large role in redirecting these flows, but it will not be adequate. Substantial new and additional public funding is essential in order to leverage much greater amounts of private financing for the mobilization of mitigation and adaptation technologies.

Private sector with its innovation mechanisms and hands-on experience with technologies will also need to play a major role in developing the technical solutions for mitigation and adaptation. The Technology Cooperation Mechanism proposed by CAN-Europe would provide the private sector with ways of participating, by, inter alia, facilitating and funding public private partnerships, providing enabling environments for joint ventures and setting Expert Panels to help develop and oversee the global Technology Roadmaps.

The Copenhagen outcome with its targets and mechanisms needs to create as predictable and reliable investment environment for the private sector as possible. This means, inter alia, shared global long term and mid term visions for emission reductions; deep emission reduction targets for developed countries; a new Technology Cooperation Mechanism that will assist and incentivise developing countries in creating enabling conditions for clean and sustainable investments; reformed and improved CDM that facilitates programmatic and sectoral approaches[9] for developing countries with strongly improved additionality and sustainability criteria; tackling current barriers related to the IPRs and, last but not least, credible compliance mechanisms.

13. Compliance and enforcement of the new agreement

How should it be ensured that countries will comply with their commitments?

Compliance must be linked to the obligations, which as we have argued above, must be differentiated. For developed countries with QEROs, a strong compliance system is need to avoid the perverse situation that we now experience with Canada, while recognizing that too strong s system could act as a disincentive for countries taking on adequate targets, for fear that they would be strongly hit if they, even acting in good faith, were unable to fulfill their obligations in full. (Limited emergency access to flexibility mechanisms may be needed as a last resort for compliance for the domestic action targets at the end of a commitment period, but would require overcompliance elsewhere.

Other types of action, by developing countries, would have to have compliance mechanisms designed to be appropriate to the mechanism or policy/ measure. In addition, assuming that different types of action are linked to different levels of capability/ development, in developing countries, the rigor of the compliance mechanism for the different type of action should reflect the capability of the countries to which it applies.

Any mitigation action undertaken voluntarily by a least developed country should not be subject to any compliance regime, but rather the regime should be designed so that any such action is supplemental to what is needed to be compliant with the <2°C goal.

14. Other suggestions

Please enter any other suggestions that were not covered by previous questions

While many new measures are being put on the table as part of the post 2012 negotiations, CAN notes the urgent need to build capacity, particularly in developing countries, to ensure that the institutional, informational and human infrastructure is in place for the measures to be able to be operational as soon as possible. CAN therefore urges the EU to come to Poznan with concrete proposals and the necessary financial, and other, support to build this capacity. For example, for REDD to be operational, it is clear that a comprehensive satellite monitoring system will be needed, with people in each country able to interpret the resulting images.

[9] Project-based investments in emerging and lower GHG energy technologies are some of the more complex and risky forms of investment.

The current lack of official consideration of biodiversity in the UNFCCC process is a huge oversight, as not only do other species have an intrinsic right to survival, but maintenance of natural diversity helps to provide stability of ecosystems to climatic changes. CAN-Europe is pleased that the Convention on Biodiversity decided, at its most recent Conference of Parties, to establish an *ad hoc* technical expert group on biodiversity and climate and looks forward to its recommendations being taken up in the UNFCCC negotiations.