

Editorial

Dear reader,

Reaching its peak in December with the UN Climate Change Conference in Bali, 2007 was an extremely active year in climate policy terms. In this issue, we focus on decisions that affect the Kyoto Protocol's CDM/JI project-based mechanisms and outline the most significant outcomes regarding climate change 'post 2012', i.e. the future of the climate change regime beyond the first Kyoto commitment period. At the Bali conference, the world's developing countries and emerging economies agreed for the first time to cut their greenhouse gas emissions. However, the degree of bindingness and the exact amounts are yet to be determined.

Prior to the conference, the Wuppertal Institute, on behalf of the Federal Environmental Agency (UBA), worked with a number of other organisations to assess how emerging economies might be integrated into the climate regime. The findings of the study are presented in this issue of JIKO Info.

On behalf of the entire editorial team, may I wish you an interesting and informative read and a successful 2008.

Christof Arens

JIKO Report

Enhancing the CDM and JI Mechanisms

At the climate change conference in Bali, the main issue on the table was whether the Parties could agree to begin in-depth negotiations on an international climate change agreement for the period beyond 2012. After long and difficult talks, especially with the US, agreement was finally reached late on the Saturday afternoon just before the conference closed (see article Bali Action Plan Paves the Way for KyotoPlus Agreement in 2009 elsewhere in this issue). The Clean Development Mechanism and Joint Implementation mechanisms received less attention from policymakers but sparked great interest among the specialist public. The project approval process is to be made more transparent and efficient, and project quality assurance is to be enhanced. The Parties reached a good compromise on baseline setting and monitoring methodologies for non-renewable biomass projects and on redefining small-scale afforestation and reforestation projects. No progress was made, however, on the issues of integrating carbon capture and storage (CCS) projects into the CDM and destruction of HFC 23 in new facilities.

The decision on the CDM takes in a range of critical issues concerning its steering and management that had already attracted public attention and sparked criticism ahead of the conference. First and foremost, the **deficits revealed** for example **by an Öko-Institut study on CDM project certification performed by independent experts** are to be avoided in the future by introducing new, clearer guidelines. The CDM Executive Board is expected to present its first draft of the new guidelines by the end of January. The requirements concerning the additional assessment for CDM projects will be more clearly defined by adding case studies and by revising and improving the existing criteria.

Continued on page 2

Contents

- ▶ Enhancing the CDM and JI Mechanisms
- ▶ Bali Action Plan Paves the Way for KyotoPlus Agreement in 2009
- ▶ Proposals for Greater Integration of Emerging Economies into the Climate Change Regime

JIKO Report

Bali Action Plan Paves the Way for KyotoPlus Agreement in 2009

Twenty-four hours later than originally planned, the UN Climate Change Conference in Bali ended on 15 December 2007. Following difficult talks, delegates finally agreed the cornerstones of a new international climate change regime. They were also able to set in motion a formal negotiation process to be concluded in 2009 that will result in the adoption of a post-2012 agreement to cover the second Kyoto Protocol commitment period. JIKO Info reviews the key outcomes of the Bali Action Plan and other significant decisions made at the conference.

Continued on page 4

JIKO Report

Continued from p. 1

A view of the plenary hall during the twenty-seventh session of the Subsidiary Body for Implementation (SBI).

Photo courtesy of IISD/Earth Negotiations Bulletin



Decisions made by the CDM Executive Board are to be justified in greater detail, the aim being to make the approval requirements for projects and methodologies more transparent and provide greater planning certainty for project developers.

The CDM Executive Board and the Conference of the Parties have taken two years to agree on

how to treat CDM projects that involve ways of substituting **wood-fired cooking practices that use wood from non-sustainable forest management**. The main issue is that many women in developing countries tend to gather more wood, either from the undergrowth or in the form of small branches and young trees, than is able to grow in its place. This is not only inefficient and a cause of unnecessarily high

The Bali International Conference Centre, venue of the UN Climate Change Conference in December.

Photo: Wuppertal Institute



JIKO Report



Luisa Rölke

is an economist and has worked at the German Environment Ministry since 1999. She initially worked in the International Climate Protection Division. Her work largely focused on the flexible mechanisms and the post-2012 climate regime. On 1 January 2008, she took up a position in the newly-created Climate Protection Initiative Division.

levels of greenhouse gases, it is also harmful to human health. With the newly agreed methodologies, CDM projects are now allowed that either replace inefficient wood-burning stoves with efficient ones or involve a switch to cooking with renewable energy sources (e.g. solar cookers and biogas units). This project category will be of great benefit in achieving sustainable development and is especially interesting for least-developed countries, particularly in Africa, that have as yet been only marginally involved in the CDM.

