

IMA COOK STOVE PROJECT

Development of
an Improved
Cookstove for DRC





Why Clean Cookstoves

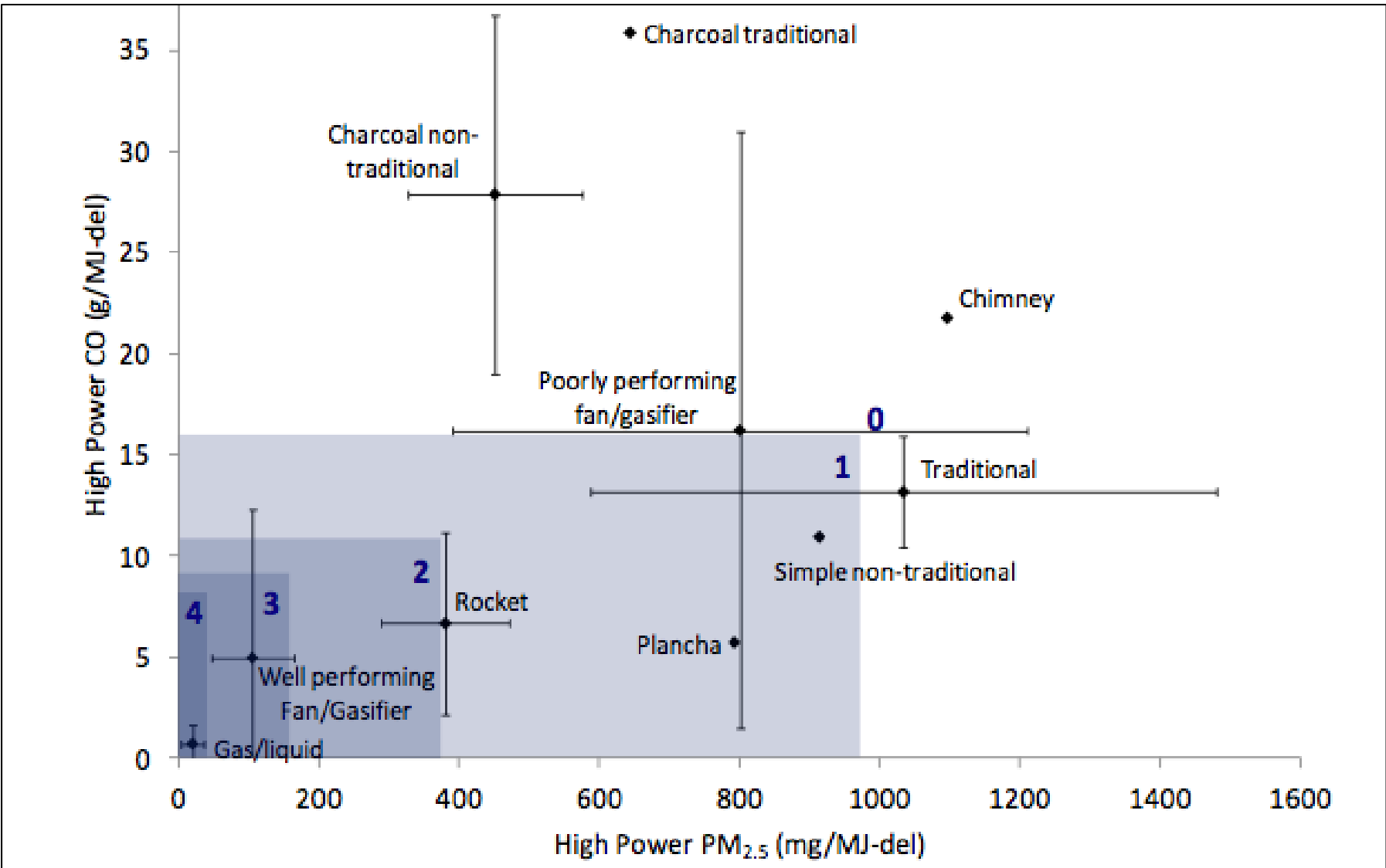
- Respiratory illness is the second greatest cause of death in Congo, mostly due to excessive exposure to smoke.
- 109 million tons of wood is used for cooking in Congo each year.
- Most of the burden and risk of gathering wood falls on women and children.





ARI is the most prevalent disease in IDP camps outside Goma with a 34% higher incidence than malaria.

