



#### **DBFZ** Activities

Togo has a high potential of biomass residues, which has hardly been used so far, meanwhile the traditional use of biomass, in particular the production and use of charcoal and the widespread cooking with wood on a three stone cooking fire, fostered deforestation.

Before this background, Togo is looking for solutions to provide bioenergy for different applications, to develop own bioenergy research capacities, and to achieve underlying ecological aims, as for instance the reduction of deforestation.

DBFZ established contact to Togo in 2014. The cooperation was intensified in 2018 when DBFZ was invited to participate at the evaluation of different bioenergy feasibility studies that were elaborated in cooperation with West African Science Service Centre on Climate Change and Adapted Land Use (WASCAL), an international organization in West Africa with financial support by the Federal Ministry of Education and Research (BMBF).

In line with those activities, BMBF funded a project to assess the national and regional available biomass residue potential as a first corner stone for a sustainable bioenergy strategy in Togo. In 2020, also with funding by BMBF, started a big research project which will install a biogas laboratory at the University of Lomé. Another pillar of the project is the development, production and testing of completely new designed pyrolysis cook stoves. Their future distribution throughout the region can contribute to a decrease in the deforestation rate.

## **DBFZ R&D and Project Focus**

The focus of DBFZ activities in Togo is on the assessment of unused biomass potentials, knowledge transfer, in particular on biogas and pyrolysis technologies, and improvement of framework conditions for the use of bioenergy.

- Assessment of (unused) agricultural residues on a national, provincial and local level;
- Installation of own biogas research capacities and associated knowledge transfer;
- Capacity-building and vocational training;
- Technical consultancy for biogas production in rural areas;
- Technical consultancy for the distribution of pyrolysis cook stoves in rural areas
- Sustainable integration of bioenergy in already existing infrastructures

## **DBFZ Future Activities**

Togo's high potential of available biomass residues will be assessed for a sustainable material and integrated energetic use. This applies for topics like food security, soil improvement, reduction of deforestation and emissions, (industrial) heating concepts, etc. The development of the bioenergy sector in Togo should be conducted consistently and reasonably, taking into account possible impacts on the national economy and environment.



DBFZ Research and Project Country Profile Project References



DBFZ would like to strengthen its activities in the following fields:

- Potential analysis together with Togolese and WASCAL partners
- Mass flow analysis
- Feasibility studies
- Knowledge transfer, capacity building and vocational training
- Research and academic exchange

## **DBFZ Partners**

The DBFZ has partnerships with the following Togolese partners in science and society.

Cooperation Agreements	
Project Partners	University of Lomé West African Science Service Centre on Climate Change and Adapted Land Use (WASCAL) Jeunes Volontaires pour l'Environnement (JVE)

# **DBFZ Reference Projects (selected)**

2/2019-	<b>Feasibility study on the biogenic residues potential in Togo und Ghana</b>
8/2019	The project quantified and screened the spatial distribution of relevant biogenic by-products from agriculture and food waste in Togo and Ghana. It identified and evaluated the country-specific biogas technology and biogas utilisation options.
1/2020- 12/2023	Development of research capacities and demonstration of technologies for the use of biomass potentials in Togo (LabTogo) The project will set-up a biogas research laboratory and develop innovative pyrolysis cook-stoves for rural areas. Besides building up research infrastructure and transferring knowledge on the bioenergetic use of biogenic organic residues, a significant contribution is made to combating climate change and at the same time reducing deforestation in the target region. The project evaluates alternative and renewable energy sources for rural areas and create the basis for a successful technological implementation.

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#### About DBFZ

DBFZ is the leading German research institute in the field of energetic and related material use of biomass. DBFZ monitors and evaluates the most promising applications for bioenergy in theory and practice, realizing research and collaborative research projects at both national and international level, with partners and stakeholders from industry, administration, politics and academia. Currently about 180 scientists in the departments of Bioenergy Systems, Biochemical Conversion, Thermo-chemical Conversion and Biorefineries carry out application-oriented R&D and provide scientifically-based results to support informed political decision making.

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