



Energising Development

EnDev – Mozambique

ALER Conference - Maputo, 26th October - 2017



*energising
development*



ENERGISING DEVELOPMENT (EnDev) PROGRAMME IS A MULTI-DONOR PARTNERSHIP



Implemented by: GIZ in coop. with the Netherlands Enterprise Agency (RVO)

EnDev has a dynamic organizational structure that allows for additional donors to join.

As such EnDev is an example for successful donor harmonization.

ENDEV IS A PERFORMANCE-BASED PROGRAMME

→ 17,3 million people reached till june/2017



ENDEV – SUPPORTED TECHNOLOGIES & REGIONAL DISTRIBUTION



Solar



Hydro



Biogas



Cooking energy



Grid extension/
densification





Key achievements EnDev-Global since 2005

Energy access for

17.3 million

people accomplished

13.3 million

household members with improved cooking solutions

4.0 million

household members with electricity

1.8 million t of CO₂ saved per year – equivalent to planting of more than 4 million trees

A total installed power of **51,2 MW** with renewable energies

38.600 small and medium enterprises with a modern form of energy for productive uses

More than **40.000** technicians, stove producers, sales agents etc. trained

19.400 social institutions with a modern form of energy: among them 9,500 schools and 1,050 health centres

6.3 million men, women and children with drastically reduced exposure to indoor air pollution



EnDev – Upscaling criteria for country projects

Up-scaling criteria

Cost efficiency (current and anticipated)

Sustainability (proven/expected)

Impact (proven)

Degree of market/sector development & scalability

Conditional criteria:

Administrative and financial clean track record (GIZ standards)

Bonus criteria

LDCs (Less Developed Countries)

Strategic importance for EnDev donors

Electrification activities

Higher service level access

Remote areas

Concrete gender strategies



EnDev Objectives

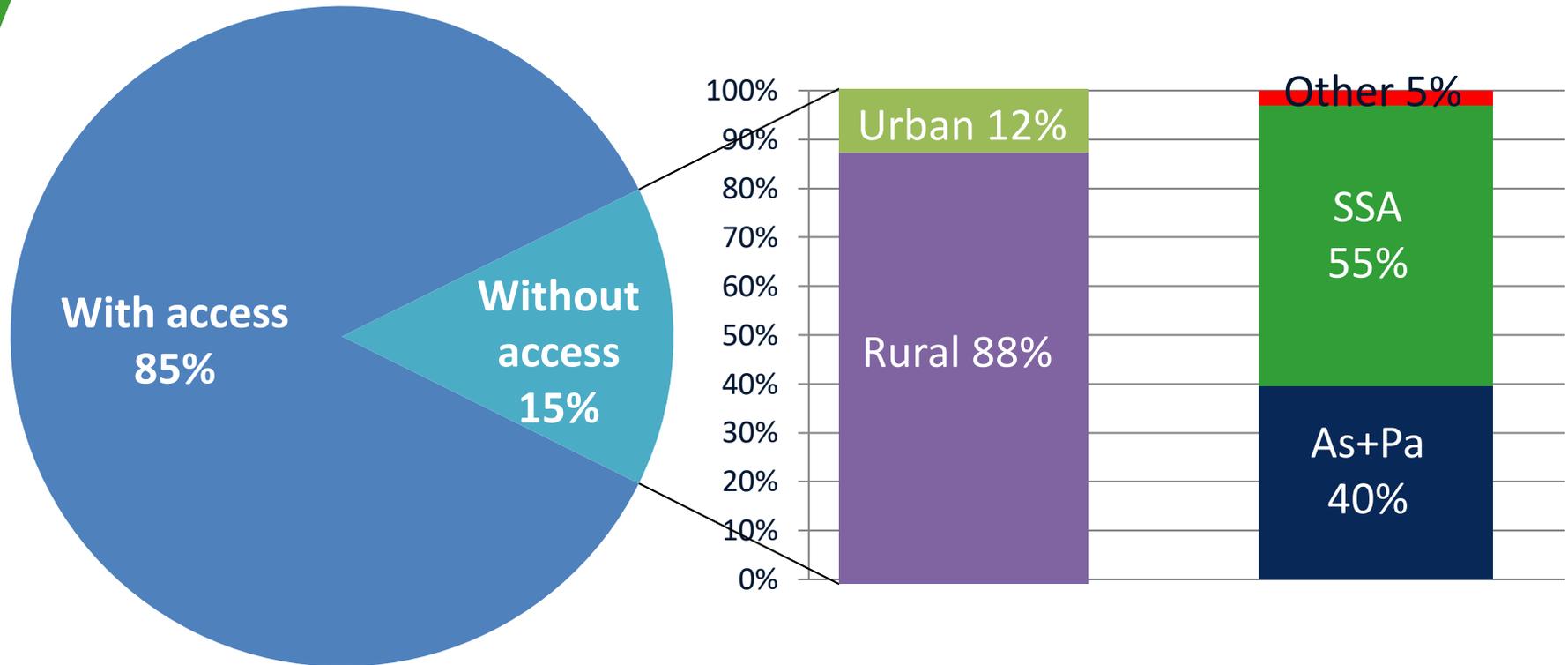
Per 100,000 EUR project budget:

