EUROPEAN PARLIAMENT

DG INTERNAL POLICIES OF THE UNION

Policy Department Economic and Scientific Policy

UNFCCC – COP 14 in Poznan (December 2008)

Note

IP/A/CLIM/NT/2008-19 **PE 408.570**

This note was requested by the European Parliament's temporary committee on Climate Change (Ref. to contract IP/A/CLIM/IC/2008-150).

Only published in English.

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Manuscript completed in November 2008

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Executive Summary

Ahead of the Poznań Conference (COP14, CMP4) in December there are four key issues or 'hot topics': i) sectoral approaches; ii) Clean Development Mechanism (CDM) and Land Use, Land Use Change and Forestry (LULUCF); iii) Reducing Emissions from Deforestation in Developing Countries (REDD); and iv) financing and development.

The Bali Action Plan introduces 'cooperative sectoral approaches and sector-specific actions' in the context of technology transfer. They could be also used to ensure comparability of efforts between developed countries. Areas for further discussions include the nature and type of sectoral approaches and actions, effective support mechanisms, and their contribution to nationally appropriate mitigation actions. As to the CDM there are five main areas of concern: regional coverage; performance; scope; additionality; and technology transfer.

The first two are recognised as barriers to CDM market expansion in developing countries while the rest as factors influencing the potential for CDM to leverage further investment. Another issue is that the CDM does not cover the main part of emissions from the forestry sector with only afforestation and reforestation projects being eligible. Discussions focus on extending the list of eligible LULUCF activities on the one hand, and methodological issues as well as a finance mechanism on REDD on the other. Lastly, with a large gap between financial need and available resources, a challenge is what mechanisms can be set up to close the gap. It is necessary to develop a functioning model, which takes into account the disparity in countries' capacities to cover the costs.

As a steppingstone on the path from Bali to Copenhagen, the Poznań conference (COP14, CMP4) will mark the turning point from analysis and discussion to negotiation stage. The goal in Poznań is to create a momentum towards reaching an agreement in Copenhagen in December 2009. With the start of the new American presidential term in January 2009, we will have a more engaged partner in the United States (US). Nonetheless the US is very unlikely to assume a binding international commitment unless a new international agreement also provides for some binding measures by emerging economies. Against this background, MEPs are recommended to arrange exchange of views and information in Poznań. The three options in order of priority include at least one informal exchange of views between the US transition team and MEPs; at least one informal exchange of views between members or staffers from Congress and MEPs; and a joint public meeting between members or staffers from Congress and MEPs.

On the path to Copenhagen in December 2009, there are two main outstanding questions: possibilities for US and emerging economies to take up binding emission reduction commitments. While the US has returned to the UN negotiation process for a comprehensive international agreement, developing countries, especially emerging economies, started showing flexibility in Bali.

Ultimately the Copenhagen agreement should be able to accommodate diversity among developing countries not only in terms of economic capability, natural resource endowments, and vulnerability to impacts of climate change but also in terms of topics of their priority. On the other hand, the Copenhagen agreement should form a 'shared vision' with a level of ambition and send a strong signal from joint leadership of all major economies to the market, business, scientists, and citizens.

1. The previous COP/CMP meeting in Bali, Indonesia (December 2007)

1.1 Outcome versus expectations

The United Nations climate change conference was held in Bali, Indonesia from 3 to 15 December 2007. The annual conference is a generic term with reference to two distinct but related bodies: the 13th Conference of the Parties (COP) to the United Nations Framework Convention on Climate Change (UNFCCC or the Convention) and the third Conference of the parties serving as the Meeting of Parties (CMP) to the Kyoto Protocol. The Kyoto Protocol sets out only the first commitment period (2008-2012) and requires Parties to start negotiations for subsequent periods in 2005 so that there should be no gap between commitment periods.

Negotiators arrived in Bali with a view to agreeing on a mandate for launching negotiation for a comprehensive post-2012 agreement with a clear end date. Setting precise targets was never their aim. The conference delivered a mandate supported by a roadmap (see the next section). There is a view that the Bali mandate becomes much weaker than the Berlin mandate of 1995 which launched a process to assign stronger commitments for Annex I Parties and which eventually led to the adoption of the Kyoto Protocol in 1997. Since target-setting or even identifying principles of such act was not the aim of the Bali conference, however, it seems unreasonable or unfair to declare the Bali mandate as unsatisfactory.

One of the surprises among outcomes was greater willingness and flexibility of major emerging economies to negotiate. Developing countries agreed that the Bali Action Plan (Decision/CP.13) covers their nationally appropriate mitigation actions in the context of sustainable development, supported and enabled by technology, financing and capacity-building, in a measurable, reportable and verifiable manner. Such actions will be considered together with measurable reportable and verifiable nationally appropriate mitigation actions by developed countries. Moreover, the Convention and the Kyoto Protocol built in dichotomy between Annex I Parties versus non-Annex I Parties. In Bali Parties agreed to replace the distinction between Annex I Parties versus non-Annex I Parties by a category of 'developed country Parties' versus 'developing country Parties'. Emerging economies' acceptance of categorical change, reflected upon the Bali Action Plan (the next section) was widely seen as a breakthrough (IISD 2007).

1.2 Decisions and achievements

There is no precise definition about the Bali roadmap. It is understood that a *set of decisions or outcomes* constitute the Bali Roadmap. Among all decisions, the most important one is the so-called Bali Action Plan (Decision 1/CP.13). Generally, the Bali Action Plan is regarded as the centrepiece of the Bali Roadmap. Parties agreed to launch a two-year negotiation process with a deadline for conclusion of a comprehensive post-2012 agreement in Copenhagen in December 2009, setting out guidance, direction or destination. For this purpose they set up a new Ad-hoc Working Group on a Long-term Cooperative Action Plan (AWG-LCA) under the Convention. The establishment of the working group enables to formalise the informal dialogue process and, for the first time, engage the US in formal negotiations for a post-2012 agreement. Moreover, the group aims at developing formulae or tools to ensure comparability of efforts by all developed countries and at exploring innovative mechanisms and incentives for engagement of major emerging economies.

