



“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 CO₂
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



TEM offices






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



-  30th most vulnerable country to climate change
-  Ranks 163rd for readiness to climate change
-  There is an urgent need for investment and action

Climate change effects for PNG



Soil erosion, and droughts



Cyclones and king tides



Decrease of food security



Risk to public health



Increased social unrest

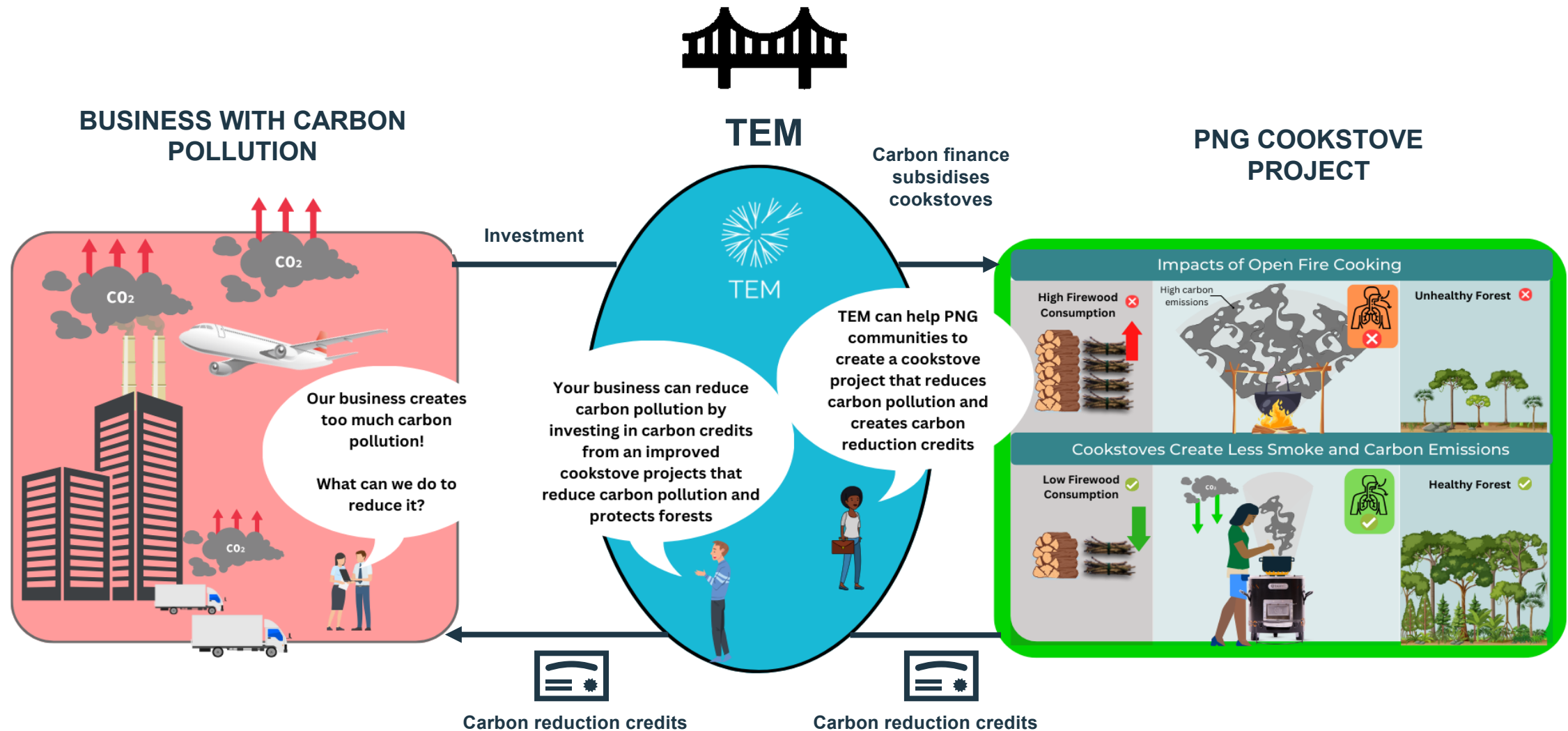


Habitat and biodiversity loss

TEM, Climate Change and PNG Cookstoves



Using carbon finance to create benefits for local communities





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 CO₂/cookstove/year



Project Stakeholders

From National and Provincial Governments to world leading companies



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



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 Nabiswero, 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 affordability.

