

Energizing Development Project: A Result-Based Financing for low carbon energy access in Benin (EnDev Improved Cookstoves) Marrakecht 11/04/2015



Julien ADOUNKPE
Director General Climate Change Management/Benin

Energizing Development Programme: Background



Finance	An impact-oriented initiative between Germany, the Netherlands, Norway, Australia, the UK and Switzerland which was established in 2005
Implementing Agency	Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)
Goals	Sustainable access to modern energy that benefits poor and vulnerable people
Zone d'intervention	24 countries with weak or average income in Asia, Latino America and Africa
Duration	2005– 2018
Budget	€ 263 .000.000
Espected outcome	15.000.000 persons have sustainable access to modern energy system
Results by end of june 2014	12.950.000 persons impacted

Regional Distribution of EnDev Programme



Solar



Hydro



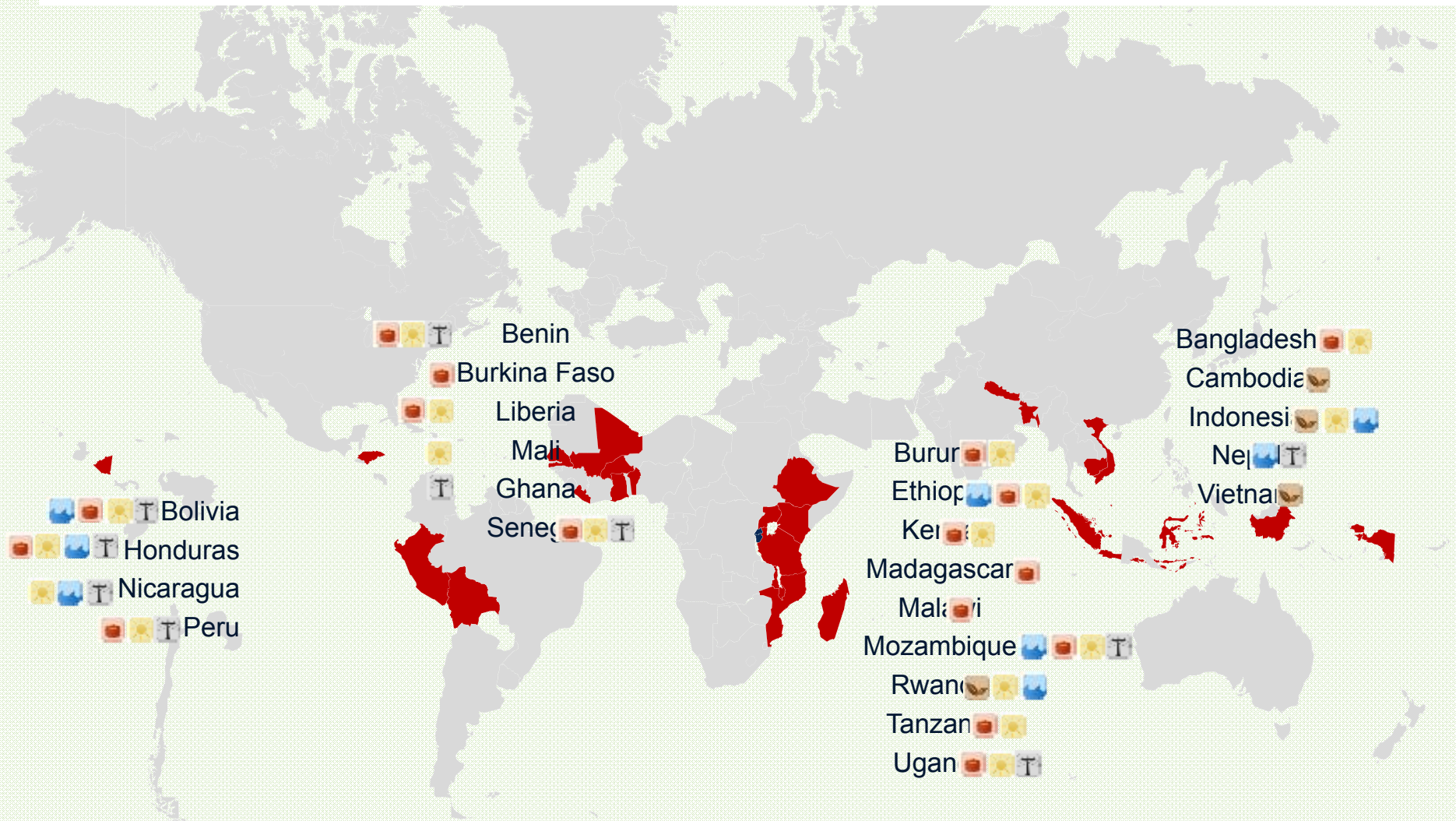
Biogas



Cooking Energy



Electrification /
densification



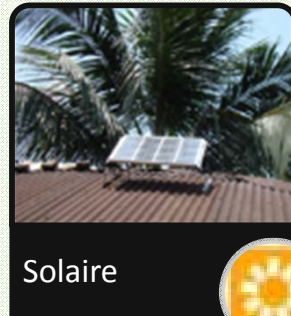
24 countries– 15 in Africa, 5 in Asia, 4 in Latino America

Technologies



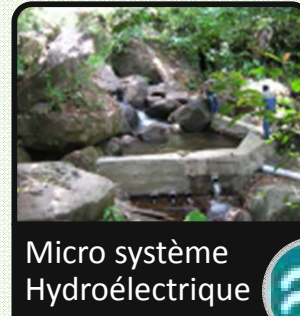
Foyer amélioré

16 countries



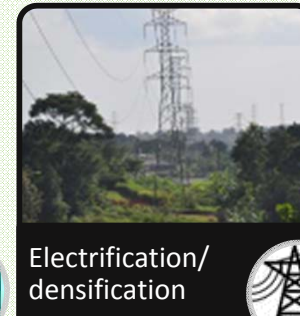
Solaire

16 countries



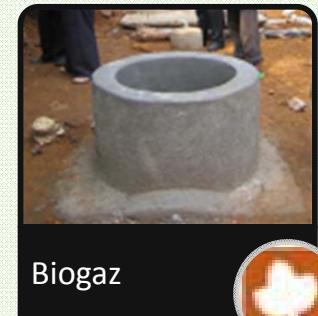
Micro système
Hydroélectrique

8 countries



Electrification/
densification