In addition to a shared vision for long-term cooperative action, Parties also agreed on the four building blocks or pillars of the post-2012 architecture: mitigation; adaptation; technology; and financing. On the other hand, the Ad Hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol (AWG-KP), established in Montreal in 2005, will continue to work on further commitments for Annex I Parties. Hence, 'two-track approaches' adopted in Montreal in 2005, namely, a Kyoto track and a Convention track, will be maintained while running the two working groups separate and in parallel.[1]

Other important decisions at the Bali conference are concerned with the Adaptation Fund and flexible mechanisms (Clean Development Mechanism (CDM), Joint Implementation (JI), and emissions trading) both under the Kyoto Protocol, and Reducing Emissions from Deforestation in Developing countries (REDD) under the Convention.

[1] The two tracks deal with respective agenda, see UNDP (2008a).

2. Climate change talks: Ad Hoc Working Groups in Bangkok (April 2008), Bonn (June 2008) and in Accra, Ghana (August 2008)

AWG-KP

The AWG-KP, a main working group on the Kyoto Protocol track, concentrates on the mitigation potential and mechanisms to reach the Protocol's objectives. The United States, not being party to the Protocol, only has an observer status.

In **Bangkok**, the AWG-KP held the first part of its fifth session, consisting in an in-session workshop on the means to reach emission reduction targets (1 to 3 April 2008). The workshop addressed emissions trading and the project-based mechanisms under the Protocol (i.e. CDM and JI); rules to guide the treatment of land use, land-use change and forestry (LULUCF); possible approaches targeting sectoral emissions; and greenhouse gases (GHGs), sectors and source categories to be covered. In its conclusions, the AWG-KP indicated that emissions trading and the project-based mechanisms under the Protocol should continue in the post-2012 period, and be supplemental to domestic actions in Annex I countries.

The fifth session of the AWG-KP was resumed in **Bonn** in June 2008. Some areas of broad agreement emerged: the need to promote linking of national and regional emission trading mechanisms and to increase their fungibility (mutual acceptance); and widening the scope of the CDM to cover LULUCF and agriculture. In addition sectoral approaches and options to ensure their contribution to global GHG emission reductions were discussed. Finally, the Bonn meetings addressed possibilities for including aviation and maritime transport.

The AWG-KP in **Accra** (first part of its sixth session, to be concluded in the Poznan session in December 2008) continued the discussions without addressing any substantial new areas.

AWG-LCA

The AWG-LCA, a new working group on the Convention track, aims at addressing a shared vision for long-term cooperative action with enhanced action on four building blocks, mitigation, adaptation, technology development and transfer, and provision of financial resources and investment, which form the key elements of the Bali Action Plan.

The AWG-LCA held its first session in April 2008 in **Bangkok**, where it agreed on its 2008 work programme. It set up a workshop system and other activities to facilitate the negotiation process and to clarify the elements of the Bali Action Plan.

Accordingly, at its second session in **Bonn** in June 2008, three workshops were organised on i) advancing adaptation through finance and technology, ii) investment and financial flows, and iii) mechanisms and means for the removal of obstacles to, provision of financial incentives for scaling up, and ways to accelerate transfer of technologies.

In Bonn and later in August 2008 in **Accra**, the main purpose of the workshops has been to collect positions of parties in view of preparing a negotiating text, and to continue to exchange ideas and clarify key elements of the Bali Action Plan. Two in-session workshops were held on i) cooperative sectoral approaches, sector-specific actions, and policy approaches, and ii) policy incentives on issues relating to REDD, and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries. On forest protection, delegates agreed that this should be part of a post-2012 agreement. Parties also expressed the view that sectoral approaches should not lead to binding commitments for developing countries but the decision to adopt them be left to each country.

Finally, discussions started on the so far neglected issues on financing and technology needs for both mitigation and adaptation. The Accra session was meant as a final step to advance negotiations on all the elements of the Bali Action Plan in light of the approaching deadline for the completion of its work in December 2009.

3. Upcoming COP/CMP meeting in Poznań, Poland (December 2008)

3.1 Key issues, 'hot topics'[2]

3.1.1 Sectoral Approaches

Sectoral approaches are regarded as having the potential to broaden the range of contributions by all Parties including emerging economies to GHG emission reductions, and to help moderate competitiveness concerns in trade-exposed industries through setting benchmarks. In particular such approaches may help to identify emissions on a sector-by-sector basis, building confidence that policies and measures can be put in place to reduce emissions. They can also help identify national or global commitments through the aggregation of sectoral data, if countries so wish. While sectoral approaches constitute a major opportunity to focus on individual sectors that make major contributions to global emissions, they also pose a number of challenges.

The Bali Action Plan notes the consideration of 'cooperative sectoral approaches and sector-specific actions, in order to enhance implementation of Article 4, paragraph1 (c), of the Convention'. Article 4.1(c) of the Convention requires governments to 'promote and cooperate in the development, application and diffusion, including transfer, of technologies, practices and processes that control, reduce or prevent anthropogenic emissions of greenhouse gases not controlled by the Montreal Protocol in all relevant sectors, including the energy, transport, industry, agriculture, forestry and waste management sectors'. This article 4.1(c), as the AWG-LCA (2008a) considers, provides the context of any discussions on cooperative sectoral approaches and sector-specific actions. Such discussions should aim at enhancing the implementation of the article through technology cooperation focusing on the specific needs of specific sectors. Moreover, these approaches and actions *should not replace* emission reduction targets for developed country Parties or form the basis of proposals for sectoral mitigation commitments or international technology benchmarks. For developed country Parties these approaches and actions *could complement* national emission reduction targets. They could be used to ensure comparability of efforts between developed countries if information at the sector level was used to determine mitigation potentials, which is more subject to the AWG-KP discussion. For developing country Parties, these approaches and actions provide opportunities for nationally appropriate mitigation actions by developing countries. Also, the process of identifying and implementing sector-specific actions should be voluntary, country-driven, and flexible determined by their national capabilities and development goals. Implementation of cooperative sectoral approaches and sector-specific actions in developing countries depends on the availability of financial resources, technology and capacities.

For further discussions the AWG-LCA (2008a) identified several areas of interest and convergence:

(a) The nature and type of cooperative sectoral approaches and sector-specific actions[3];

(b) Effective support mechanisms, including for technology cooperation, involving technology, finance and capacity-building to enhance implementation of Article 4, paragraph 1 (c), of the Convention;

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[2] Authors are most grateful to a number of participants in the UN process for contributing to background research, especially through interviews.

