

Clean Development Mechanism (CDM) Registration

for the

Gianyar Waste Recovery Project

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CDM website with Gianyar Waste Recovery Project (Project No. 1885):

<http://cdm.unfccc.int/Projects/DB/SGS-UKL1214472977.27/view>

1 THE CLEAN DEVELOPMENT MECHANISMS (CDM)

The Clean Development Mechanisms of the United Nations Framework Convention for Climate Change (UNFCCC) is an offspring of the Kyoto Protocol of 1997 that expires by the end of 2012. At the Copenhagen Conference end of 2009, negotiations will continue to decide later on a replacement for the present mechanisms that might extend to other issues like deforestation and marine issues.

The idea behind the CDM is that it is about 15 times cheaper to reduce greenhouse gases (GHG) in developing countries than in developed countries. Under the CDM scheme, developed countries that are signatories of the Kyoto Protocol can offset part of their pledged GHG reductions with reductions generated in developing countries, where reducing GHG is cheaper, but has the same global effect.

The CDM Executive Board registers only projects that can prove that they could not materialize without CDM support due to technical, financial or other barriers. This is the requirement for "additionality" which is defined as follows: *"A CDM project activity is additional if anthropogenic emissions of greenhouse gases by sources are reduced below those that would have occurred in the absence of the registered CDM project activity"*.

The amount of compensations, called carbon credits, depends on the CDM GHG reduction methodology that is applied. The carbon credits are sold as Certified Emission Reductions (CER). To facilitate the trade, all GHG reductions, regardless whether they result from reducing CO₂, methane, nitrous oxides, ozone or others gases, are all transformed into CO₂-equivalents (CO₂-e) as common legal tender. One ton CO₂-e equals one CER.

Regrettably, the CDM registration under the UNFCCC is extremely burdensome and for many projects unaffordable, even if the project qualifies for *"simplified modalities and procedures for small scale project activities"*. Typically, the project personnel lack the know-how to successfully compile all documents and to conclude the complicated 10-step registration procedure. To reduce the rejection risk, projects usually employ the services of consultants who specialized in processing CDM registrations and brokering of carbon credits.

1.1 CDM Registration Procedure

A CDM registration costs at least USD 50,000. The main document for registration is the Project Design Document (PDD) and its compilation costs at least USD 32,000. The required validation of the PDD by an independent Designated Operational Entity (DOE) costs at least further USD 18,000. Besides that, Host Country Approvals have to be obtained from the governments of the countries where the CERs are generated and bought.

To avoid fraud, verifications of the achieved GHG reductions by a DOE are also required before the CERs can be sold. They take place at chosen intervals and cost at least USD 20,000. Brokers then buy the verified CERs from projects and sell them in the appropriate market. There are two such markets.

- The Compliance Market accommodates customers that are legally bound to reduce GHG emissions. In this market CERs are traded like a commodity by many banks and other institutions with fluctuating prices.
- The Voluntary Market accommodates customers that voluntarily reduce emissions of GHG. In this market the transactions are usually based on an Emission Reduction Purchase Agreement (ERPA) between the seller and buyer with agreed fixed prices.

Please refer to Attachment A for a diagram of the CDM registration procedure.

2 THE PROJECT'S CDM REGISTRATION

2.1 The Registered CDM Methodology

By the aerobic composting of organic material that otherwise would decay in landfills under anaerobic conditions, the generation of the strong GHG methane is avoided in our project. Aerobic composting generates only carbon dioxide, which is 21 times weaker as GHG than methane.

For this reduction of GHG, the project gets carbon credits. However, the project also uses energy for its operations. The CO₂ for producing this energy is deducted from our carbon credits, which is why we put so much research into energy reductions: they pay twice.

We registered under the only available CDM methodology *AMS-III.F. – avoidance of methane production from biomass decay through composting, version 05*. The estimation of the baseline emissions for this methodology refers to *III.G. Landfill Methane Recovery using the First Order Decay model (FOD)*. Due to the relatively small project size, we could apply using the *simplified modalities and procedures for small scale project activities*. Under this methodology, the project will generate GHG reductions amounting to 81,199 tons CO₂-e over the 10 year Crediting Period that was chosen by the project. The total 81.199 CO₂-e become payable after verification.

The Generation of Carbon Credits:

Unfortunately, the available methodology compensates GHG reductions each year only at the rate at which methane emissions would have generated if the organics were dumped in a landfill. As shown in above table, these amounts are very small in the first years, even though all methane emissions are irreversibly prevented after a few months of composting. Only over the years, the cumulative effect increases the eligible amounts of CERs.

However, for projects to become viable, a more substantial income from carbon credits is needed especially in the first project years. The small compensations in the first years and the prohibitively complicated and expensive CDM registration regrettably prevent many new composting projects. It is an irony that precisely those kinds of projects are hindered that the CDM are actually supposed to foster.

Besides above CDM eligible 81,199 tons CO₂-e, the project reduces about further 72,000 tons CO₂-e while processing daily 51 tons of organics over 10 years. Unfortunately, they are not eligible for CDM carbon credits, because they originate from methane that would have escaped from a landfill after the 10 year crediting period has expired.

Our project is only the 19th operating CDM project in Indonesia. Indonesia is very far behind other countries what CDM projects are concerned. The government complained during the Bali Climate Summit in 2007 about the difficult CDM registration but ironically, Indonesia requires an unprecedented 9 step procedure to issue the Host Country Approval.

2.2 Administration of the CDM Carbon Credits

The project has chosen Myclimate a reputable carbon credit broker in Zurich, Switzerland. Myclimate sells the CERs generated by the project to Kuoni under an Emission Reduction Purchase Agreement (ERPA) between the project, Myclimate and Kuoni. Kuoni is a world-wide tour operator that offers customers in many countries the opportunity to voluntarily neutralize their Carbon Footprint when traveling on airplanes. The carbon footprint is the GHG emitted by an aircraft per passenger. As example, for a round trip from Zurich to Bali of 24,000 km, these GHG amount to 5.3 tons of CO₂-e that can be neutralized for USD 125.00. Kuoni also neutralizes voluntarily the carbon footprint of all the headquarter personnel as part of its Corporate Responsibility program.

On December 18, 2008, the ownership and management of the project was transferred to a specially founded organization, the Yayasan Pemilahan Sampah Temesi (Temesi Waste Separation Foundation). The administration of all CDM activities has also been transferred to this foundation. Each year, the foundation's board will make a budget for the received carbon credits. The CDM carbon credits will be used according to the following priorities:

1. To subsidize operational cost of the facility, if required.
2. To provide a small but appropriate contribution to the village of Temesi.
3. To expand the Temesi facility, if required.
4. To co-finance replications of the Temesi model facility elsewhere.

2.3 CDM Registration Milestones

- July 6, 2007: The PDD version used for validation was submitted.
- August 7, 2007: The validation took place at the project location.
- November 16, 2007: The Swiss Host Country Approval was received from the Federal Department of the Environment, Transport, Energy and Communication.
- March 6, 2008: The Indonesian Host Country Approval was received from National Commission for Clean Development Mechanism of the Ministry of Environment.
- March 28, 2008: The validation report was submitted to CDM Executive Board.
- April 8, 2008: The PDD final version was submitted reflecting validation inputs.
- October 22, 2008: The validation process was finished after a minor issue was resolved.
- November 4, 2008: The registration was received from the CDM Executive Board under No. 1885, which allows the project to sell its CER.

3. The 10-Step CDM Registration Procedure:

