



TEM

# “Klinpela Kuk: Gutptela Laip”

*VCS 4416 PNG Improved  
Cookstoves Project*

Michael Kisombo  
Dr. Gabriel Machovsky Capuska



REFLECT |  
Reconciliation  
Action Plan  
| ENDORSED



# 10 YEARS OF IMPACT



Asia-Pacific's  
largest carbon  
credits  
provider



**300+**

Unique carbon  
projects supported  
across 30 countries



**250+**

Customer  
partnerships  
since inception



**11m**

Tonnes of CO<sub>2</sub>  
avoided or removed  
from the atmosphere on  
behalf of our customers



**15,000**

Partnerships with  
local landowners for  
international REDD+  
projects, supporting  
significant economic and  
social outcomes



**100,000+**

Carbon credits from  
TEM-managed or  
owned Australian  
projects since 2021



**1.5m+**

Carbon credits  
issued from TEM-  
managed REDD+  
projects since 2023



**600,000ha+**

Of land managed  
across Australian  
projects and over  
50,000ha of  
bush regenerated



# Our partners

Iconic brands trust TEM to partner in achieving their decarbonisation goals through high-quality carbon offset solutions and sophisticated, world-class technology



# Climate Change is the Biggest threat to Papua New Guinea



30<sup>th</sup> most vulnerable country  
to climate change



Ranks 163<sup>rd</sup> for readiness to  
climate change



There is an urgent need for  
investment and action

4

## *Climate change effects for PNG*



Soil erosion, and droughts



Cyclones and king tides



Decrease of food security



Risk to public health



Increased social unrest

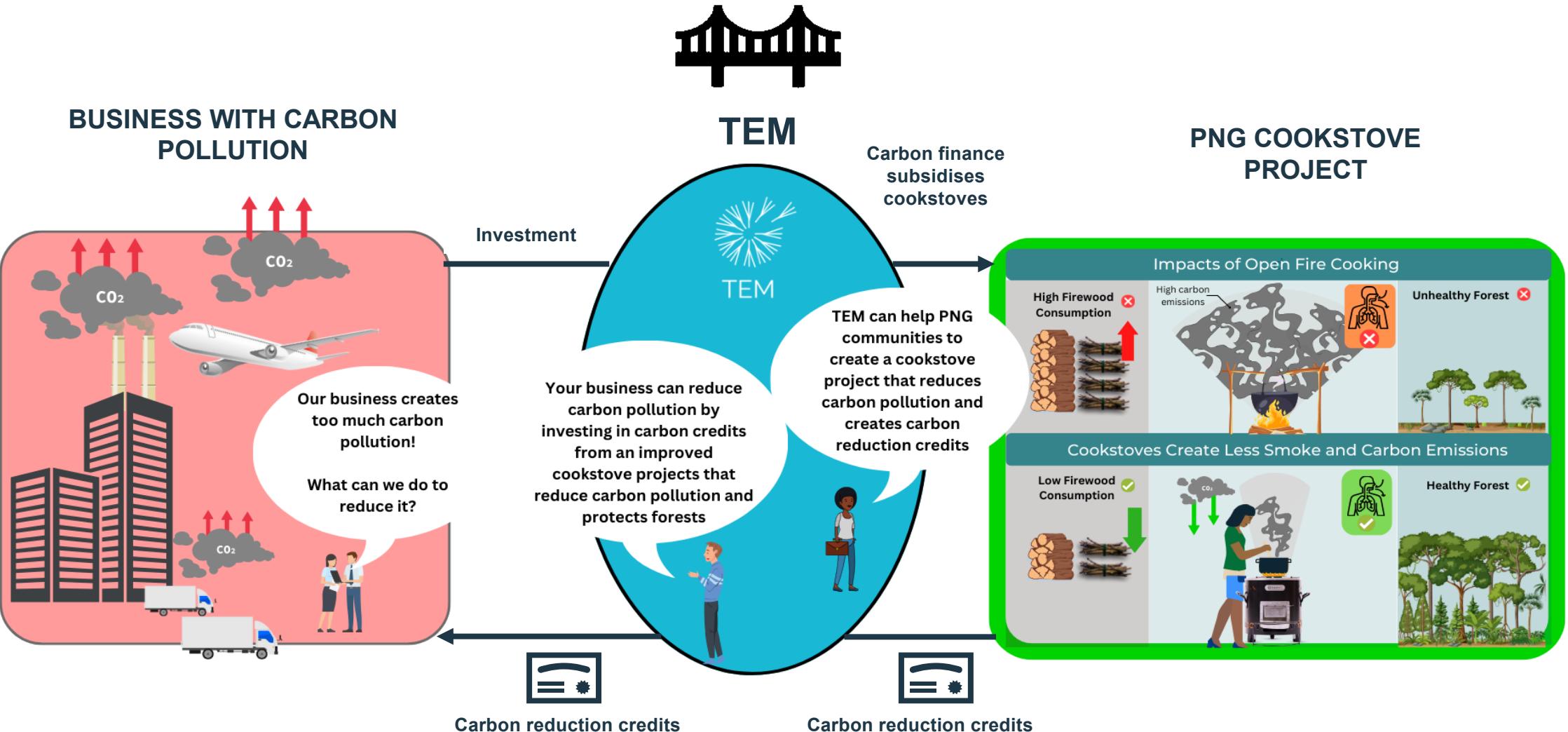


Habitat and biodiversity loss

# TEM, Climate Change and PNG Cookstoves



Using carbon finance to create benefits for local communities





TEM

# Pilot Project 2022

Cookstove demonstration during pilot the project



# Clean Cooking Introduction



## Clean Cooking transform lives: Papua New Guinea

- Families spend over 8 hours per week collecting fuelwood and carrying heavy loads (20 kg).
- Fuelwood can be purchased at high prices creating an economic burden for some families (over 28% of minimum annual salary).
