EU PUBLIC CONSULTATION ON FUTURE COMMITMENTS POST 2012 ON CLIMATE CHANGE

RESPONSE ON BEHALF OF THE EUROPEAN ENVIRONMENTAL BUREAU
26/10/04
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[this response is similar to the collective response produced by Climate Action Network Europe, in which most of the EEB members active on Climate Change issues are involved. However, in the answer to question 4, some elements have been added].

1. Is it important for the EU to continue to show leadership on addressing climate change?

Yes, it is extremely important that the European Union continues and strengthens its global leadership role on the issue of climate change. The EU with 21% of world economic output and a total GDP of close to 9 trillion Euros is a key actor that can credibly drive this issue forward. Moreover, the EU's European Neighbourhood Policy as well as its network of co-operation agreements with nearly all the world's developing countries, enables it to exert an enormous influence on climate change and energy policies worldwide**.**
But this leadership must be backed up by action at home in order to be credible. The EU must implement polices, realize emission reductions and commit itself to further action. All countries in the long run will have to accept that they need to limit their use of global atmospheric resources but it is clear that the industrialised countries due to their historical role in greenhouse gas (GHG) emissions have to lead the way. The public support is there: according to Euro Barometer surveys citizens in Europe think that EU is the institutional level best suited to protect the environment, a strong endorsement of EU's leadership role on this important issue.

2. On the basis of the EU's 2°C long-term objective, what objectives should the EU set for global and EU climate change policy (including targets, timeframes and pathways for emission reductions)?

The EEB welcomes the Commission's endorsement of the 2°C objective as the framework for its consultation. The latest scientific findings (IPCC 3rd Assessment Report plus more recent studies since its publication) show that in order to avoid catastrophic climate change (defined via the predicted impacts incurred by a change of that magnitude) global mean warming needs to be limited to a peak below 2°C (above pre-industrial level) and that the then prevailing temperature should be reduced as fast as possible from this peak. Emission reductions therefore must be consistent with limiting global temperatures below a 2°C increase with high confidence.[1] Avoiding a warming exceeding 2°C with high confidence means that greenhouse gas concentrations will need to be reduced from whatever levels they peak at in the 21st century and reductions most likely will need to be continued in the following centuries. Global

[1] The Climate Action Network has summarized the state of the science on impacts and the reasons for a peak of 2°C in a paper that is available for download:
http://www.climnet.org/pubs/CAN-adequacy30102002.pdf

emissions will have to peak well before 2020 in order to avoid economically destructive emission reduction rates in the future. In the long term greenhouse gas concentration levels of 400 ppmv CO_2 equivalent imply about a 10% risk that 2°C is exceeded if the climate sensitivity uncertainty range is similar to that implied by the IPCC. More recent estimates place the risk of overshooting in the range of 2-38% if this were the stabilization level in the long term (22nd century and beyond). Recent scientific results make it clear that stabilization at 450 CO_2 equivalent entails a high risk that the 2°C target would be exceeded. It has been clear since at least 1990 that stabilization at 550 ppmv CO_2 equivalent would more than likely result in warming of at least 2.5°C and recent work reinforces this indicating that there it is almost certain that this level of greenhouse gas concentrations would result in 2°C being exceeded.

Given the enormity of the risk, the EU must act swiftly and strongly to decarbonise its economy and implement long-term emission reductions of 80% of 1990 levels by 2050 and contribute to a peak of global greenhouse gas (GHG) emissions before 2020. This reduction needs to be divided into several medium term legally binding targets with absolute reductions for 2020 of at least 30% domestic EU emission reductions. As the lead times for change in many sectors are substantial, and member state circumstances differ it is important that the EU give investors and market actors clear, early, signals of the way EU will go. It is clear that a delay of global action by 10 years doubles the required reduction rates in 2025 so we have to act now.

3. What type and level of participation should the future climate change regime seek from developed countries and developing countries, what should be the timeframe for such participation and what should the contribution from the EU and other countries?