[3] For typology of sectoral approaches, see Egenhofer and Fujiwara (2008).

(c) Possible contribution of sector-specific actions to nationally appropriate mitigation actions in a measurable, reportable and verifiable manner;

(d) Opportunities to engage the private sector and intergovernmental organisations in activities to enhance mitigation in specific sectors.

In Warsaw, prior to COP14, the Polish government will host a high-level meeting, 'Summit on sectoral cooperation'. This meeting will provide an opportunity to enhance political momentum for further consideration on practical application of cooperative sectoral approaches and actions under the post-2012 regime. In Poznań there will be a workshop on 'cooperation on research and development of current, new and innovative technology, including win-win solutions'. It is also likely that any element of discussion on sectoral approaches would take place in the context of technology cooperation focusing on the specific needs of specific sectors.

3.1.2 CDM and LULUCF

The Clean Development Mechanism (CDM)

The CDM is established under the Kyoto Protocol[4] as a means of stimulating sustainable development and encourage developing countries to contribute to emission reduction efforts on the one hand, and allowing Annex I countries to meet their national targets by investing in lower cost carbon emission reduction projects in non-Annex I countries on the other. The Marrakesh Accords in 2001 (Decision 17/CP.7) adopted a set of rules and procedures for the operation of the CDM.

The CDM is generally seen as a success, especially by developing countries. At least it has been crucial for capacity building in developing countries. It is now the world's largest carbon offset market: in 2007, the value of the CDM market totalled €12 billion (Wara and Victor 2008). The CDM has registered over 1,000 projects to date. It is estimated that CDM credits — certified emission reductions (CERs) — will amount to more than 2.7 billion t CO_2- eq in the first commitment period, 2008–2012.[5] More importantly, an ECN[6] study finds that the technical and economic potential for CDM is much larger, depending on a number of other (non-economic) factors such as the eligibility of technologies under the CDM, the future application of the additionality criterion, the success of programmatic CDM and the existence of non-financial barriers related to the uptake of technology (Bakker et al. 2007).

Below addressed are five main areas of concern: regional coverage, performance, scope, additionality, and technology. The first two areas are recognised as barriers to CDM market expansion in developing countries (Ellis and Kamel 2007). The last three areas refer to the factors influencing the potential for CDM to leverage further investment according to the ECN study.

[4] (Article 12).
[5] http://cdm.unfccc.int/about/index.html
[6] ECN, Energy Research Centre of the Netherlands

First, there is heavy concentration in regional coverage. China alone accounts for 53% of expected average annual CERs from registered projects by host party, followed by India (14%), Brazil (9%), and Republic of Korea (6%).[7] These four countries dominate the CDM market at more than 80% share. The question of how to increase the share of Africa, the most under-represented region, in participation has been at centre of discussions under the Nairobi Framework[8] and also addressed in the AWG-KP.

Second, there is a matter of performance, especially in terms of sustainable development benefits and the operation process. The frequent lack of sustainable development benefits is mostly attributed to the market structure of the CDM and the focus on cost-effectiveness of projects in terms of emission reductions (i.e. the tradable unit) rather than on the wider objective of sustainable development (Biermann et al. 2008). A common criticism that current CDM is a pure off-setting mechanism led to a proposal for introducing a discount rate at which part of achieved emission reductions are not fully counted in the values of carbon (Schneider 2007 and 2008). Another issue is the complexity of the bureaucratic process. The CDM operates under the oversight of the CDM Executive Board (EB). The AWG-KP discussion addressed the need to redefine the role of the EB by letting it focus on providing guidance, while reducing its involvement in specific project cases. The discussion also suggested identifying and reducing barriers to projects in countries having only a few projects or none, and simplifying procedures for small-scale project activities in certain host countries.

Third, there is a problem of additionality which refers to emission reductions that would not have occurred in the absence of a CDM project in business-as-usual conditions. However, the additionality of many projects has been contested (Michaelowa and Purohit 2007 in Biermann et al. 2008). The AWG-KP discussion considered possibility for alternative ways to assess the additionality of projects.

Fourth, a number of proposals attempt to respond to the criticism that the current CDM is too narrowly focused on single projects with a relatively large potential to generate credits for real emission reductions which can be certified as additional to baseline. The AWG-KP discussion emphasised the need to broaden the coverage of project activities and suggested moving from a project-based approach to an approach with a stronger focus on programmatic CDM and sectoral CDM. Programmatic CDM increases possibility to register under CDM a set of different activities covering a wide area under a single 'programme' umbrella. The rationale behind it is to enhance the efficiency of the CDM operation process, and increase its applicability as well as the volume of credits. It is also expected to facilitate the access of poorer countries to the CDM, by allowing regrouping single projects, which would be otherwise too small to be commercially attractive. Sectoral CDM establishes a baseline for a whole sector and crediting emission reductions below this baseline, which does not require complex demonstration of additionality. Carbon capture and storage (CCS) (Philibert et al. 2007) and REDD could be recognised as a case of the sectoral CDM. Extending the CDM to tropical deforestation projects (REDD) is unlikely to enter into the final negotiation phase before Copenhagen, as it needs to incorporate the AWG-LCA progress on REDD. In addition, it is possible that implementation of policies and measures will be indirectly rewarded (Schneider 2007) in bottom-up sectoral approaches or Sustainable Development Policies and Measures (SD-PAM).

[7] http://cdm.unfccc.int/Statistics/Registration/AmountOfReductRegisteredProjPieChart.html
[8] http://cdm.unfccc.int/Nairobi_Framework/index.html

Fifth and lastly there is a claim that CDM does not lead to technology transfer. Technology transfer was never meant to be the primary objective of CDM. In addition the operation period of five years (2008-2012) for CDM is too short to achieve the full effect of technology transfer. An ECN study finds that a significant share of projects uses new or improved technologies originated from abroad, and experiences knowledge transfer and capacity building. Development of high-technology industries in emerging economies will likely to contribute to an increase in their share of the CDM market. At the same time projects with technology transfer from non-Annex B to non-Annex B will possibly rise outside CDM (de Coninck et al. 2007)[9].

