



# Promoting commercial improved cook stoves: the need for solid financing mechanisms

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Ouagadougou

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# Promoting energy efficient cook stoves for beer brewers (dolotières) in Burkina Faso



# The local beer sector has needs and potential for increased efficiency

## KEY FACTS

<b>Design</b>	2-4 pots per cook stove
<b>Capacity</b>	1050 L of Dolo (beer) for 4 pots
<b>Process duration</b>	48 to 72 hours
<b>Wood costs</b>	<ul style="list-style-type: none"> <li>• CFA 250,000 to 500,000/month (EUR 380-760)</li> <li>• 3 to 4 tons/stove/month</li> </ul>
<b>Cost of Pots</b>	<ul style="list-style-type: none"> <li>• Ceramic (CFA 2,000 – EUR 3)</li> <li>• Aluminum (CFA 25,000 – EUR 38)</li> </ul>

## EFFICIENCY IMPROVEMENT POTENTIAL

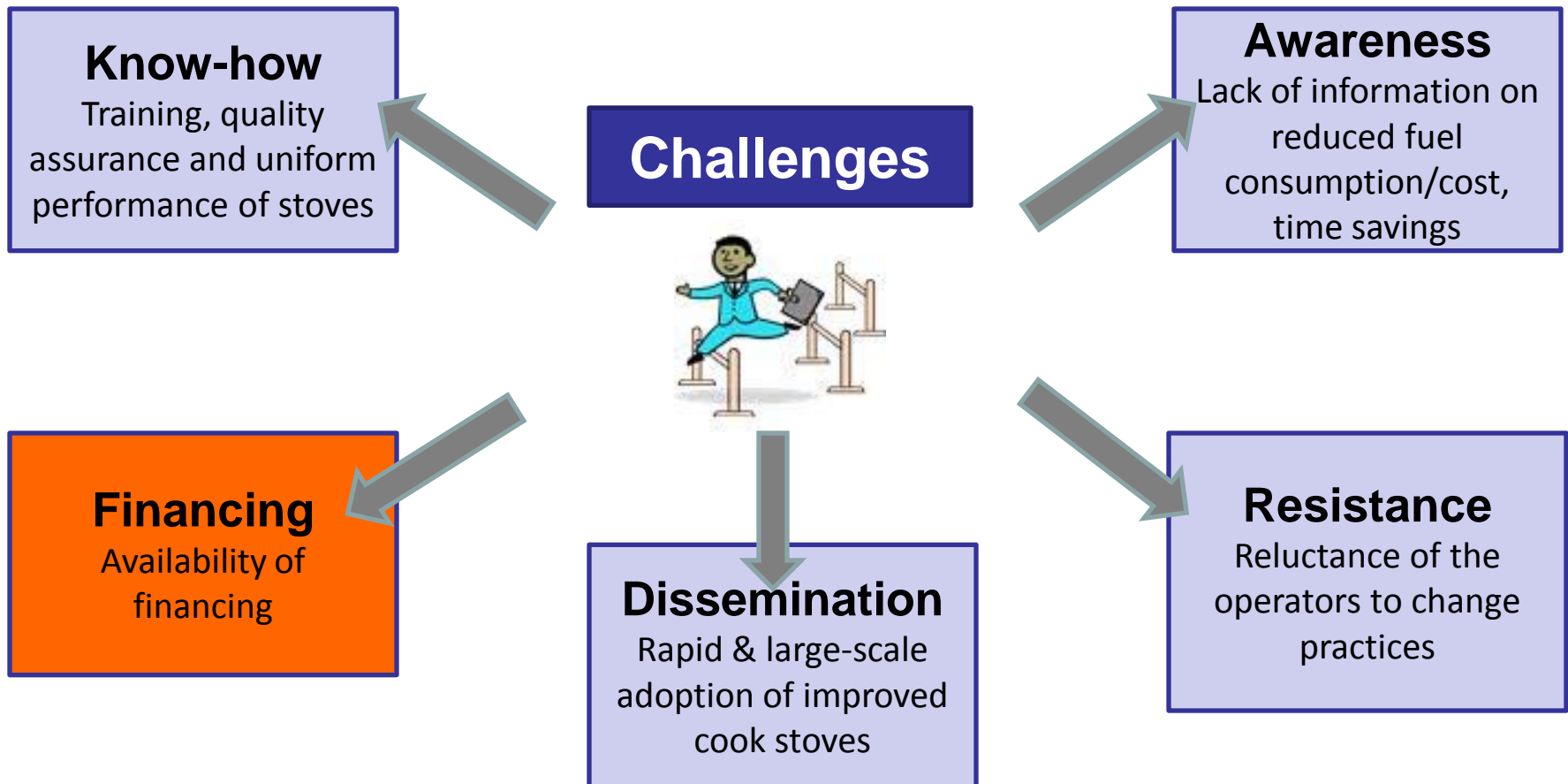
<b>Energy Efficiency factor impacting wood consumption and costs</b>	<ul style="list-style-type: none"> <li>• Ceramic: <b>45 to 50%</b></li> <li>• Aluminium: <b>60 to 65%</b></li> </ul>
<b>Payback period</b>	40.65 t CO <sub>2</sub> e carbon emission reduction/ cook stove Starting 6 weeks