The EU should continue to seek the active participation in the future climate change regime from all countries and constructively engage with them in accordance with the UNFCCC principle (article 3.1) of *common but differentiated responsibility and respective capabilities* but should not take non-action from some parties as an excuse for not going ahead. In the long run, most developing countries will also have to limit their emissions, in order for global emissions not to exceed the threshold for a 2°C maximum warming target. The EU must provide support for developing countries to mitigate and adapt to climate change as a centrepiece of its foreign and development policy. The EU should ensure that climate change considerations are fully mainstreamed into all co-operation activities and agreements with both EU neighbouring countries and developing countries (such as Cotonou, the Euromediterranean Partnership etc), giving full support to the rapid development of the above mentioned strategies.

The EEB is convinced that a viable international system for achieving this objective must reflect the moral responsibility of those who have benefited the most from the use of the global commons to reduce their emissions first and to compensate the victims of climate change. Main elements of a viable regime must be built on core principles of equity and fairness and include an appropriate balance of rights and obligations.

The EEB supports Climate Action Network in its plea for a multi stage approach operating on the same or a very similar timetable divided in three tracks: The Kyoto track, a Greening (decarbonisation) track and an Adaptation Track.

The Kyoto track builds upon the UNFCCC and the Kyoto Protocol, with its system of legally binding absolute emission reductions and compliance regime. This track, with its legally

binding tradable emission obligations provides the core of a system that will drive rapid technological development and dissemination, and provide the technological basis for win-win solutions to climate and sustainable development objectives.

The 'Greening' (decarbonisation) track would drive the rapid introduction of clean technologies that can reduce emissions and meet sustainable development objectives in developing countries. The industrialized countries should provide resources and technology for this track but should do this in partnership with the developing countries and not conditioned on other policies in a carrot and stick way as seen in all too many other policy fields.

The Adaptation track provides the resources to the most vulnerable regions (small island states, least developed countries) to deal with unavoidable climate changes. Least Developed Countries will quite appropriately focus on adaptation for some time to come, since they are the most vulnerable to climate change impacts and their contribution to emissions is tiny compared to their population and development needs.[2] Countries receiving support under the Adaptation track could also operate in the Greening (decarbonisation) track.

The level and the character of the mitigation actions within this framework would be determined by reference to an agreed level of per capita emissions, ability or capacity to act (including measures such as per capita income) and historical responsibility. In this context industrialized countries have the obligation to act first to reduce their emissions in absolute terms. The emission reduction targets in the emission reduction stage of the Kyoto track would be set with a strong reference to the need for per capita emissions to converge over the course of the 21st century. Other fairness criteria such as historical responsibility would also play a role in setting the overall timing, level and character of the emission action required of different countries. A combination of factors such as per capita emissions, ability or capacity to act and historical responsibility could be used to determine when and how countries move from the 'Greening' or decarbonisation track to the Kyoto track.

4. Which technological solutions should be allowed or promoted (e.g. renewable energy, nuclear energy, carbon sequestration, carbon capture and storage)?

The question of technologies and their promotion is the only suggestion by the questionnaire of concrete means to fight climate change. The EEB believes that this task involves far wider Policies and Measures, as requested by Article 2.1 of the Kyoto Protocol and Article 4.1 of the United Nations Convention on Climate Change. In particular, the policies of the EU have to reflect the true cost to society that GHG emissions cause, should implement considerable increases in carbon taxation in all member states, and strengthen emission caps in all sectors concerned by emissions trading. The most efficient and fair method, both for the economy and the environment, is to do this in a harmonized fashion, but obstruction from individual states, using the unanimity requirement laid down in the EC Treaty, and unfortunately again in the Treaty for a European Constitution, should not prevent individual EU Members, or a group or groups of Members, to go ahead.

Whatever the mix of technologies used by member states to implement their goals, the EU has to ensure that allocation for environmentally friendly technology funding increases considerably during the next mandate of the Commission. This allocation should correct the present

[2] 49 LDCs together add 2.2% percent of annual global CO_2 emissions from energy and forestry; but account for 10.7% of global population, producing 1.8% of world GDP (WRI 2003).

bias toward nuclear and fossil technologies, and concentrate instead on renewable energy, transport reform, and sustainable process technology for industries.

Two of the key solutions where the EU needs to act strongly and decisively, far beyond current policies enacted is on reducing energy demand – saving energy - and developing better sources of energy supply mainly through promoting renewable energy on a large scale.

