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A Social Enterprise Recycles Used Cooking Oil (UCO) into Biodiesel

Project Experiences from Bali, Indonesia



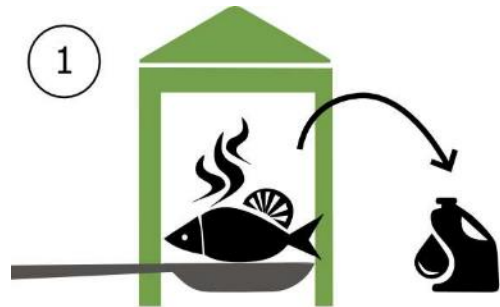
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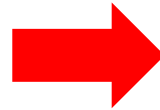
0. Outline

1. Setup of the UCO recycling and some project photos.
2. Status of the project and outcomes.
3. Project challenges resulting from external and internal factors.
4. Lessons learned from the project.

1a. Setup of the UCO recycling



1
In hotels and restaurants large quantities of used cooking oil are regularly produced.



2
Used cooking oil is collected by Yayasan Lengis Hijau, the social enterprise set up by Caritas Switzerland.



3
In a processing plant the used cooking oil is converted into biodiesel.



4
The produced biofuel is used as diesel substitute, e.g. for construction equipment or emergency generators of cooperating hotels.



5
Avoided greenhouse gas emissions are certified according to the Gold Standard and traded in form of emission certificates.

1b. Impressions of the project



1c. Impressions of the project





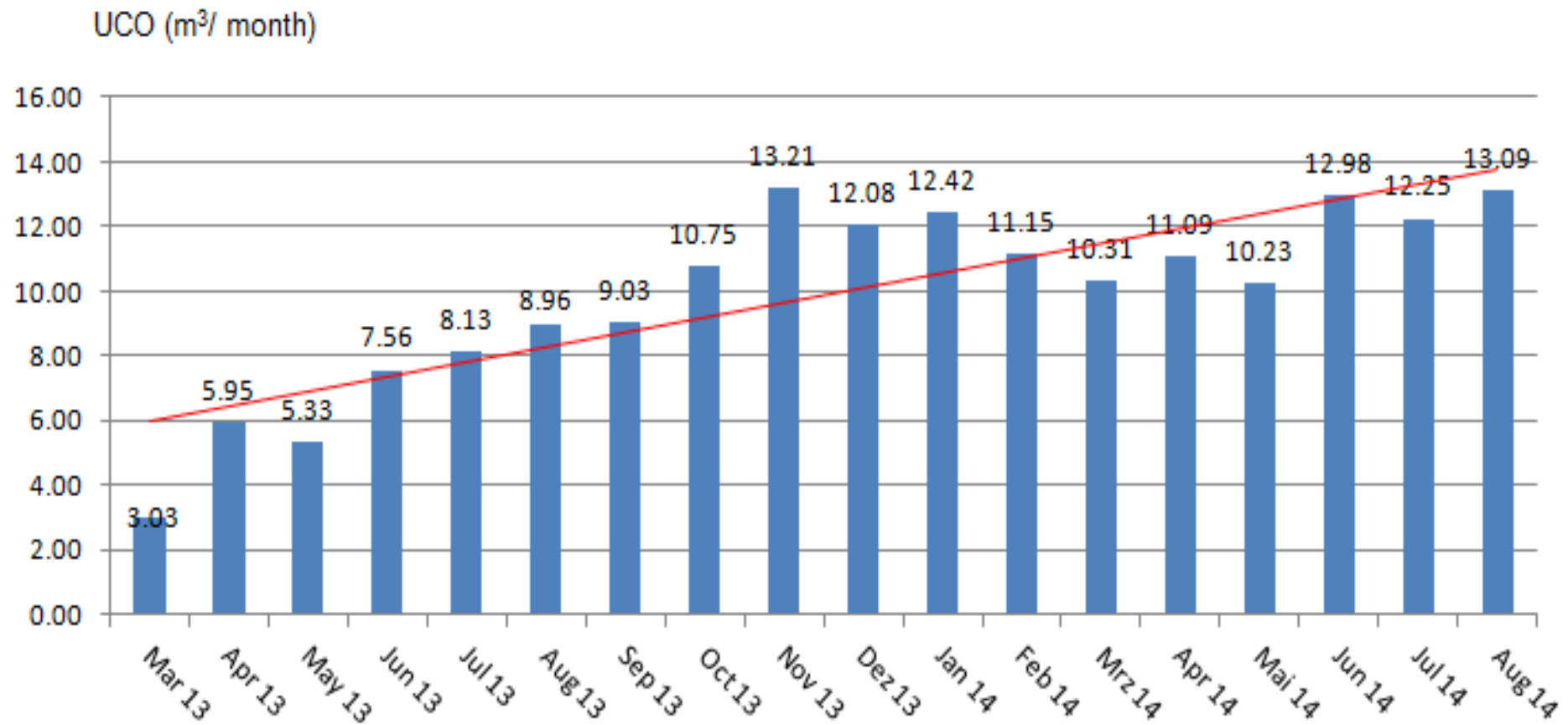
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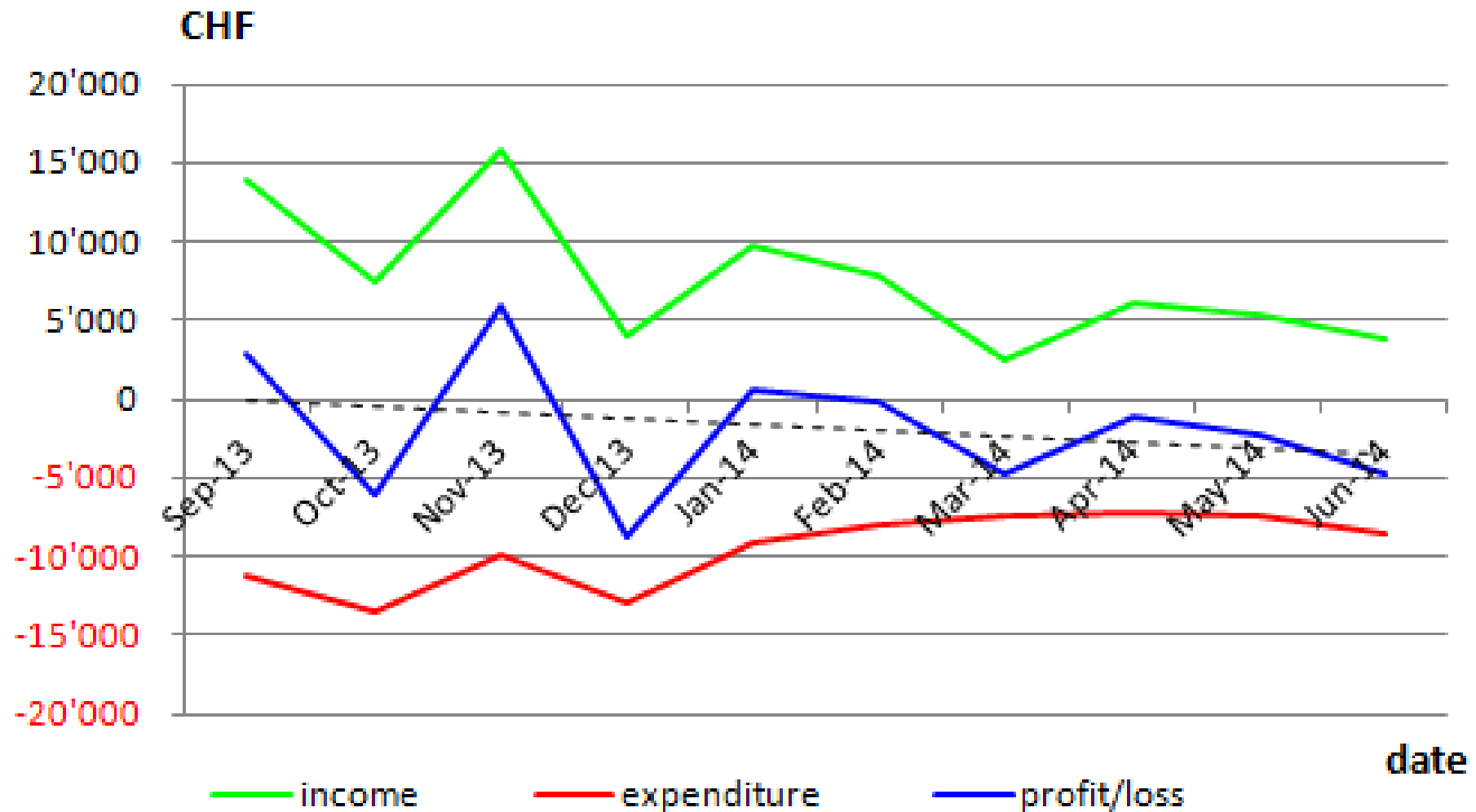
2a. Current status of the UCO recycling