- I. **Sustainable access:** >5,000 persons, 10 social institutions and 20 enterprises. Gender equality is respected in the access and use.
- II. **Health:** >300 poor households use cooking systems that significantly reduce the health burden caused by smoke and soot.
- III. **Job creation** : at least 5 jobs created along the value chain of the supported energy technologies.
- IV. **Low carbon development:** >500W of electrical power based on renewable energy are installed.
- V. **Leveraging:** additional investment of >200,000 EUR by private households, private sector and public sector.
- VI. **Climate:** reduction of the annual CO₂ equivalents (CO₂e) emission by 400t.



Energy Access Situation

In 2014: > 1 billion people (= 15% of global population) without access to electricity

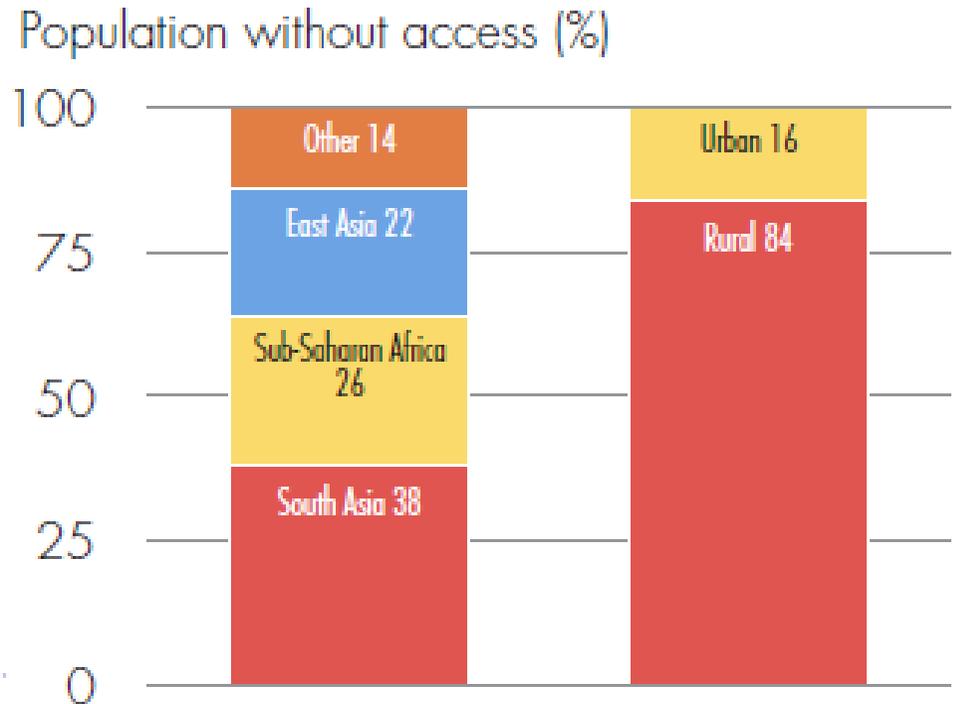
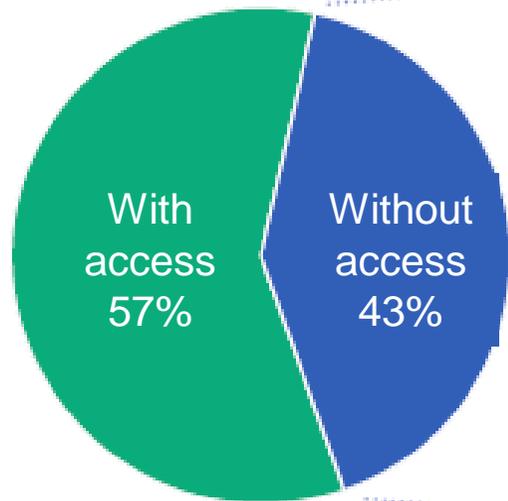