Another negotiation item involved the **definition of small-scale afforestation and reforestation projects under the CDM**. At the climate conference in Nairobi, the Latin American countries of Chile, Bolivia, Columbia and Paraguay had called for a significant increase in the threshold that defines a small-scale project and allows a simplified approval procedure to be used. With the Bali decision, the carbon sequestration threshold was raised from 8 to 16 kilotonnes CO₂-equivalent per year – the main aim being to promote implementation of small-scale projects that target low-income rural populations.

No significant progress was made on the issue of whether and under what conditions **carbon capture and storage (CCS)** projects should be included in the CDM portfolio. While the EU, Canada, Norway and particularly the OPEC countries want to work apace to produce environmental standards for CCS projects carried out under the CDM, Brazil and the Alliance of Small Island States vehemently reject the idea of creating a new project category for CCS projects because they believe the technology is not sufficiently mature. Thus, the decision reached on this particular subject is a purely procedural one designed to aid further negotiations at the twenty-eighth session of the Subsidiary Bodies (SB) in Bonn this coming June. The Climate Change Secretariat will be issuing a synthesis report based on existing statements and position papers. The Contracting Parties may request that items not already addressed be included in the report.

The delegates were also unable to reach any substantial agreement in their negotiations on the **destruction of HFC 23**, a greenhouse gas which occurs as a byproduct in the production of the ozone-destroying gas HCFC 22. Used as a coolant in refrigerators and air conditioning units, HCFC 22 is regulated by the Montreal Protocol on Substances that Deplete the Ozone Layer. As in previous years, the subject of approving CDM projects that involve the destruction of HFC 23 in new HCFC 22 production facilities sparked heated debate. Given that the income accrued from such projects would be significantly higher than the costs involved in producing HCFC 22, their approval under the CDM could serve as a huge incentive to step up its production. This would have adverse effects on both the climate and the ozone layer. This potential risk was the main reason for Brazil and the EU rejecting the idea. China, the biggest producer of HCFC 22, wants to use the CDM for new facilities. Negotiations on this issue are to continue at the twenty-eighth session of the Subsidiary Bodies in May.

JI coming into its own

The JI Supervisory Committee (JISC) report highlighted the fact that JI projects are coming into their own. Some 100 projects are now passing through the JI Second Track approval procedure. The latest and very welcome development is that in future, the Climate Change Secretariat will publicise all projects – including JI First Track projects. This will make the JI mechanism more transparent overall. Negotiations on this agenda item were professional and target-oriented. The JISC report and management plan were adopted. Costs are not expected to be covered by fees until 2010, meaning that the Parties must continue to make voluntary contributions to fund the JI mechanism. Franzjosef Schafhausen, a section head at the German Environment Ministry, was again elected as an alternate member of the JISC.

Luisa Rölke,
Federal Environment Ministry

JIKO Report

Bali Action Plan Paves the Way for KyotoPlus Agreement in 2009

Continued from p. 2

Both the industrialised nations and the developing countries aim to step up their efforts in climate change mitigation. One of the key outcomes of the Bali conference, this involves a two-pronged negotiation process in the form of two separate ad hoc working groups in which the Parties to the UN Framework Climate Change Convention (UNFCCC) and the Kyoto Protocol will negotiate targets and measures for a new international climate change agreement.

The **Parties to the UNFCCC** adopted the Bali Action Plan in which the industrialised nations, including the US, commit to far more stringent climate change targets and measures. These efforts must be 'measurable, reportable and verifiable' and include quantified targets for the industrialised nations to limit and reduce greenhouse gas emissions. The targets must be based on IPCC findings. Although the actual wording of the Action Plan makes no explicit reference to the IPCC's recommended reduction corridor of between 25 and 40 percent compared with 1990 levels, it is referred to in a footnote. The plan also requires developing countries to 'consider nationally appropriate mitigation actions in the context of sustainable development'. This marks the first occasion on which developing countries have declared their willingness to engage in far-reaching measures to limit greenhouse gas emissions.

The negotiations in this part of the process will be continued by the newly-formed Ad hoc Working Group on Long-Term Cooperative Action under the Convention which is expected to hold its first meeting in spring 2008.

