# Renewable Energy in Africa



In Africa, 80% of the population depends on traditional energy sources, and only one in four Africans is estimated to have access to electricity. The provision of cleaner and renewable energy can keep or lift households out of poverty, improve the health of households, provide jobs, develop small businesses, and combat climate change.

## Energy for better lives

Access to energy is a precondition for development and achievement of the Millennium Development Goals. SNV's work in renewable energy focuses on lighting and cooking needs for households, and productive needs for small and medium enterprises (SMEs). Interventions in the renewable energy sector include facilitating commercially sustainable market systems for domestic biogas, solar lighting and biomass based cooking products and services, and activities for Reducing Emissions from Deforestation and Degradation (REDD+).

#### SNV is working to:

1. **realise access** to sustainable, clean and reliable energy sources and technologies for domestic households and SMEs including small producers, while reducing greenhouse gas emissions;

2. create an **enabling environment** whereby local organisations are strengthened and sound policies, including regulation, quality assurance and governance, are developed.

#### Approach

Over the years we have learned that four factors are key to success in our approach to capacity development in the renewable energy sector:

#### Inclusive development

In recent years many developing countries have grown economically. Evidence shows, however, that economic growth alone does not reduce inequity. It is important that poor households and small enterprises can benefit from economic development. Availability of inexpensive clean energy solutions in rural areas is a prerequisite for inclusive development.

#### Systemic change

Individual solutions are not adequate to tackle energy poverty. We initiate, promote and develop flexible partnerships where various actors (consumers, entrepreneurs, producers, investors, financial intermediaries, policy makers, civil society) independently pursue their own interests whilst they collaboratively work towards achieving goals that they could not have realized individually.

#### Local ownership

Effective and sustainable solutions can only be achieved if local actors shape and drive their own agendas. We support local partners to develop the energy sector in such a way that sustainable, clean and reliable energy sources become available to poor households and SMEs.

#### **Contextualised solutions**

SNV's strong on-the-ground presence and networks enable us to develop and test solutions adapted to local contexts. We take proven solutions and work with local stakeholders to adapt them to specific challenges and needs in their contexts, enabling effective and economically viable solutions to development problems.



#### Sector scope

#### BIOGAS

SNV is supporting domestic biogas activities worldwide for more than **20 years**, and to date has established biogas programmes in seven Asian countries as well as biogas activities in **9** African countries. The Africa Biogas Partnership Programme, funded by the Netherlands Government and coordinated by SNV and Hivos, is being implemented in Burkina Faso, Ethiopia, Kenya, Senegal, Tanzania and Uganda. Our expertise focuses on the preparation and implementation of national programmes applying a multi-stakeholder sector development approach.

#### **BIOMASS AND SOLAR**

SNV's diversification into other renewable energy technologies focuses on facilitating **market-based solutions for cooking and lighting needs**. This largely focuses on Improved Cook Stoves (SNV is a founding partner of the Global Alliance of Clean Cook Stoves) and Pico Solar PV technologies. Besides there is also an emphasis on 'Innovation' to provide contextual and **off-grid energy solutions** for associations and **small businesses**, especially **adding value** to agricultural production and transformation using valuable agricultural residues.



#### REDD+

Building on experience in Asia, the programme for Reducing Emissions from Deforestation and Degradation (REDD+) is currently a pilot innovation area for SNV in West and Central Africa. SNV's strategy in the Congo Basin (Cameroon and Democratic Republic of Congo) is targeting the social and economic inclusion of REDD+ actions with a focus on: (i) implementation of high quality **Pro Poor REDD+** actions, (ii) diversification of intervention proposals to **mitigate deforestation** and forest degradation, (iii) improved access to finance pro poor REDD+ actions, and (iv) national legal frameworks supporting the inclusion of the poor in REDD+ actions.



#### Intervention Areas



#### Some achievements

As of December 2011, **13,165 biogas digesters** had been installed under the Africa Biogas Partnership Programme implemented in collaboration with Hivos in **Burkina Faso, Ethiopia, Kenya, Senegal, Tanzania** and **Uganda**. An additional **1,846 digesters** were installed under the National Domestic Biogas Programme in **Rwanda**.

Together with Price Waterhouse Cooper, SNV operates as the Fund Manager for the « **Congo Basin Forest Fund** » (African Development Bank grant). The fund supports innovative interventions to alleviate poverty and address the challenges of climate change by building capacities at the national, institutional and community levels of the forest countries of the **Congo Basin**.

SNV in **Ethiopia** signed in April 2011, a three year agreement of Euro 1,275,000 with the Oromia Regional Bureau of Water, Mineral Energy/ Regional Biogas Coordination Office and the Oromia Credit and Saving Share Company, for credit financing of biogas households in the National Biogas Programme. Under this agreement, 6000 households, reaching 30,000 people, in Oromia regional state will each receive a Euro 272 subsidy when installing biogas technology.

Through collaborative efforts, SNV is installing a steam kitchen – rice transformation facility in **Burkina Faso**. The hybrid system, using both solar thermal reflectors and biomass gasification (using rice husk), provides a complete off-grid energy solution to (i) produce daily food for 1,500 pupils, and (ii) to steam and process rice. This project is the first steam kitchen outside of India.

SNV is enhancing community Forestry Groups capacities to comply and link with legal timber markets in **Cameroon** in the PELFC project ("Promotion de l'Exploitation et de l'Exportation Légales des bois issus des Forêts Communautaires").

#### Partnerships for sustainability

In order to scale-up and improve renewable energy use, SNV works in collaboration with capacity development partners including government departments, the private sector, civil society organisations, research institutes and international initiatives such as the Global Alliance for Clean Cookstoves and IFC's Lighting Africa programme.

To increase the required renewable energy technical, functional and entrepreneurial knowledge and skills, we collaborate with local technical and vocational education training institutions, as well as local and international universities.

#### Our expertise

#### Advisory services: creating effective solutions with local impact

We provide advisory support to ensure sustainable production of <u>renewable energy solutions</u>, <u>generating income and employment</u> opportunities. We reinforce capacities of local organisations to build their technical and organisational capacities in order to <u>function more efficiently and effectively</u> in achieving their goals. SNV promotes the <u>development of innovative technologies and approaches</u> which are in line with the demand and context of the respective countries. Besides market studies, surveys and intelligence, we develop <u>innovative</u>, <u>suitable and practical funding mechanisms</u> for investments in the renewable energy sector.

#### Knowledge networking: developing, sharing and leveraging knowledge

SNV's local presence and our on-going advisory work with more than 1,000 local organisations are fertile sources of knowledge and insight. We are active members of extensive local and international networks and have an array of experience in renewable energy. We develop, broker and manage the knowledge and products developed in the sector for replication, leverage and impact enhancement. We link local developments to (inter) national mechanisms, tools, agreements and protocols. SNV is open to share this knowledge and experience with other actors in the sector.

### *Evidence-based advocacy: enabling environments for effective solutions with local impact*

SNV joins forces with governments, the private sector and civil society to enrich policy debate and development. We advocate for the adoption of developed and tested technologies, approaches and mechanisms in policies to make the renewable energy sector sustainable. We include cross-cutting issues like gender and good governance in the process of up-scaling energy services.

#### www.snvworld.org

SNV is an international not-for-profit development organisation that works in 36 developing countries in Africa, Asia, and Latin America. We help empower local communities, businesses and organisations to break the cycle of poverty by providing them with the tools, knowledge and connections they need to increase their incomes and gain access to basic services. We do this by providing advisory services, knowledge networking and supporting advocacy in the agriculture, water, sanitation and hygiene, and renewable energy sectors.

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