- Women and young children spend several hours near open flames to prepare meals and warm themselves up.
- The World Health Organization (WHO) estimates that exposure to toxic smoke from cooking causes almost 2 million deaths per year worldwide.





# Pilot Study Insights

## Southern Highlands and Western Highlands Provinces, Papua New Guinea



Estimated baseline  
consumption of firewood  
5.56 tonnes/house/year



Preferred firewood species  
were Yar trees, PNG Oak, Beech  
Wood, Kamarare / Eucalyptus  
and Crypto

The report from this study was  
peer-reviewed by the Head of  
Forestry from the PNG University of  
Technology



Households purchased  
firewood at a cost of  
K 540.00/year



Burn cookstoves can save up  
to 20 minutes of cooking per  
meal and an average of 3.2  
tonnes CO<sub>2</sub>/cookstove/year



# Project Stakeholders

From National and Provincial Governments to world leading companies

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Climate Change  
and  
Development  
Authority  
  
PNG National  
Government



PNG Forest  
Authority  
  
National  
Government



Western,  
Eastern,  
Southern  
Highlands and  
Jiwaka Provinces  
  
Provincial  
Governments



Western Pacific  
University  
  
Provincial



End-users  
  
Local  
Communities



World leader  
  
Cookstoves  
manufacturer



TEM

# Phase 1 - 2024

First phase of project cookstove distributions in Kero Village, Imbonggu District



# Project Overview

- A high profile, high impact project with strong community support
- Addressing critical environmental, energy, and health needs across PNG
- Phase 1 successfully funded and completed the delivery of 20,000 cookstoves
- Substantial expansion (from 20,000 to 100,000 cookstoves) subject to receiving CCDA support and the Letter of Authorization (LoA) to access compliance markets
- An opportunity for PNG to immediately participate in Global Carbon Markets

The Project featured in the Post Courier local newspaper

FEATURE

## Cookstove project a game changer

BY JEFFREY ELAPA

COOKSTOVE project in PNG is envisaged to provide positive impact on the communities that have depended entirely on open fire cooking for many years.

