

## Malaysia

### 1 CDM investment climate index: regional comparison

*CDM investment climate index (CDM ICI), Asia September 2008 (excerpt)*

Rank	Country	CDM ICI (max. 100 pts)	Regional classification
1	Korea (Rep.)	90.3	Very good climate
2	PR China	84.1	Good climate
...	...	...	...
11	Malaysia	80.2	Good climate
...	...	...	...
62	Afghanistan	5.4	Unsatisfactory climate

*Source: DEG - Deutsche Investitions - und Entwicklungsgesellschaft mbH*

*(For calculation method, see [www.kyoto-coaching-cologne.net](http://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 Malaysia. The Institutional Investor Country Credit Rating and the steady increase in registered projects underscore this assessment. In the Transparency International Corruption Perceptions Index, the ranking is 47 out of 180 countries listed.

### 2 General climate for foreign investments

General economic statistics 2007	
Population:	approx. 27.2 million inhabitants
Nominal GDP:	approx. US\$ 187.4 billion
Per capita GDP:	approx. US\$ 6,890
GDP growth (real):	+6.3% (2006: +5.9%)
Consumer prices:	+2.0% (2006: +3.6%)
Goods exports:	US\$ 176.7 billion
Goods imports:	US\$ 147.3 billion
Foreign direct investments:	US\$ 8.5 billion
Foreign debts (end of 2007):	US\$ 65 billion (gross)
Foreign exchange reserves (end of 2007):	US\$ 118 billion
Exchange rates (30 Sept. 2008):	US\$ 1 = RM 3.44, EUR 1 = RM 4.96
Country credit rating acc. to Institutional Investor (September 2008):	72.5 out of 100 points (Rank 40 of 177; -0.3 pts on previous year)
Corruption Perceptions Index 2008 (Transparency International):	5.1 out of 10 points (Rank 47 of 180; 10 = free from perceived corruption)

#### *Locational advantages:*

Favourable macroeconomic parameters (real annual GDP growth for many years, in part well over 5%, good consumption and investment climate, etc.), raw materials wealth, diversified national economy with a focus on technology-intensive sectors (electrical/electronics industry, semiconductor production, chemicals), stable political climate, good protection of foreign investments

#### *Locational disadvantages:*

Protectionism in various economic sectors, pervasive bureaucracy and partly intransparent administrative governance, restrictions on approvals for foreign direct investments, deficiencies in intellectual property rights, shortage of trained personnel, preferential economic policy towards Malaysians

# CDM MARKET BRIEF

## 3 Specific climate for CDM projects

Malaysia ratified the Kyoto Protocol on 4 September 2002. Although the country is generally numbered among the Asian Tiger states, as an upper middle income country it still counts as a developing nation. It was also accorded this status in the Protocol, which is why Malaysia is also not subject to any emission reduction obligations.

Up until the end of September 2008, the CDM Executive Board (EB), the body responsible for the international approval of CDM projects, had registered a total of 33 projects from Malaysia. So measured by the number of registered projects worldwide, the country ranked No. 5 (world market share: 2.8%) and No. 8 (share: 1.15%) by anticipated resulting annual certified emission reductions (CERs).

Experts gauge Malaysia as an interesting alternative to the large Asian CDM recipients, the PR China and India, as it still affords many lucrative project opportunities and provides an advanced framework for CDM business.

### 3.1 Ongoing and planned CDM projects in the country

The utilization of methane emissions from palm oil production affords the largest potential for CDM in Malaysia, which is the second-largest palm oil producer worldwide after Indonesia. About 400 palm oil mills press about 16 million tonnes of raw palm oil a year from oil palm fruit pulp.

The bulk of approved Malaysian CDM projects to date are located in this sector. As a rule, these entail using plant residue from production for energy, composting and siphoning off or avoiding the methane emitted in this process. Methane from decomposition can also be used to generate energy in biogas facilities.

*Projects registered with the CDM Executive Board in Malaysia as at 30 September 2008*

Project category	No. of projects	Estimated annual emission reduction (1,000 t CO <sub>2</sub> e)
Biogas	5	252
Biomass energy	14	1,884
Landfill gas/Composting	10	421
Hydropower	1	45
Energy efficiency in industry	3	8
<b>Total</b>	<b>33</b>	<b>2,611</b>

CO<sub>2</sub>e = carbon dioxide equivalent

Source: UNFCCC website, UNEP Risø Centre

Although various palm oil companies are already engaged in the CDM sector, there are still large project opportunities here. Theoretically, over 300 palm oil factories are eligible for these kinds of measures. As some palm oil projects destroy rainforest areas and cause other ecological and social problems, each case needs to be assessed on its own merits to decide whether an investment is warranted and whether an application for registration as a CDM project has good prospects of success.

