

Development in Partnership

the World Bank's activities in Thailand and other news related to development

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THAILAND TO FIGHT GLOBAL WARMING WITH TWO NEW CDM PROJECTS

What is CDM?

CDM is a mechanism under the Kyoto Protocol, which allows industrialized countries with a greenhouse gas reduction commitment to invest in projects that reduce emissions in developing countries.

For more information about CDM in Thailand, visit www.tgo.or.th – the official website of the Thailand Greenhouse Gas Management Organization.

BANGKOK – Thailand's effort to reduce greenhouse gas emissions and promote renewable energy gets a big boost from the World Bank, which signed two carbon finance agreements with Thai companies in less than a month.

The agreements supported two Clean Development Mechanism (CDM) projects, which – once operational – will help the country reduce almost one million tons of carbon-dioxide-equivalent of greenhouse gas emissions annually.

"These two projects together is another step forward for Thailand," said **Sirithan Pairoj-Boriboon**, Executive Director of the Thailand Greenhouse Gas Management Organization (TGO).

Since 2007, the Thai government has approved a total of 75 CDM projects, helping Thailand to cut the emissions of almost five million tons of carbon dioxide equivalent per year.

"Our goal is to reduce pollution and greenhouse gas emissions while promoting renewable energy as a means to sustainable development. I hope to see many more projects like these in the future," he said.

Improvements of Wastewater Treatment Systems Help Reduce Greenhouse Gas Emissions

The first agreement, signed on May 28, was between the World Bank and **TSM Bio Energy Co. Ltd.**, a subsidiary of Thai Sugar Ethanol Co. Ltd., which produces ethanol from molasses as an alternative to fossil fuels. In general, ethanol production tends to generate a lot of wastewater. If not properly treated, wastewater can generate methane gas as well as foul odors.

The company plans to replace the currently open wastewater lagoons with a new covered anaerobic digestion system. Methane gas will be captured and used for electricity generation, some of which will be sold to the Provincial Electricity Authority.

This operation will enable the company to reduce per year 150,000 tons of carbon-dioxide-equivalent of greenhouse gas emissions – known as "carbon credit." The World Bank will purchase the carbon credit on behalf of the Spanish government, utilizing the Spanish Carbon Fund.



Acting Country World Bank Director, **Patchamuthu Illangovan** (right) looked on as **Supoj Srisathaporn**, Director of Sapthip Co. Ltd., signed the ERPA agreement. The signing was witnessed by Minister of Natural Resources and Environment, **H.E. Suwit Khunkitti** (center)

Continue on page 2



A covered anaerobic digestion system capturing methane gas, which is then used for electricity generation

The second agreement was between the World Bank and **Sapthip Co. Ltd.**, which produces ethanol fuel from cassava chips. Under the agreement, the Bank will purchase certified greenhouse gas emission reductions equivalent to 375,000 tons of carbon-dioxide.

Sapthip is a subsidiary of Sapsathaporn Co. Ltd., a manufacturer and wholesaler of cassava and tapioca products. The company was set up recently to take advantage of Thailand's position as one of the largest cassava producing countries in the World to support Thailand's growing interest in biofuels.

The plant would normally emit greenhouse gases by using coal for its energy supply and by managing wastewater in a way that allows of the emission of the greenhouse gas methane to the atmosphere. Similar to the TSM project, the reductions at Sapthip's ethanol refinery, located in Lopburi province, will result from improvements of the wastewater treatment system.

*"We are pleased to play our part in the fight against global warming by capturing methane from our new wastewater treatment facility and converting it to clean renewable energy and getting carbon credits for our efforts," said **Supoj Srisathaporn**, Director, Sapthip Co. Ltd., after the agreement signing on June 5, which was witnessed by the Minister of Natural Resources and Environment, **Suwit Khunkitti**.*

Why methane is good or bad for the earth?

Methane is 21 times more potent greenhouse gas than carbon dioxide, making it a significant contributor to the warming of earth's temperature. However, methane can also provide clean source of energy, making it an attractive alternative to fossil fuels.

Carbon Finance Makes Green Investment Affordable to Developing Nations

Such agreements also demonstrated the World Bank's commitment to help developing countries acquire the resources to invest in climate-friendly technology and programs in order to reduce greenhouse gas emissions. With the Emission Reduction Purchase Agreement (ERPA) to guarantee additional income from trading the carbon credit, investment in clean technology becomes much more attractive to business operators, who may be interested in protecting the environment but do not have access to the capital to support needed new investment.

*"With support from the Spanish Carbon Fund, we will be able to invest in a propertechnology to reduce the emissions of methane gas at our plant," said **Jetsada***

Wongwatanasin, Managing Director of Thai Sugar Ethanol and TSM Bio Energy. *"This project will enable us to improve the local environment and address the global issue of climate change at the same time. It's a win-win solution for us."*

The Bank firmly believed that developing countries are more vulnerable to the negative impacts of climate change than rich countries, and the impact of climate change could wipe out some of the gains they had made in terms of poverty reduction, said **Annette Dixon**, the Thailand Country Director of the World Bank. At the same time, she noted that the world is beginning to step up to the challenge of climate change, and emphasized the Bank's full commitment to supporting this effort.

"I hope that we clearly demonstrated our commitment by signing two ERPAs in Thailand in less than two weeks," she said.

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To learn more about the World Bank in Thailand, visit

www.worldbank.or.th

WORLD BANK'S RESPONSE TO THE GLOBAL CRISIS

The collapse of the financial sector in the United States has quickly snowballed into a global crisis, leading the world into the worst economic recession since the Great Depression. At greatest risk are the world's poorest population, who live on less than \$1.25 a day. The crisis, combined with last year's food price increases, will have serious consequences for women in poor countries and for their children. We can expect higher infant mortality, more girls being pulled out of school, and reduced women's income.

Before the financial crisis emerged, the Bank estimated that 130-155 million people in developing countries had already been pushed into poverty as a result of soaring food and fuel prices. Now the global slowdown will push up to 53 million more people in developing countries down to an income of less than \$1.25 a day.

The World Bank Group has been helping countries to respond to the crisis in a number of ways. We moved swiftly to speed up lending, assistance and advice to countries affected by the global slowdown. Our assistance is focused on safety net programs to protect the most vulnerable people; maintaining investments in infrastructure (which will help create jobs and stimulate



The global crisis will have serious consequences for women and children in poor countries, the World bank said

economic growth); and supporting small and medium-size enterprises as well as microfinance. To deliver our assistance, we work closely with other development partners, donor countries, and our investment arm, the International Finance Corporation (IFC).

Many new initiatives and programs have been introduced over the past year, but more still needs to be done. This is an unprecedented global challenge and it requires an unprecedented global effort.

Continued on page 4



Some of World Bank initiatives in response to the crisis:

- A Global Food Crisis Response Program (GFRP), launched in May 2008, to provide immediate relief to countries hard hit by high food prices. GFRP was increased to \$2 billion in April 2009 from the initial \$1.2 billion. In FY08/09 each of the GFRP loans was processed on average in under two months.
- The Rapid Social Response Program (RSR) which focuses on social interventions by providing access to basic social services, safety net programs and labor market policies to assist in income support for the unemployed.
- INFRA (Infrastructure Recovery and Assets Platform) will provide \$45 billion for infrastructure over the next three years, as announced in April 2009.

*For more information on the World Bank's response to the global crisis, please visit
<http://www.worldbank.org/html/extdr/financialcrisis/>*



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