Land Use, Land Use Change and Forestry (LULUCF)

LULUCF refers to the management and/or conversion of land uses (e.g. forests, croplands and grazing lands) which affect sources and sinks of greenhouse gases. Such activities usually take place in form of deforestation, afforestation and reforestation, land clearing and agriculture. LULUCF activities account for about 20% of anthropogenic GHG emissions with tropical deforestation being the largest contributor (IPCC 2007a) (see also 3.1.3). Articles 3(3) and 3(4) of the Kyoto Protocol Annex I Parties establish the eligibility of different activities related to the LULUCF sector under the Protocol. In addition a decision (16/CMP.1) limits the eligibility of LULUCF projects under the CDM to 'afforestation and reforestation': afforestation is the conversion of land that has not contained a forest for at least 50 years to forested land; reforestation is the conversion of land that was not forested on 31 December 1989 to forested land. Project participants in forestry projects must demonstrate the eligibility of lands that are the project sites. There are other general requirements for validation. Mostly due to the delayed but complicated rules and the non-permanence of credits, afforestation and reforestation CDM projects account for only 0.8% of the total number of projects and 0.3% of total CERs per year[10].

Discussion started on reassessing procedures, extending the list of eligible LULUCF activities. While the AWG-LCA addresses primarily REDD issues and mechanisms for developing countries (see 3.1.3), the AWG-KP concentrates on LULUCF issues as part of Annex I Parties' compliance with possibility to include such activities under the flexible mechanisms (UNDP 2008b). In Accra the AWG-KP further elaborated on 'collecting and clarifying' options for addressing the abovementioned issues. Thus Parties could analyze how the different options affect their national circumstances and narrow down the lists in Poznań[11].

3.1.3 Reduced Emissions from Deforestation and Forest Degradation (REDD)

Tropical deforestation and forest degradation undermine both forests' role of reservoirs (carbon storage) and sinks (removing CO_2 from the atmosphere), at the same time being a main driver for biodiversity loss, water scarcity, soil degradation, and desertification. Reducing deforestation is therefore not only the mitigation option with the largest and most immediate carbon stock impact in the short term globally (IPCC 2007b), but also contributes to adaptation. It is estimated that the opportunity cost of forest protection (e.g. avoiding deforestation) in eight countries accounting for 70% of emissions from land use could amount to $5 billion per year initially, with marginal costs rising over time (Stern 2007).

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[9] Annex B of the Kyoto Protocol lists the maximum amount of emissions that an Annex I country may emit over the commitment period in order to comply with its emissions target.

[10] UNEP Risoe, CDM/JI Pipeline Analysis and Database, 1 November 2008, http://www.cdmpipeline.org/

[11] http://www.iisd.ca/download/pdf/enb12383e.pdf

The COP in Bali agreed to address the above issue as REDD and requested the Subsidiary Body for Scientific and Technological Advice (SBSTA)[12] to undertake a programme of work on methodological issues related to a range of policy approaches and (positive) incentives for REDD (Decision 2/CP13). For consideration of appropriate compensation mechanisms, SBSTA is tasked to study how best to measure current deforestation rates and carbon storage levels in forests, and how to verify emission savings from preservation efforts.

The Poznań session will address both methodological and substantive issues. First, the SBSTA will continue consideration of the outstanding methodological issues related to a range of policy approaches and positive incentives for REDD. The agenda will include recommendations on methodological approaches as well as its 2009 working programme towards finalising methodological aspects[13]. Second, the AWG-LCA, the negotiation body responsible for REDD, will have detailed exchange of views and be more likely to focus on policy designs and financing mechanisms, facilitated by the SBSTA input. Discussion on the actual elements of the overall REDD mechanism will continue until COP 15 in Copenhagen, possibly drawing on experiences from the UN REDD programme launched in September 2008[14].

3.1.4 Financing and development: Mitigation and adaptation

Provision of financial resources is an integral part of the Convention framework. In Article 4.3 of the Convention (commitments), developed countries (Annex I Parties) pledged to provide financial resources to pay for the costs incurred by non-Annex I Parties. Article 11 sets out the definition of financial mechanisms, and Article11.2 of the Kyoto Protocol reiterates Annex I Parties' commitments.

Estimations of the global financing needs for both mitigation and adaptation have recently been brought forward by numerous institutions (UNFCCC, World Bank, Oxfam, UNDP, OIES, Stern Review, Vattenfall, OECD, European Commission and IPCC). These studies are based on different methodologies and are therefore very hard to compare. However, with a certain level of generalisation it may be concluded that average annual global costs could range from €200 billion to €1 trillion or about 0.5 to 2.5% of global GDP. Table 1 presents the totals estimated by the UNFCCC (2007), where costs are based on calculated additional investments to bring global GHG emissions to the levels of 2004 (26GtCO2) by 2030 and to adapt to adverse climatic effects.

[12] The SBSTA is one of the subsidiary bodies supporting the COP/CMP.
[13] http://unfccc.int/methods_and_science/lulucf/items/4123.php
[14] http://www.un.org/apps/news/story.asp?NewsID=28218&Cr=Climate+change&Cr1=

Table 1. Global additional investment and financial flows necessary in 2030 to return global GHG emissions to the 2004 level and for adaptation

	Additional investment (bn EUR/ bn USD)	**Share needed in non-Annex I countries**	**Main driving forces**
Mitigation total	*€161-169/ $200-210*	*46%*	*Transport, buildings, industry and agriculture.*
Adaptation total	*€39-137/ $49-171*	*€23-54/$28-67*	*Infrastructure, AFF, water supply, coastal zones.*

Source: adapted from UNFCCC, 2007. AFF=Agriculture, Forestry and Fisheries.

Depending on the methodology, the EU27 may need to shoulder more than €50 billion a year (up to €200 billion in some estimates) well above the 2009 expenditure estimated around €6.6 billion (Behrens 2008).

With such a large gap between financial need and available resources, questions arise about what mechanisms can be set up to close this gap. Given the scale of the challenges ahead, there is a need to shift investment patterns. As domestic policies and measures are not sufficient on its own, there is expectation for cost-efficiency achieved through international cooperation on investments in low-abatement cost options abroad. Policy tools to facilitate a shift in international investment flows are i) flexible mechanisms (e.g. CDM, JI, and emission trading), ii) the Green Investment Schemes aimed at recycling revenues from sale of surplus assigned amount of units (AAUs) for further emission reductions, iii) sectoral no-lose targets (SNLTs) which benefit developing countries from sale of tradable units for emission reductions without risk of penalty for non-compliance (therefore called 'no-lose' target), iv) crediting for avoided deforestation, and v) multilateral funds. They can be complemented by some innovative policy tools for raising additional revenues. The latter includes auctioning in a cap-and-trade scheme (such as the EU-ETS which is expected to raise revenues from 30 to 50 € billion annually from 2013), proceeds of credit transactions, levies on aviation, a Tobin style tax, a progressive global tax, debt for efficiency and donated special drawing rights.

On the other hand, these revenues are not sufficiently stable or predictable for a clear financial commitment from a developing countries' point of view. As a result, mainly grants but to lesser extent loans and other instruments provided by international financial institutions should remain the principal source of finance for countries with low capacity to raise their own revenues for implementation of policies and measures for mitigation and adaptation to climate change. In order to leverage the funds, developing countries are in favour of grant-oriented public finance, while developed countries argue for public-private partnerships or private investments.

For the post-2012 period it is necessary to develop a functioning finance model, which takes into account the disparity in countries' capacities to cover the costs. Amongst the questions left to answer, the most interesting ones address the link of the revenue base with the polluter pays principle (PPP), whether to earmark revenues, the form and modality of a future fund, and ultimately how to ensure predictability, stability and timeliness of funding (Fujiwara et al. 2008).

Ahead of the Poznań session the AWG-LCA received several proposals for financing actions on mitigation and adaptation as well as development and transfer of technology. Developing countries reiterate that new funding should be grant-based and additional.

3.2 Expectations for Poznań

The UN climate conference in Poznań is halfway on the road from Bali to Copenhagen. The Poznań conference will provide the opportunity to take stock of progress made in 2008 since the Bali conference and switch from discussion to full negotiation mode in 2009. The outcome of the Poznań conference would build a momentum towards an agreed outcome to be reached in Copenhagen. In Poznań Parties are expected[15]:

- To agree on a plan of action and programmes of work for the final year of negotiations after a year of comprehensive and extensive discussions on crucial issues related to future commitments, actions and cooperation;
- To make significant progress on a number of ongoing issues (e.g. capacity-building, REDD, technology transfer and adaptation) needed to enhance further the implementation of the Convention and the Kyoto Protocol;
- To advance understanding and commonality of views on shared vision;
- To strengthen momentum and commitment to the process and the agreed timeline.

The conference will consist of COP14 and CMP4 under the Convention and the Kyoto Protocol respectively. They will take decisions based on reports from subsidiary bodies, SBSTA and Subsidiary Body for Implementation (SBI), as well as working groups, the AWG-LCA and the AWG-KP. In addition the second review of the Kyoto Protocol under Article 9 will take place.

AWG-LCA

The AWG-LCA will continue to address a shared vision with four building blocks, enhanced action in mitigation, adaptation, technology and finance, which forms the key elements of the Bali Action Plan. In addition the working group will hold three in-session workshops: a shared vision for long-term cooperative action; risk management and risk reduction strategies, including risk sharing and transfer mechanisms such as insurance; and cooperation on research and development of current, new and innovative technology. Parties will also discuss in detail proposals on the future financial architecture along with technology and capacity-building.

AWG-KP

The AWG-KP is expected to reach an agreement on the 'rulebook' before taking another look at possible emission reduction targets for developed countries. It is considered that such work will be instrumental for the agreed outcome in Copenhagen in 2009.

The working group has identified a need for further work on specific aspects of elements and options identified on the possible means to reach emission reduction targets and relevant methodological issues (e.g. CDM, JI, emissions trading, LULUCF, sectoral approaches, coverage of GHGs, sectors and sources, and methodological issues). It is expected that such work would develop a clear understanding of the elements and options as well as the implications of implementation for the environmental integrity of the Kyoto Protocol and the carbon market among others. Such an understanding could lead the working group to agree on the rules of implementation of commitments for Annex I Parties for the post-2012 period, then to reach agreement on such commitments. In Poznań the working group was expected to finish the ongoing analysis of and contribution to sustainable development, which is considered to be unlikely due to time constraints (AWG-KP 2008a).

[15] http://unfccc.int/meetings/cop_14/items/4481.php

The group will also consider methodological issues, and information on potential environmental, economic and social consequences. They will then turn to the analysis of mitigation potentials and identification of ranges of emission reduction objectives of Annex I Parties. Finally, the group is expected to kick-off discussions on further commitments by Annex I Parties.

The second review of the Kyoto Protocol

Article 9 of the Kyoto Protocol requires a periodic review of the Protocol in the light of the best available scientific information on climate change and its impacts as well as relevant technical, social and economic information. Elements identified for review include issues related to the scope and effectiveness of the flexible mechanisms such as the capacity of Parties to participate in the CDM.[16] The CMP in Poznań will respond to the requirement for the second review, following the pre-sessional UNFCCC workshop on this issue in Athens in October 2008.

3.3 A likely US position after elections

On 4 November 2008 Barack Obama and Joe Biden were elected for President and Vice-President of the US respectively.

US presidential candidates, Senators Obama (Democrat) and McCain (Republican) have made *climate policy* a point of departure from the Bush administration. This reflects the fact that the climate change debate also at federal level has considerably shifted. Then Senator and now President-elect Obama backs an 80% reduction in US emissions from 1990 levels by 2050. There is however a conspicuous absence of short-term or medium-term targets in the political discussion, reflecting the difficulty to get legislation though Congress. Generally speaking, various proposals that are pending before Congress could translate into reductions of around 15% below 2005 levels by 2020. At first sight this is close to what the EU will be doing under its own target (Diringer 2008) but disregarding early action based on the 1990 baseline. But even such medium-term target appears to be ambitious to get adopted.

Support from Congress and especially the Senate will be pivotal for US participation in an international climate agreement. The US will be unlikely in a position to agree to a specific emissions target before Congress enacts (or is on the verge of enacting) legislation setting firm limits on US emissions (Diringer 2008). Although it is difficult to speculate at this stage, such enactment may be still years away. Despite the majority support of the Senate, at least two major concerns have become a formidable obstacle to a cap-and-trade programme. One is cost containment of a cap-and-trade scheme, i.e. how to limit the cost of the programme without eroding its environmental effectiveness. Such costs refer to the impact of CO_2 prices on final consumer and industry energy prices. Another is a level-playing field argument with China and other emerging economies. There is an intensive debate on border measures on developing countries' imports unless they take legally binding commitments. The Senate's position towards emerging economies seems to evolve however. For example, the Biden/Lugar resolution[17] (June 2008) allows for some flexibility in the types of actions and commitments for developing countries as long as they are legally binding.