The following list is by no means exhaustive but it indicates some of the most pressing areas of reform:

- The EU member states should commit to binding annual, absolute, reductions of at least 1% energy consumption per year in the EU-25, this can be achieved with existing technologies and would lead to significant reductions of greenhouse emissions;
- Implement dynamic feed-in tariff schemes for renewable energy. Guaranteed premium prices are easy to establish, to implement and effective in accelerating the penetration of renewable electricity as shown by successful implementation in e.g. Denmark, Germany and Spain. However, to be successful, tariffs must be high enough to ensure competitiveness, be based on 10–15 year contracts, reduce overtime to account for technological development, and be differentiated depending on project locations;
- Provide priority access to the grid. Utilities should be obliged to allow straightforward access to the grid from renewables and provide transparent and economically fair charging systems for grid access;
- Align other policies, particularly transport, development, regional and structural funds and education with the climate change policy framework;
- Adopt full-pricing for non-renewables in a progressive schedule; remove all subsidies from fossil fuels and introduce a common EU tax on aviation kerosene
- Simplify and clarify the regime for renewable projects and carbon finance;
- Improve financial support for renewable energy start-ups;
- Greatly expand financial support for R&D on renewable energies;
- Promote green public procurement of energy efficient products as well as energy from renewable sources;
- Keep key financial institution decision-makers well-informed about climate change and renewable energy technologies and markets;
- Ensure EU, multilateral and national public sector financial institutions support the transition to renewable technologies adequately in line with the recommendations of the extractive industries review[3];
- Delegate powers & financial sources to promote renewable energy to regional and local polities;
- Promote the early adoption of advanced air conditioning systems for vehicles using CO_2 technologies and the early banning of HFCs.

Nuclear power is not an option for a sustainable energy system, given the unsolved problems of safe long-term storage of the lethally toxic and radioactive waste generated in the whole production process as well the still existing risks with nuclear accidents. Investing in nuclear would also tie huge amounts of money which otherwise could be more efficiently used for conservation and renewable alternatives. Ensuring full liability to the nuclear power producer would make it a very expensive alternative. And large parts of the citizens of Europe have serious concerns with this option.

[3] The Extractive Industries Review was launched by the World Bank Group to discuss its future role in the extractive industries with concerned stakeholders. http://www.eireview.org/html/EIRFinalReport.html

The EEB supports CAN Europe in its opposition to the use of terrestrial carbon sequestration - sinks - as a method that should be a part of any future climate regime that receives mitigation credits. Of course there are several important benefits of forest conservation and reforestation such as increased biodiversity, improved water resources management and maintaining the carbon stock, but due to the numerous problems with verification and accounting of the amount of carbon captured as well as the limited permanence of any carbon stored in the biomass this method should not be integrated in a future EU climate regime.

Carbon capture and storage (CCS) are still in early stages of development. As the end-of-pipe solution it is always be second best compared to renewable energy alternatives that do not include any carbon emissions at all. Earlier use of carbon injection in the ground has not been carried out for the purpose of permanently storing the carbon but for other reasons related to fossil fuel extraction. Only if the issue of permanence can be guaranteed and liability issues related to the stored carbon can be adequately addressed can CCS technologies be part of the solution. Carbon sequestration and storage also risk diverting financial investments in R&D much needed for renewable energy systems. Presently the CCS discussion mainly acts as a smoke screen for coal and lignite industries that desperately try to stay in business, so far few companies have committed themselves beyond token investments in pooled research, with little or no tangible outcome. Due to the high energy penalty and high cost per ton of CO_2 avoided, CSS requires a strong carbon caps to become economically viable, before this price level is reached renewable energy investments and energy efficiency will outperform CSS on a financial comparison.

5. Should the future global climate regime maintain the key elements of the Kyoto Protocol, including the Kyoto mechanisms (joint implementation, the clean development mechanism and emissions trading) and what other elements should such regime contain?

The key elements of the Kyoto Protocol are the quantitative limitation and reduction commitments for Annex-I parties with clear targets and timetables and this should also form the backbone of a future international climate regime. Target setting should be guided by the scientifically backed 2°C target as laid out in answers to questions 2 and 3 and must not be allowed to be inflated to unsustainable levels throughout the negotiation process. We already have our backs to the wall, the world cannot afford more time wasted, and there is no soft landing alternative.