The Parties to the **Kyoto Protocol** adopted both a roadmap setting out a range of specific objectives and a decision that explicitly refers to the IPCC report in which industrialised nations are required to cut emissions by between 25 and 40 percent by 2020. The Kyoto Ad hoc Working Group will meet in parallel to the UNFCCC Ad hoc Working Group.

Another key issue discussed at the conference involved **technology transfer**. The respective decision calls for 'nationally appropriate mitigation actions by developing country Parties in the context of sustainable development, supported and enabled by technology, financing and capacity-building, in a measurable, reportable and verifiable manner'. This support for developing countries, who have historically played only a marginal role in the causes of climate change, was largely called for by China and India.

The Parties also adopted a decision on the **Adaptation Fund** which is designed to assist developing country Parties that are particularly vulnerable to the adverse effects of climate

Talks between EU and Chinese delegates.

Photo courtesy of IISD/Earth Negotiations Bulletin



JIKO Report

COP President Witolaer (2nd from left) in talks with Yvo de Boer, Executive Secretary of the UN Climate Change Secretariat (2nd from right) and others.

Photo courtesy of IISD/Earth Negotiations Bulletin



change in meeting the costs of adaptation. The fund is fed from the monetarisation of certified emission reduction certificates (CERs) accrued from CDM projects. Another key decision prescribes that **deforestation** be made an integral part of the new international climate change regime.

With the decisions made at the Bali conference, the international community now has a good basis on which to build over the next two years and facilitate the adoption of a comprehensive climate change agreement in 2009 to cover the second Kyoto commitment period from 2012. The conference sent out encourag-

The impact of the Bali conference on the carbon markets will be analysed in the next issue of JIKO-Info, when the main point of focus will be the state of the carbon markets at the start of the first Kyoto commitment period and the outlook for CDM/JI projects post-2012.

ing signals to the carbon markets, especially as regards the inclusion of developing countries in future emissions reduction activities.

CA

UN Secretary General Ban Ki-moon and Indonesian President Susilo Bambang Yudhoyono and with UNFCCC Executive Secretary Yvo de Boer and Australian Prime Minister Kevin Rudd. Australia signed the Kyoto Protocol on the first day of the conference.

Photo courtesy of IISD/Earth Negotiations Bulletin



JIKO Analysis

Proposals for Greater Integration of Emerging Economies into the Climate Change Regime

The Climate Change Conference in Bali signalled a decisive phase in the negotiation process on the future of the climate change regime (see article **Bali Action Plan Paves the Way for KyotoPlus Agreement in 2009** elsewhere in this issue). One of the key issues under discussion will be how large emerging economies can play a greater role in climate change mitigation. As yet, it remains unclear as to how and to what extent these countries can contribute towards reducing greenhouse gas emissions and the kind of support they would need to do so. On behalf of the German Federal Environmental Agency (UBA), Ecofys and the Wuppertal Institute looked at the potential for and possible measures towards climate change mitigation in six big emerging economies. The findings were used to draw up a set of proposals on how to integrate these countries into the post-2012 regime. In the following, the JIKO Info team summarises the key findings.

The Final Report on the South-North Dialogue is available online at: www.wupperinst.org/de/projekte/proj/uploads/tx_wiprojekt/1085_proposal.pdf

In conducting their research, Ecofys and the Wuppertal Institute looked at the situation in Brazil, China, India, Mexico, South Africa and South Korea. The main aims of the study were to:

- Assess future emission trends and the potential for emission reductions in the countries in question. Four different scenarios were used for the purpose (see Box).
- Draw up a set of proposals for national policy measures to mobilise reduction potential.
- Draw up a set of proposals on how the countries covered by the study can be integrated into the post-2012 regime and how they can be supported by industrialised nations.

When drawing up the proposals on how the countries studied can be integrated into the post-2012 regime, the key reference points were the criterion of ecological adequacy

Four different emissions scenarios were used:

The **business as usual (BAU) scenario**: Development according to current trends without any additional climate change measures.

The **'no regrets' scenario**: Mitigation options that involve no direct costs or with favourable cost-benefit ratios, e.g. energy efficiency measures.

The **co-benefit scenario**: Low-cost mitigation options that offer additional benefits such as improved air quality.

The **ambitious scenario**: Technically practicable mitigation options up to a price of around USD 100/t CO₂. As no detailed economic analysis was conducted, the costs could be below this amount depending on the assumptions worked on.