Source: GTF 2017



Energy Access Situation

In 2014: > 3 billion people (= 43% of global population) without access to clean cooking¹



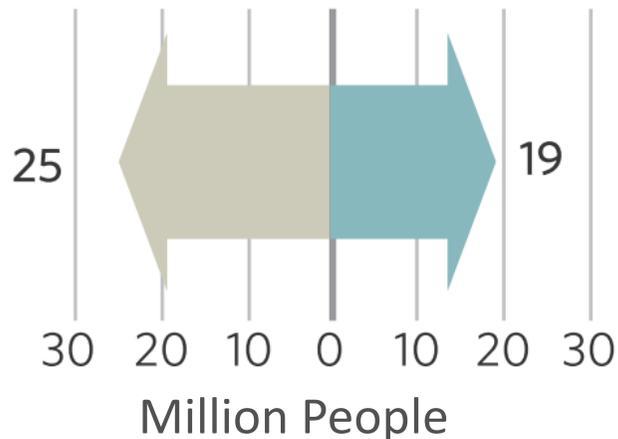
Source: WHO Household Energy database 2015 (WHO 2015).

¹ Clean cooking = use of clean fuels and technologies for cooking (before non-solid fuels)

Energy Access Situation

Electricity:

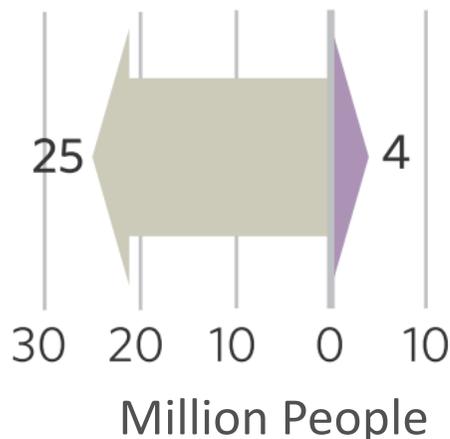
Africa
(excluding
North Africa)



- Annual increase in population with access to electricity, 2012-14
- Annual increase in total population, 2012-14

Clean Cooking:

Africa
(excluding
North Africa)