The Kyoto Protocol flexible mechanisms have many cost-effective aspects that should be conserved in the next commitment stage. Emission Trading is being established as an instrument of climate policy for use among countries as well as private entities, mainly by the introduction of the EU's domestic system. Use of the project-based mechanisms is at best a zero sum game as far as the environmental effectiveness is concerned. Current practice has shown a lot of problems with its implementation that threaten the environmental integrity and also the sustainable development benefits that should result from the projects have so far been marginal if at all present. A future mechanism must more directly target particular technologies like renewable energy. Arguably, this cannot be accomplished by a market mechanism which is technology neutral. For ensuring the integrity of the flexible mechanisms as well as for compliance and transparency reasons, the reporting requirements (annual national inventories and national communications) of the Kyoto Protocol should be maintained and strengthened. There is also a need to allow already-existing CDM projects to be converted to JI-type

projects, still allowing some flexibility in minimising mitigation costs for when the host country takes on quantified limits.

The provisions on land use, land use change and forestry measures under article 3.3 and 3.4 of the Kyoto Protocol are flawed and threaten to seriously undermine the environmental integrity of the protocol and should therefore not be included in future agreements. It is clear that there are several important benefits from forest conservation and reforestation such as increased biodiversity and maintaining the terrestrial carbon stocks but due to the numerous problems with verification and accounting of what amount of carbon that is captured as well as the limited permanence of any carbon stored in the biomass that this method should not be integrated in a future climate change regime.

There is a great need to create additional financial streams independent of current UNFCCC Annex I pledges e.g. international aviation ticket taxes, levy on financial transactions to increase funding for adaptation, technological transfer and mitigation measures in LDCs and Non Annex I countries.

6. What are the costs of taking further action on climate change, including competitiveness impacts, and how can/should impacts be addressed?

The question of costs of taking action to combat climate change is secondary in the face of the grave threat we face to the general wellbeing of our citizens and people worldwide. It is painfully clear from the scientific evidence that we need to act decisively and swiftly if we are to avoid terrible impacts to our environment, society, and economic system. It is also clear that it is impossible to create a scientifically robust economic estimate on the costs and benefits for different levels of climate change mitigation; there are too many variables involved for such an exercise in future forecasting to be reliable. Most existing attempts to calculate costs fail to fully account for the so-called 'cost of inaction', as well as for the positive dynamics of taking early action. There is also the question of what material value will make up for the human suffering and death resulting from increased droughts, floods etc. The French Government report *Reducing CO2 emissions **fourfold** in France by **2050*** show that the cost of non-action are higher than early action and that it is feasible to achieve drastic reductions.[4]

On the basis of several sources, CAN Europe has drawn up an impression of the scale of costs we would face under a warmer climate by drawing on previous experiences of adverse weather phenomena expected to increase in both severity and rate of occurrence in a warming climate. Economic losses resulting from weather and climate related events have already increased significantly during the past 20 years, from an annual average of less than $5 billion to about $11 billion. This is due both to wealth increase and more frequent events. The average number of annual disastrous weather and climate related events in Europe doubled over the 1990s compared with the previous decade, while non-climatic events such as earthquakes remained stable. Four out of the five years with the largest economic losses in this period have occurred since 1997.

- The bill for the cleanup and rebuilding operations following the flooding in Central Europe in 2002 was estimated to about 20 billion euros. This estimate includes loss of tourism and closure of businesses that could be as much as 15 billion euros, the vast majority, 80-85%, which could not be covered by insurances.

[4] http://www.effet-de-serre.gouv.fr/fr/etudes/etudes.htm

- Munich Re estimated in September 2004, the overall economic losses from the latest hurricane season in the Gulf of Mexico at around $50 billion and this is without taking into account the tragic loss of human life on a major scale.
- Swiss Re, the world's second largest insurer, has estimated that the economic costs of global warming could double to $150 billion each year in the next 10 years, hitting insurers with $30-40 billion in claims.
- During the summer of 2003 more than 20.000 excess deaths attributable to heat, particularly among the aged population, occurred in Western and Southern Europe. Heat waves are projected to become more frequent and more intense during the twenty-first century and hence the number of excess deaths due to heat is projected to increase in the future.
- The World Health Organization estimated the number of global climate related deaths to 150,000 and 5.5 million DALYS[5] in the year 2000.