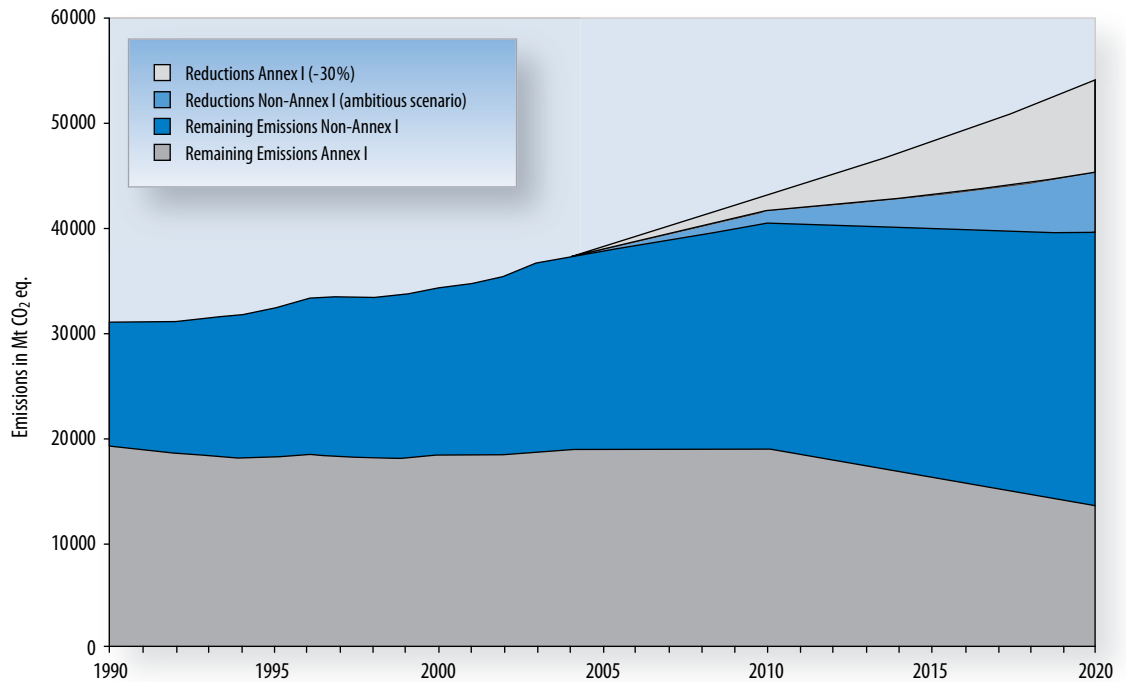
(achieving the 2° Celsius target) and targeted differentiation according to prevailing national conditions. Based on the methodology used in the **'South-North Dialogue on Equity in the Greenhouse'**, this involved three criteria: level of responsibility for causing climate change on grounds of historical emissions, economic capability and mitigation potential.

The research team found that all six countries included in the study possessed great mitigation potential: In the BAU scenario, the combined emissions of all six countries in 2020 amounted to 18.4 Gt CO₂-equivalent. This compared with 16.8 Gt in the 'no regrets' scenario, 15.6 Gt in the co-benefit scenario and as little as 12.6 Gt in the ambitious scenario – more than 30 percent lower than the BAU result.

All the countries studied are already operating a wide range of policies and measures aimed at reducing emissions. These could be further enhanced and broadened relative to prevailing conditions in an effort to mobilise the identified emissions reduction potential.

JIKO Analysis

Global greenhouse gas emissions and reduction scenarios for Annex I states (-30%) and non-Annex I states.



Source: Wuppertal Institute/ Ecofys

The research team sees room for improvement in the following areas:

- Withdrawal of energy subsidies and taxation of fossil fuels, with parallel compensation for consumers by means of support in energy-saving activities, e.g. grants for home insulation and purchase of low-energy appliances.
- Feed-in tariffs for renewables-generated electricity, similar to the schemes already in operation for example in Germany and some Indian states.
- Direct financial aid for energy efficiency measures and for generation of heat and cooling using renewable energy sources, e.g. creation of a revolving fund to support energy efficiency measures in industry and trade.
- Introduction of new or tightening up of existing statutory energy efficiency standards for buildings, appliances and facilities.
- Greater financial support for public transport.

In drawing up the proposals on how the countries in question could be integrated into the international climate change regime, the research team estimated the emission reductions that would be needed to keep the global average temperature rise below 2° Celsius, as aimed for by the EU (see figure). The esti-

mate initially assumes that the industrialised nations will reduce their domestic emissions by 30 percent by 2020 compared with 1990 levels, i.e. without purchasing additional emissions allowances. In this case, to stop an overall rise in emissions during the coming decade, as called for by the IPCC, nearly all the 'ambitious' potential would have to be mobilised in the emerging economies covered by the study. In all other scenarios, overall emissions would continue to rise.