[16] Some papers are prepared for the second review of the Kyoto Protocol pursuant to Article 9: UNFCCC (2008a, 2008b).

[17] S. Res. 30 as amended SA4836

The US House and Senate debates are likely to advance enough to allow the country to agree to an international framework that lays out the key architecture of a future climate treaty at the COP15 in Copenhagen in 2009 but not necessarily targets. Most likely, there will in the end need to be big bi-partisan support for both domestic legislation and ratification of an international agreement. The Democrats would like to see any serious climate change policy and a ratification of a climate treaty be adopted with bi-partisan support in order not to be vulnerable to criticism that the Democrats put additional undue pressure on the US economy in a time of an economic downturn.

Still, with the start of the new presidential term in January 2009 the EU will have a more engaged partner for global climate action in the US. The new President Obama and the new Congress are expected to push for a mandatory domestic cap and trade scheme. But this may take years to come into operation. In addition, the US is very unlikely to assume a binding international commitment unless a new international agreement also provides for some binding measures by the emerging economies. Most importantly, it will be interesting to see whether and when (e.g. in 2020) the Obama administration will accept the principle of absolute reduction targets for developed countries and whether it will first build a domestic consensus. If it does not, it will be hard to see how the US could become a leader again in climate change.

3.4 How can the European Parliament positively contribute?

COP14 in Poznań offers the last major opportunity for Members of the European Parliament (MEPs) to informally and formally exchange ideas about a future international agreement, explain EU (EP and non-EP EU) positions to the outside world and pass crucial EP messages.

With great certainty, one major focus of COP14 will be the "US after the elections". Pending the appointment of crucial jobs in the new administration, the new President will be represented by a "transition team", i.e. consisting of those that have laid out the broad policy lines during the campaign and those who may play a future role in the new administration. This transition team will be able to outline the broad policy agenda on climate change and possible priorities of the new administration. The team will be predominantly occupied with "getting into gear". Nevertheless we should expect it to be open to suggestions and discussion with the international negotiation partners including the US.

In addition, key politicians or at least their staff from Congress (both Senate and the House of Representatives) will most likely be present in Poznań in rather large numbers. The Congress position will be likely more important for a future global climate change deal than the US government's international negotiation position. It is generally assumed that the priority of Congress and the new US president will be given to the domestic agenda, i.e. adopting a domestic cap-and-trade regime.

We should also expect that numerous think tanks and research institutes will present analysis on, proposals for and recommendations on the transatlantic dimension of global climate change negotiations.

Another focal point of COP14 will be strategies of how to engage emerging economies in a future climate change agreement.

As to discussions with the US, the topic of most interest to US counterparts is how to deal with costs containment of a cap-and-trade programme. The challenge is, learning lessons from the EU ETS, how the EU and the European Parliament (EP) approach this politically sensitive issue. The second most important topic is concerned with off-sets and the CDM. Key issues here could be to discuss measures to improve the environmental performance of the CDM and maintain its quality, and to recognise the importance of the future CDM for engagement of developing countries in a future agreement.

Moreover the CDM and off-sets in general are tools to reduce overall compliance costs in developed countries and ultimately are essential to achieve price convergence between two different emissions trading schemes, e.g. the EU-ETS and a future US cap-and-trade scheme. This leads to the third topic, linking of emissions trading schemes. Most likely such linking will only happen if there is strong political will. Fourth, the EP, which consistently has argued for a 30% EU reduction target by 2020, should engage US Congress in a discussion on how to make and meet more stringent commitments. Fifth, we can expect convergence of EU and US positions on assistance for adaptation of developing countries and on REDD. Sixth, differences on LULUCF are most likely to persist. Finally, it would be helpful to engage the US Congress in a discussion on the future finance architecture.

As to developing countries, the main topics would be assistance for adaptation, payments for REDD, the future of the CDM and the finance architecture. The EP has played and is still playing a very active role in all of these issues and generally, being supportive to developing countries concerns. This should be the basis for an active dialogue with developing countries regarding these four themes.

Finally, a major topic throughout COP14 will be technology. Current EU discussions on CCS, notably the legal framework and how to finance demonstration projects could be instructive for the EU's negotiation partners.

Against this background, the following recommendations can be made in that order of priority:

- At least one informal exchange of views between the US transition team and MEPs;
- At least one informal exchange of views between Members/staffers of Congress and MEPs. Note that it might be necessary to hold separate meetings with representatives from the Senate and the House;
- A joint public meeting between Members/staffers from Congress and MEPs to identify and articulate "similarities and differences" between the EU and the US and notably between the parliamentarians from the two regions. The meeting could potentially be open to other representatives from Canada and Mexico;
- MEPs could think about holding informal or formal meetings with representatives (and parliamentarians, if present) from emerging economies. Should such meetings happen, the EP delegation could think about opening it to other OECD countries;
- There will be value-added for MEPs to explain EU political discussions in relation to the Climate and Energy Package, especially but not exclusively to developing countries. Particularly interesting areas could be topics with international reach such as the finance architecture of climate change including the use of revenue from auctioning in the EU ETS, the CDM ceiling, REDD and adaptation.
- A salient issue will be CCS, the legal framework and how to finance demonstration projects. A briefing on EU discussions could be informative for COP14.
- Finally, MEPs could reinforce some of the key EU messages such as the long-term and short-term targets, the urgency of action, and financial as well as fiscal implications.

4. Upcoming COP/CMP meeting in Copenhagen (December 2009)

4.1 The road from Poznań to Copenhagen

AWG-LCA

The AWG-LCA intends to advance negotiation on all elements of the Bali Action Plan in a comprehensive way. The working group will organise its work accordingly, limiting any in-session workshops planned in 2009 to clarification of issues that will form part of the outcome to be agreed at COP15 in Copenhagen (AWG-LCA 2008b). Parties are requested to put forward further proposals on the content and form of the agreed outcome in order to review and assess the scope and progress of the negotiation at the sixth session of the AWG-LCA in June 2009. Some topics for workshops at the fifth session (early 2009) have been identified: measurable, reportable and verifiable nationally appropriate mitigation commitments or actions by all developed country Parties; nationally appropriate actions by developing country Parties supported and enabled by technology, financing and capacity-building in a measurable, reportable and verifiable manner; economic and social consequences of response measures; and opportunities and challenges for mitigation in the agricultural sector (AWG-LCA 2008b).

