



EX-ACT presentations and trainings

- **FRANCE** – Aubagne, 11-13 September 2012: staff from GERES attended a three-day training on the EX-ACT tool. GERES (Renewable energies, environment and solidarity group) is a French association working to implement solutions based on promoting energy efficiency and renewable energy, to preserve the environment and natural resources while promoting sustainable development at local level, respecting the needs and wishes of communities and their territories.

Application of the EX-ACT tool on specific projects

Impacts of the expansion of palm oil cultivation to produce biodiesel

COLOMBIA

Colombia is the fourth largest palm oil producer in the world and the largest in Latin America. Palm oil is one of the major industries in the country, having applications in the food and pharmaceuticals industry. Currently, it is mainly transformed into biodiesel. The country's objective is to

achieve a B20 level (20% biodiesel – 80% diesel) by 2020.

The impact of expanding palm oil to achieve such target has been estimated with EX-ACT, for the four main producing regions. It appears that the carbon storage potential of palm oil is less than the one of the native forests it will replace, therefore creating a carbon debt. Only one region, the oriental plains, would be suitable for palm oil expansion since land conversion would not occur on forested areas but rather on savannah and pasturelands, whose carbon storage capacity is similar to the one of palm oil plantations. A forthcoming article will soon be published, assessing the whole impact of palm oil plantations to produce biodiesel, not only from a land use change point of view but also from the processing and fuel substitution aspects. We will keep you posted on this publication.

Appraisal of two pilot projects of the MICCA program (Mitigation of Climate Change in Agriculture)

KENYA and TANZANIA

In our 5th newsletter, we were already introducing you to the MICCA programme and the two projects that were going to be analyzed with EX-ACT.

As a reminder, the FAO MICCA Programme is working to make agriculture more climate-smart, in cooperation with national and international organizations. Four pilot projects



Oil palm plantations to produce biodiesel

are being developed to provide quantifiable evidence that climate-smart agricultural practices can mitigate climate change, improve farmers' lives and make local communities better able to adapt to climate change. Two projects amongst these four were assessed with the EX-ACT tool:

- The East African Dairy Development (EADD) Project and the Kaptumo Division, Kenya and;
- The CARE Hillside Conservation Agriculture (HICAP) Project in the Uluguru Mountains, Tanzania

In the United Republic of Tanzania's Uluguru mountains, current farming practices, including slash-and-burn agriculture and annual burning of field sites and adjacent forest areas are causing severe soil degradation. MICCA, in coordination with the HICAP project, is introducing hillside conservation agriculture practices such as soil conservation, zero tillage and agroforestry. Such measures present a mitigation potential of 566 612 tCO₂e over 20 years, i.e. 1,7 tCO₂e/ha/yr.

In Western Kenya, the EADD-MICCA project is proposing and testing technical alternatives for reducing the carbon footprint of the dairy industry with the goal of raising 'carbon-neutral' cattle. Adopting better feeding and breeding practices, developing agroforestry and improving pasturelands quality lead to the storage of 663 689 tCO₂e during 20 years, which is equivalent to 4.0 tCO₂e/ha/yr.

New EX-ACT versions

Two [new versions of the EX-ACT tool](#) are now available.

Version 3.4 is an update from version 3.3, with some corrections regarding the emission factors of natural gas, propane, butane and N₂O emissions from inputs, plus a formula corrected in the "Forest Degradation Module".

Version 4.0 (only available in English for now on) adds several new options:

- the possibility to enter a time lag for each activity
- the time spent in pasture for livestock
- a value chain module to estimate the GHG for each production stage from "field to plate" or

even "field to trash bin"

- complementary indicators to evaluate the impact of the project on water consumption and land degradation
- indication on the level of production (yields) to calculate the carbon footprint per ton of product

However, please be aware that this version is experimental and does not aim at replacing specific Life Cycle Analysis (LCA) tools. We would therefore be grateful for any feedback and suggestions to improve it.

EX-ACT website publications

Case studies:

- [MICCA project in Kenya](#)
- [MICCA project in Tanzania](#)
- [Palm oil in Colombia](#): L.E. Rincón, A.P. Cuesta, E. Felix, *Calculo del cambio de emisiones generadas asociadas a la expansión de cultivos de palma aceitera en Colombia*, in: M.J. Valencia, C.A. Cardona (Eds.) Seminario - Taller internacional "Construyendo la huella de carbono de la ciudad de Manizales" - II Seminario Nacional Científico Sobre Cambio Climático, Universidad Nacional de Colombia, Sede Manizales, Departamento de Ingeniería Química, Manizales, Colombia, 2012. ISBN: 978-958-761-309-4.
- [Pilot platform on sustainable agriculture practices](#): this website prototype gathers about 180 technical manuals and guidelines to help farmers to implement CSA practices

Future events and analysis

Case studies: several World Bank/FAO projects will be assessed with EX-ACT in the coming months, in India, Burundi, Brazil, Turkey, Kyrgyzstan, Kenya ...

The tool: development of a prototype version to appraise GHG emissions of fishery, aquaculture, mangrove and marine activities, and to test it on a project in Indonesia

The FAO-EX-ACT team* supports appraisal of agriculture and forestry projects all over the world, please contact us if you are interested.

*Louis Bockel, Martial Bernoux, Giacomo Branca, Patricia Gorin, Madeleine Jönsson, Rocío Sanz Cortés, Ophélie Touchemoulin

We welcome your questions and feedback; they will help us make this newsletter more useful and enjoyable for you.

Email: EX-ACT@fao.org

Website: <http://www.fao.org/tc/exact/en/>

You are currently subscribed to the EX-ACT newsletter, to unsubscribe please send us an email