On this basis, the research team developed two options:

A) A reduction in national emissions of 30 percent in industrialised nations and ambitious net contributions by emerging economies, meaning actual reductions that do not merely facilitate higher emissions in the industrialised nations as with the existing CDM. These contributions would be made possible through provision of considerable direct financial and technical support by industrialised nations to cover the higher costs faced by the emerging economies when compared with the BAU scenario.

B) Less-ambitious contributions by emerging economies at the level of the co-benefit potential. However, to achieve the emission reductions needed to meet the 2° Celsius

JIKO Analysis

Solar-thermal power stations harbour huge potential for environmentally and economically sustainable energy supply. This technology has now reached a level of market maturity that makes it an attractive project option for CDM use.

Source: Photodisc



The Final Report on the project, Proposals for Contributions of Emerging Economies to the Climate Regime under the UNFCCC post 2012, will be published on the Federal Environmental Agency (UBA) website once the study has been completed.

target, the industrialised nations would have to agree to cut their emissions by 45 percent. The additional 15 percent could be achieved through further domestic reductions in those countries or through mobilisation of ambitious potential in the emerging economies by means of international emissions trading activities.

In its proposals regarding the form of the obligations that the emerging economies could reasonably take on, the research team used the South-North Dialogue methodology to differentiate between the prevailing development status in the countries concerned:

→ An obligation to implement **sustainable development policies and measures (SD PAMs)** for economically less-developed countries such as India. SD PAMs are policy

measures that largely focus on sustainable development but which are also of benefit in climate change terms. These could include housing construction programmes that result in energy-efficient buildings and electrification using renewables-generated power. Activities of this kind would not generate emissions allowances.

- **Non-binding sectoral and national emissions targets** for countries with stronger economies. This proposal, also known as 'no lose' targets, provides for specific economic sectors or entire countries to commit to emissions reduction targets and receive emissions allowances if their emissions remain below target, although they would not be subject to sanctions if they failed to meet that target.
- **Absolute binding national emissions targets** for the most developed countries.

JIKO Analysis

Applying the above criteria of responsibility, capability and mitigation potential to the countries covered by the study leads to a proposal for SD PAMs for India, sectoral non-binding emissions reduction targets for China and South Africa, national non-binding targets for Brazil and Mexico, and binding targets for South Korea.

Overall, the research team found that the emerging economies in question possess considerable mitigation potential. It would thus be reasonable to conclude that the rise in global emissions could be stopped within the next decade. A significant portion of the available potential is 'no regrets' and 'co-benefit' potential whose exploitation is in the best interests of the emerging economies. The 'ambitious' potential needed to meet the 2° Celsius target calls for considerable support from industrialised nations. This could be provided directly, via emissions trading or in a combination of both. If the 'ambitious' potential is to be exploited largely by means of emissions trading, then industrialised nations would need to comply with far more stringent targets than have been discussed so far to ensure the 2° Celsius target is met.

WSt



Photo: © Vestas Central Europe

Imprint

Edited by:

*Wuppertal Institute for Climate,
Environment and Energy,
Döppersberg 19, 42103 Wuppertal*

Responsible for the contents:

*Wolfgang Sterk, Energy-, Transport-
and Climate Policy Research Group,
Wuppertal Institute for Climate,
Environment and Energy,
Tel. +49 202-2492-149*

Editorial Staff:

*Christof Arens (CA, final editing)
Thomas Forth (TF)
Julia Rüsche (JR)
Wolfgang Sterk (WSt)
Rie Watanabe (RW)*

Translation of pages 6–8:

*Words-Worth, Stocks & Stocks GbR,
Bonn*

Subscription:

*JIKO Info is distributed in electronic
form only. Entry into the subscription
list is free of charge.*

Internet Address for subscription:

www.wupperinst.org/jiko

Layout:

VisLab, Wuppertal Institute

JIKO Info

*covers current developments in the
policy field project-based mecha-
nisms in Germany and worldwide.
The newsletter is published as part of
the project JIKO Development phase
2007–2009 at the Wuppertal Institute
for Climate, Environment and Energy
(see www.wupperinst.org/jiko). The
editorial staff works independently
from the JI-coordination unit at the
German Ministry of the Environment.*

*JIKO Info is published quarterly and on
special occasions.*