# The brewing of the dolo is a traditional fuelwood-consuming women activity

- Traditional industry and processes
- 100% Female brewers (dolotières)
- Mass concentrations of at least 3,000 brewers in Ouagadougou alone
- 20% of the country's firewood consumption – strong pressure on deforestation & GHG emissions



# Today the introduction of energy efficient cook stoves encompasses various challenges...



...to be overcome by our project

## **Dolo Project**

4 intervention zones for 2 years

- 1 Technology Introduction**
- 2 Market demand stimulation**
- 3 Facilitation of access to finance**
- 4 Replication via Carbon Finance**
- 5 Extension to other countries**

# I Training, support & advice enables the dissemination of energy efficient cook stoves

- ✓ Training 100 cook stove artisans/manufacturers on improved designs and construction



Locally produced



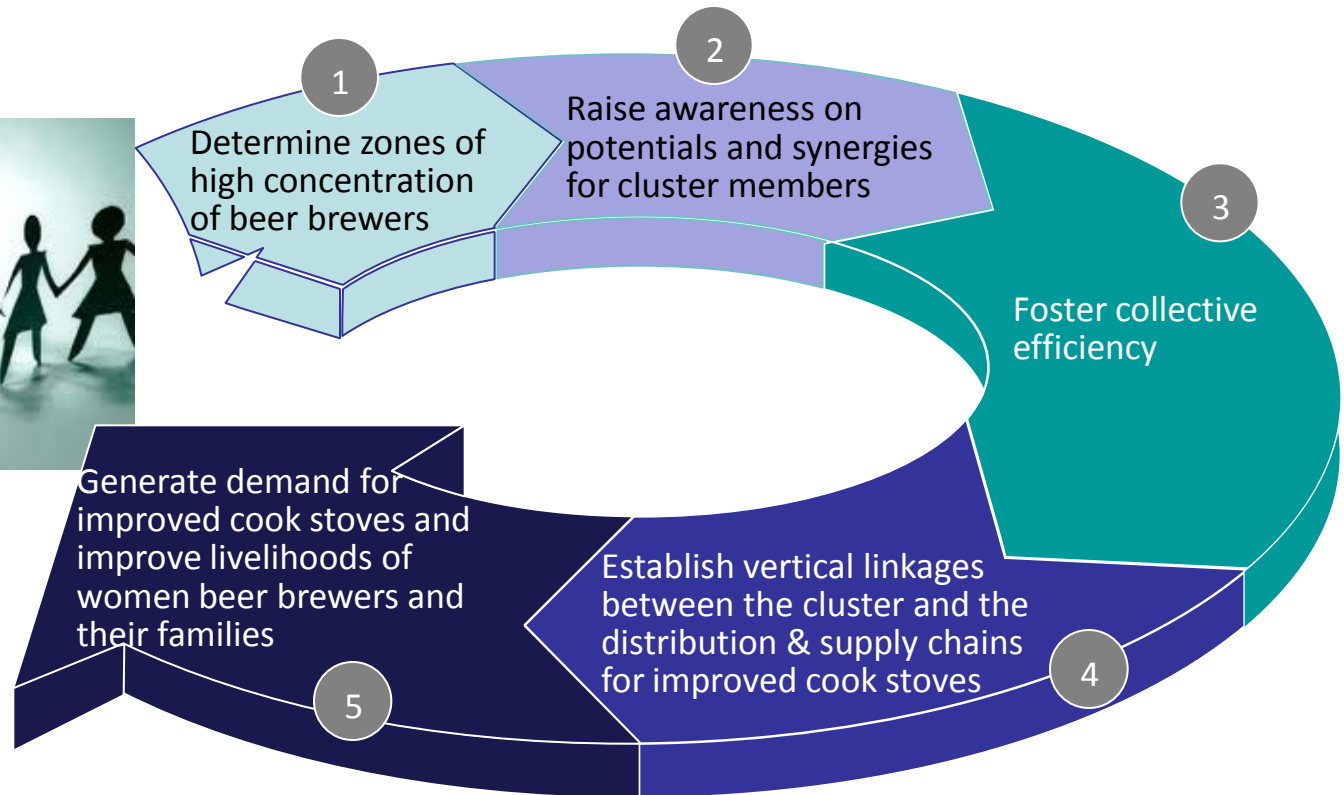
- ✓ Training of beer brewers on cook stove maintenance & operations

