



Against the background of global climate change, whose impact becomes to an increasing degree more and more noticeable, and the fact of the expanding scarcity of natural resources, mankind stands at the crossroads not only to reconsider but to act immediately and in a sustainable way in their energy and environmental policies.

Applications of renewable energy sources (RES) are excellently qualified for delivering a significant contribution to the solution of energetic problems and economic development. At the same time, natural resources and environment are preserved and additional income opportunities might be created. Of course, this means also that various forms of RES have to be utilised worldwide, thus a vital contribution against climate change might be obtained. Hence, this Public-Private-Partnership (PPP)-Project aims to installing an international centre of excellence for capacity-building and training in the fields of biogas and biomass in Hale / Tanzania.

The project is coordinated by ALENSYS Alternative Energiesysteme AG, was planned jointly with BEB BioEnergy Berlin GmbH and the University of Hohenheim and will be partially supported by the German Federal Ministry for Economic Cooperation and Development via sequa gGmbH, Bonn, (PPP-Project No. 477-078).

It started in June 2009 and will be terminated by November 2010. Based on an earlier successful implementation of a biogas pilot project for fermentation of sisal waste in Hale, the idea was the logical consequence to facilitate gaining further know-how and its dissemination.

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German Public-Private- Partnership-Project

Establishment of an
"International Centre of Excellence
for Training in Biogas and Biomass"
in Hale (Tanzania)



Bundesministerium für
wirtschaftliche Zusammenarbeit
und Entwicklung



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International Centre of Excellence for Training in Biogas and Biomass in Hale (Tanzania)



ALENSYS AG is a project development and consultancy enterprise operating along the entire value-added chain of biofuel production from renewable raw and biological waste materials. The range of services offered by ALENSYS covers investment analysis including provision of finance, technological planning, tendering and realisation, start-up and expert monitoring for all kind of small and medium scale biofuel plants for native vegetable oils, biodiesel, bioethanol, biogases / biomethane and Bio-synthetic natural gas (Bio-SNG).

BioEnergy Berlin GmbH (BEB) is a company specialized on planning and realizing biogas plants. BEB has access to a broad partner network and already accomplished numerous international biogas projects. By order of UNIDO in 2006 and 2007, BEB planned, installed and put into operation the above mentioned first big pilot biogas plant for fermentation of sisal waste on the premises of KATANI Ltd. in Hale / Tanzania.

In the planned centre, run under the auspices of KATANI, not only theoretical capacity building and training for the different target groups will be provided, also consultancy and laboratory services in the field of biogas and waste material exploitation will be offered.

For these purposes a teaching room for theoretical education and a laboratory for applied tutoring on and analysis of biogas and raw materials will be installed. The planned laboratory will, together with a trained service team, offer a service package for new and existing biogas plants, so that in the medium-term income for the training centre is generated

for contribution to the economic sustainability of the centre.

As an accompanying measure knowledge transfer from universities and research institutes is projected. Additionally, roadshows are planned to demonstrate to the Tanzanian authorities and the broader public advantages and application possibilities of biogas technologies.

With this PPP-Project ALENSYS and BEB want to contribute to the further distribution of renewable energies in Africa.

ALENSYS AG and BEB GmbH will realise the PPP-Project with the following partners in Tanzania and Germany:

- University of Hohenheim
- KATANI Ltd.
- The Sisal Association of Tanzania (SAT) / Tanzanian Sisal Board (TSB)
- University of Dar es Salaam / (Mlingano Agricultural Research Institute)

During the project different target groups will be trained on various subjects in the fields of biogas, biomass and further applications of renewable energy sources. Target groups are company experts, farmers and peasants, university lecturers, students, and governmental representatives.

Among others, the following topics will be covered by the training courses:

theoretical training:

- basic knowledge on production and application of biogas
- biogas generation from sisal and other organic waste and substrates

- processing and use of fermentation digestates
- financing concepts for the installation of additional biogas plants
- laboratory tests and digestate analysis
- systems engineering
- instructions on operation of a large-scale plant using the pilot plant
- biogas potential for the development of rural and urban regions with regard to improvement of living conditions, environment preservation and resource conservation, energy, sustainable agriculture etc.

practical training:

- laboratory tests and digestate analysis
- instruction in operation and maintenance / attendance of a large-scale plant

Beside the above listed objectives, the training centre in Hale also aims to establish biomass and biogas technologies regionally and transregionally, facilitating to launch a new branch of industry and economic activities in Tanzania. In the long-run, also ALENSYS and BEB hope to profit from new chances and opportunities from the development of a renewable energy market in Tanzania.

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