Tier levels by type of stove



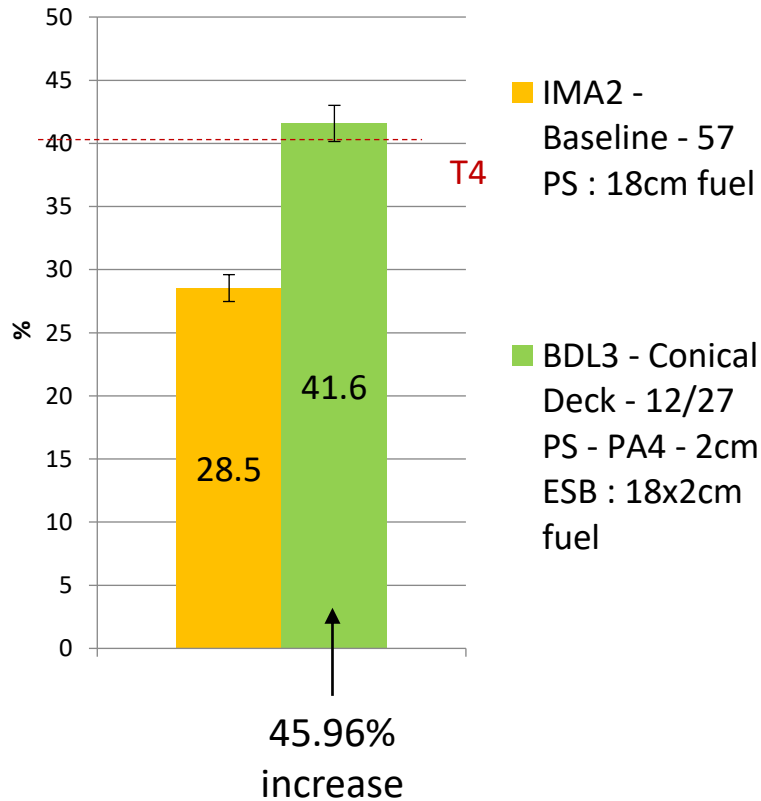
Results of Swiss TPH study

- Statistically significant reduction in pneumonia (ARI): Treatment villages had 13.5% less ARI after the introduction of IMA stoves
- Statistically significant reduction in respiratory symptoms: coughs, nasal discharge/secretion and stuffy nose

