



## Energising Development Partnership – EnDev Country Project Tanzania

Country	Tanzania
Technology	solar, stoves
EnDev 2	12/2012 – 06/2017
Budget	€ 2,041,000
Partners	Ministry of Energy and Minerals, Tanzania Investment Bank (TIB), stove producers and retailers, food vendors, solar companies
Objective	Facilitate access to clean energy to the rural and peri-urban areas by 2017: Improved cooking for 45,000 people, energy for lighting and electrical applications through solar power for 181,000 people.
Achieved until December 2014	Over 28,500 people have been gained access to modern cooking energy. Additionally, more than 10,800 people have access to modern lighting through small solar systems.

Increasing demand of biomass fuels, use of inefficient traditional cookstoves and a dwindling supply have created environmental degradation and energy security challenges in both rural and urban areas. In 2010, the demand for biomass fuels was about three times as high as the estimated supply. To meet their biomass need, people are forced to overharvest existing natural forests, contributing to the high deforestation rate. Green House Gas (GHG) emissions resulting from unsustainable biomass consumption contribute to adverse climatic change with direct consequences for livelihoods and the country's economic growth.

### Project Approach

EnDev Tanzania focuses on two key components: the development of markets and sustainable supply for improved cookstoves (ICS) as well as for small plug-and-play solar (picoPV) technology in rural and peri-urban areas in the Lake Zone.

### Background

The energy balance in Tanzania is dominated by biomass fuels. The household sector consumes 91% of the total energy demand in the country, mainly for cooking and lighting. Less than 14 % of Tanzania's 41 million residents have access to the electricity grid. Of the three quarters of the population living in rural areas only 2-3 % have access to electricity. The six regions of Tanzania's Lake Zone (Kagera, Geita, Mwanza, Shinyanga, Simiyu and Mara Regions) are home to approximately ten million people, of whom 8.5 million are without electricity access.

The Lake Zone capital, Mwanza City, hosts a variety of solar technology suppliers including some of the largest and most reliable solar vendors nationwide. Despite strong potential for expansion of solar technology to under-served rural and peri-urban areas, the absence of viable distribution chains effectively limits the diffusion of quality solar options.



Stove producers during a theory training session.

Implemented by SNV, EnDev Tanzania initiated the Tanzania Improved Cook Stoves (TICS) programme. TICS works to build upon existing local ICS supply chains to initiate the production, distribution and sales of clean and marketable ICS options that meet the need of rural households. The project works closely with existing stove entrepreneurs to realise improved performance,

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quality and marketability of cook stove options. In the first phase of the project, this was realised through the joint development of the 'Jiko Matawi' – a multi-purpose stove capable of using both firewood and charcoal. The newly developed 'Matawi' wood stove is marketed in rural and peri-urban areas of Mwanza Region with increasing consumer demand throughout the country.

The project ensures consistent quality of cookstoves through introduction of standard production methods. Materials and tools are employed by stove artisans in order to enable returns for sustained enterprise growth. This is combined with marketing measures aimed to brand, professionalise and lend distinction to both ICS product and producer profiles.

Since May 2014, results-based financing (RBF) is applied to support the establishment of a rural market for picoPV systems. The component aims to improve market access to pre-electrification pico-solar devices for rural and off-grid households in the Lake Zone. This is to be achieved via strengthened ties between import-suppliers and retailers. EnDev established a temporary financial product with Tanzania Investment Bank (TIB). The incentive scheme is accessible to import-suppliers actively engaged in distribution chain development. The incentive payment is limited in time and proportional to the performance of the product. The private sector must pre-finance their sales activities before they are able to earn incentives, as. These are only paid upon verified sales of systems to rural consumers in the Lake Zone. SNV engages in multi-stakeholder coordination to ensure transparent operation of the RBF.

## Outcome & Impacts

Since the start of the project, about 28,500 people have benefited from improved cookstoves. During the second half of 2014, average monthly sales of wood stoves have nearly doubled compared to the previous semester. The metal clad version of the Matawi stove has continued to realise good consumer response in new rural districts. EnDev Tanzania has further expanded its support in stove production and marketing to include agri-business operators. All producers engaged in the project benefit from continued coaching and quality control. A performance based 'Champion Fund' is accessible to leading producers. The Champions, of whom four out of five are female headed enterprises, have further taken leading roles in marketing of their enterprises at national events. Product branding distinguishes the ICS products and services from inferior imitations. The stove business has created employment in the production,

marketing and installation segments, thus increased incomes.

The RBF fund has been in the market since May 2014. A total of ten companies with a diverse range of business models is benefitting from the incentive and marketing picoPV systems in the rural Lake Zone. The scheme has helped to distribute more than 1,800 picoPV products to households in rural areas until December 2014. This equals about 10,800 people having gained access to modern, energy-efficient lighting. The number of beneficiaries is expected to rise to 31,000 people by mid-2015. Since the start of the project, firms and households have invested EUR 320,000 in the picoPV sector. There has been an increase of three new importer/suppliers engaging in sales picoPV systems in the Lake Zone, plus numerous retailers. A total of 91 employments have been created.



*Preparing the clay and making the stove blouse.*

## Lessons Learnt & Outlook

The cultivation of entrepreneurship and fair competition, verified by regular and transparent sales monitoring is critical. Performance-based approaches are an innovative way to unlock the potential of local entrepreneurs. Local stove producers are provided with the means and flexibility to make their local cook stove markets work while further extending the reach of their stove options to wider spheres of Tanzania.

The existing technical and business assistance for picoPV entrepreneurs contributes to the progress of the RBF intervention. However, initial research has indicated that supplier knowledge of actual retailer practices was fairly limited. Suppliers engaged in RBF have started to identify players in the chain to whom they previously paid little attention. RBF reveals more clearly the strongest performers in the distribution network – and supplier activities are shifting to provide greater support to them.

### Published by:

Deutsche Gesellschaft  
für Internationale Zusammenarbeit (GIZ) GmbH  
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As of: May 2015

### Photos:

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### Designed by:

creative republic / Thomas Maxeiner  
Visual Communications, Frankfurt a. M.  
Germany, [www.creativerepublic.net](http://www.creativerepublic.net)

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