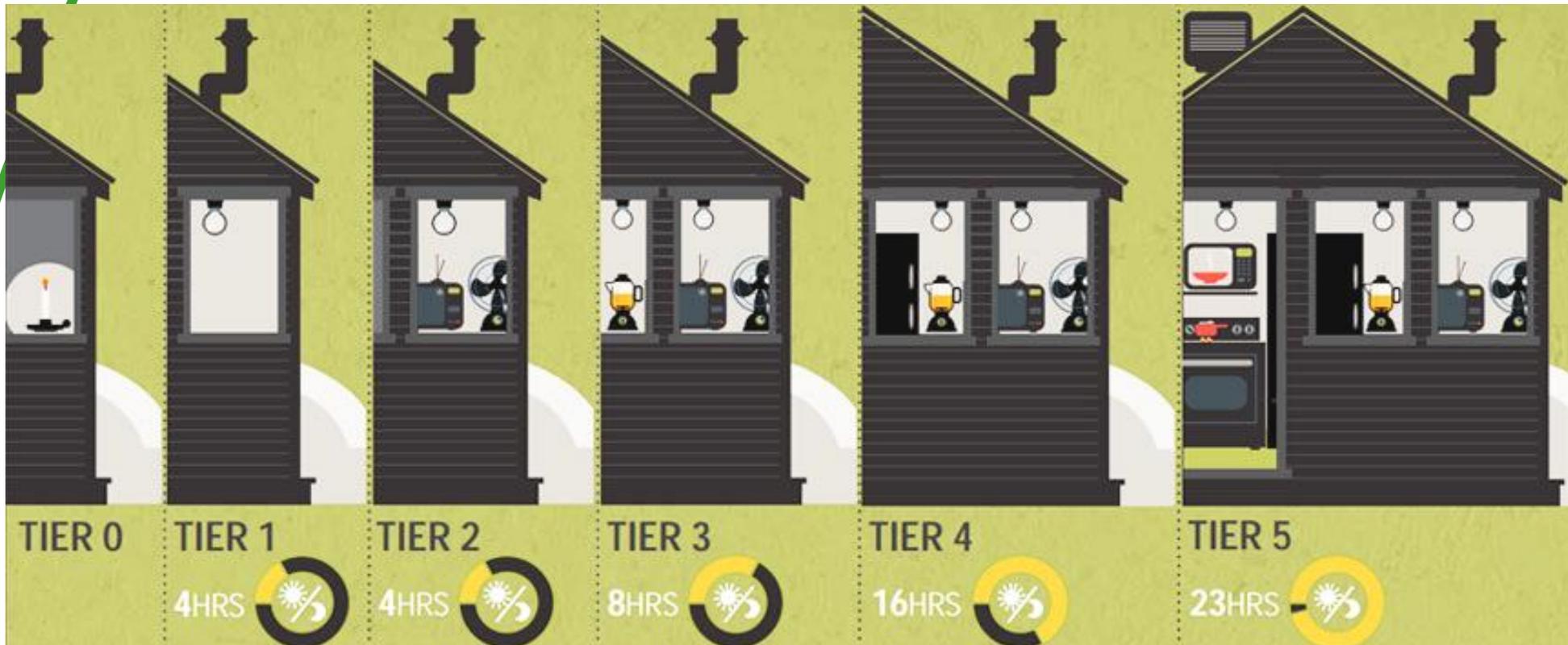
- Annual increase in population with access to clean cooking, 2012-14
- Annual increase in total population, 2012-14



Future prospects

- Universal access to modern energy will not be reached by 2030 according to IEA, World Energy Council, and IRENA
- IEA scenario for 2030
 - > 780 million people without access to electricity
 - > 2.3 billion people without access to modern cooking
- To achieve universal energy access by 2030, annual investments in energy access will need to be around five times higher than recent spending.

Measuring energy access:





Provided Access to Electricity by EnDev

Outcomes according to MTF

Tier	Services	Typical system	%
5	tier 4 services plus use of devices typically requiring a few kilowatt like air conditioners	grid	20
4	tier 3 services plus use of devices typically requiring a kilowatt like water heaters, irons	limited grid	8
3	tier 2 services plus use of devices typically requiring a few hundred watt like rice cookers, refrigerators	mini-grid	4
2	bright light, radio, telephone plus use of devices typically requiring tens of watts like TV, video, fan	solar home system	50
1	medium bright light and, if possible, limited radio use and telephone charging	picoPV, battery charging station	18