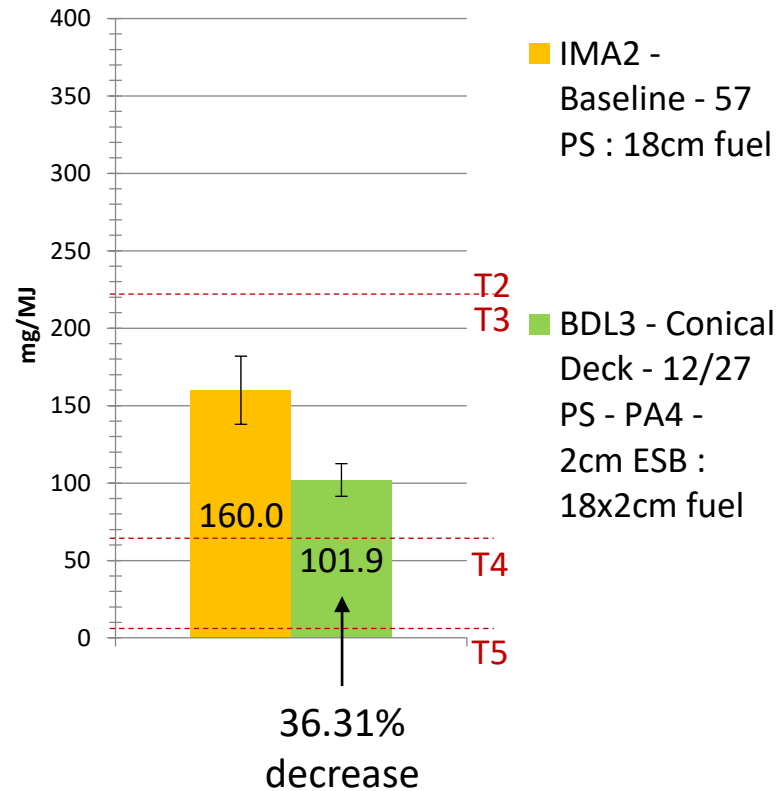


Results – Best Config: IMA2 vs. BDL3

