



**SOUTH EAST ASIA FORUM ON GREENHOUSE
GAS MITIGATION, MARKET MECHANISMS AND
SUSTAINABLE DEVELOPMENT:
10-12 SEPTEMBER 2003**

The South East Asia Forum on Greenhouse Gas Mitigation, Market Mechanisms and Sustainable Development took place from 10-12 September 2003, in Manila, the Philippines. The Forum was sponsored by more than a dozen intergovernmental organizations, government agencies, and multinational corporations, and was hosted by the Asian Development Bank (ADB). The International Emissions Trading Association (IETA) chaired the Forum's organizing committee. Approximately 250 participants from 30 countries attended the meeting.

The aim of the Forum was to examine recent developments in climate change policy, the use of market mechanisms, and their contribution to sustainable development in the region. Participants met in eight plenary sessions to hear presentations and engage in discussions on: global climate change negotiations; opportunities in and priorities for countries hosting projects relating to climate change; the promotion of projects in support of sustainable development; the greenhouse gas (GHG) market; existing procurement and capacity development programmes for the Clean Development Mechanism (CDM); key considerations in project development; and project idea notes proposed by the local private sector.

The Forum is expected to support further development of the region's use of market mechanisms in achieving climate change mitigation and sustainable development.

**A BRIEF HISTORY OF THE CLIMATE CHANGE
NEGOTIATIONS AND MARKET MECHANISMS**

Climate change is considered one of the most serious threats to the global environment, with negative impacts expected on human health, food security, economic activity, water and other natural resources, and physical infrastructure. While the global climate varies naturally, scientists agree that rising concentrations of anthropogenically emitted GHGs in the Earth's atmosphere are leading to a change in

the climate. According to the Intergovernmental Panel on Climate Change (IPCC), the effects of climate change have already been observed, and a majority of scientists believe that precautionary and prompt action is necessary.

The international political response to climate change began with the adoption of the UN Framework Convention on Climate Change (UNFCCC) in 1992. The UNFCCC sets out a framework for action aimed at stabilizing atmospheric concentrations of GHGs to avoid "dangerous interference" with the climate system. Controlled gases include methane, nitrous oxide and, in particular, carbon dioxide. The UNFCCC entered into force on 21 March 1994. It now has 188 Parties.

THE KYOTO PROTOCOL: In 1995, the first meeting of the Conference of the Parties (COP-1) established the *Ad Hoc* Group on the Berlin Mandate, and charged it with reaching agreement on strengthening efforts to combat climate change. Following intense negotiations culminating at COP-3 in Kyoto, Japan, in December 1997, delegates agreed to a Protocol to the UNFCCC that commits developed countries and countries with economies in transition to a market economy (EITs) to achieve quantified emissions reduction targets. These countries, known under the UNFCCC as Annex I Parties, agreed to reduce their overall emissions of six GHGs by at least 5% below 1990 levels between 2008 and 2012 (the first commitment period), with specific targets varying from country to country. The Kyoto Protocol also established three mechanisms to assist Annex I Parties in meeting their national targets cost-effectively – an emissions trading system, joint implementation (JI) of emissions-reduction projects between Annex I Parties, and a Clean Development Mechanism (CDM) that encourages projects in non-Annex I Parties.

After 1997, Parties spent several years negotiating many of the rules and operational details determining how countries will cut emissions and measure and assess emissions reductions under the Protocol. By COP-7, which was held in Marrakesh, Morocco in late 2001, delegates had agreed on most of the rules relating to the Protocol. At COP-8, held in New Delhi, India, from 23 October to 1

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November 2002, delegates adopted the *Delhi Declaration on Climate Change and Sustainable Development*. The Declaration reaffirms development and poverty eradication as overriding priorities in developing countries, and recognizes Parties' common but differentiated responsibilities and national development priorities and circumstances in implementing their UNFCCC commitments. Parties at COP-8 also considered institutional and procedural issues under the Protocol and adopted several decisions, including on the rules and procedures for the CDM.

With the details and rules governing the Protocol now established, many observers expect the treaty to enter into force in the near future. To do so, however, it must first be ratified by 55 Parties to the UNFCCC, and by Annex I Parties representing at least 55% of the Annex I group's total carbon dioxide emissions for 1990. As of 5 September 2003, the Protocol had been ratified by 117 Parties, including 32 Annex I Parties representing 44.2% of carbon dioxide emissions for 1990.

REPORT OF THE FORUM

On Wednesday, 10 September, Rolf Zelius, Chief Compliance Officer and Deputy Director General, Regional & Sustainable Development Department, ADB, welcomed participants, emphasizing that the focus of the Forum would be on examining the viability of the CDM in providing flexibility for industrialized countries to meet their commitments to reduce their GHG emissions. He highlighted key items on the agenda, including an introduction to CDM in individual countries, promotion of CDM projects in the region, an update on the GHG trading market, key considerations in CDM project development, and presentations of key projects by private sector actors.

