

LES ACTIONS DE LA DGD

DE ACTIVITEITEN VAN DE DGD

DGD'S ACTIVITIES

LAS ACTIVIDADES DEL DGD

Research into Biodiesel from *Jatropha* among the Winners but *Jatropha* is not a Wonder Plant

On 16 November 2010 researcher Wouter Achten received the FWO McKinsey & Company Science Prize for his lifecycle-oriented study into the sustainability of tropical biodiesels. He did research in India, among other places, for which he received a Flemish PhD scholarship (VLADOC) from VLIR-UOS. Wouter Achten is currently a doctoral research fellow at the Forest, Nature and Landscape Section (K.U. Leuven).

The study in five questions

What did you want to find out in your study?

I wanted to evaluate whether biodiesel from tropical *Jatropha curcas* is a sustainable alternative to fossil diesel and whether it attains a better sustainability performance than other biofuels.

Why did you feel that was important to study?

Because a great many investments and land conversions were planned without adequate knowledge of the plant itself, never mind the sustainability aspects of such a system. These investments and land conversions were predominantly planned in the South. I felt that big risks were being taken due to the lack of knowledge, mostly in the South.

What do you feel is the study's most important discovery and why?

Despite *Jatropha*'s status and the attention and investments it has been given, it's not a wonder plant. Sustainability will only be attained in a small set of situations where the conditions are right. That's why *Jatropha* seems to us to be an option for small-scale production in rural conditions for local consumption.

What is the link with developing countries in your study?

The *Jatropha* hype is mainly about application in warm dry countries. *Jatropha* comes from Central America, but has been and continues to be primarily promoted in India and Africa.

Why is your study relevant to development in the South?

It shows what conditions are needed if the *Jatropha* biodiesel system is to function. It identifies a number of gaps in knowledge. It shows where we might be able to improve the process and lastly it shows the opportunities for small-scale production in rural areas for local consumption.

Read more about the study at

<http://tinyurl.com/JatrophaArchives>

Top expertise thanks to VLADOC

Professor Bart Muys (K.U. Leuven) has supervised a number of PhD students who have received a VLADOC grant from VLIR-UOS.

"Linking VLADOC grants to existing VLIR-UOS projects in the South generates advantages with regard to project coherence and reinforcement. In my own group, the PhDs of Raf Aerts and Bert Reubens are good examples of that. They built the capacity of the VLIR-UOS projects in the South and even resulted in spin-offs, such as Ma'ar and Trees for Farmers. Spin-offs can be a source of continuity when VLIR-UOS financing ends.

One thing linking a VLADOC grant to a VLIR-UOS project in the South does not permit is exploring innovative ideas or strengthening international networks. Let me use Wouter Achten as an example. His study was about *Jatropha*, its use in biodiesel production and the connection with sustainability and food security. By choosing a very innovative subject, in association with ICRAF, the international Research Centre, as a research group we were able to acquire top expertise in a short space of time.

The VLADOC study generated a multiplier effect in all areas:

- 10 articles about *Jatropha* in international periodicals
- International recognition as *Jatropha* experts
- 3 additional PhDs on this subject, including the PhD of Aklilu Negussie, a researcher from Mekelle who started out as a technician in our Own Initiative project in 2000, earned a master's degree under the supervision of VLADOC scholarship recipient Raf Aerts and is now doing a PhD at K.U. Leuven in Zambia with logistical support from Belgian company D1 Oils Plant Science.
- 2 additional projects: an EU FP6 ERA ARD project on *Jatropha* sustainability in Mexico and India and a Belgian ERA ARD project (DGD/Africa Museum) on *Jatropha* sustainability in Mali."

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