

Indonesia

January 2008

1 CDM investment climate index: regional comparison

CDM investment climate index (CDM ICI), Asia January 2008 (excerpt)

| Rank | Country | CDM ICI (max. 100 pts) | Regional classification |
|------|--------------|------------------------|-------------------------|
| 1 | Korea (Rep.) | 90,2 | Very good climate |
| 2 | PR China | 83,8 | Good climate |
| ... | ... | ... | ... |
| 5 | Indonesia | 78,7 | Good climate |
| ... | ... | ... | ... |
| 62 | Afghanistan | 6,6 | Unsatisfactory climate |

Source: DEG - Deutsche Investitions - und Entwicklungsgesellschaft mbH
(For calculation method, see www.kyoto-coaching.cologne.net)

The CDM ICI measures the investment climate for CDM projects. It can range between 100 points (highest) and 0 points (lowest). Altogether, the climate is rated as 'good' in Indonesia. The increase in the Institutional Investor Country Credit Ratings from 47 (March 2007) to 50.2 points (September 2007) and the rise above ten to altogether eleven registered CDM projects at the end of 2007 are key contributory factors to this classification. The rating in the Transparency International Corruption Perceptions Index remained unchanged in 2007 on the previous year.

2 General climate for foreign investments

| General economic data 2006 | |
|--|---|
| Population: | approx. 225 million |
| Nominal GDP: | approx. US\$ 30 billion |
| Per capita GDP: | approx. US\$ 1,645 |
| GDP growth (real): | +5.5% (2005: +5.6%) |
| Consumer prices: | +6.6% (2005: +17.1%) |
| Goods exports: | US\$ 104.0 billion |
| Goods imports: | US\$ 78.8 billion |
| Foreign direct investments: | US\$ 5.9 billion |
| Foreign debts (end of 2006:) | US\$ 125.3 billion (gross) |
| Foreign exchange reserves (end of 2006:) | US\$ 44.2 billion |
| Exchange rates (31 Dec. 2007): | US\$ 1 = Rp 9,379; EUR 1 = Rp 13,804 |
| Country credit rating acc. to Institutional Investor (September 2007): | 50.2 out of 100 points (Rank 75 out of 174; +8.1 pts on previous year) |
| Corruption Perceptions Index 2007 (Transparency International): | 2.3 out of 10 points (Rank 143 out of 179; 10 = freely of perceived corruption) |

Locational advantages:

Positive macroeconomic framework (stable real annual GDP growth for many years at 5% to 6%, favourable consumer climate, increasing propensity to invest, flexible exchange rate regime, etc.), raw materials wealth, a market with over 220 million consumers and a large backlog demand, growing readiness for economic and administrative reforms

Locational disadvantages:

Deficits in infrastructure, great need for (economic) legislative reform, labour law inimical to investment, large share of black economy, high (covert) unemployment, intransparent administrative system, anti-corruption remains a major issue

3 Specific climate for CDM projects

Indonesia is a 'late starter' when it comes to CDM. The Kyoto Protocol was ratified in 2004 and the institutional framework for the sector only set up after this. Up to mid-December 2007, only eleven national projects had been registered by the CDM Executive Board (EB), the UN body for the international approval of CDM projects. At the same date, the leading CDM nations in Asia, the PR China and India, had already recorded 141 and 297 measures respectively.

With the projects underway so far, Indonesia has only just started to harness a small fraction of its CDM potential. A study financed by the World Bank and published in summer 2007 found that with an annual output of over 3 billion t of carbon dioxide equivalent (CO₂e), the archipelago state is the third-largest emitter of greenhouse gases worldwide behind the USA and China, but still ahead of Brazil and India. Land use and conversion account for about 85% of emissions, however, caused especially by the slash-and-burn clearance of rain forests. As the certification of emission cutbacks through measures in the forest sector are beset with methodological problems, the effective scope here is still unclear.