Andrei Marcu, President & CEO, IETA, called on participants to share their experiences with market mechanisms and to identify how to make the mechanisms more business oriented. He then invited four keynote speakers to open the meeting by setting out their perspectives on climate change, GHG mitigation and market mechanisms.

SESSION ONE: KEYNOTE SPEECHES

Tadao Chino, President of the ADB, stated that developing countries will undoubtedly be adversely affected by climate change and that the poor will suffer most. He pointed out that the market for CDM projects in Asia is promising, and encouraged the active participation of the private sector. He indicated that the ADB has been working with many of its developing country members to strengthen their capacities in GHG abatement since the adoption of the Kyoto Protocol. He also highlighted ADB's ongoing Renewable Energy, Energy Efficiency and Climate Change (REACH) Programme, and reported the establishment of a CDM Facility at ADB.

Elisea G. Gozun, Secretary of the Department of Environment and Natural Resources of the Philippines, informed delegates that sea level rise has already had an impact on the local and national economy, and stressed the need to address this problem urgently. She noted that

providing shelter, education and food, and alleviating poverty, are at the heart of sustainable development. In addition, she emphasized that developing countries need technical support and technology transfer from developed countries in order to stabilize their GHG emissions.

Nabiel Makarim, Indonesia's Minister of the Environment, said that in order to implement the CDM, there is a need for a balance between emissions, benefits, and obligations, and for a review of regulations and procedures in host countries. He drew attention to various barriers in using the CDM effectively, including a lack of capacity and technology, and the absence of experience negotiating with, and attracting, buyers. He also emphasized the need for guidelines on how CDM projects should be carried out.

Eddi Widiono, President and Director of PT PLAN, Indonesia, outlined his company's position regarding CDM projects and reported on key activities carried out by the company in the electricity sector. He stressed that, in order to implement CDM projects, governments need to develop clear criteria and policy objectives.

SESSION TWO: GLOBAL CLIMATE CHANGE NEGOTIATIONS

Christine Zumkeller, Acting Coordinator, UNFCCC's Cooperative Mechanisms Programme, outlined the core issues for future global climate change negotiations, including: how the principle of common but differentiated responsibilities should be applied; how the economic strength or level of vulnerability of countries can be assessed and taken into account; how action could be taken in a fair and economically realistic manner; and which parameters should be used (for instance, past emissions, per capita emissions, emissions per unit of GDP, or historic contributions to atmospheric concentrations of GHG). Commenting on the upcoming COP-9 to the UNFCCC, she noted the key role of partnerships and private sector cooperation in GHG mitigation. She also stressed the need to engage the business community early on in the negotiating process. In addition, she emphasized the need for further research on policies and measures, and on an effective emissions trading system.

SESSION THREE: OPPORTUNITIES IN AND PRIORITIES OF HOST COUNTRIES

Late on Wednesday morning, 10 September, Arun Kashyap, UNDP's Climate Change Manager, chaired a session on opportunities in, and the priorities of, host countries. Five presentations were made, focusing on progress in making the CDM operational, national sustainable development priorities, and sectoral opportunities.

PRESENTATIONS: Liana Bratasida, Deputy Minister, State Ministry of Environment, Indonesia, indicated that the Kyoto Protocol should be ratified by mid-2004, and that the Designated National Authority (DNA) for Indonesia should be operational before COP-9 in December 2003. She informed participants that Indonesia has prepared many CDM projects covering various sectors, including energy, industry, forestry, transportation, and agriculture.

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Indris Zulkifli, Director, Malaysia's Ministry of Science, Technology and the Environment, briefed participants on the country's national committee on the CDM, national institutional arrangements for the CDM, the approval procedure for CDM projects, the criteria for selection of CDM projects, and prioritized areas and projects for CDM implementation, including energy efficiency and renewable energy. He expressed Malaysia's concerns regarding CDM projects, including the absence of "real" investors, the "wait-and-see" attitude, uncertainty regarding the rules and their interpretation, and a depressed CDM market, with prices as low as US\$2.50 per ton of carbon dioxide equivalents (CO₂e). He also highlighted concerns relating to the high transaction costs, including the cost of accreditation for operating entities and registration fees.

Joyceline Goco, Head, Inter-agency Committee on Climate Change of the Philippines, described the country's CDM projects, capacity development for CDM, principles of sustainable development, and its 1994 GHG inventory. She updated participants on the country's ratification process of the Kyoto Protocol, noting that the government is in the process of talking to senators in order to secure a majority vote for ratification.