At least 20,000 households in PNG would receive one free cookstove, particularly in the Southern Highlands at no cost.

### WHAT IS COOKSTOVE PROJECT?

Cookstove project is a charity-non profit organisation founded in 2013 by Rebecca Sommer after she heard of the devastating impact of these open fires on the health of women and children. As a mother of four girls, she was horrified to think that the act of cooking for one's family was one of the leading causes of death in sub-Saharan Africa.

The project built its first cookstove in the village of Nabisware, Uganda in May of 2013. That first cookstove is still going strong and its owner has become a trained cookstove master, helping others in his community.

The project extended into Nepal in 2014 and has installed 6,000 clean cookstoves to date.

In total they have built over 27,000 stoves impacting more than 135,000 people.

### WHAT THEY DO

The project helps women and their families gain access to efficient, clean cookstoves through solutions that are unique to each country. They promote the use of clean cookstoves that provide health benefits, cleanliness, aesthetics, and durability.

Their emphasis is on personal community ownership, which assures that these clean cookstoves continue to be used for years to come.

### STOVE PROJECT IN PNG

Cookstove project in PNG started in September 2022 in the Upper Mendi and the Southern Highlands.

Dr Gabreil Machovsky is leading the cookstove project and Michael Kisombo, the team leader is leading a 17 staff members assisting with the help of 24 other field staff and three office staff.

According to Mr Kisombo, the project is envisaged to have a positive impact on the communities as it would transform the lives of many who depend on open fire cooking.

It was first trialled in the Lalibu area in the Mendi-Munihue Southern Highlands and is now expanding to other parts of the province.

79 cookstoves have been distributed to households in the areas of Kewabi and Lalibu.



FOOD being cooked in a pot over a cookstove.



A MOTHER, the recipient of the cookstove project with her cookstove flanked by team leader Michael Kisombo (left) and director of International Project with Tasman Environmental Markets Dr Gabreil Machovsky (right) in Lalibu.



THE crowd that had shown interest and turned up to register with the cookstove project in the Lalibu-Danisi area. PICTURES SUPPLIED



# Community Engagement and FPIC

**Cultural engagement aligned with international and in-country customary protocols**

TEM's engagement with Indigenous people from the Highlands Provinces in Papua New Guinea, follows 'free, prior and informed consent' (FPIC) protocols enabling the local communities to give or withhold their consent of any activities that takes place on their traditional lands.

TEM's cultural engagement practices are aligned with:



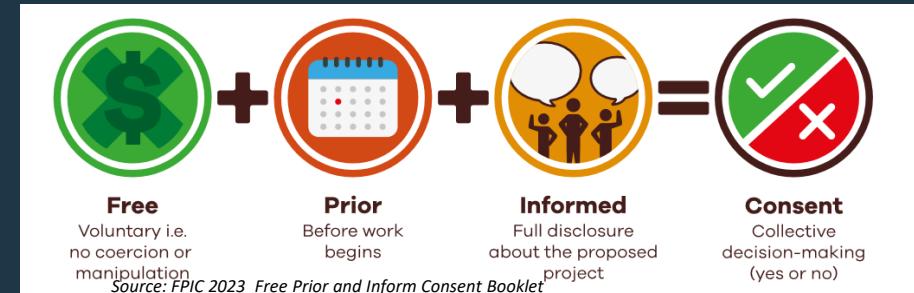
United Nations Convention on the Rights of Indigenous People (2007)



Papua New Guinea Climate Change and Carbon Markets Regulation (2023)



Integrity Council for Voluntary Carbon Market (ICVCM) Core Carbon Principles (2023)



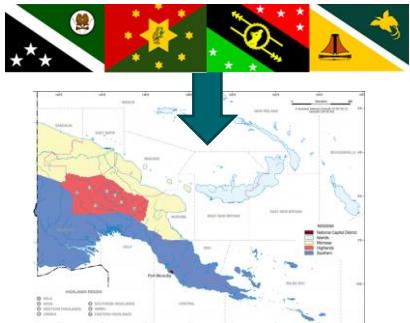


# Full scale project design

## Cookstove Project Papua New Guinea



**Methodology:** Methodology Installation of high efficiency firewood cookstoves (VMROO06 v1.2). Sustainable Development Verified Impact Standard (first project under the updated Improved Cookstoves (ICS) method June 2023). [VCS 4416](#)