- ▶ Development of the infrastructure and foundation of the social enterprise have been finished successfully.
- ▶ The recycling business started 1.5 year ago and is ongoing.
- ▶ About 170 hotels and restaurants are cooperating.
- ▶ The recycling rate is still too low to break even.

2b. Development of monthly recycling rates



2c. Economic development from Sept 13 to June 14





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2d. Project outcomes

- ▶ Improved awareness on the existing problem of UCO disposal and reuse.
- ▶ Knowledge on sustainable UCO recycling imparted.
- ▶ Contribution to climate change mitigation.
- ▶ Environmental conditions improved and health risks reduced.
- ▶ Training and higher income for socially disadvantaged people.
- ▶ Caritas improved knowledge in different fields.



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3a. Challenges resulting from external factors

- ▶ Absence of legal regulations for UCO disposal.
- ▶ Formal UCO market is not existing on Bali.
- ▶ Lack of legal regulations and limited understanding for economic oriented social business approaches.
- ▶ Environmental awareness and social responsibility in the tourism sector as well as in the public is low.
- ▶ Subsidies on fossil fuel confine development of renewable energy solutions.
- ▶ Imported technology involves risks with regard to taxation and availability of spare parts.



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3b. Challenges resulting from project internal factors

- ▶ The social enterprise lacks capacity and experiences especially in the field of business management.
- ▶ Financial means of the social enterprise as well as financial support from Caritas are limited after the implementation phase has been finished.
- ▶ Caritas and the social enterprise have only limited leverage to mobilize more support from the authorities.
- ▶ The carbon offsetting mechanism imply a long term commitment (10a) from Caritas as implementer.



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4. Lessons learned from the Bali UCO Project

- ▶ An enabling environment through support from the government & civil society is important.
- ▶ Legislative frameworks are often too rigid (e.g. flexibility towards a more business oriented).
- ▶ Long term support for social capital development & improvement of knowledge and skills is required.
- ▶ Financial & technical back up on a long term is important.
- ▶ Risks from market and supply chain barriers need to be considered and minimised.



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Thank you very much!

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