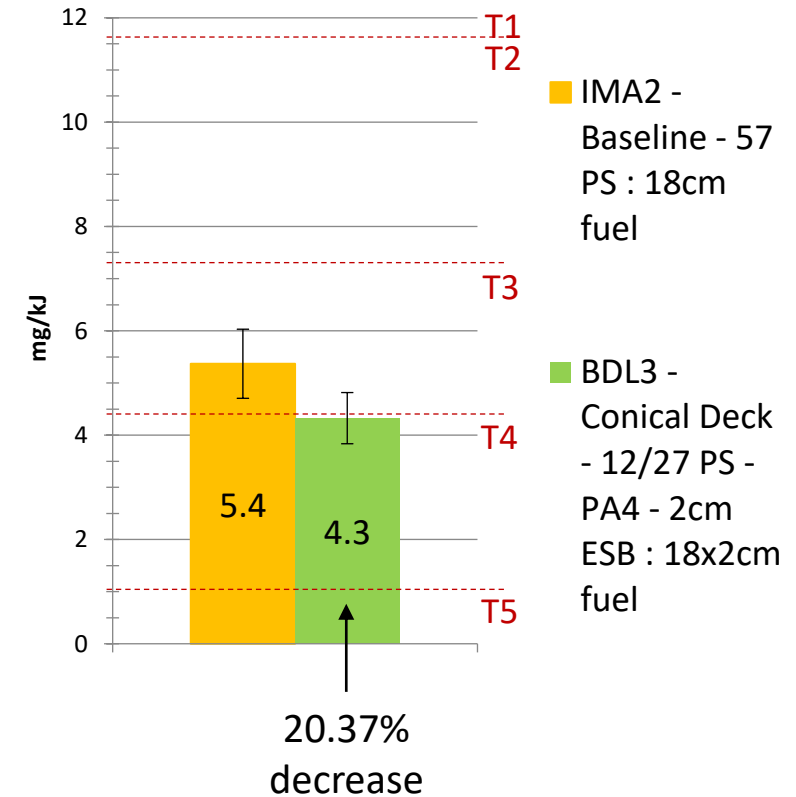
High Power Thermal Efficiency



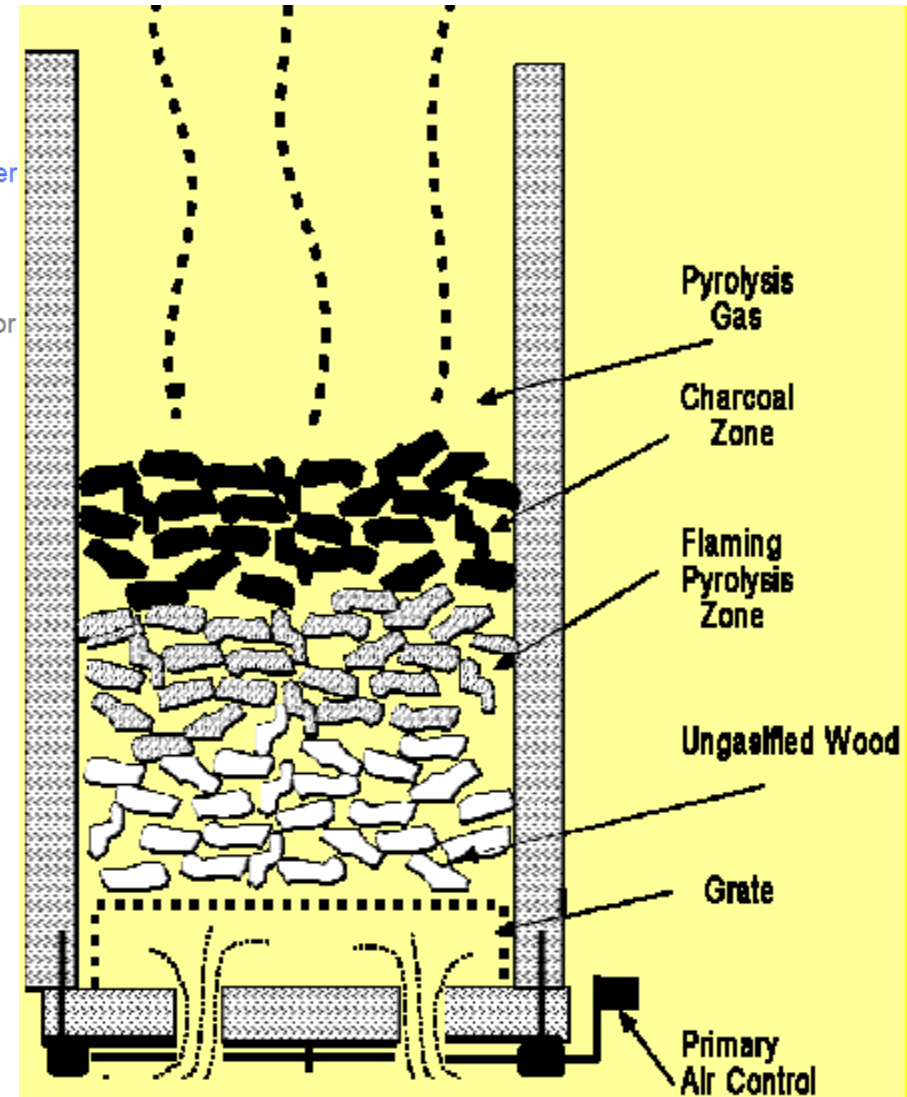