Apart from the palm oil industry, however, there are also other attractive possibilities for CDM projects in Malaysia. Experts see scope, for example, in raising energy efficiency (incl. cogeneration of power and heat), renewable energies, in the oil and gas sector or in waste management. The Malaysian government provides particular support for the first two. In this partly densely wooded country, lower priority is, however, attached to projects in the forestry sector.

The Malaysian CDM Secretariat estimates prospective emission abatement between 2006 and 2012 at up to 100 million t of carbon dioxide equivalent (CO<sub>2</sub>e). Emission reductions in the order of almost 18 million t

# CDM MARKET BRIEF

CO<sub>2</sub>e are considered feasible for 2010. Considering the market volume to date, however, this estimate would seem very optimistic.

## Potential for CDM projects

Project types	CERs in 2010	MW electricity
Biogas extraction in the palm oil industry and livestock farming	5,900,000	190
Landfill gas	3,700,000	45
Avoidance of gas burn off in oil mining	4,600,000	n/a
Small hydropower stations	70,000	25
Biomass CHP	380,000	90
Other projects	3,150,000	n/a
<b>Total</b>	<b>17,800,000</b>	<b>350</b>

Source: PTM and others

Nevertheless, the present project pipeline foresees rapid growth in the Malaysian CDM market. At the beginning of August, almost 100 projects were in the validation phase. Together with the projects already registered at the EB, these could generate emission reductions amounting to about 65 million t CO<sub>2</sub>e by 2012. The more recent projects still focus on biomass/bioenergy and landfill gas.

This will afford many market opportunities for investors from industrialised countries. Since local banks are still reticent to finance CDM projects, foreign capital is welcome for their development. The emission reductions from the ongoing activities have so far largely been acquired by buyers from Denmark, Canada, Japan, the United Kingdom and the Netherlands. The World Bank has recently entered the Malaysian market for CERs too.

Enterprises from Germany are also engaged. Vattenfall Europe, for example, is planning to buy emission certificates from several projects presently undergoing the validation phase and KfW and RWE are also reportedly looking for possible purchases.

## 3.2 Mode of operation of designated national authority (DNA)

The Ministry of Natural Resources and Environment (NRE, "www.nre.gov.my") acts as DNA in Malaysia and is in charge of granting formal host country approval for CDM projects. It is assisted in climate protection policy issues by the National Steering Committee on Climate Change (NSCCC).

The National Committee on CDM (NCCDM) was founded especially for the sector in 2002. Under the auspices of NRE, it also includes other ministries as well as the Malaysian Nature Society and the Business Council for Sustainable Development in Malaysia. NCCDM is the decisive authority for appraising projects. It ensures that the proposals submitted meet the national CDM criteria (see 3.4), is responsible for the substantive review and prepares recommendations for project assessment by the DNA.

NCCDM convenes about four times a year and schedules other meetings when required. If a project idea note (PIN) or a project design document (PDD) is submitted eight weeks before a meeting, the DNA can be expected to reach a speedy decision.

The PIN or PDD must first be submitted to one of two sectoral secretariats, which carry out an initial technical and economic appraisal. The secretariat for energy projects is located at the energy authority, Pusat Tenaga Malaysia (PTM) and the one for forestry at the Forest Research Institute Malaysia (FRIM).

These make recommendations either to the Technical Committee on CDM (Energy) or (Forestry). The committees in turn convey their opinions to NCCDM, which then comes to a final judgement. The fees for handling a PIN application amount to RM 1,000 (approx. EUR 200). For a small-scale PDD application,

# **CDM MARKET BRIEF**

DNA charges RM 2,500 and RM 5,000 for larger projects. A validated PDD is needed for granting the final host country approval. Altogether, this was issued to 76 projects at the beginning of September 2008 according to official reports. A complete project list was not available at the competent agencies.

Details on the approval procedure and additional information on CDM in Malaysia are available on the Internet at "[www.cdm.eib.org.my](http://www.cdm.eib.org.my)". A 73-page handbook can also be downloaded here, explaining the national CDM procedure.