Nguyen Mong Cuong, Chief, Division of Agrometeorology, Institute of Meteorology and Hydrology, Viet Nam's Ministry of Natural Resources and Environment, identified several barriers to CDM implementation, including inadequate legal regulations and administrative mechanisms and a low level of awareness. To overcome these barriers, he suggested: strengthening coordination and cooperation at the individual, local, governmental, non-governmental, national and regional levels; identifying the desired type of priority projects for host countries and investors; improving awareness and knowledge of CDM management and implementation; and establishing a DNA.

Krairapanond Asdaporn, Senior Environment Officer, Ministry of Natural Resources and Environment of Thailand, responded to a request to summarize the situation in Thailand by outlining the Thai Government's policy for the CDM and emphasizing the selection of good projects and the establishment of project criteria.

DISCUSSION: After the presentations, participants engaged in a general discussion on the issues raised. Many participants stressed that CDM projects must be bilateral, with technology transfer from developed countries to developing countries. With regard to pricing of certified emissions reductions (CERs), many were of the view that the current price is unreasonably low, noting that both sellers and buyers need to form a common position on pricing and that there is a need to set rules for taxation and fees levied on CERs. Commenting on the development of indicators for sustainable development, a number of participants shared the view that local communities must be engaged in the process.

SESSION FOUR: PROMOTING PROJECTS IN SUPPORT OF SUSTAINABLE DEVELOPMENT

On Wednesday afternoon, participants convened for a session on stakeholders' priorities in promoting projects that support sustainable development. The session was chaired by Andrei Marcu of IETA.

PRESENTATIONS: Dwight Demorais, Special Advisor, Lafarge, described the cement industry's contribution to global carbon emissions and the actions taken to reduce these emissions. He reported that the CDM influences investment policies by encouraging process efficiency and fuel switching, and by creating incentives for initiatives that would otherwise be too expensive. He also stressed the importance of policy clarity and certainty.

Mark Fogarty, Executive Director, Sustainable Energy Development Authority, described the initiatives undertaken by his organization, and highlighted: the use of biomass for producing energy; the significance of adequate infrastructure and financing for projects; and sustainable development. He also stressed the importance of regulatory certainty.

Arun Kashyap, Manager, Climate Change, UNDP, noted that for his agency climate change is closely linked to poverty eradication, and observed that the CDM promotes new partnerships and capacity development. He indicated that a good return on investment in a project is not sufficient to attract private sector investors, and stressed the need for an enabling environment with efficiency, transparency, and certainty. He called for greater capacity building by using the "doing and learning" method, and for sharing the benefits of the CDM with a larger number of countries. While noting that small-scale projects create employment, he cautioned that they can also be costly, and thus need to be made more efficient.

Foo Moo, Senior Manager, Environment, Petronas, reported on a number of projects where the company encouraged capacity building and worked with the host country. He described CDM projects as "win-win" situations, because the customer receives added value and technology improvements benefit the host country government. He called for a pricing regime and flexibility across the CDM mechanism.

David Newell, Manager, Power Development, Unocal Indonesia, noted that the CDM is an incentive-based mechanism aimed at changing the behavior of businesses. He described how the CDM can add value to geothermal energy and create incentives to switch to less polluting sources. He stressed the need for certainty and added that CDM income should not be taxable. Finally, he argued that the pricing of CERs should be determined by market forces.

Yuzuru Nonka, Director, Climate Change, J-POWER, reported that the company has brought clean technology to developing countries that used coal, and that it is also developing new technologies to use clean energy sources in support of sustainable development. He described how J-POWER has participated in CDM projects as a manager, investor, and facilitator, and as a purchaser of CERs.

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Lolo Panggabean, Director, Yayasan Bina Usaha Lingkungan (YBUL), a non-profit organization seeking to support environmentally and socially responsible businesses, reported on a number of GHG emissions reduction projects in Indonesia. He highlighted the issue of pricing of CERs, saying it should not present a barrier to CDM projects.

Liam Salter, Coordinator, WWF's Asia-Pacific Climate and Energy Programme, said NGOs were disappointed by the results of the CDM in terms of capacity building, sustainable development, attracting investors, and the depressed prices. He suggested that there was no justification for the low prices offered to developing countries.

DISCUSSION: In the ensuing discussion, several participants raised questions about the term "additionality," which refers to the idea that projects should create emissions reductions that are additional to those that would otherwise occur in a business-as-usual situation. In response, Demorais said additionality should take into account the project's sector and region and, along with Newell, noted that the definition of additionality is currently unclear and therefore creates uncertainty.

The World Business Council for Sustainable Development (WBCSD) noted that uncertainty makes business in general more difficult, and called for the implementation of the "learning by sharing" method, which he described as a "triple win" situation, as it benefits businesses, policy makers, and host countries.