6 countries



Biogaz

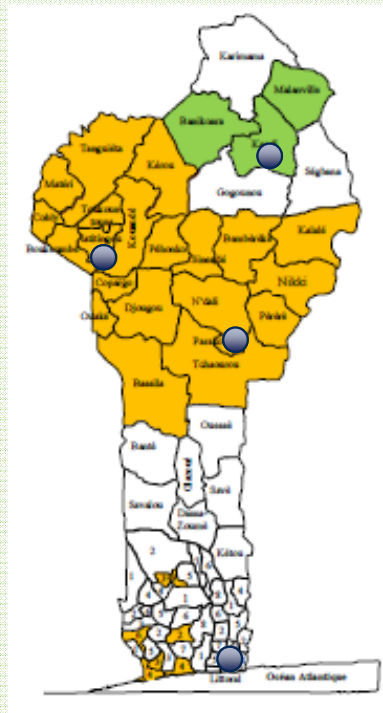
3 countries

- The selected technologies abide to the following criterias:
 - efficient
 - Affordable
 - socially acceptable and
 - Environmentally friendly
 - Technologies to benefit poor and vulnerable people

EnDev Cookstoves Project in Benin



Population.	10,323,474 (2013)
Rural Population (% of total population).	57 (2013)
GDP (current US\$).	8,307,222,087.28 (2013)
GDP Per Capita (current US\$)	804.69 (2013)
Access to Electricity (% of population).	27.90 (2014)
Energy Imports Net (% of energy use).	43.82 (2011)
Fossil Fuel Energy Consumption (% of total) <i>It comprises coal, oil, petroleum, and natural gas products.</i>	41.71 (2011)
Source: World Bank	



Légende

- Zone d'intervention du ProCEAO
- Zone d'intervention d'EnDev
- Antenne EnDev /ProCEAO



ISSUES

- **Approximately 6.5 millions of Béninese utilize traditionnal inefficient three stone cookstoves:**



Deforestation

50 000 ha of forest disappear every year in Bénin, say about 70 000 soccer fields



Respiratory Infections

5 700 Beninese pass each year from indoor pollution .
Smoke from inefficeint cookstove double the pneuminia risk among children



High local combustibles costs

A household in Benin spends over €190 each year for wood energy purchase

Solutions: Variety of improved cookstoves ANFANI



Simple mais puissant !



