



**Sustainable Use
of Biomass
Focussing on Bioenergy**

gtz

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Biomass for development

- Biomass is a subject of growing significance worldwide, in particular due to its suitability as source of bioenergy. The main reasons for this are the global increase in the demand for energy, the constant rise in the price of fossil fuels and the need to reduce greenhouse gas emissions. Biomass is also increasingly in demand as a raw material in the chemical and plastics industries.

Proponents of this bioenergy boom see new possibilities for economic development and poverty reduction, particularly in developing countries and above all in rural areas. Investments in the bioenergy sector are also expected to increase smallholder incomes, promote the development of decentralised energy supply systems and improve developing countries' balance of trade and payments through higher export earnings. However, many civil society groups and NGOs are increasingly pointing to the possible negative social, ecological and economic consequences and food security dangers posed by the focus of industry and the energy sector on biomass and bioenergy production.

German and international development cooperation must seize opportunities for sustainable development while considering and minimising the known risks. This requires coordinated and coherent policies in the environment, agriculture and energy sectors, the introduction of social and ecological standards – with special attention paid to food security – and clear concepts that allow the private sector to invest in sustainable production and bioenergy use.



Sustainability is the goal

- We support governments in selected partner countries as well as trade associations, private sector companies and German development cooperation organisations in planning and developing strategies for the sustainable production and use of biomass. In addition to developing biomass strategies for selected countries, we also work very closely with the Programme Office for Social and Ecological Standards on testing sustainability standards and setting up pilot certification systems. The emphasis here is on the local and national supply of biomass for power generation purposes. The main beneficiaries of this work will be the smallholders as producers, the population as end consumers, and the actors along the entire local and national value chain.

Overview of our activities and services

- We organise our activities in the interests of our target groups, promoting sustainable economic development and poverty reduction in the rural areas of developing countries. The focus is on
 - developing consulting concepts for the sustainable production and use of biomass
 - drawing-up biomass strategies and providing policy advisory services in selected partner countries
 - developing and promoting value chains in the area of biomass with our partners
 - testing sustainability standards and certification systems

- identifying and implementing pilot projects with the private sector, for example public private partnerships (PPPs) in the areas of decentralised energy supply and biomass for export
- setting up networks to promote specialist exchanges with our partners and other projects, and providing information on specific themes



Partners

- We work together with a large number of stakeholders. Our partners include governmental and non-governmental organisation as well as national and international organisations from the world of development cooperation. We are also expanding our activities with a number of companies in Germany and our partner countries.

Pilot regions

- Project activities will focus on the following partner countries: Kenya and Uganda (Africa), Indonesia (Asia), Brazil and Peru (Latin America). It is highly likely that support will be provided in other countries, and in some cases this is already being planned.



PPP measures

1. A public private partnership initiative with the German company Prokon-Energiesysteme GmbH is underway in south-western Tanzania. The aim of the initiative is to promote the sustainable cultivation of jatropha by local smallholders and so supply the regional centre with vegetable oil as a substitute for imported diesel for power generation. The oil is intended to improve the local supply of household energy and also to be used in future for transportation purposes. The long-term objective is to sell any excess power generated on the national or international markets.
2. Buses in Lima, the capital of Peru, are running on vegetable oil. A project run by VWP (Vereinigte Werkstätten für Pflanzenöltechnologie – a leading German developer of diesel engine-based vegetable oil technology) and supported by GTZ as part of a public private partnership trains local skilled workers to convert buses to run on vegetable oil. The oil is also purchased locally. In this way, the project reduces greenhouse gas emissions and at the same time promotes economic growth in rural areas of Peru.



Bioenergy is a new compound word that denotes the energetic use of biomass. Solar energy is converted into chemical energy in plants by photosynthesis. Suitable biomasses can be derived from a whole range of sugar, carbohydrate and oil-producing “energy plants” as well as from organic wastes that can be processed into ethanol, biogas and vegetable oils.



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