On the pricing of CERs, WWF said the prices offered by the buyers did not reflect the costs and were unfair. Fogarty explained that many price issues are driven by regulatory considerations, which explains the difference with contractual prices. He suggested that this issue is a "red herring", because even if the price is fixed by a couple of buyers, the sellers do not have to sell. In addition, Fogarty noted that market transformation was part of the CDM's policy, and that it will make renewable energies more attractive than fossil fuels.

Commenting on indicators for energy efficiency projects, Demorais said Lafarge looks at the overall gains of a project in terms of capital, benefits to the community, and emissions reduction.

SESSION FIVE: GREENHOUSE GAS MARKET UPDATE

On Thursday morning, 11 September, participants convened for a session to hear presentations and engage in discussions on the GHG market.

PRESENTATIONS: Kan Araki, President, Natsource Japan, presented on GHG emissions mitigation policy and private initiatives in Japan. He called for greater private sector participation in CDM projects, government subsidies for developing new GHG mitigation technology, and the creation of a GHG market. He described Natsource's new guidelines for measures to prevent global warming, including a step-by-step approach and domestic shared responsibility. He noted that Japanese emissions levels for industry were 5% lower in

2001 than in 1990, whereas transport and household emissions had increased over that period. He also indicated that forward trading had largely replaced option trading.

Tim Atkinson, Broker, Natsource Tullet Europe Ltd., described how there had been a shift from a voluntary market to compliance tools. He noted that the EU market is currently independent from the CDM but that the two may later be linked. Observing that risks and uncertainties are the cause of low prices, he stressed the importance of risk management, and called for clear title, clear additionality, low credit risk, acceptable delivery risk, independent verification, and government and CDM Executive Board approval.

Jorund Buen, Partner, PointCarbon, examined CDM demand and reported that Annex I Parties are the main buyers, renewables and energy efficiency are the preferred project types; and memorandums of understanding have been signed between Annex I Parties and Latin American and South East Asian countries. In relation to CDM supply, he described the risks associated with the CDM process, including: non-approval of the project by the host country; potential delays in CDM Executive Board approval; delays or failures in implementation; and non-certification or non-commerciality of CERs. He identified various possible price drivers, including standardization of host country and CDM Executive Board approval, approval of the EU linking directive, Russian ratification of the Kyoto Protocol, an increase in CDM awareness, and clarification of sink modalities and guidelines.

DISCUSSION: In the subsequent discussion, Buen welcomed the development of sustainable development criteria but warned against inconsistency between countries and the creation of CER havens in countries with no sustainable development criteria. Araki explained that 1.6% of the 6% reduction target Japan has to meet can be produced through the CDM. He expressed doubts that the government's measures to reduce emissions by transportation and households would be effective. Atkinson said the debate about EU pricing was a "red herring," as there had been very few trades on the European market. He added that derivatives would play a major role in the market and make prices more likely to fluctuate. He underlined that the products on the EU and the CDM markets both aim at helping countries to meet their Kyoto targets. In addition, Buen explained that emissions reduction was preferred to sinks projects at this stage due to the risks associated with the latter, especially in terms of approval by the CDM Executive Board, as the relevant rules have yet to be established.

SESSION SIX: EXISTING CDM "PROCUREMENT AND CAPACITY DEVELOPMENT" PROGRAMMES

On Thursday afternoon, 11 September, Lucas Assuncao, Coordinator, BioTRADE and Climate Change Programme, UN Conference on Trade and Development (UNCTAD), chaired a session on existing CDM "procurement and capacity development" programmes, where delegates heard presentations on programmes that procure carbon emissions reductions, provide carbon financing, and support capacity development.

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PRESENTATIONS: Rolf Zelius, ADB, briefed participants on the Bank's work in the areas of CDM and capacity building, with a focus on the Bank's newly-established CDM Facility. He said that the objectives of the Facility are: promoting sustainable development and cleaner production; promoting CDM projects; monitoring the implementation of projects; finding compatible prices; and facilitating project financing for developing countries in the region. He noted that the Bank's main responsibility is to assist developing countries in securing fair prices for CERs and to help them participate in CDM projects.

Ken Newcombe, Fund Manager, Carbon Finance, World Bank, outlined the Bank's CDM procurement and capacity building products, including its carbon finance mechanisms, carbon finance business, and capacity building strategy, noting that GHG credits already purchased or under negotiation amount to approximately US\$250 million. He summarized various aspects of the CDM process that the Bank had observed to date, including: high regulatory risk and uncertainty; small direct private foreign investment; limited volumes of CERs for the first commitment period; few opportunities for small countries and poorer communities to become involved; the potential use of carbon sinks to assist in ensuring equitable distribution of CDM benefits; and the need for capacity building through direct participation in transactions.