AWG-KP

Parties are requested to submit any draft texts for proposed amendments to the Kyoto Protocol at least six months before (i.e. June 2009) the CMP5 due in Copenhagen at the end of 2009 (AWG-KP 2008b).

The AWG-KP will be likely to continue some specific work on the means to reach emission reduction targets and relevant methodological issues in 2009. They are encouraged to take into account, as it considers further commitments for Annex I Parties, analysis of means to reach such targets, relevant methodological issues, and analysis of mitigation potentials and identification of ranges of emission reduction objectives. The working group is expected to advance its work and reach a conclusion relating to further commitments for Annex I Parties under the Kyoto Protocol. In addition the working group may consider the need for further work on potential environmental, economic and social consequences, including possibility for holding a workshop in 2009 (AWG-KP 2008c).

4.2 Expectation for Copenhagen

The Bali Roadmap sets out a goal of the agreed outcome to be concluded in Copenhagen at the end of 2009. The two main outstanding questions are possibilities for US and emerging economies to take up binding emission reduction commitments. The US situation has been assessed in 3.3. This section concentrates on developing countries.

The EU Environment Council[18] noted findings of recent scientific research that developing countries as a group, in particular the most advanced among them, would have to reduce their emissions by 15-30% below business as usual in order to be consistent with the EU objective of staying within the two degrees threshold (the Council of European Union 2008).

[18] The EU Environment Council meeting was held in preparation for the Poznan conference on 20 October 2008. See also, S. Dimas, 'Climate change: International and EU action', speech at the Climate Change Conference, Prague, 31 October 2008.

Developing countries are more diverse now than at the time of designing the Kyoto Protocol. Among developing countries each group of countries has its own priority, its preference for the type of actions and the method of crediting such actions in tradable units. For Africa the mitigation challenge would be 'avoiding emissions' rather than 'emission reductions' (van Schalkwyk 2008)[19]. Their uptake of future CDM would be relatively small. Their immediate priority goes to adaptation to impacts of climate change, which is shared by other LDCs and SIDs. Another priority for Africa is poverty reduction which should go hand in hand with avoided deforestation and consequently halting desertification. For energy-scarce countries regardless of stages of development a priority would be to reduce dependency on imported fossil fuel through energy efficiency improvements, and for those with non-fossil fuel resource endowments to introduce low-carbon technology either on its own or with support from advanced economies. OPEC countries may gradually realise the merit of reducing dependence on oil production and diversifying the structure of economy. Lastly, for emerging economies, the challenge would be to decouple energy consumption from GDP growth, and leap-frog fossil-fuel based economy on the way to low-carbon economy with aid of advanced clean technology and support for capacity-building. In future there will be even possibility for so-called south-south cooperation, replicating successful models of energy efficiency improvements in emerging economies to other developing countries.

Such diversity has been reiterated by the EU Environment Council: economically more advanced developing countries should contribute adequately according to their responsibilities and capabilities; the least developing countries should not be subject to obligatory emission constraints; and the nature and the level of ambition of measurable, reportable and verifiable nationally appropriate mitigation actions by developing countries will differ between countries and sectors (Council of the European Union 2008).

Developing economies started showing flexibility in Bali as Chapter 1 illustrates while some emerging economies such as China and South Africa are taking concrete steps for mitigation and are capable of strengthening their actions (Hedegaard 2008).[20]

Ultimately the Copenhagen agreement should be able to accommodate diversity among developing countries not only in terms of economic capability, natural resource endowments, and vulnerability to impacts of climate change but also in terms of topics of their priority ranging from technology to adaptation. On the other hand, the Copenhagen agreement should clearly indicate a shared vision with a level of ambition, and send a strong signal from joint leadership of all major economies to the market, business, scientists, and citizens. Stakeholders of carbon markets are most interested in the strength of the signal needed for investments in low-carbon technology in the coming decades. Differentiation in allocation of assigned amounts would be politically significant. Scientists are also watchful about the reaction of negotiators to their call in the IPCC fourth assessment report and concerned with the overall level of commitments and pledges for actions from all major economies.

[19] M. van Schalkwyk is Minister of Environmental Affairs and Tourism, South Africa.

[20] C. Hedegaard is Danish Minister for Climate and Energy. See also, S. Dimas, 'Climate change: International and EU action', speech at the Climate Change Conference, Prague, 31 October 2008.

5. Recommendations and conclusions

This briefing has illustrated the progress in the Bali Action Plan, the likely US position after elections, and some expression of flexibility on the part of emerging economies in both UN-based discussions and concrete domestic actions. Given a generally positive change in negotiating environment as such, MEPs are recommended to arrange exchange of views and information in Poznań. The three options in order of priority include at least one informal exchange of views between the US transition team and MEPs; at least one informal exchange of views between members or staff from Congress and MEPs; and a joint public meeting between members or staff from Congress and MEPs.

The Poznań conference is halfway on the road from Bali to Copenhagen. At this stage it is reasonable to note at least two points on what agreement can be expected in Copenhagen. First, such an agreement should be able to accommodate diversity among developing countries not only in terms of economic capability, natural resource endowments, and vulnerability to impacts of climate change but also in terms of topics of their priority. Second, the Copenhagen agreement should indicate a shared vision with the level of ambition, and send a strong signal from joint leadership of all major economies to the market, business, scientists, and citizens. Further understanding about diversity and a shared vision would help to create an enabling environment and mutual trust both needed for year-long intense negotiations ahead.

