

## Press release

Leipzig, 13.05.2020

### **Potential analysis, biogas lab and pyrolysis cooker: DBFZ starts foreign project in Togo**

In a project financed by the German Federal Ministry of Education and Research (BMBF) and running until the end of 2023, Leipzig scientists are investigating the potential of residual and waste materials in West Africa and providing support in setting up a research biogas laboratory and in the production of pyrolysis cookers for rural regions. The aim is to build up long-term know-how and scientific capacities on the subject of climate change and its impact on land use in Togo, West Africa. Togolese scientists are being trained at the Lomé University as well as at the DBFZ in Leipzig to ensure the independent and sustainable use of the established infrastructure.

As part of the German Federal Government's Africa Strategy, the joint research centre "West African Science Service Center on Climate Change and Adapted Land Use" (WASCAL) was established by the Federal Ministry of Education and Research as early as 2012. With the countries Benin, Burkina Faso, Cape Verde, Ivory Coast, Gambia, Ghana, Mali, Niger, Nigeria, Senegal and Togo, a total of eleven African countries with different focal points are now integrated into the research network. While each country pursues regionally adapted research priorities on different aspects of climate change (biodiversity, water, land use, civil security or agriculture), bioenergy plays a particularly important role in Togo.

In the DBFZ's largest foreign project to date, with 3.2 million euros, a significant contribution is to be made to combating climate change through the development of research infrastructure and the transfer of knowledge on the bioenergetic use of biogenic organic residues, while at the same time reducing deforestation in the target region of Togo. In line with this starting point, the Leipzig scientists are pursuing the goal of evaluating alternative and renewable energy sources for rural areas and creating the basis for successful implementation. Therefore, in a first step, biomass potentials are to be quantified, technologies are to be examined with regard to their suitability and, in the case of biogas application, a research structure is to be created that is necessary to enable a sustainable implementation of technologies.

The final system contribution that biomass can make in Togo depends to a large extent on the availability and mobilisation of the existing resource base. The measures in the project therefore aim at a comprehensive systemic assessment with regard to the expected impacts that would occur if the technologies considered in the project were to be fully established in Togo. With a new research laboratory to be built, the project partner, the University of Lomé, will be enabled to independently test the country's most important agricultural residues with regard to their suitability for biogas production. The construction and commissioning is planned for 2021, but could be postponed due to global

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coronavirus-related restrictions. In addition, an extensive transfer of knowledge on biogas laboratory methods is planned. Togolese employees of the University in Lomé will be trained for this purpose in the biogas laboratory of the DBFZ in Leipzig. In order to show the country promising alternatives to the use of agricultural residues, which can contribute significantly to stopping the high deforestation rate in the country, a further partial work package envisages the production of pyrolysis cookers. The heat source for cooking or grilling is wood gas, which is formed during charring. After the gasification process, the coal can be reused as fuel or used as vegetable coal in agriculture for soil improvement. The use of pyrolysis cookers can also reduce health hazards during cooking by reducing emissions compared to traditional combustion. Further information is available at: [www.dbfz.de/en/projects/labtogo](http://www.dbfz.de/en/projects/labtogo)



Delegation from WASCAL visited the DBFZ research biogas plant in Leipzig in March 2019 (Photo: DBFZ)

### Smart Bioenergy – innovations for a sustainable future

The DBFZ works as a central and independent thinker in the field of energy and material use of biomass on the question of how the limited available biomass resources can contribute to the existing and future energy system with sustainability and high efficiency. As part of the research the DBFZ identifies, develops, accompanies, evaluates and demonstrates the most promising fields of application for bioenergy and the especially positively outstanding examples together with partners from research, industry and public. With the scientific work of the DBFZ, the knowledge of the possibilities and limitations of energy and integrated material use of renewable raw materials in a biobased economy as a whole should be expanded and the outstanding position of the industrial location Germany in this sector permanently secured – [www.dbfz.de/en](http://www.dbfz.de/en).

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