- ✓ Enforcing quality and standards to ensure performance



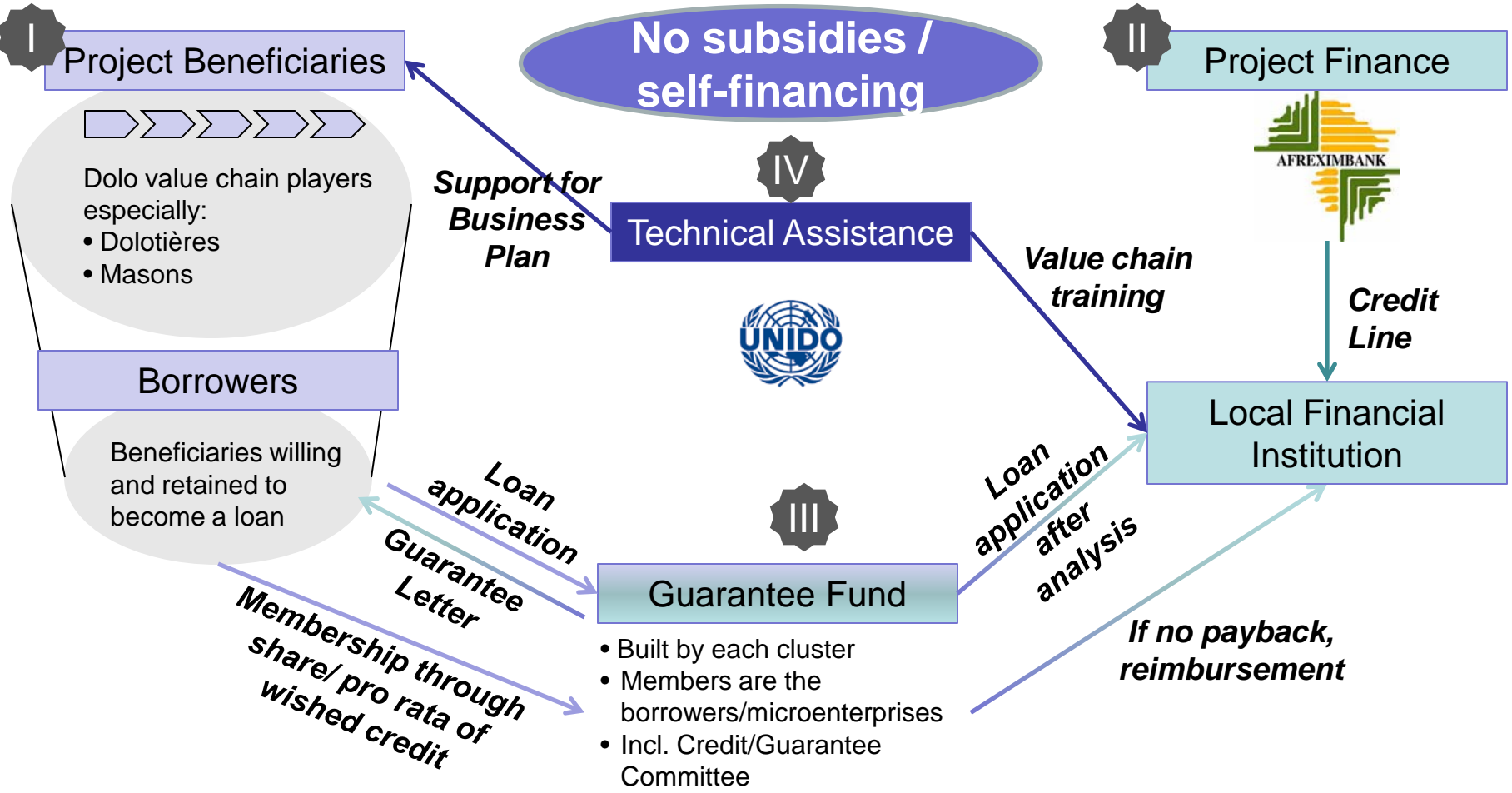
Close collaboration with national research institute: IRSAT, GIZ and SNV