Reliable figures for costs and loss of competitiveness due to energy and environment regulations are hard to acquire but previous rounds of environmental legislation show that as a rule Industry often highly exaggerate the difficulty, time needed and cost of compliance.

There is widespread agreement among scientific energy modellers that the costs of meeting ambitious climate targets are low compared to expected income growth. According to recent macroeconomic models built in the last two years incorporating technology learning, the role of investments etc put the costs at the order of a few tenths to 1 per cent of GDP discounted to the present over the next century which can account for several months of foregone growth over the next century. Any potential loss in competitiveness in energy intensive industries could be counteracted by increased production and exports from the manufacturing sector.[6]

Few industries have high energy costs compared to total turnover. Any protective measurements are only warranted should Europe take the lead while key competitor regions avoid action so that there is a risk for carbon leakage due to relocation of plants. Then some countervailing policies may me be warranted for energy intensive industries that are price takers on the international market but only for them. The Chalmers study found the most cost efficient methods to be direct subsidies and border tax adjustments calculated on carbon content in production process. It also found that grandfathering emission permits to be a very inefficient and costly approach.

7. What are the benefits of taking further action on climate change, including avoided damages, competitiveness impacts and ancillary benefits, and how can/should these be encouraged or optimized?

Early climate policies in Europe will speed up technological development and create competitive advantages for the time when other countries start cutting GHG emissions. An example of this development is the case of wind energy where European companies following a period of targeted policy measures now dominate the fast growing world market with the creation of tens of thousands of new jobs in Europe (more than 72,000 today compared to 25,000 in 1998)[7].

[5] Disability Adjusted Life Year (DALY): An indicator of life expectancy combining mortality and morbidity into one summary measure of population health to account for the number of years lived in less than optimal health. WHO Global Burden of Disease 2000 project. http://www.who.int

[6] Azar, C; Post-Kyoto EU Climate policy targets – Costs and competitiveness implications, 2004.

[7] EWEA, *Wind Energy The Facts, an analysis of Wind Energy in the EU-25*, 2004.

Reducing GHG emissions also has a number of ancillary, non-carbon benefits that come with the reduction in other pollutants, reduction in fuel use and thus the environmental impacts associated with fuel production and transportation. These benefits include avoidance of health impacts from atmospheric pollutants (e.g. respiratory diseases), and their associated cost, avoided accidents of fuel transport (oil tankers) and their associated cost (clean-up, loss of local economic production) and environmental impacts (loss of marine and coastal flora and fauna).

Mitigating climate change also means avoiding some of its projected impacts, which would mean loss of property and life from flooding, as pointed out in the previous question. In fact, efficiency gains from restructuring company operations can in many sectors lead to great gains for industry instead of costs, these so-called 'no regret options' should be embraced by all companies and should be encouraged by government policies.

There follow, some concrete examples:

- In 1998, BP set itself the target of reducing its greenhouse gas emissions by 10% within 12 years. It achieved this goal inside just three years. The company integrated emissions targets into its senior managers' performance contracts. It also introduced an innovative emissions trading scheme to minimize cost. Employees were inspired to identify a myriad of opportunities to cut emissions and save money throughout the business. The program cost the company an estimated $20 million to implement, but saved $650 million over the three year period.

- DuPont began to inventory greenhouse gas emissions in 1991. Between 1990 and 2000 investing in energy efficiency allowed the company to hold energy use flat while increasing production 35% and saving the company $2 billion.

- According to an EEA study on ancillary benefits for EU to comply with the Kyoto Protocol a substantial part of the control costs of CO_2 reduction can be recovered from reduced costs of controlling air pollution. Quantitatively, this saving could amount to 50% of the costs to implement the Kyoto Protocol.[8]

Estimating costs and benefits of future policies is beset with uncertainties; therefore caution should be exercised when basing decision making on this kind of cost estimates.

Since climate change is already underway, we need adaptation policies to complement mitigation policies. Efficient implementation of pre-emptive adaptation strategies can significantly reduce adverse impacts of climate change as well as costs. Human populations vary in their vulnerability, depending on factors such as population density, economic development, local environmental conditions. Adaptation measures usually will have near-term as well as future benefits, by reducing the impacts of current climate variability. Adaptation measures should be integrated with other EU strategies.

[8] EEA study on ancillary benefits, http://reports.eea.eu.int/technical_report_2004_93/en