EnDev-Mozambique – Strategy

Budget: € 14.5 million



Stoves



Solar



Grid
Densification



Micro Hydro
Power



for 410,000 people

So far **457,875** people

Corrected **410,883** people

MARKET
BASED
APPROACH

KNOWLEDGE
BASE
AND QUALITY
ASSURANCE

AWARENESS
CREATION
AND RAISING



for 139,000 people

So far **156,999** people

Corrected **107,530** people

INNOVATIVE
FINANCING
MODELS FOR
BOP

CREATION OF
FRAMEWORK
CONDITIONS

SUSTAINABLE
ACCESS

EnDev ENCOURAGES COMPETITION BETWEEN
PROJECTS, TECHNOLOGIES AND STRATEGIES

← **CONSISTENT AND RELIABLE M&E SYSTEM** →

EnDev-Mozambique – Output

Budget: € 14.5 million



Stoves



Solar



Grid
Densification



Micro Hydro
Power

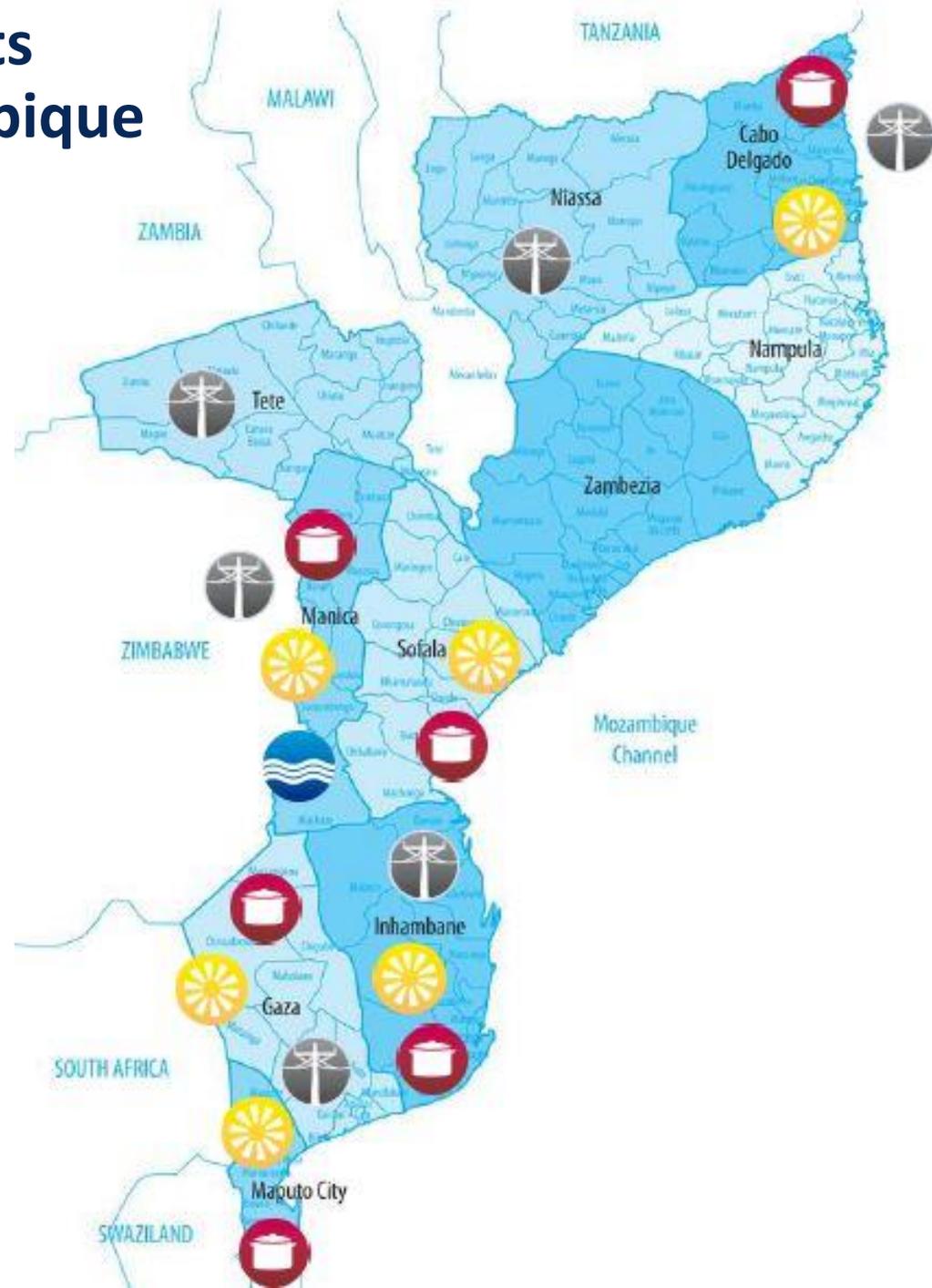


Key Achievements EnDev Mozambique:

- 88.053 Improved cook stoves
- 19.267 Solar systems
- 34.072 EDM grid connections (EnDev 1+2)
- 14 Micro-Hydro powerplants providing 210 Mini-grid connections
- Support for Vocational Training in PV at IIM
- Set-up of 2 quality testing labs for ICS and Pico-PV



Current projects EnDev-Mozambique



Charcoal ICS Promoted By EnDev



Wood ICS Promoted by EnDev



Promoted Technologies For Electrification





Current Partners EnDev-Mozambique



ELECTRICIDADE
DE MOÇAMBIQUE, E.P.



People for development



TOTAL



Muito obrigado pela atenção

Funded by:



Ministry of Foreign Affairs of the
Netherlands



Schweizerische Eidgenossenschaft
Confédération suisse
Confederazione Svizzera
Confederaziun svizra

Swiss Agency for Development
and Cooperation SDC



Coordinated by:



Netherlands Enterprise Agency