## 2 Dolotières are clustered to stimulate demand for improved cook stove and generate synergies

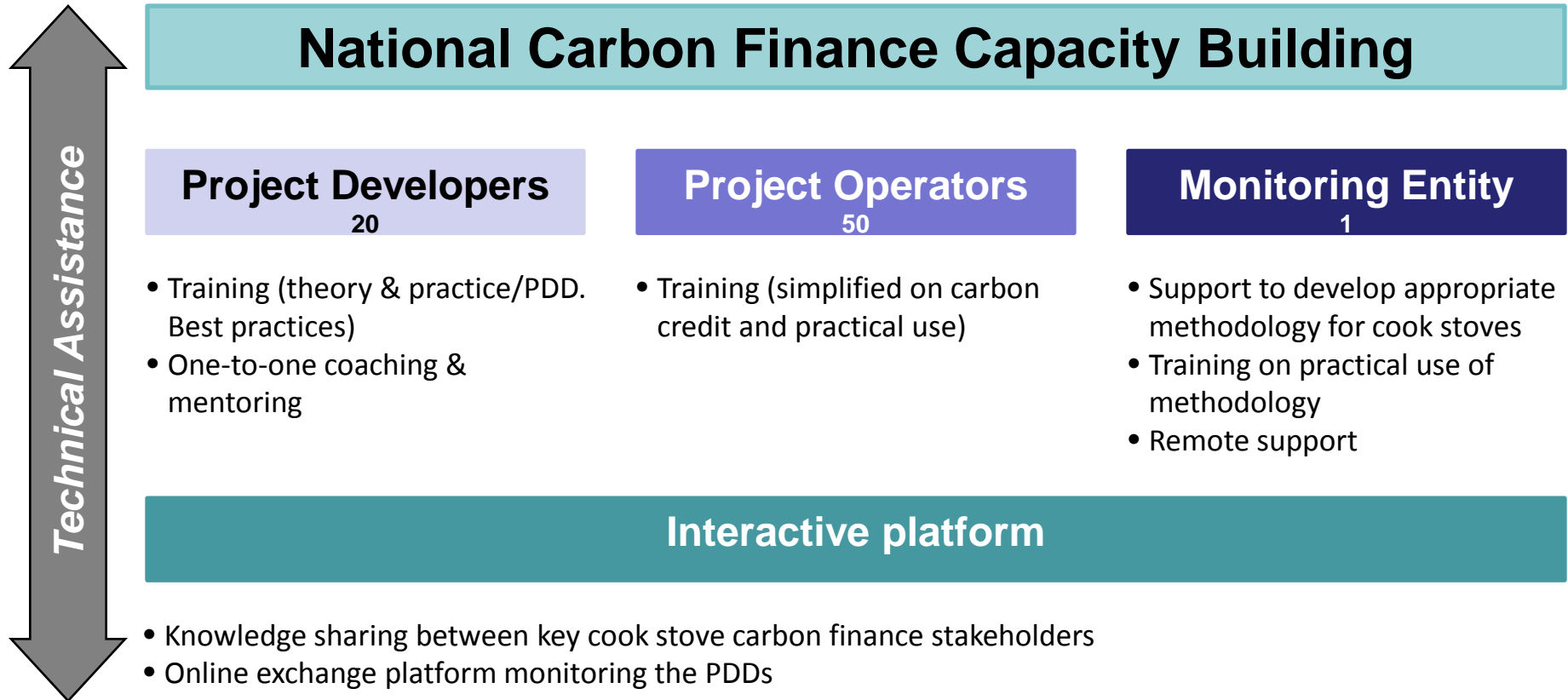