Project decisions by NCCDM were delayed in the first half of 2008 and developers complained about the slow processing of their applications. Dozens of projects are still awaiting attention. The environment ministry intends to ease the congestion. NCCDM has therefore scheduled further meetings before the end of 2008. Another 50 to 60 projects ought to receive national approval in the course of the year.

## **3.3 Local consultants, validators and verifiers**

Experts estimate the costs for a CDM project to install a biomass or biogas facility in the palm oil sector at EUR 600,000 to EUR 1 million and as much as EUR 2 million for larger high-tech facilities. These costs comprise fees for the consultant, the procurement of equipment and charges for commissioning. As a rule, the costs for project validation by the Designated Operational Entity (DOE) are paid by the CER buyer.

More than a dozen consultants offer their consultancy services to project developers. The Malaysian conglomerate YTL Corporation acquired the local CDM consultancy firm SV Carbon in April 2008. The new company YTL-SV Carbon describes itself as the largest local consultant and the third-largest in Southeast Asia. About 20 projects have been supported in Malaysia as well as others in Indonesia, Thailand and China. The company cooperates in many projects with the validators, TÜV Rheinland. The leading DOE in Malaysia so far is Der Norske Veritas (DNV), which has taken care of the major share of projects registered till now. TÜV Süd also occupies a strong market position in the country.

The company Eco-Ideal Consulting, which has been handling CDM projects since 2002, also describes itself as a major local consultancy firm. The EcoSecurities group, which opened an office in Kuala Lumpur in March 2007, is engaged both as a consultant and CER buyer.

With a branch office in Kuala Lumpur, the international consulting firm, Global Forestry Services (GFS), is especially involved in forestry. The enterprise BioX Carbon from the Netherlands has made several project applications with the help of its own consultants and is reported to be seeking other lucrative openings.

## **3.4 Local legal requirements for CDM projects and taxation aspects**

The national CDM guidelines were issued on 18 August 2005. These require that CDM projects must meet five criteria, although fewer duties of disclosure and reporting apply for small-scale projects.

First, the projects must support sustainable national development. Various economic, ecological and social aspects have to be taken into account here. Second, participation of a partner from an Annex I country has to be ensured. Criterion three stipulates a transfer of technology or an improvement in current technologies. Fourth, the committee examines whether the project meets the requirements of the CDM-EB (including additionality - additional emission reductions through the project). Finally, the applicant must demonstrate his ability to carry out the project. For this, a locally incorporated company in Malaysia with a minimum paid-up capital of RM 100,000 (approx. EUR 20,000) must make the application and provide evidence of project finance. The documents for submission are explained in detail in the CDM handbook mentioned in 3.2.

The Ministry of Finance has provisionally exempted CER sales proceeds from income tax for the fiscal years 2008 to 2010.

# CDM MARKET BRIEF

## 3.5 CDM cooperations

Actors from Denmark in particular have been engaged in the Malaysian CDM sector for some years. Both countries have signed an agreement providing for cooperation in climate protection initiatives and financial and technical support in CDM projects through the Danish Embassy. In connection with this, the Danish International Development Agency (DANIDA) has prepared studies on CDM potential in Malaysia that are available on the embassy website at "[www.ambkualalumpur.um.dk](http://www.ambkualalumpur.um.dk)".

Cooperation has already led to some tangible transactions. In eight of the projects registered up to August 2008, the Danish Ministry of Climate and Energy has bought emission certificates. The PDD consultant in each case was the company, Danish Energy Management.

## 3.6 Opportunities for CDM projects in the energy sector

The BP Statistical Review of World Energy estimates that the non-OPEC country Malaysia held over 0.4% of world petroleum reserves and more than 1.4% of world gas reserves at the end of 2007. According to information from the national oil group, Petronas, oil reserves will last for 19 years and gas reserves for 33 years at the current level of exploitation. Experts anticipate that Petronas could show keener interest in CDM projects.

Population growth, a rising standard of living and rapid economic development demand an increasing amount of energy. This is why the government is planning new power stations and promoting the use of renewable energies and energy-efficient technologies. To date, more than 90% of Malaysian electricity has been produced in fossil-fuelled power stations. Except for hydropower, which the government intends to expand by a large margin, renewable energies have so far played a minor role only.