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

COOKSTOVE PROJECT IN PNG

The cookstove project in PNG started in November 2022 in the Upper Mendi region of the Southern Highlands. The project is part of the International Project with Tasman Environmental Markets. Dr Gabriell Machovsky is leading the cookstove project and Michael Kisombo, the team leader is leading a team of 27 staff members assisting in 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.

The project was first trailed in the village of Nabiswero, in the Mendi-Munihi region of the Southern Highlands. The project is now expanding to other regions in the province.

To date, 79 cookstoves have been distributed to households in the villages of Kewabi and Ialibu.



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 Gabriell Machovsky (right) in Ialibu.



THE crowd that had shown interest and turned up to register with the cookstove project in the Ialibu District. 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:



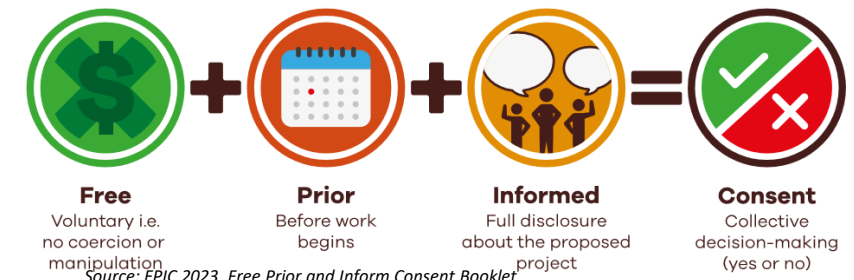
United Nations Convention on the Rights of Indigenous People (2007)



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



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



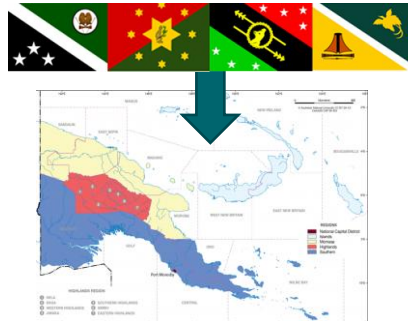


Full scale project design

Cookstove Project Papua New Guinea



Methodology: Methodology Installation of high efficiency firewood cookstoves (VMROOO6 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 tCO₂
avoided
emissions/annum