FOYERS
ÉCONOMIQUES
anfani



Foyer éclair



2.100 FCFA /mois d'économie de charbon



24 kg/mois d'économie de charbon



Un arbre sauvé par mois



4.000 FCFA /mois d'économie de bois



24h/mois de temps épargné pour le ramassage de bois



161 kg/mois d'économie de bois

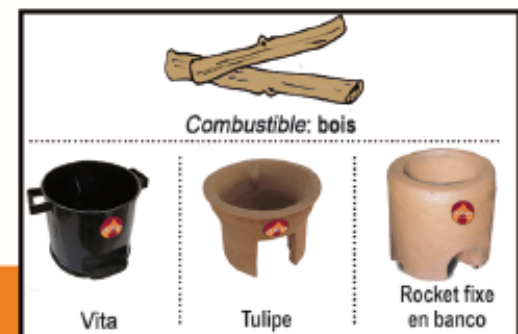


Un arbre sauvé par mois

ECONOMIQUE - RAPIDE - PROPRE

OBTENEZ VOTRE FOYER **anfani** CHEZ:

Contactez Anfani au +229 66 27 11 11



Improved cookstove selection criteria



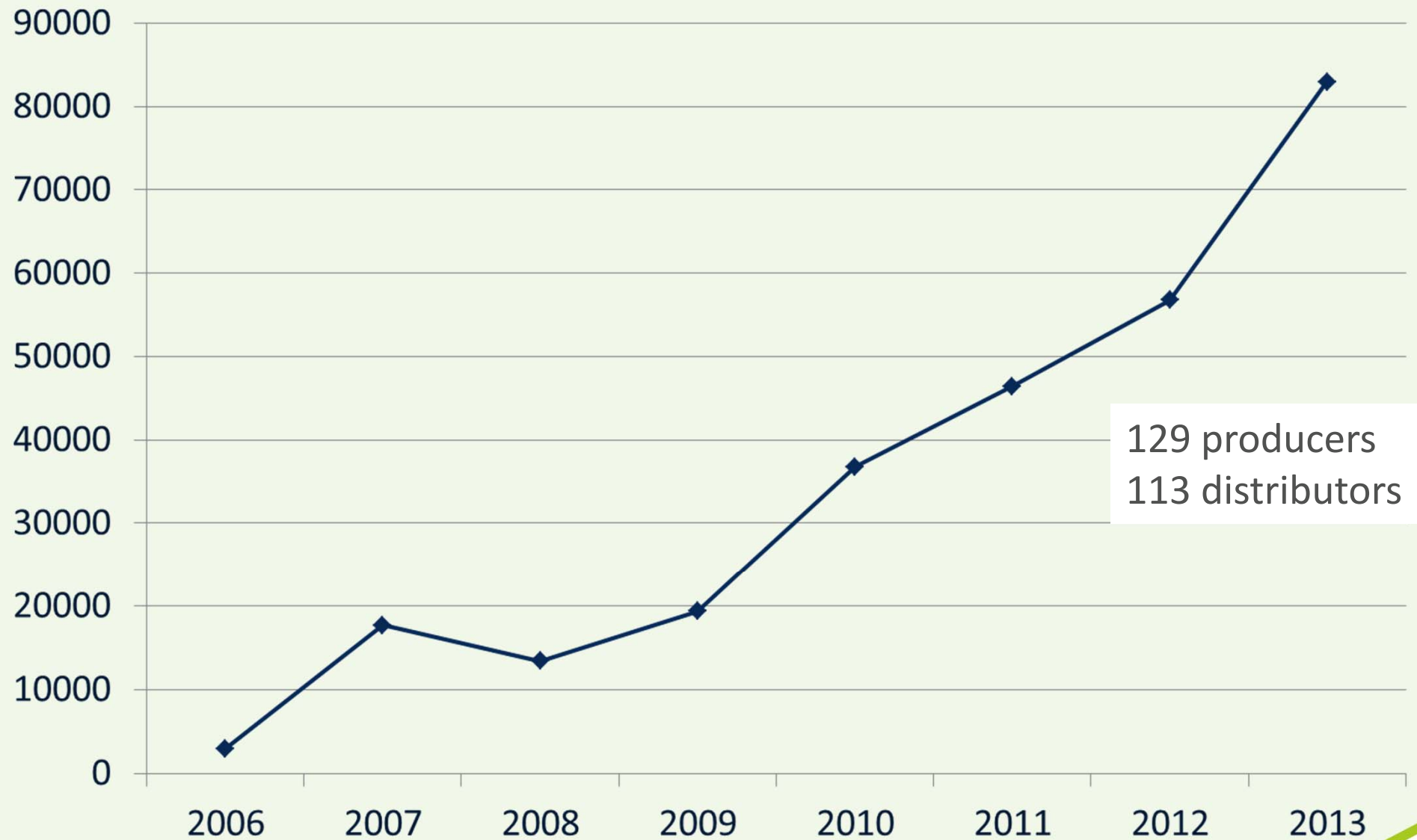
- Socially acceptable
- Reliable and Efficient offering up to 40% wood charcoal consumption reduction compared to the traditional three stone cookstoves,
- Affordable € 10- 12
- Last 2 to 2 .1/2 year
- Environmentally friendly