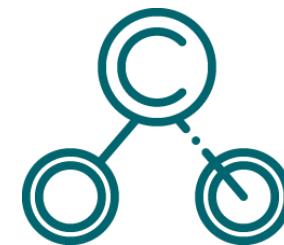
Initial focus 4 Provinces  
Highlands region,  
then potentially expand nationally



Distribute over 100,000 Improved Cookstoves (ICS)



Project crediting period 10 years



320,000 tCO<sub>2</sub> avoided emissions/annum



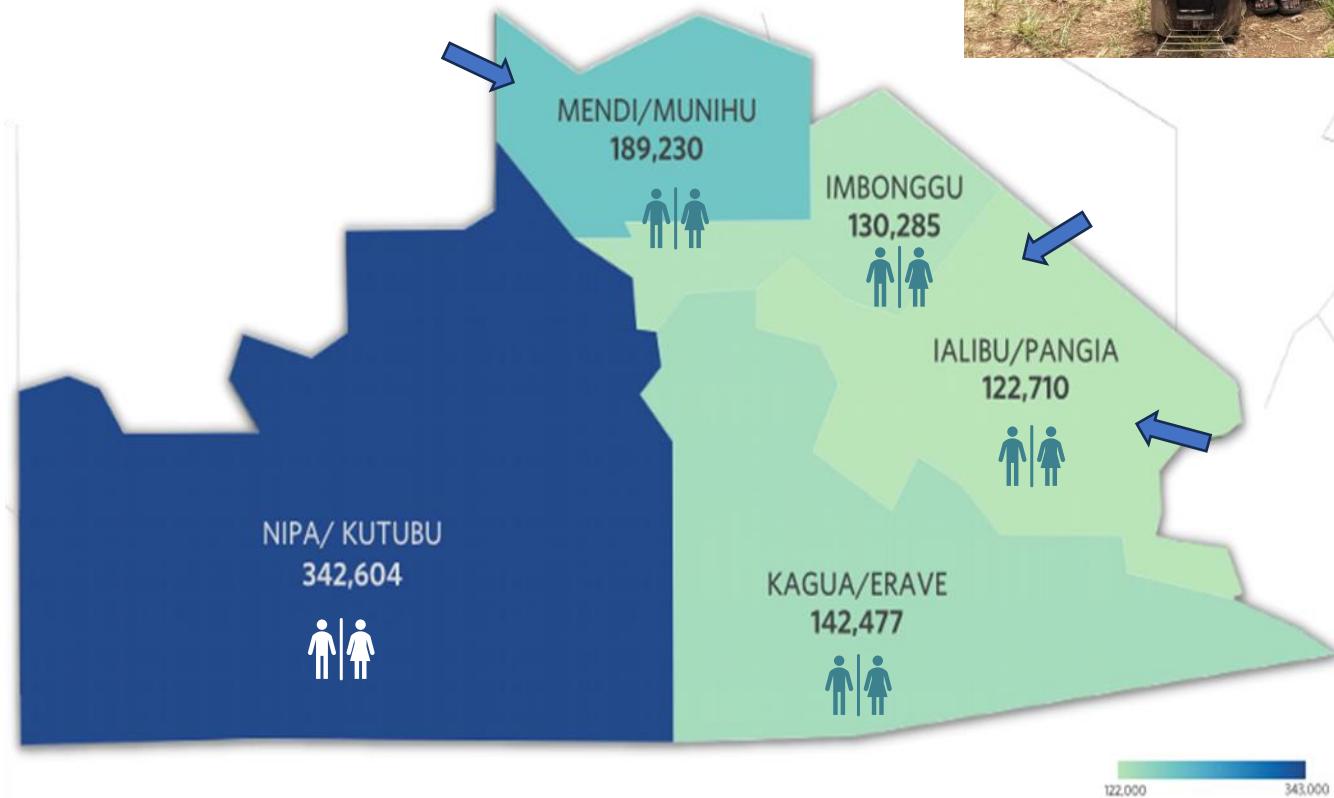
# Phase 1 - Southern Highlands

## Districts and Local Level Government Phases

14



Initial focus 4 Provinces Highlands region, then potentially expand nationally



# In-Country Stakeholders



## Stakeholder engagements and letters of support

1



National, Provincial, Local  
Level Governments  
(LLGs), Wards and End-  
users' Engagements



### Provincial and local level government engagements

In March 2023, TEM engaged face to-face with stakeholders from different Provinces as part of the in-country FPIC process



### Local communities Engagement

In February 2024, TEM re-engaged face to-face with local communities from the Southern Highlands Province



### CCDA Engagement

Since 2023, TEM has been engaging face to face with Climate Change and Development Authority (CCDA)

2



National, Provincial  
and LLGs' letter of  
support

# Project Registration



## Verified Carbon and SDVIsta Standards

3



Verra registered the Project under the Verified Carbon Standard

**VERRA** Standards for a Sustainable Future

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20 JUN 2024

## New TEM cookstove project approved in Papua New Guinea by Verra – the first carbon finance cookstoves project in PNG and under revised Verra methodology

CARBON PROJECTS MEDIA RELEASE

<https://www.tasmanenvironmental.com.au/pngcookstoves/>

# House Registrations



## FPIC Process: End-user consent to be involved in the project

4