Estimates of the Indonesian project potential differ. While the above cited study assesses that about 235 million t of CO₂e could be saved through CDM, the competent national authority reckons with between 125 and 300 million t. The consulting firm, EcoSecurities, puts the Indonesian project potential at an optimistic 250 to 500 million t of CO₂e.

At present, lucrative possibilities for emission reductions are seen primarily in the energy sector (see Section 3.6). Methane avoidance also affords some opportunities. Owing to the smaller role of high-emission heavy industry firms, the potential CO₂ savings in the industrial sector are rather restricted.

3.1 Ongoing and planned CDM projects in the country

Altogether, the Indonesia's eleven EB-registered projects, including seven in the bio-energy sector, are expected to cut back annual emissions by about 2 million t of CO₂e. The company Indocement, a subsidiary of HeidelbergCement, is included with two measures. Amongst those registered is the first 'German' CDM measure, a solar cooker project in Aceh.

Besides the projects listed in the following table, national approval had been given by Indonesia's Designated National Authority (DNA) to 13 more at the time this report was in preparation. Most of these come from the energy sector, mainly bioenergy and gas. A detailed project list with further information, including the Project Design Documents (PDDs), is available at the DNA website (<http://dna-cdm.menlh.go.id/en>).

The problems of climate change are still new to many Indonesian enterprises. Awareness of the issue has, however, risen with the UN Climate Change Conference in Bali in December 2007. More than 10,000 registered participants from about 180 countries along with 130 environment ministers met on the Island of the Gods to bring climate protection onto the agenda in Indonesia as well.

As criticised by NGOs, hardly anyone had cared about the Kyoto Protocol prior to this, except for the Ministry of Environment, not even the energy or forestry ministries. Only a few enterprises have addressed CDM to date. Reportedly, only larger companies, especially those with foreign participating interests have been considered for this business segment till now. CDM is regarded less as a 'business' and more as a new outgrowth of bureaucracy.

CDM affords considerable commercial opportunities in Indonesia, though. Provided the difficulties in international project approval can be surmounted, measures in the forestry sector alone could generate income from emissions trading of some US\$ 2 billion a year, according to media reports. This is an astonishing amount, compared with the present level of foreign direct investments, for example.

Projects in Indonesia registered with the CDM Executive Board (as at 19 December 2007)

| Project Proponent | Project | Estimated annual CO ₂ e reduction (1,000 t) | DOE*) | Buyer of credits |
|--------------------------------|--|--|---------|-----------------------------|
| EcoSecurities Indonesia | Lampung Bekri Biogas Project | 19 | DNV | Cargill Int., EcoSecurities |
| PT Budi Acid Yaya | Tapioca Starch Production Biogas Project, Lampung | 271 | DNV | Sumitomo |
| PT Indocement Tunggal Prakarsa | Indocement Alternative Fuels Project (Biomass Energy) | 144 | DNV | Finland, Netherlands (IBRD) |
| PT Multimas Nabati Asahan | Biomass 9.7 MWe Condensing Steam Turbine Project | 46 | TÜV-Süd | No information |
| PT Murini Samsam | Biomass 9.7 MWe Condensing Steam Turbine Project | 56 | TÜV-Süd | No information |
| PT Nagamas Palmoil Lestari | Nagamas Biomass Cogeneration Project | 77 | DNV | Mitsubishi UFJ Securities |
| PT Indortirta Suaka | Methane Capture and Combustion from Swine Manure Treatment | 166 | DNV | Mitsui & Co |
| PT Navigat Organic Energy | Integrated Solid Waste Mgt. (GALFAD) Project, Bali | 123 | DNV | Mitsubishi UFJ Securities |
| PT Indocement Tunggal Prakarsa | Indocement Blended Cement Project | 470 | DNV | Finland, Netherlands (IBRD) |
| Chevron Geoth. Indonesia Ltd. | Darajat Unit III Geothermal Project | 652 | KPMG | Chevron |
| PT Petromat Agrotech | CDM Solar Cooker Project Aceh 1 | 3.5 | TÜV-Süd | Klimaschutz e.V |

*) DOE = Designated Operational Entity (Function here: author of validation report)

Sources: UNFCCC website, UNEP Risø Centre

Companies engaged on the Indonesian CDM market report rapid recent development. While this segment was still of little interest in 2005, about 100 projects are now already in the pipeline. According to the UNEP Risø Centre, about 40 had entered the validation phase at the end of 2007.