Lex de Jonge, Head of CDM Division, Dutch Ministry of Housing, Spatial Planning, and the Environment, explained how the Netherlands had become involved in the CDM by using intermediaries such as multilateral banks, community development carbon funds, bilateral contracts with countries, and private banks. For a CDM project to be successful, he recommended: following all Marrakesh criteria and procedures; establishing a credible baseline; securing the host country's cooperation and reliable project financing; guaranteeing payment for CERs; and applying social and environmental criteria.

Takao Aiba, Deputy Director, Development Bank of Japan, presented his Bank's new programme for promoting the Carbon Fund of Japan, which he said was established to assist Japanese companies to carry out CDM projects through project financing. The main characteristics of the Fund are: pure carbon financing; support for sustainable development; reliable buyers; flexibility in project financing; and competitive terms of purchase agreements.

Calliope Webber, Advisor, Oil, Gas, Mining and Chemicals Department, World Bank Group, reported on the Bank's global gas flaring reduction (GGFR) programme, which aims to support national governments and the petroleum industry in reducing flaring and venting of gas, and which also seeks to promote sustainable development. Her presentation also explained the GGFR's emissions reduction potential; current partnership; work programme; and opportunities in the future.

Participants also heard a presentation by Gao Pronove, Senior Advisor, UNCTAD/Earth Council Carbon Market Partnership, on UNCTAD's GHG Emissions Trading Programmes, which have three components: a carbon market E-learning center; a capacity development programme; and relevant research and publications.

Akihiko Koenuma, Director, Division 5, Corporate Finance Department, Japan Bank for International Cooperation (JBIC), explained how JBIC supports initiatives that reduce GHG emissions by financing projects, promoting energy savings, and nominating a special advisor to the President on Kyoto Protocol implementation. He said strong relationships have been established with host governments and agencies and stressed the need to reduce risks.

DISCUSSION: During the subsequent discussion, a representative from Germany informed participants that a German capacity building programme for the CDM with 15 million Euros will be operational early in 2004. Some participants expressed concerns about the uncertainty surrounding CDM projects at the end of the first commitment period in 2012, noting that there is no guarantee the Kyoto Protocol will enter into force and that negotiations after 2012 could be lengthy and complicated. Jonge stressed the need to use intermediaries for financing CDM projects, and the ADB indicated that small funds from official development aid can be used to assist small countries to prepare CDM projects.

SESSION SEVEN: KEY CONSIDERATIONS IN PROJECT DEVELOPMENT

On Thursday afternoon, 11 September, Laurent Corbier, Programme Director, Energy and Climate, WBCSD, chaired a session on key considerations in project development, with seven presentations on various thematic issues, including the project cycle, the role of the Designated National Authority (DNA) and the host country, baselines and additionality, and the validation of CDM projects. On Friday morning, 12 September, the Session resumed with presentations on financing and IETA contract agreements.

PRESENTATIONS: The Project Cycle: Kai Uwe Schmidt, Programme Officer, UNFCCC Secretariat, presented on the theme of CDM Executive Board processes, and described the project cycle that involves the project participant, the operational entity, the Executive Board and the DNA in the project design, validation/registration, monitoring, verification, and certification/issuance of CERs. He noted that the approval process includes a feedback loop. In addition, he informed delegates that the Executive Board had adopted procedures on public availability of CDM project design and provided a number of clarifications and guidelines.

The Role of the DNA: Xuedu Lu, CDM Executive Board, reported that 17 developing countries had established a DNA. He then described their role and stated the reasons why some host countries had yet to

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create a DNA. Schmidt explained that the DNA is to provide a written approval of all the project participants, and Lu suggested the Executive Board help in promoting their creation.

The Role of the Host Country: Lu listed the tasks host countries could undertake in project development. This includes setting domestic policies, building up CDM infrastructure, establishing a CDM promotion fund, setting other facilities to promote project development, and helping bridge any gap between demand and supply. He indicated that a national CDM board will be set up in China, and described the domestic approval process, as well as future steps to promote CDM development.

Baseline and Additionality: Schmidt said methodologies for baseline and monitoring had been approved by the Executive Board, and nineteen more methodologies had been proposed for other stages. On the question of additionality, Jonge, with Johannes Heister, Senior Economist, Carbon Finance, World Bank, agreed that a project is additional if emissions are reduced below those that would have occurred without the project. Heister further explained that if there is a positive difference between the baseline and the project reductions, then there is additionality. He then outlined ways to structure baseline studies and stated that the Executive Board's preference seemed to be for applying the additionality test and the baseline methodology. Jonge explained that if the project is carried out because of a legal obligation, then there is no additionality, as opposed to projects based on non-binding policy plans. He listed various reasons why companies participate in CDM projects. He then explained that additionality can be demonstrated by showing that the CDM is not the most attractive course of action from a short-term economic perspective. He stated that the most attractive project economically is generally the baseline and that the credibility of the baseline scenario must be tested.