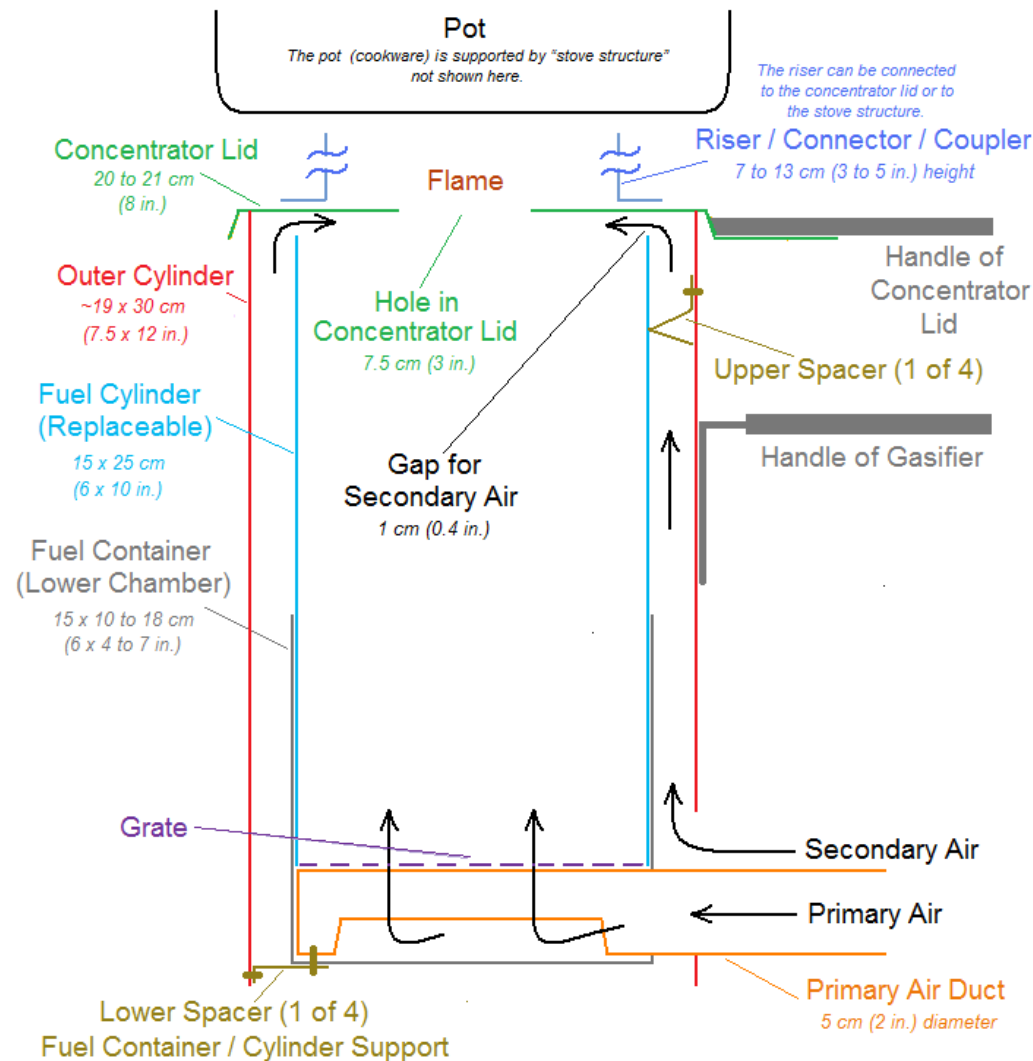
High Power PM2.5 Emission Factor