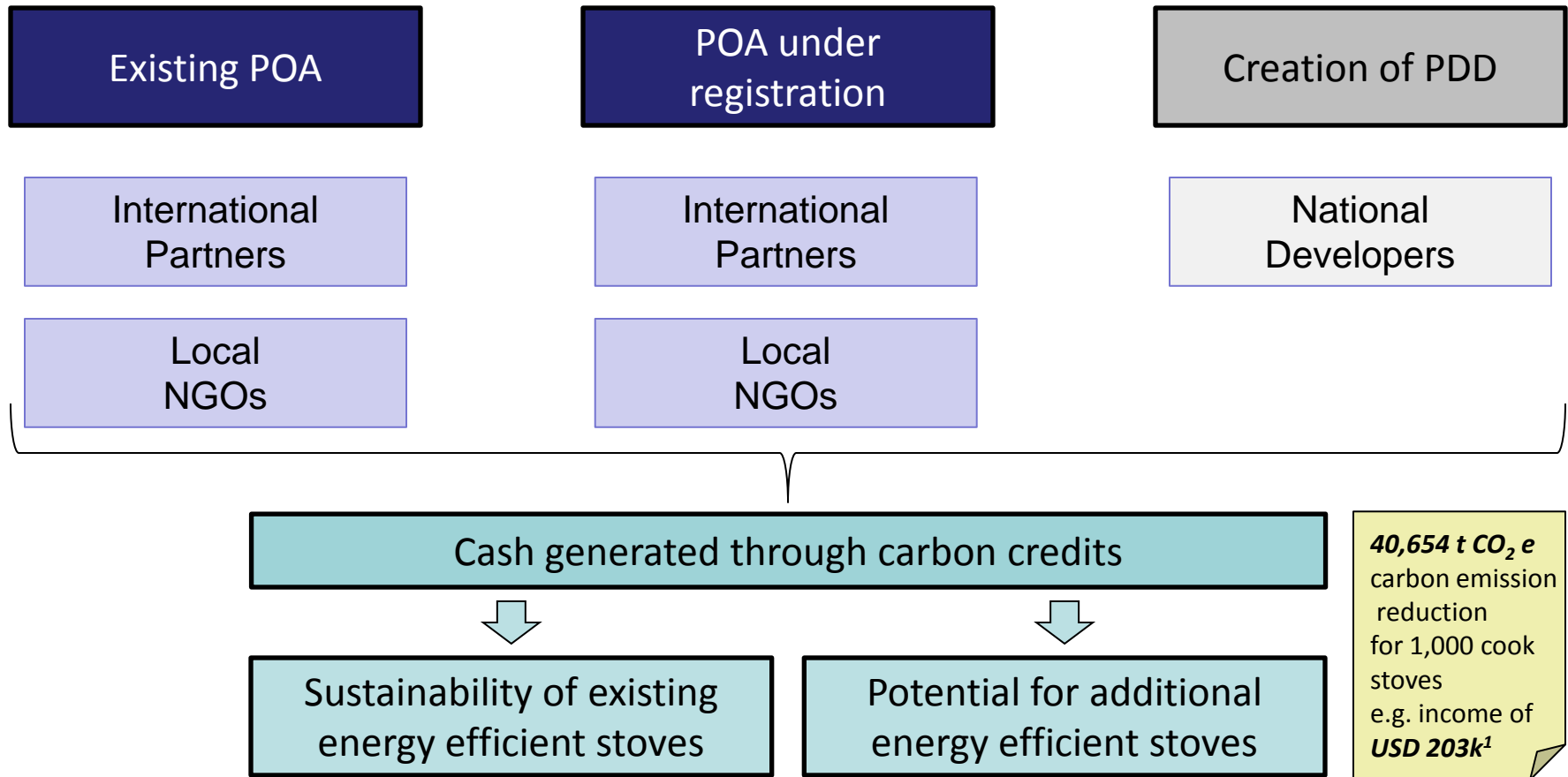
# 3 Access to finance via a four-pillar approach facilitates the dissemination of EE cook stoves