Validation of CDM Projects: Mahua Acharya, Research Fellow, WBCSD, presented on an initiative called GHG Protocol Project Quantification Standard, which is to develop international GHG accounting and reporting standards for business through an inclusive and transparent multi-stakeholder process. She elaborated on: emerging quantification standards; GHG accounting; and quantification steps.

Einar Telnes, Technical Director, DNV, reported on some lessons learned from validation of CDM projects, including on project documentation (its content and timelines), and on market prospects for validation services. Addressing the issue of monitoring and verification, Shigenari Yamamoto, Manager, Japan Quality Assurance Organization, noted that it was essential to strike a balance between accuracy and transaction costs. He elaborated on two approaches to achieve that balance - a performance approach and management system approach - stressing the importance of using the established reliable management system for monitoring and reporting on CDM projects. Werner Betzenbichler, Manager, Certification, TÜV Carbon Management Services, outlined the requirements on monitoring and verification as established by the Marrakesh Accords, offering comments on various practical aspects, first experiences, and unresolved issues.

Financing: Natale Halich, Investment Officer, Carbon Facility, International Financing Corporation (IFC), talked about the IFC's current carbon financing, focusing on the CER Purchase Agreement (ERPA). She outlined several considerations for structuring an ERPA-based financing, including regulatory and legal issues (such as title to the right of CERs), delivery risk, and due diligence. In terms of the contract structure, she suggested taking into account various elements, including: priority; accelerated delivery; replacement of CERs; delivery flexibility; and escrow account.

IETA Contract Agreements: Martijn Wilder, Partner, Baker & McKenzie, described the role of carbon contracts as facilitating the buying, selling, acquiring, or transferring of "emissions rights" within a documented framework that accords with legal rules. He observed that it is a new area of the law combining public international legal principles and agreements, rules governing multilateral institutions and governments, and regional and domestic legal systems and principles of contractual law. The key contractual issues relate to: the parties involved; the nature of the asset being purchased; the ownership and transfer of clear legal title; non-performance and remedies for non-performance; dispute resolution; the governing law and its enforceability; local legal requirements; warranties and indemnities; transaction costs; and capacity building.

Rutger de Witt Wijnen, Partner, De Brauw Blackstone Westbroek, addressed various legal issues relating to the CDM, focusing on ownership of CERs, host country involvement in CERs, and contracts for CDM projects. He suggested that perhaps no party actually owns CERs and that CERs can only be transferred after they are issued by host countries. With respect to host country involvement, he indicated that various actions are required, including ratification of the Kyoto Protocol, the establishment of a DNA, the approval of voluntary participation, the registration of the CDM project, and issuance of CERs. As for the contract for the CDM, he noted the need to address the allocation of risk, the quantity of CERs, the defined commodity and monitoring and verification process, and the nature of host country involvement.

SESSION EIGHT: PRESENTATION OF PROJECT IDEA NOTES BY THE LOCAL PRIVATE SECTOR

On Friday, 12 September, Charles Cormier, Senior Training Specialist, World Bank Institute, chaired the final session of the Forum, during which delegates heard presentations of Project Idea Notes (PINs) by the local private sector from South East Asia. The presentations related to a variety of project types, including those dealing with geothermal energy, waste management, renewable energy, and biomass.

PRESENTATIONS: Geothermal Energy: Sayogi Sudaman, Pertamina Geo-thermal, reported on a geothermal project in Indonesia. He said the project's aim is to produce electricity from geothermal energy, reduce GHG emissions, and support a policy of diversification. He indicated that the project also took into consideration geothermal energy conversion, project boundary, and emissions flows. In conclusion, he noted that most financing is needed for piping and power plant

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development, and that all projects present almost no risk, as the environment has been assessed, proven technology is being used, and the government is finalizing its ratification of the Kyoto Protocol.

Dwita Prihantono, Amoseas Indonesian Inc., outlined a geothermal project in Indonesia. She listed the objectives of the project, including increasing the supply of electricity, developing clean resources, and supporting energy diversification. She said the baseline is coal-fired steam power technology that would be current practice and produces more carbon dioxide than geothermal power. She added that CDM projects are no different than other projects, in that they also have to minimize risks and maximize shareholder stakes.

Commenting on these presentations, some delegates stated that Indonesia has the largest potential reserve of geothermal electricity in the world, adding that the business climate is improving, and calling for the promotion of such projects.