High Power CO Emission Factor



Basic Gasifier Stove





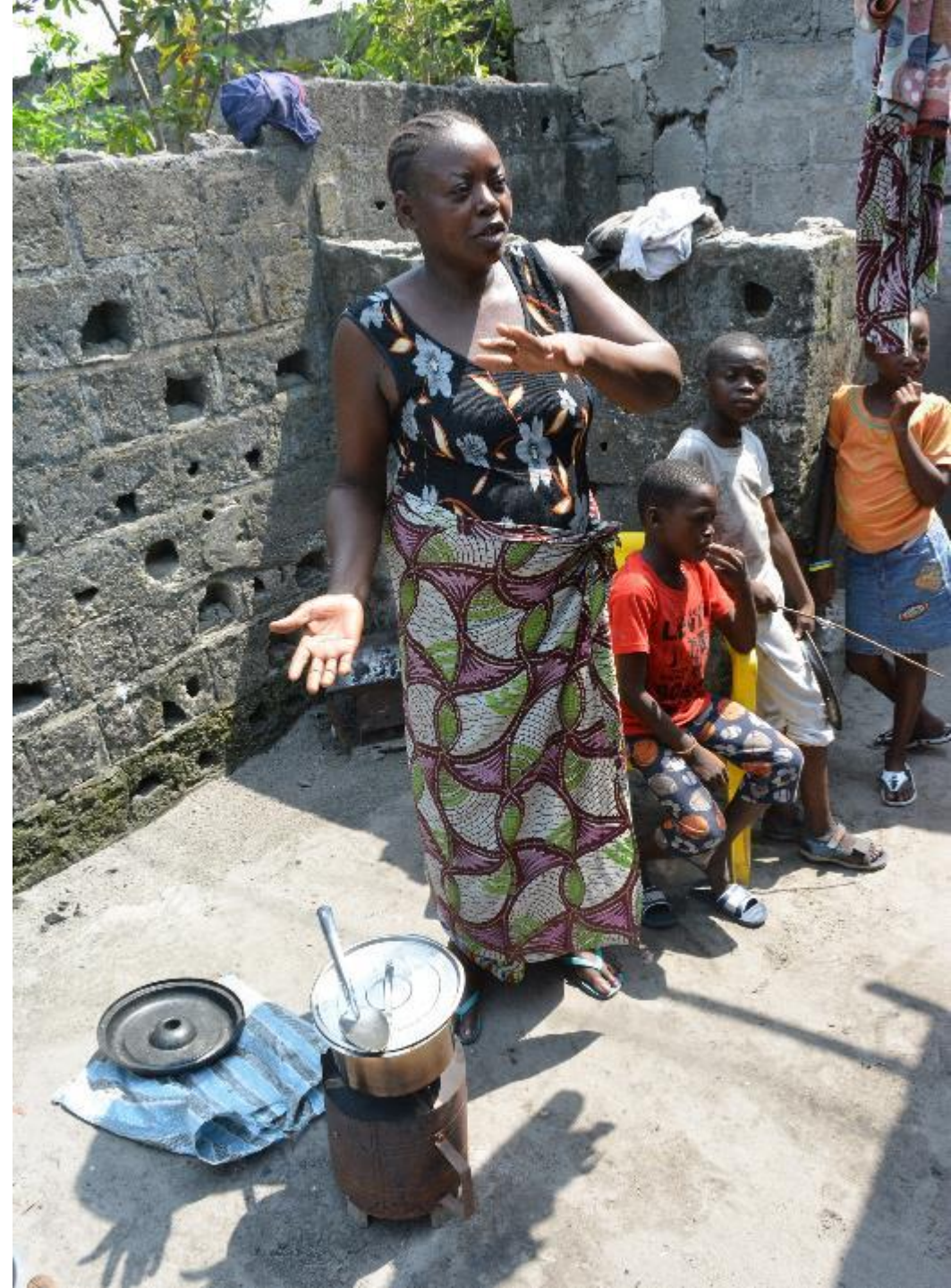
Charcoal from Smokeless Stove

Produces 25 Kg to 30 Kg of
charcoal per family per month



Testing the Gasifier Stove

- 2013: Tested stove with 40 households in Mokali, Kinshasa
- 2014: Tested 5 Prototypes in Kasai Central: Nganza, Tshikaji, & Village Mpoko
- 2015 – 2016: prototypes were tested at the CERERKA laboratory (WBT & CTT test)
- 2016: 50 units distributed to 50 households in Mpoko village
- 2017: 200 units distributed in ZS Ndesha, a Peri-Urban Environment
- 2020: Health impact study conducted with 250 units by Swiss TPH
- 2023: Testing adoption and impact of 500 stoves in IDP camp with World of Good funding
- 2023: Researched efficiency improvements with Burn Design Lab



Adoption of IMA Stove

- In Mpoko village there was a 100% adoption of the stove
- In peri-urban area: 72% use the IMA stove every day
- 3 years after distribution, people are still using their stoves



**Manufacturing:
Capacity to produce
up to 4,000 stoves
per month**



Local Assembly of Stoves From Flatpack Parts

- Local organization can be quickly trained to assemble stoves from flat packs
- Flatpacks of pre-cut parts make it possible to assemble stoves anywhere in the country at low cost
- Flatpacks reduce the cost of transporting materials from Kinshasa
- Stoves can be repaired locally



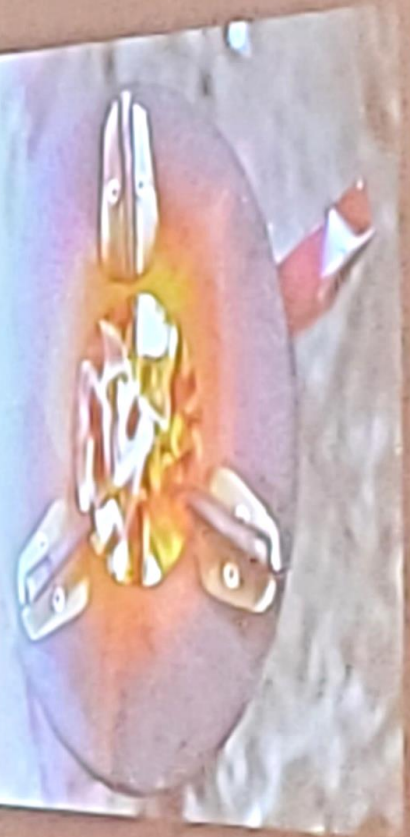


Members of ANJE support groups will be trained to organize themselves into VSLAs. VSLAs will sell stoves for \$10, of which \$5 will be used to increase the VSLA loan fund. The remaining \$5 will be used to assemble and transport the stoves.

