

Philippines Biodiesel Project

On 23rd to 30th Jan 2007 Jonathon Thwaites visited Philippines to assist with the development of small to medium scale biodiesel manufacturing equipment, to give a biodiesel training workshop in the manufacture of biodiesel and to talk with government and business representatives regarding the potential of biodiesel as a renewable fuel for the future. He assisted and advised with the construction of a small biodiesel batching plant and instructed on the production of the first two batches of biodiesel and its quality testing.

During the visit he worked with, and was sponsored by Biodiesel Solutions, headed by well know Manila businessman Raymond Chang. We met and discussed regionalised medium scale biodiesel manufacturing with the Secretary of Agriculture Arthus Yap (equivalent of our Federal Minister for Agriculture) and his new Biofuels taskforce and were the task force's first representation. The government initiative has been specifically set up to encourage and assist with the development of regionalised and community based biodiesel manufacturing. This exactly matches Biodiesel Solution's initiative.

We also met with ex CEOs of Mobile and Petronas fuels and other influential businessmen and Senators.

The Ministry of Agriculture, headed by Arthur Yap, has established a plan to open up unproductive and degraded land in the Philippines largely for the cultivation of the plant *Jatropha* in a bid to dramatically increase the production of biodiesel and alleviate future fuel shortages, increased fuel prices and the drain on the national income from importing oil. 92% of the country's oil is imported.

Some 12 billion Peso (AU \$320 million) has been initially earmarked for *Jatropha* plantings, much of it from the private sector but with project selection and quality being assessed by the ministry. Finance for projects approved by the ministry will be given assistance in finding funding and loan approval with National Government guarantees. The project is expected to initially employ 230,000 people and reafforest 230,000 hectares of land. The plantings in many places will be intercropped and/or intergrazed with other forestry and food species like mango or rubber and goats.

Initial studies have shown *Jatropha* nut yields of between 2 and 12 tons per hectare are possible, with 10 tons per hectare being likely in the Philippines. Biodiesel yield is approximately 3,000 litres per hectare. The total output is expected to be 690 million litres (for comparison equivalent to approx 1/3 rd of WA current diesel use).

Jonathon Thwaites will continue to assist with equipment development and roll out of biodiesel production capacity.

Jatropha is a declared weed in Australia as stock won't eat it and it competes with grasses for grazing. It will grow in poor, arid and salty soils with lower yields.

see http://www.op.gov.ph/profiles_yapDA.asp for details on Arthur Yap.



President of Phillipines launching the Jatropha project



First prototype after making two batches of biodiesel, engineer on left, myself right



Raymond Chang, Arthur Yap, Jonathon Thwaites – Biodiesel meeting