Waste Management Sector: Hendy Premanasakti, P.T. Rekapasa Sumber Daya Hayati, briefed participants on a small project in rural Indonesia using palm oil residue to produce electricity. He explained that the biomass would substitute for diesel and thereby greatly reduce carbon dioxide emissions. He said the additionality of the project was environmental, financial, social and technical, and that it contributed to sustainable development.

In response to a comment from one participant that using palm oil for the production of electricity was now part of a binding code of practice, Premanasakti replied that there was still additionality because although a compulsory policy existed, it was not enforced. Some delegates noted that there are many oil palm plantations in Indonesia and that this pioneer project should be encouraged in order for others to follow suit.

Renewable Energy, Biomass: Graham Stowell, Bonzeoak Ltd., reported that his company works entirely on biomass projects, which is a new sector where CDM constitutes approximately 5% of the activity. He underlined a number of difficulties associated with CDM projects, including a shortage of true investors, difficulty in demonstrating additionality, uncertainty, high risks, and lack of clarity. He explained that Bronzeoak concentrated on rural areas and small projects that were highly replicable.

Alexis Ledesma, Bronzeoak Philippines, presented an energy project using sugar cane in a rural area of the Philippines. He explained that through partnerships with producers, the company provides the latter with new equipment. He also informed participants that the new technology produces a greater quantity of cleaner power and replaces the electricity from fossil fuels that would otherwise have to be purchased.

Stowell then briefed delegates on a project using rice husk as a source of energy. He said the project is environmentally additional because the by-product is used to produce energy instead of producing carbon dioxide when burned in the open, and because it eliminates

emissions from diesel, the alternative energy source. He added that ashes produced from the process are used as fertilizer and that the project is also socially additional, as it creates jobs.

Iwan Sutanato, Bronzeoak Indonesia, reported on an oil palm residue project. He explained that the project is environmentally additional, as it reduces carbon dioxide emissions from the waste, provides a safe disposal route for the waste, and contributes to sustainable development. He added that the project is also financially and socially additional.

Commenting on these presentations, participants and panellists stated that these projects had a high likelihood of being approved, that baseline scenarios should be further developed in terms of costs and that the ownership structure should be clarified. One participant underlined the added benefit of projects that not only reduce carbon dioxide emissions but produce more oxygen through plantation. As for the baseline, some delegates expressed doubts regarding the assumption that without the project, old technology machinery would be used for a further 10 or 20 years, and suggested that capabilities should be examined.

Other Renewable Energy Projects: Hardjio Djuwarno, Indonesia, delivered a presentation on the bundling of small hydro power units in tea estates, which is designed to utilize water resources and provide cleaner energy. He described the project as bundling a number of micro-hydro-power units in tea estates in West Java to provide electricity, which would otherwise have to be provided by stand-alone diesel generators. He said benefits of this project include a reduction of carbon dioxide and other GHG emissions, preservation of water resources, and cheap electricity for use by local communities.

Jonge stated that hydro projects should be in compliance with the World Commission on Dams (WCD) guidelines, and that buyers are concerned about social and economic aspects. He noted that buyers also focus on project financing, without which there is no certainty of implementation.

Nguyen Duc Minh, Viet Nam, reported on a wind-diesel hybrid electricity supply system project. The project aims at reducing emissions by using cleaner technology. The project plans to construct an eight MW capacity wind farm in the Phu Quy Island, which will be connected with an existing diesel plant to formulate a wind-diesel hybrid electricity supply system for the island. The estimated GHG avoidance for the 20-year lifetime of the project would be 414,786.70 tons. The project should help promote capacity building and technology transfer, and its success should also stimulate wind power development in the country.

Antonius Artono, PT. Indonesia Power, presented on the Tanjung Priok combine cycled power plant project. The project objective is to meet potential growth in electricity demand in Java-Bali, and its potential benefits include the provision of electricity, direct emissions reductions, job opportunities, and the absence of any significant environmental risk.

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Zulham Lubis, Krakatau Steel, reported on an energy efficiency project in a steel making plant in Indonesia. He explained that the introduction of new standard procedures and the modification of burners resulted in a significant reduction of emissions and that the project required only US\$250,000 in financing. He added that the project had sustainable development benefits as it improved the local and regional environment and developed people's knowledge and consciousness on energy saving.

CLOSING REMARKS: In his closing remarks, Charles Cormier, who chaired the final session, noted that that the region is becoming very active in terms of the CDM. He said many good projects had been presented during the Forum, and called for more to be developed. He encouraged delegates to take on board the comments that had been made during the presentations. Following Cormier's remarks, the Forum officially ended, at around 5:00 pm on Friday afternoon.