EnDev Achievements in Benin since 2005

Technology	<u>grid extension</u> <u>improved cookstoves (ICS)</u>
EnDev 1	09/2005 – 12/2009
EnDev 2	10/2009 – 12/2017
Partners	Ministry of Agriculture / Ministry of Environment / Ministry of Energy / Benin Electric Energy Society (SBEE) / Local communities
Outcomes (6/2014)	Access to electricity: <ul style="list-style-type: none">• 17.800 people Access to modern cooking energy: <ul style="list-style-type: none">• 1,116,000 people
Access to modern energy services	Access to modern energy services: <ul style="list-style-type: none">• 84 social institutions• 8761 SMEs

Sale trend in Atacora and Donga Departments



A self contained project

- **Endurable due to its principles and approaches**

Principles et Approaches:

- Develop and dynamize a sustainable market for Improved cookstoves
- Stimulate local contributions and look for high rentability
- No subsidy, no free gift or distribution of ICS and the consumers buy at real price
- Direct training- No intermediary training to avoid deformation

Market Ecosystem

- Promotion a labelled quality
- Standardisation of efficiency tests for the ICS
- Aids to national testing laboratories
- Networking with all stakeholders
- Protect the stakeholders interests
- Development and diffusion of the knowledge,
- share lessons learned



Demand

- Understanding users' behaviors
- information, sensitization, and communication
- Improved Marketing activities

Supply

- Selection of adapted technologies
- Professionnalisation
- Improved production capacity
- Aid for commercialisation
- Quality insurance controle
- Assist in search of financing



The need for decisive and urgent action to close the pre-2020 ambition gap

- ❑ EnDev is a capacity building
- ❑ A low carbon and resilient development initiative
- ❑ CO2 emission avoidance not captured by any CDM project
- ❑ Capturing CO2 saved by EnDev project in Benin will be a big plus to the pre-2020 ambition gap as
- ❑ Finance to local cookstove producers will favor this technology penetration
- ❑ CDM, instead of being a market based mechanism, can just be a financing tools to low-carbon development basically in countries non annex 1

CONCLUSION and RECOMMANDATION

- EnDev is Results based finance delivered to carry out in order to provide low carbon energy access to rural population,
- over 1,000,000 persons impacted every year in Benin
- Deforestation is avoided, because of 40% reduction in wood use
- Carbon sequestration is improved
- This obviously closes up the gap to pre-2020 GHG reduction ambition and beyond since EnDev is a self sustainable project.
- It improves the livelihood of the rural population by disease reduction, low cooking energy cost, reduction of wood collecting time basically women, and more time for economic activities.
- A simplified CDM can help EnDev program lower the price of ICS not by the current market based mechanism