TEM initiates awareness with the local communities



### Community Awareness

In August 2024, the project commenced household registrations where the team surveyed homes and undertook FPIC

5



End-users consent to be registered in the project



### End-users Consent

In August 2024, the project commenced household registrations where the team surveyed homes and undertook FPIC

6



Registered end-users are provided with a Token Flyer



### End-users Registration

Each Token Flyer has a unique serial number that combined with a photo enables the identification of the end-user that can be matched with the house location

# Cookstoves Distribution



## FPIC Process: from tokens to end-users

7



Field Assistant verifies Token Flyer against registration records



### Token Verification

During September and October 2024, end-users arrived at our distribution centres with their Token Flyer to collect their cookstoves.

8



End-User Agreement is explained to seek understanding and consent



### End-user Agreement

The End-User Agreements are explained to beneficiaries by the Field Assistants.

9



End-User received a cookstove with a unique serial number, and the Agreement is signed



### Cookstoves Distribution

Each cookstove has a unique serial number and were given free-of-cost, while TEM will claim the carbon offsets.

10



Monitoring and awareness to embrace clean cooking benefits



### Monitoring & Awareness

The End-User Agreements are explained to beneficiaries through a guided survey delivered by Field Assistants.



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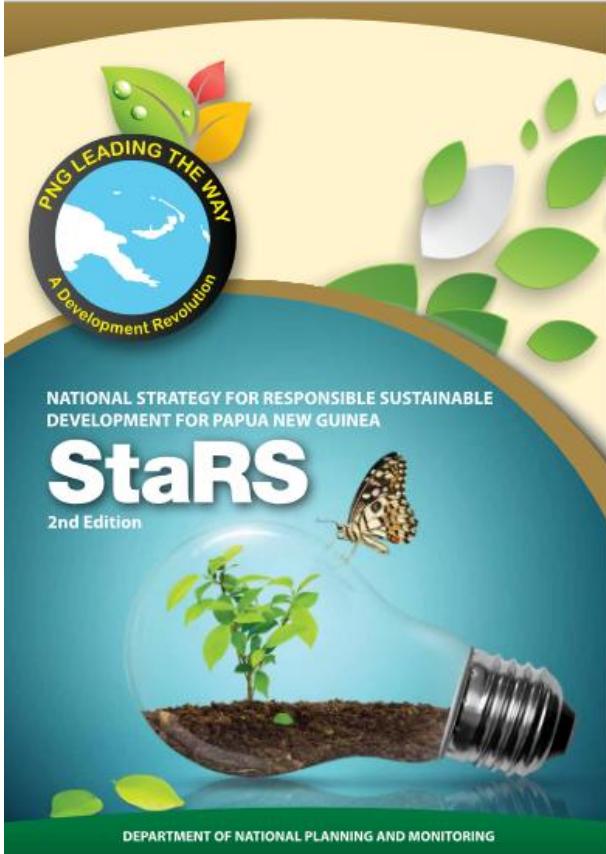
# Project Benefits