List of abbreviations

AAU	Assigned Amount of Units
AWG-KP	Ad-hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol
AWG-LCA	Ad-hoc Working Group on a Long-term Cooperative Action Plan
CCS	Carbon Capture and Storage
CDM	Clean Development Mechanism
CER	Certified Emission Reductions
CO_2	Carbon dioxide
COP	Conference of the Parties
COP14	14th Conference of the Parties
COP15	15th Conference of the Parties
CMP	Conference of parties serving as the Meeting of Parties to the Kyoto Protocol
EB	Executive Board
EU	European Union
EU-ETS	EU Emissions Trading Scheme
FCCC	Framework Convention on Climate Change
GHG	Greenhouse gases
IPCC	Intergovernmental Panel on Climate Change
JI	Joint Implementation
LDC	Least Developed Countries
LULUCF	Land Use, Land Use Change and Forestry
SNLT	Sectoral No-Lose Target
PPP	Polluter Pays Principle
REDD	Reducing Emissions from Deforestation in Developing countries
SBI	Subsidiary Body for Implementation
SBSTA	Subsidiary Body for Scientific and Technological Advice
SD-PAM	Sustainable Development Policies and Measures
SID	Small Island Developing States
UN	United Nations
UNFCCC	United Nations Framework Convention on Climate Change

Bibliography

AWG-LCA, 2008a, 'Report on the workshop on cooperative sectoral approaches and sector-specific actions, in order to enhance implementation of Article 4, paragraph 1(c), of the Convention: Summary by the chair of the workshop', Third session, UNFCCC, Accra, held on 21-27 August, published on 25 August.

AWG-LCA, 2008b, 'Report of the Ad Hoc Working Group on Long-term Cooperative Action under the Convention on its third session, UNFCCC, held in Accra from 21 to 27 August 2008', 30 September.

AWG-KP, 2008a, 'Information on the work of the Ad Hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol in accordance with decision 4/CMP.3, paragraph 10', Note by the secretariat, UNFCCC, 7 October.

AWG-KP, 2008b, 'Report of the Ad Hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol on the first part of its sixth session, held in Accra from 21 to 27 August 2008', UNFCCC, 29 September.

AWG-KP, 2008c, 'Information on the work of the Ad Hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol in accordance with decision 4/CMP.3, paragraph 10'; UNFCCC, Ad Hoc Working Group on Further Commitments for Annex I Parties under the Kyoto Protocol, Sixth session, Accra, 21-27 August 2008 and Poznan, 1-10 December 2008, 'Agenda and annotations', Note by the Executive Secretary, UNFCCC, 1 October.

Bakker, S.J.A. et al. 2007, 'Carbon credit supply potential beyond 2012: A bottom-up assessment of mitigation options', ECN, Point Carbon, ECOFYS, ECN-E-07-090.

Behrens, A. 2008, 'Financial impacts of climate change: What scale of resources is required?' ECP Report No.6, October.

Biermann, F. et al. 2008, 'Climate Governance Post-2012: Options for Policy-Making', ADAM-CEPS Policy Brief, draft, October.

Council of the European Union, 2898th Environment Council meeting, Luxembourg, 20 October 2008, 'Council conclusions on preparations for the 14th session of the Conference of the Parties (COP14) to the United Nations Framework Convention on Climate Change (UNFCCC) and the 4th session of the Meeting of the Parties to the Kyoto Protocol (CMP4) (Poznań, 1 to 12 December 2008)'

de Coninck, H.C. et al. 2007, 'Technology transfer in the Clean Development Mechanism', ECN-E-07-009, January.

Diringer, E. 2008, 'The U.S. election and prospects for a new climate agreement', Transatlantic Climate Policy Group, Heinrich-Böll-Stiftung, Washington, D.C., 22 October.

Egenhofer, C. and N. Fujiwara, 2008, 'Global sectoral industry approaches to climate change: The way forward', Centre for European Policy Studies, Brussels.

Ellis, J. and S. Kamel, 2007, 'Overcoming barriers to Clean Development Mechanism projects', OECD/IEA, May.

Fujiwara, N., A. Georgiev and C. Egenhofer, 2008, 'Where should the funds come from and how should they be delivered?' ECP Report, No.7, October.

Hedegaard, C. 2008, 'Negotiating a new international response to climate change' speech at the London School of Economics, 1 October.

International Institute for Sustainable Development (IISD), 2007, *Earth Negotiations Bulletin*, COP/MOP3, Final, 18 December.

IPCC, 2007a, *Climate change 2007: The physical science basis.* Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, New York, IPCC.

IPCC, 2007b, *Climate change 2007: Mitigation options.* Contribution of Working Group III to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change, New York, IPCC.

Philibert, C. et al. 2007, 'Carbon capture and storage in the CDM', OECD/IEA, December.

Schneider, L. 2007, 'Is the CDM fulfilling its environmental and sustainable development objectives? An evaluation of the CDM and options for improvement', Report prepared for WWF, Öko-Institut, Discussion paper, November.

Schneider, L. 2008, 'A Clean Development Mechanism (CDM) with atmospheric benefits for a post-2012 climate regime', Discussion Paper, Berlin, September.

Stern, N. 2007, 'The Stern review on the economics of climate change', Cambridge: Cambridge University Press.

UNDP, 2008a, 'The Bali Action Plan: Key issues in the climate negotiations: Summary for policy makers', An Environment & Energy Group Publication', September.

UNDP, 2008b, 'Key issues on land use, land use change and forestry (LULUCF) with an emphasis on developing country perspectives', September.

UNFCCC, 2007, 'Investment and financial flows to address climate change', background paper, http://unfccc.int/cooperation_and_support/financial_mechanism/items/4053.php

UNFCCC, 2008a, 'Synthesis of views from Parties on ways and means to enhance equitable regional and subregional distribution of projects under the clean development mechanism, and on how the current institutional arrangements, governance, rules and procedures of the clean development mechanism and joint implementation may be improved in the first commitment period in order to enhance the functioning and effectiveness of these mechanisms', Note by the secretariat, 17 October.

UNFCCC, 2008b, 'Compilation and analysis of available information on the scope, effectiveness and functioning of the flexibility mechanisms under the Kyoto Protocol', Note by the secretariat, 16 October.

van Schalkwyk, M. 2008, 'Africa's climate roadmap: From Johannesburg through Africa to Copenhagen', *CLIMATE-L.ORG Bulletin,* No.5, 5 September.

Wara, M. W. and D. G. Victor, 2008, 'A Realistic Policy on International Carbon Offsets', Stanford University Program on Energy and Sustainable Development, Working Paper #74, April 2008 - http://iis-db.stanford.edu/pubs/22157/WP74_final_final.pdf