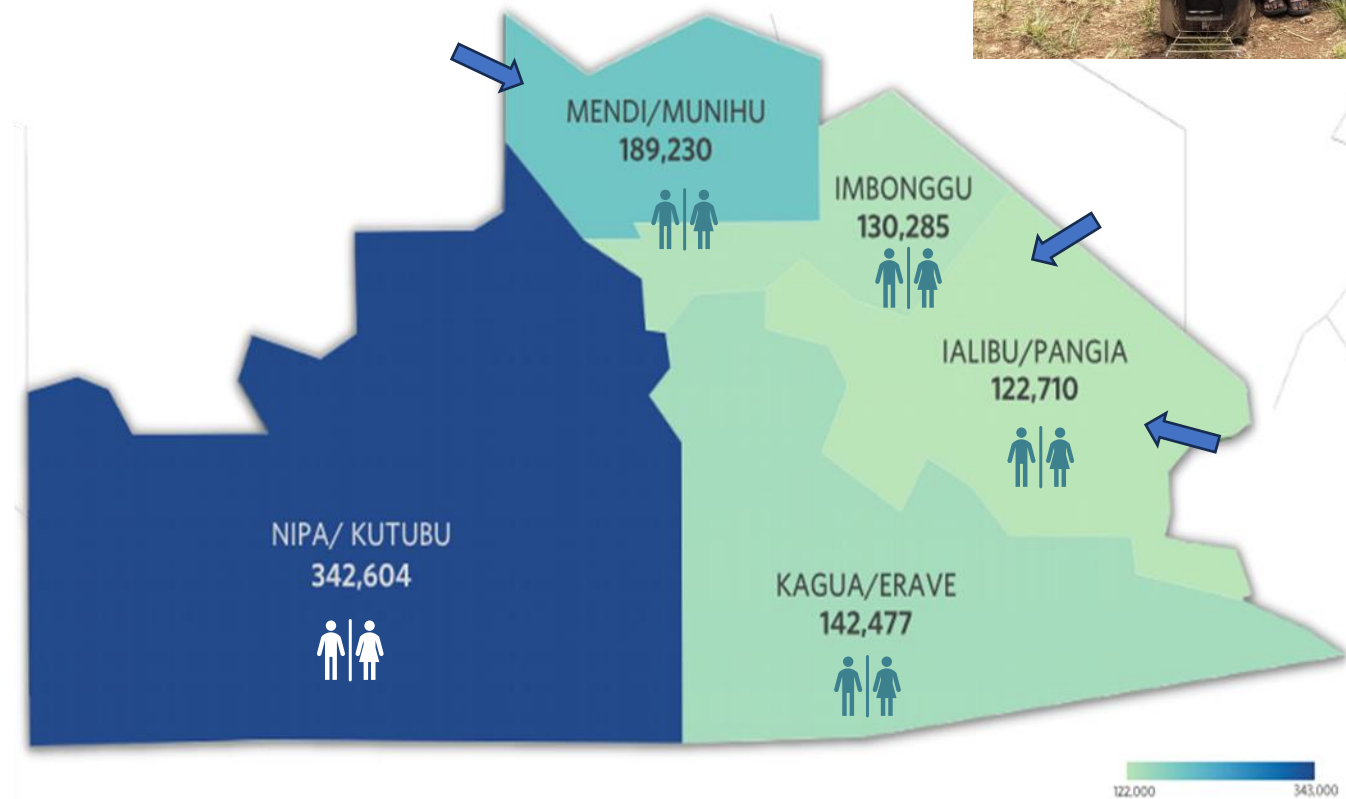


Phase 1 - Southern Highlands

Districts and Local Level Government Phases



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



Standards for a Sustainable Future

NEWS

PUBLIC REPORT ▾

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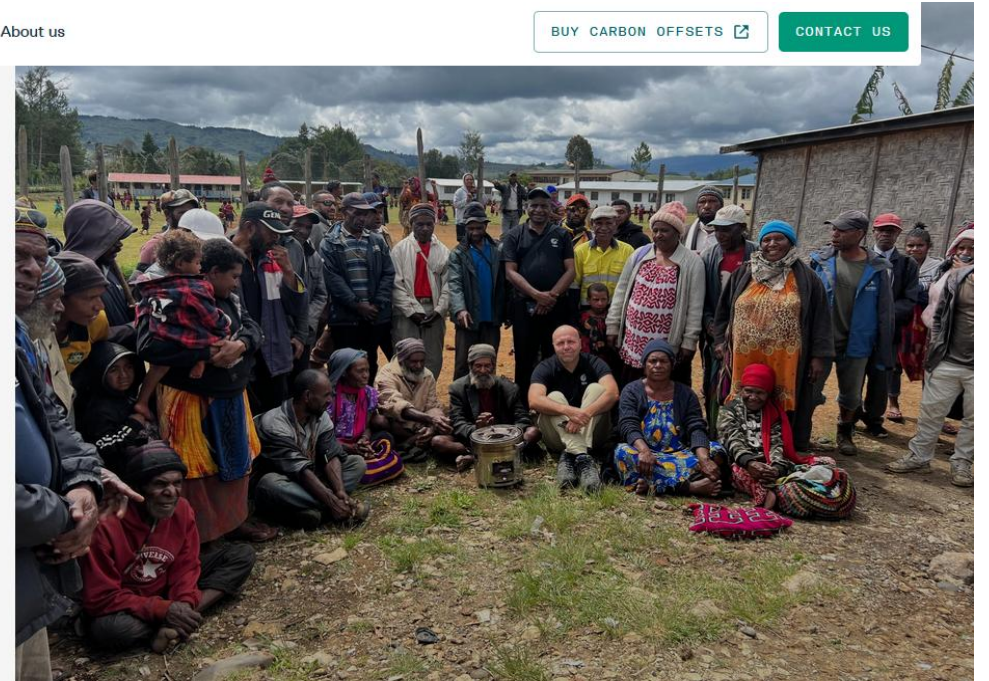
CONTACT US