THINGS TO LOOK FOR

FOURTH INTERNATIONAL ENERGY SYMPOSIUM ON ENERGY INVESTMENT OPPORTUNITIES: This Symposium will take place from 24-26 September 2003, in Fuschl, Vienna, and will consider the level of risk involved in energy investments today. For more information, contact: Albrecht Reuter; tel: +43-1-536-05-32560; fax: +43-1-531-13-54191; Internet: <http://www.energysymposium.at>

THE THIRD WORLD CONFERENCE ON CLIMATE CHANGE: This conference is scheduled for 29 September - 3 October 2003, in Moscow, Russia. The conference aims to address key scientific issues and policy responses to the problem of climate change. For more information, contact: Conference Secretariat; tel: +95-252-0708; fax: +95-252-0708; e-mail: wccc2003@mecom.ru; Internet: <http://www.meteo.ru/wccc2003/econc.htm>

CONFERENCE ON THE EFFICIENT USE OF BIOMASS FOR GHG MITIGATION: This conference will take place from 30 September - 1 October 2003, in Östersund, Sweden. Organized by IEA Bioenergy, the conference will focus on the efficient use of biomass for energy, including the efficient use of land resources, to reduce GHG emissions. A study tour will take place on 1 October bringing participants to a new, large biomass combined heat and power plant in Östersund. For more information, contact: Bernhard Schlamadinger, Joanneum Research; tel: +43-316876 ext 1340; fax: +43-316876 ext. 91340; e-mail: bernhard.schlamadinger@joanneum.at; Internet: <http://www.joanneum.at/iea-bioenergy-task38/workshops/announcement.pdf>

THIRD FORUM ON THE STATE AND DEVELOPMENT OF THE GREENHOUSE GAS MARKET: This Forum, organized by IETA and sponsored by a number of governmental agencies and international organizations, will take place from 22-24 October 2003 in Ottawa, Canada. It will include a pre-conference workshop on "The

State of the CDM." The Forum will address issues relating to creating a GHG global regime; the development of market elements; roles in the marketplace; and current market trends. For more information, contact: Andrei Marcu, President and CEO, tel: +1-416-487-8591; fax: +1-416-340-1054; e-mail: marcu@ieta.org; Internet: <http://www.iea.org/new/planiea.gif>

CONFERENCE ON DELIVERING CLIMATE TECHNOLOGY - PROGRAMMES, POLICIES AND POLITICS: Scheduled for 4-5 November 2003 in London, United Kingdom, this conference will examine the role of energy technologies in helping respond to climate change. It will investigate the role of existing international institutions, and consider whether or not a new global energy regime is required. For more information, contact: Georgina Wright, Royal Institute of International Affairs; tel: +44-20-7957-5700; fax: +44-20-7321-2045; e-mail: conferences@riia.org; Internet: <http://www.riia.org/index.php?id=5&cid=36>

IPCC PLENARY 21ST SESSION: The 21st Session of the IPCC Plenary will take place on 3 November and 6-7 November 2003, in Vienna, Austria, while sessions of Working Groups I, II and III will be held from 4-5 November. For more information, contact: IPCC Secretariat, C/O World Meteorological Organization; tel: +41-22-730-8208; fax: +41-22-730-8025; e-mail: ipcc_sec@gateway.wmo.ch; Internet: <http://www.ipcc.ch/calendar.htm>

CLIMATE CHANGE TECHNOLOGY BAZAAR AND CONFERENCE: This conference will take place from 10-13 November 2003, in New Delhi, India. The conference is being organized by the Ministry of Environment and Forestry, in association with UNFCCC and UNEP, and will include a workshop by the Expert Group on Technology Transfer, a CDM workshop, and a roundtable and technology bazaar. For more information, contact: UNFCCC Secretariat; tel: +49-228-815-1000; fax: +49-228-815-1999; e-mail: secretariat@unfccc.int; Internet: <http://www.unfccc.int/>

UNFCCC COP-9: The ninth Conference of the Parties to the UNFCCC will take place from 1-12 December 2003, in Milan, Italy. COP-9 will continue deliberations from SB-18 in June 2003, and will be preceded by a number of preparatory UNFCCC workshops and consultations. These will include meetings on: the needs and options of non-Annex I Parties for economic diversification, and on support from Annex II Parties (18-19 October 2003, Tehran, Iran); the IPCC Third Assessment Report (27-28 November 2003, Milan, Italy); registries (28-29 November 2003, Milan); and definitions and modalities for including afforestation and reforestation activities under the CDM of the Kyoto Protocol (27-29 November 2003, also in Milan). For more information, contact: UNFCCC Secretariat; tel: +49-228-815-1000; fax: +49-228-815-1999; e-mail: secretariat@unfccc.int; Internet: <http://www.unfccc.int/>