A prominent new project is a 180-MW hydropower station presently under construction at the Asahan River in North Sumatra. The company, EcoSecurities, concluded contracts on this with PT Bajradaya Sentranusa in November 2007. With the revenue from annual CO₂ savings of 800,000 t, it is assessed that about 30% of the investment costs could be recovered. Sindicatum Carbon Capital Ltd., domiciled in Hong Kong, has also recently agreed on eight projects in the energy sector (particularly in gas) with investments totalling US\$ 500 million.

3.2 Mode of operation of Designated National Authority (DNA)

As Indonesia's DNA, the National Commission for the Clean Development Mechanism (NC-CDM) is responsible for issuing national project approvals. Its Indonesian title is Komisi Nasional Mekanisme Pembangunan Bersih (Komnas MPB). It was established through government decree by the Ministry of Environment (Decree no. 206/2005) in 2005, to which it is still attached. Since special account has to be taken of the interests of various sectors, other ministries are also involved in the decision-making processes.

NC-CDM's tasks include the regular vetting of eligible CDM projects as well as the coordination of project implementation. This is usually performed with the help of an advisory team of technical experts made up of different ministries and a NGO, but it also consults external experts for specific projects. In the case of discrepancies, the NC-CDM consults with a specially appointed expert team. At present, about 80 local experts are listed as additional consultants. In addition, annual reports are submitted to the UNFCCC Secretariat.

The NC-CDM consists of a chairman and nine other members who come from the different ministries involved as well as the National Development Planning Board. Meetings are convened under statute at least four times a year. Everyday business is conducted by a secretariat established by the commission. Decisions for or against a project require majority agreement with a quorum of at least half the commission members or their authorized representatives from the relevant authorities.

The national approval process for CDM projects and the requirements to be met are described in detail on the website of the NC-CDM (<http://dna-cdm.menlh.go.id/en>). Besides the PDD and proof of 'sustainability', an environmental assessment report and a letter of endorsement from the forestry ministry may have to accompany a project application. A validation report is not, however, cited. Owing to the limited experience gained so far, little can be said about the effectiveness and mode of operation of NC-CDM.

3.3 Local consultants, validators and verifiers

The market leader in project validations in Indonesia is the Norwegian company, DNV. Besides this, however, TÜV-Süd and TÜV-Rheinland are also well positioned on the market. In addition to these companies, a handful of other DOEs also operate in the country.

Numerous companies in Indonesia provide consulting services for developing CDM projects, including some national ones. A prominent position on the Indonesian project market is held by EcoSecurities, whose local subsidiary firm acts as project developer, providing comprehensive consultancy services.

3.4 Local legal requirements for CDM projects and taxation aspects

DNA representatives concede that the regulatory framework for the sector is still in its infancy. Interest has, however, increased considerably among many policymakers since the Climate Change Conference in Bali in December 2007, so developments are expected to speed up. As yet, no special legislation has been adopted for CDM projects. Individual laws partly anticipate the CDM issue, such as in the area of geothermal energy since 2003. A government decree (No. 14/2004) has also been issued in the forestry sector with a view to future emissions trading. These 'pointers' or recommendations are still not considered to be enough in practice, however.

Projects in renewable energies are favoured by various measures (e.g. customs duty exemption for importing certain machinery and components for geothermal energy projects). Foreign investors are to be given general incentives for environmentally clean projects in future. This was announced by the investment authority BKPM at the Climate Change Conference in Bali, without, however, providing any details. These state subsidies are particularly important in geothermal energy, due to the high capital requirements. For lack of experience or legal provisions, there is no information on the fiscal treatment of CDM revenue.