### *Energy and environmental data*

	<b>Malaysia</b>	<b>Asia</b>	<b>OECD</b>
Primary energy supply (Mtoe, 2006)	68.33		
... from renewable energy sources (2005)	approx. 5.3% <sup>1)</sup>		
Electricity generation (TWh, 2006)	88.46		
... from renewable energy sources (2005)	approx. 6.6% <sup>2)</sup>		
CO <sub>2</sub> emissions from fuel combustion (Mt, 2006)	153.95		
Electricity consumption per capita (kWh/capita, 2006)	3,388	667	8,381
CO <sub>2</sub> /primary energy supply (t of CO <sub>2</sub> /toe, 2006)	2.25	2.04	2.32
CO <sub>2</sub> per capita (t of CO <sub>2</sub> /capita 2006)	5.90	1.28	10.93
CO <sub>2</sub> /GDP (kg of CO <sub>2</sub> /US\$, purchasing power parity 2000; 2006)	0.59	0.35	0.41

1) Including waste incineration; 2) Share of hydropower

Source: *International Energy Agency (IEA)*

A baseline study on the national power sector is available for download free of charge at the website "[www.cdm.eib.org.my](http://www.cdm.eib.org.my)". In renewables, experts see the largest exploitable potential for CDM projects in small hydropower and bioenergy, but they also still see a need for improving the national framework. Energy pricing, for example, is heavily influenced by government subsidies in Malaysia.

Investors in renewable energies can avail themselves of assistance from the Malaysian Industrial Development Authority ([www.mida.gov.my](http://www.mida.gov.my)). This includes tax incentives for projects up to a maximum of 10 MW and customs duty exemptions for imported equipment. Assistance is also available through the Small Renewable Energy Programme (SREP), which aims to enable project owners to feed into the general power grid over the long term. The purchase prices have to be negotiated individually with the utilities. There are also assistance measures for investors in energy efficiency or savings.

## **3.7 Local financing facilities for CDM projects**

Established and solvent local banks appear to be showing increasing interest in CDM projects, though to a limited extent only when it comes to providing financing facilities. The Deutsche Investitions - und Entwicklungsgesellschaft mbH (DEG), for example, provides facilities for project finance on commercial terms, including long-term loans, mezzanine finance and equity contributions. 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**

Malaysia provides favourable general conditions for CDM. Technically competent institutional capacity is available, but it sometimes operates slowly. There is extensive project potential, primarily in the previous priority sectors of agriculture and waste management as well as in energy. In some branches, prospective project proponents are still in need of information. Potential CER buyers presently sounding out the market contribute to the dissemination of information and could help CDM to achieve a national breakthrough.

# **CDM MARKET BRIEF**

## **5 Advice/Service**

### **DNA/Ministry of Natural Resources and Environment (NRE)**

Conservation and Environment Management Division; Level 6, Tower Block 4G3, Precinct 4, Federal Government Administrative Centre, 62574 Putrajaya; contact: Mr Azhar Noraini;  
Tel.: 0060/3/88 86 11 29, Fax: -88 88 44 73; Email: azhar@nre.gov.my, Internet: www.nre.gov.my

### **KfW Carbon Fund**

Email: carbonfund@kfw.de; Internet: www.kfw.de/carbonfund

### **DEG - Deutsche Investitions- und Entwicklungsgesellschaft mbH (Advice/Project finance)**

Email: hei@deginvest.de (Project finance); co@deginvest.de, sb@deginvest.de (Carbon Credit Management); Internet: www.deginvest.de, www.kyoto-coaching-cologne.net

### **TÜV Rheinland Group (Validation/Verification)**

Email: kober@de.tuv.com (Kyoto Coaching Cologne network - KCC); Internet: www.de.tuv.com

### **Malaysian-German Chamber of Commerce and Industry**

Email: info@malaysia.ahk.de; Internet: www.mgcc.com.my

### **bfai - Bundesagentur für Außenwirtschaft/ German Office for Foreign Trade (Country information)**

Email: asien@bfai.de; Internet: www.bfai.de

### **Imprint:**

Authors: Thomas Hundt, Kuala Lumpur; Martin Wiekert, Cologne

Technical advice: Dr Christopher Cosack, Volker Schwab

### **German Office for Foreign Trade (bfai)**

Agrippastr. 87-93, 50676 Cologne

Tel.: 0221/20 57-0, fax: 0221/20 57-212, -262, -275 Internet: www.bfai.de

### **DEG - Deutsche Investitions - und Entwicklungsgesellschaft mbH**

Belvederestr. 40, 50933 Cologne

Tel.: 0221/49 86-0, fax: 0221/49 86 -12 90, Internet: www.deginvest.de

All rights reserved. © Reproduction in full or in part with express permission only. The contents have been prepared with the greatest possible care, but we accept no liability for any errors.