# 4 A national cadre for developing and implementing cook stove projects will be established



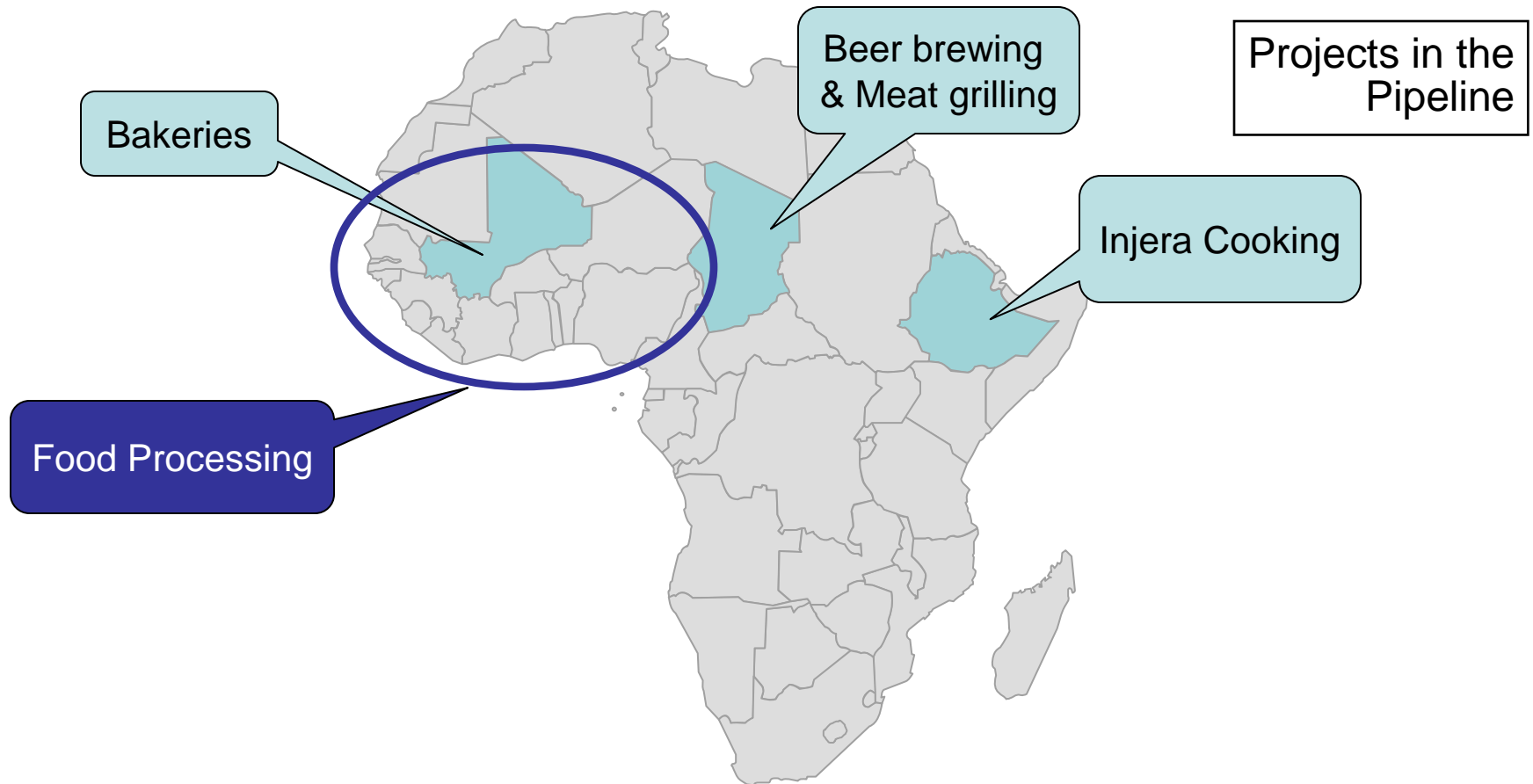
# 4 Carbon finance will be further accelerated through strategic collaboration