# Enabling National Development



## National Strategy for Responsible Sustainable Development for Papua New Guinea (StaRS 2050)



- An opportunity for PNG to immediately participate in Global Carbon Markets with economic benefits that can enable:
- Expansion of responsible sustainable development activities and job creation across the country in alignment with StaRS 2050

Focusing on:

- Sustainable food and water security,
- Sustainable energy
- Conservation of forest and biodiversity
- Mitigate the effects of climate change

# TEM PNG staff

Empowering local communities



# Cookstoves as Economic Multiplier



## Economic growth through business development opportunities



Accelerating access through clean cooking is known to support local employment and economic growth. Households using a Burn-designed “Ecoa wood” cookstove has been found to generate over 20 times its cost in economic return for the local community (Berkouwer & Dean, 2022)

Berkouwer, S. & Dean, J. (2022). Credit, attention, and externalities in the adoption of energy efficient technologies by low-income households  
Credit, Attention, and Externalities in the Adoption of Energy Efficient Technologies by Low-Income Households

# A Generational Change for 500,000 PNG Citizens



Impacting the lives of women, children, men, frail, elderly and disabled



## Financial Benefits

- Improved cookstoves delivered **free of cost**
- Annual average household saving firewood



## Social Benefits

- Improved **indoor air quality** saves many lives
- **8 hours** of firewood collection/week
- Reduced safety risks for **women and children** collecting firewood
- **Healthier children = better students**



## Environmental Benefits

- **3.2 million CO<sub>2</sub> emission reductions** over the 10 years



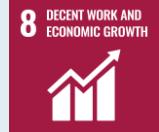
# Highlands Job Creation & Economic Development



Multiplying opportunities for marginalised communities



## Socio-economic Benefits



- **30 full time jobs** created locally during first year
- Permanent and casual staff salaries over 10 years
- More opportunities for **local ancillary services** (car hire, food, stationery, clothing, IT and computers)
- **Higher economic outcomes and living standards** for local community and local LLGs

# Training the Next Generation



Sharing knowledge across the Highlands region

25



**Memorandum of Understanding for  
collaboration on Sustainable  
Development Activities**

## Educational Benefits



- Develop Environmental Science and Sustainability content for the local students

## Financial Benefits



- Develop employment opportunities for graduated students
- Office and storage rent

# Developing Healthier Provincial Communities



In alignment with Provincial Government activities



## Governance Benefits

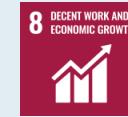


- Widespread distribution of cookstoves will provide **long term provincial government benefits** due to improved economic conditions, healthier communities and sustainable development
- **Reduced delivery pressures** on provincial governments and administrative services

# Immediate Funding for PNG's Climate Action



## Stakeholder Engagements and Project Registration



### Strategic Benefits



Once the Letter of Authorization (LoA) enables the project to access compliance markets:

- **Direct financial benefit to Climate Change and Development Authority (CCDA) from the sales of carbon credits over project lifetime to fund PNG's climate action**
- **Establish PNG as a global leader in climate mitigation.**
- **Demonstrate strong and agile climate policy implementation attracting further investments in carbon markets.**
- **Scalable opportunities for international recognition and cooperation through bilateral carbon agreements**







# We are happy to hear your questions...



# Key Contacts



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*Kominiti bum blong  
nuipela kuk stove*

Nuipela na moa gutpela kuk stove long PNG

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