3.5 CDM cooperation

Amongst others, Indonesia has reached cooperation agreements in emissions trading with the Netherlands, Denmark, Austria and Canada. Furthermore the country cooperates with the Japan Bank of International Cooperation and numerous other international institutions. The Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ) has already been engaged in Indonesia's CDM sector for some years and has made a substantial contribution to expanding local capacity.

3.6 Opportunities for CDM projects in the energy sector

As the previous ample national oil reserves are progressively diminishing, the OPEC member Indonesia is very keen on reducing the petroleum bias in its energy supply. A primary concern is to step up use of domestic coal and gas resources, but renewable energies as well. Power supply is also being expanded at a rapid pace to meet the fast accelerating demand for electricity and to remedy current shortages.

There are lucrative project opportunities, particularly in the gas sector and in bioenergy, hydropower and geothermal energy. The Ministry of Energy and Mineral Resources is looking to step up activities primarily in geothermal energy in particular. Thanks to its favourable situation at the Ring of Fire chain of volcanoes, Indonesia can draw on the largest geothermal potential in the world.

Notwithstanding the large potential, the development of renewables has made slow progress only in Indonesia to date. The main reason for this is the regulatory framework and/or the rather ineffectual incentives of the present set of development tools. It is therefore difficult to mobilize private investment capital for capital-intensive geothermal energy or hydropower projects.

GTZ provides a good summary of the policy framework for renewable energy projects in Indonesia in its new TERNA country study of September 2007 (available for web downloading at www.gtz.de).

Energy and environmental data

| | Indonesia | Asia | OECD |
|--|-----------------------------|------|-------|
| Primary energy supply (Mtoe, 2005) | 179.51 | | |
| of which from renewable energy sources | approx. 32.1% ¹⁾ | | |
| Electricity generation (TWh, 2005) | 112.33 | | |
| of which from renewable energy sources | approx. 13.6% ²⁾ | | |
| CO ₂ emissions from fuel combustion (Mt, 2005) | 340.98 | | |
| Electricity consumption/capita (kWh/capita, 2005) | 509 | 646 | 8,365 |
| CO ₂ /primary energy supply (t of CO ₂ /toe, 2005) | 1.90 | 2.01 | 2.33 |
| CO ₂ per capita (t of CO ₂ per capita 2003) | 1.55 | 1.25 | 11.02 |
| CO ₂ /GDP (kg of CO ₂ /US\$, purchasing power parity 2000; 2005) | 0.45 | 0.37 | 0.43 |

1) including refuse incineration; 2) hydropower 8.4%, geothermal energy 5.2%

Source: International Energy Agency (IEA)

3.7 Finance facilities for CDM projects

The Deutsche Investitions - und Entwicklungsgesellschaft mbH (DEG), for example, provides facilities for project finance on commercial terms, including long-term loans, mezzanine finance, equity contributions and guarantees. DEG finances profitable private-sector projects with the aim of making a sustainable beneficial contribution to improving the general conditions of life of the population in the respective investment country. Besides financing commercially viable CDM projects, DEG also offers to take over the complete management of the certification process as well as bearing transaction costs contingent on success (e.g. for PIN, PDD, validation).

The KfW Carbon Fund is engaged in Indonesia and buys emission reduction certificates from projects that are suitable for CDM. Under the purchase programme, support is also provided for project development via a facility for transaction costs. Furthermore, a downpayment can be made on the certificates for delivery as part of project finance.

4 Recap

Indonesia has made little use of its potential in the CDM sector till now. The necessary institutional preconditions for a functioning project market were not set up till late on and there is still little awareness of the need for international climate protection and of the business opportunities entailed. Moreover, the investor community has so far concentrated on other CDM host countries in Asia, chiefly the PR China and India.

In 2007, partly thanks to the UN Climate Change Conference in Bali, interest in the country has, however, grown considerably. The Indonesian CDM market will not gain real momentum, though, until the persistent obstacles for approving forest projects have been removed.

5 Advice/Service

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