# Replication and up-scaling potential within Africa



# A large variety of traditional food processing technologies have EE potential in Africa





# THANK YOU

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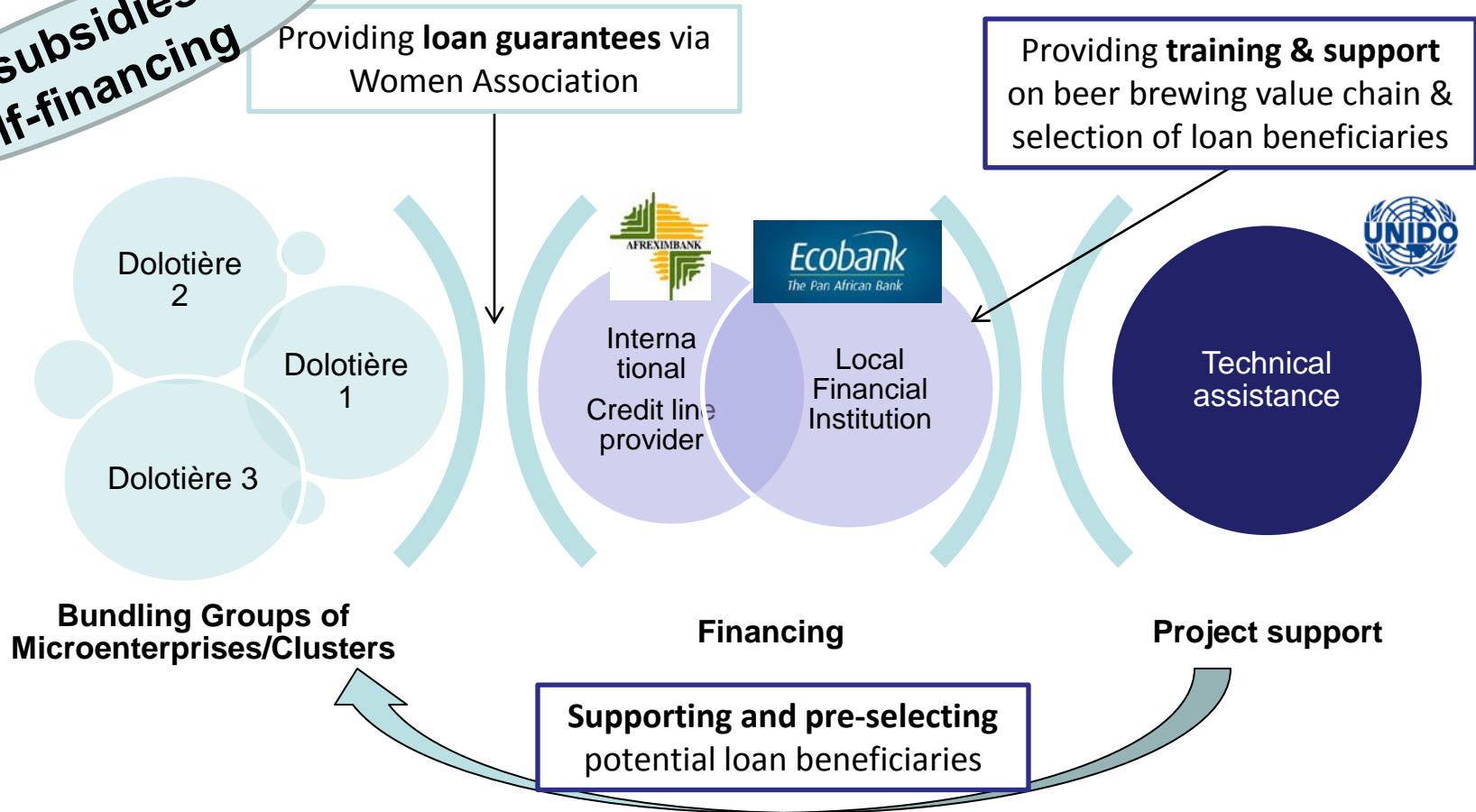