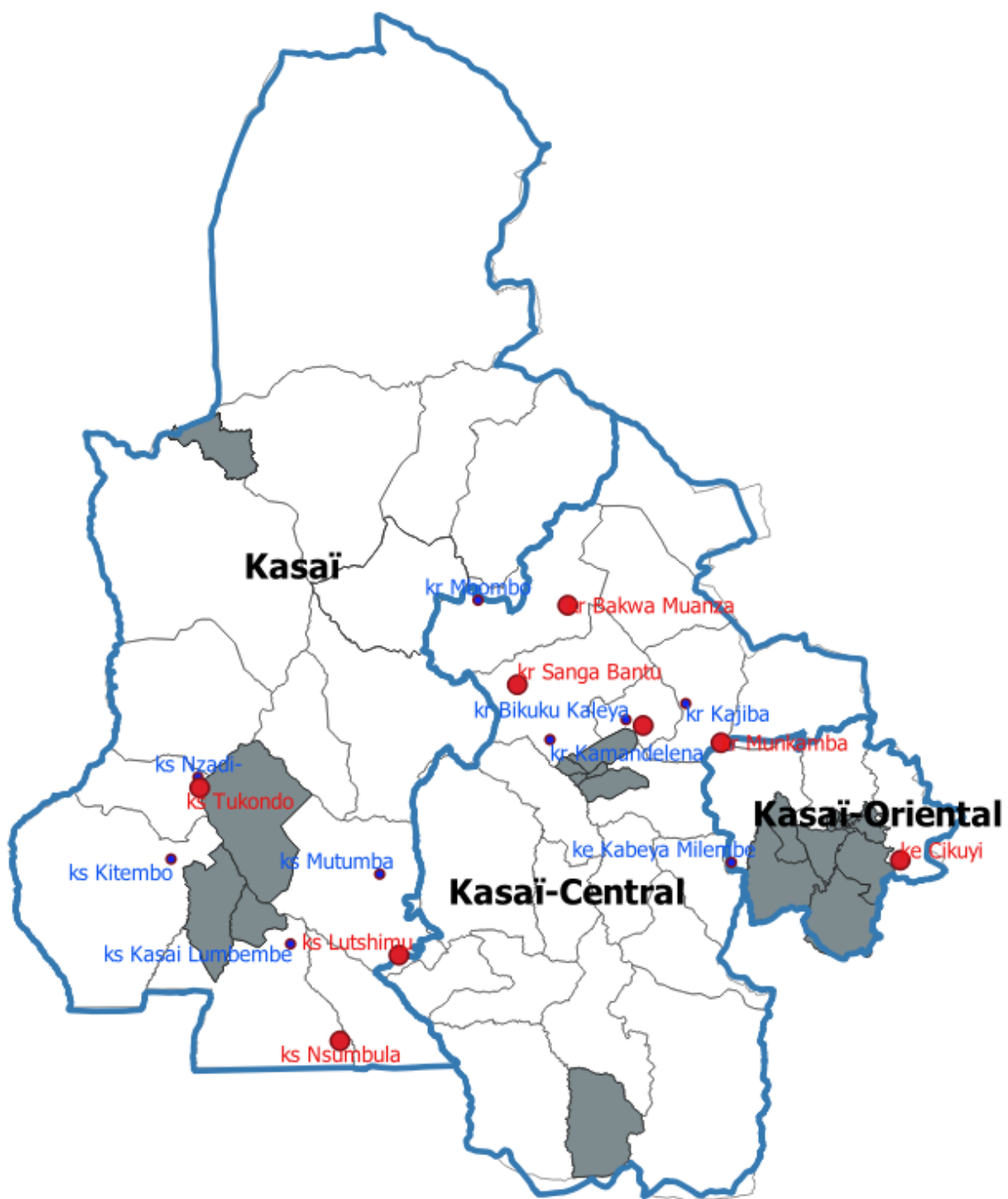


Mécanisme de gestion de plaintes

- Nos records à tous en termes de perception les de cette marque.
- Commentaires, prenez vite fait lors du sondage
- Si vous avez d'autres commentaires à nous faire ou si vous remarquez quelque chose qui ne fonctionne pas dans le programme, vous pouvez nous contacter par téléphone à 08104141 ou à l'adresse e-mail suivante: Marketing@airfrance.com
- L'avis de plainte aux bons sens.



Stakeholder meeting in Tshikapa



Baseline study will be carried out in 9 villages with 25 families per village

Must track stove use and 3 SDGs to receive carbon credits: Tracking 1, 3 & 13



Clean cooking is part of basic services necessary to lead a healthy and productive life and saves households time and money.



Efficient cookstoves reduce the amount of fuel needed to cook, thus reducing the burden on families who would otherwise have to collect it, buy it, or trade their food for it.



Reducing smoke emissions from cooking decreases the burden of disease associated with household air pollution and improves well-being, especially for women and children.



Children, particularly girls, are often kept out of school so that they can contribute to household tasks, like cooking and collecting fuel.



Unpaid work, including collecting fuel and cooking, remain a major cause of gender inequality.



Clean cooking is essential to addressing energy poverty and ensuring sustainable energy security for billions of people.



Energy access enables enhanced productivity and inclusive economic growth. The clean cooking sector offers many job opportunities.



Clean cooking addresses household and ambient air pollution, resource efficiency, and climate vulnerability.



Up to 25% of black carbon emissions come from burning solid fuels for household energy needs. Clean cooking solutions address the most basic needs of the poor, while also delivering climate benefits.



Up to 34% of woodfuel harvested is unsustainable, contributing to forest degradation, deforestation, and climate change.

Carbon Credit Potential

if IMA produced and sold 4,000 per month

Year	Tons of CO2	Offset Carbon Credits
Year 1	24,751	\$ 173,257
Year 2	70,444	\$ 493,108
Year 3	116,138	\$ 812,966
Year 4	161,832	\$ 1,132,824
Year 5	207,208	\$ 1,450,456
<i>Average</i>	<i>116,075</i>	<i>\$ 812,522</i>