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



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



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



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

8



End-User Agreement
is explained to seek
understanding and
consent

9



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

10

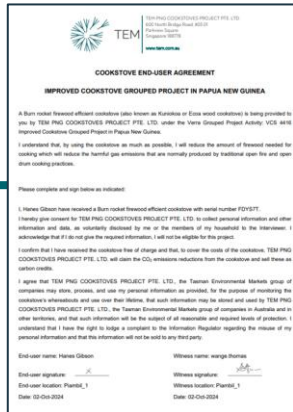


Monitoring and
awareness to
embrace clean
cooking benefits



Token Verification

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



End-user Agreement

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



Cookstoves Distribution

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



Monitoring & Awareness

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



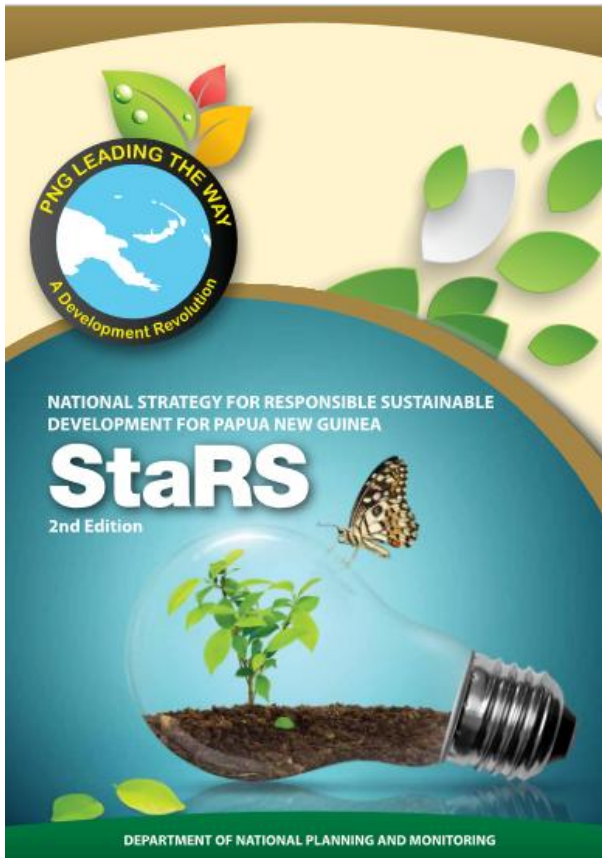
Project Benefits



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 CO2 emission reductions** over the 10 years

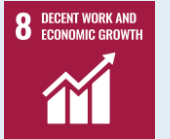
Highlands Job Creation & Economic Development



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



**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



TEM





We are happy to hear your questions...



Key Contacts



Michael Kisombo

PNG Cookstoves Project in Country Manager

Email: michael.kisombo@tem.com.au

Dr. Gabriel Machovsky Capuska

Director of International Projects

Email: gabriel@tem.com.au

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



Email: pngcookstoves@tem.com.au



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