# BACK-UP

3

# Access to finance via a three-pillar approach facilitates the dissemination of EE cook stoves

**No subsidies / self-financing**





4

## Thanks to carbon markets energy efficient cook stoves can be further promoted and used

- ✓ Train 20 master project developers on Gold Standard project identification and development
- ✓ Establish a monitoring methodology
- ✓ Train 50 project operators on registration and monitoring requirements
- ✓ Establish a platform for interaction between project developers, project operators, DOE, CME, DNA and other relevant stakeholders

PDDs created



Cash generated through carbon credits



Sustainability of existing energy efficient stoves



Potential for additional energy efficient stoves

4

## Leveraging the voluntary carbon market supports the financing of women brewers

Feasibility study of VCM Projects on dolo cook stoves

For this project with an implementation of 1,000 improved cook stoves

- ✓ **40,654 t CO<sub>2</sub> e** emission reductions per annum with an energy efficiency of 35 %
- ✓ Based on an average Gold Standard carbon price of EUR 6/t, earnings before taxes would be about **EUR 176,000/year**

# Each project component has clear outcomes to ensure the adoption of energy efficient stoves

<u>Step</u>	<u>Description</u>	<u>Outcomes</u>
1	Technology Introduction	<ul style="list-style-type: none"><li>• 100 cook stove manufacturers trained</li><li>• 1,000+ improved stoves implemented</li><li>• 40,654t CO<sub>2</sub> e emission reduction</li></ul>
2	Facilitation of access to finance	<ul style="list-style-type: none"><li>• Financial support mechanism implemented</li><li>• Loans to beneficiaries granted</li></ul>
3	Market Demand Stimulation	<ul style="list-style-type: none"><li>• 2 clusters developed and working</li><li>• Improved integration into value chain</li></ul>
4	Replication via Carbon Finance	<ul style="list-style-type: none"><li>• 20 project developers trained</li><li>• 50 project operators trained</li><li>• National monitoring entity upgraded</li></ul>



# The project contributes to reduced impact on climate change and improved livelihoods

## Reduced impact on Climate Change

- ✓ Reduced deforestation in a country where wood is a scarce resource and reforestation efforts are limited
- ✓ Reduced GHG emissions/smoke

## Improved livelihoods of women & households

- ✓ Improved women health (limited acute respiratory infections)
- ✓ Reduced cost and improved production processes leading to increased income generation for women
- ✓ Employment opportunities/security for masons and women brewers