Table S1. Survey questions. (Questions have been adapted from original format in DataWinners, where responses were entered in a tablet with preset menu forms. Format consisted of textboxes and drop-down preset options for easy input)

## General questions [answered by surveyor]

District name [drop-down menu: Sambava, Antalaha, Andapa]

Commune name [enter name in textbox]

Village name [enter name in textbox]

What is the roof of the house made of? [drop-down menu: bamboo, cement, ravinala, i.e. traveler's palm, tin, other]

What are the walls of the house made of? [drop-down menu: bamboo, cement, ravinala, i.e. traveler's palm, tin, wood, other]

## **Basic household demographics**

Is respondent male or female? [drop-down menu: Female, Male]

Is the primary cook for the family male or female? [drop-down menu: Female, Male]

How many people live in the household? [enter number in textbox]

## Cooking space, cookstove types and related questions

Where do you cook? [drop-down menu: open space, outside/roof/no walls or weak, inside/3 walls/window, roof/strong walls/close]

Stove type [drop-down menu: stone structure, metal tripod, brick structure, ADES-wood, simple metal, brick-clay with metal protective rim, brick-clay without a metal protective rim, tile-cement structure, ADES-charcoal, other]

Fuel type [drop-down menu: firewood, charcoal, gas, other]

How many stoves [same type] [enter number in textbox]

How many hours lit per day [enter number in textbox]

## [repeat questions until all stove types are included]

Preferred material to start fire [enter response in textbox]

Do you own an ADES stove? [drop-down menu: Yes, No]

Do you use your ADES stove? [drop-down menu: Yes, No]

Why don't you use your ADES? [enter response in textbox]

How much money do you spend per week on cooking? [enter number in MGA in textbox]

How much time do you spend per week on collecting firewood? [enter number on hours in textbox]

Table S2. List of villages (*fokontany*) surveyed in this study, ordered by commune, district and distance from paved road.

District	Commune	Fokontany	Distance	# households
Andapa	Andapa	Ambomitsinzo	paved	20
Andapa	Andapa	Andapa Sud	paved	20
Andapa	Andapa	Antangegny	paved	20
Andapa	Andasibe Kobahina	Andasibe Kobahina	good dirt	26
Andapa	Belampona	Ambody Pont	good dirt	21
Andapa	Belampona	Belampona	good dirt	19
Andapa	Doany	Doany	off road	32
Andapa	Marovato	Marovato	good dirt	20
Antalaha	Antalaha	Ambatomitraka	paved	20
Antalaha	Antalaha	Antananbao	paved	20
Antalaha	Antalaha	Belle Rose	paved	20
Antalaha	Antsahanoro	Antsahanoro	off road	22
Antalaha	Lanjarivo	Vohitsoa	off road	20
Antalaha	Marofinaritra	Marofinaritra	off road	21
Sambava	Andrahanjo	Andrahanjo	off road	22
Sambava	Anjangoveratra	Anjangoveratra	paved	19
Sambava	Maroambihy	Ambohimanarina	paved	16
Sambava	Maroambihy	Manantenina	paved	22
Sambava	Maroambihy	Mandena	paved	24
Sambava	Maroambihy	Maroambihy	paved	18
Sambava	Nosiarina	Nosiarina	paved	20
Sambava	Sambava	Ambatofitatra	paved	20
Sambava	Sambava	Ambodisatrana	paved	14
Sambava	Sambava	Sambava Centre	paved	20
Sambava	Tanambao Daoud	Tanambao Daoud	off road	21
Total households included in the analysis				517

Table S3. Preferred features in cookstoves including households using firewood, compared by distance from paved road. Numbers in parentheses represent percentages of respondents selecting this choice; n represents the number of households.

	Top 1 choice	Top 2 choice	Top 3 choice	Top 4 choice
Paved road	Cooking time (34) n=48	Fuel efficiency (21) n=30	Doesn't dirty pots (12) n=17	Amount of smoke /Type of fuel (9) n=12
Dirt road	Cooking time (44) n=31	Fuel efficiency (20) n=14	Type of fuel (17) n=12	Other (9) n=6
Off road	Cooking time (31) n=38	Amount of smoke (21) n=26	Doesn't dirty pots (14) n=17	Fuel efficiency (13) n=16

Pearson p=0.0019

Table S4. Preferred features in cookstoves including households using firewood, compared by district.

	Top 1 choice	Top 2 choice	Top 3 choice	Top 4 choice
Andapa	Cooking time (37) n=41	Fuel efficiency (22) n=24	Type of fuel (14) n=16	Amount of smoke (8) n=9
Antalaha	Cooking time (36) n=25	Doesn't dirty pots (16) n=11	Amount of smoke (13) n=9	Fuel efficiency /Other (11) n=8
Sambava	Cooking time (34) n=51	Fuel efficiency (19) n=28	Amount of smoke (14) n=21	Doesn't dirty pots (13) n=19

Pearson p=NS

Table S5. Preferred features in cookstoves including households using charcoal, compared by distance from paved road.

	Top 1 choice	Top 2 choice	Top 3 choice	Top 4 choice
Paved road	Fuel efficiency (33) n=64	Cooking time (19) n=36	Type of fuel (12) n=23	Amount of smoke (11) n=21
Dirt road	Fuel efficiency (46) n=18	Cooking time (28) n=11	Type of fuel (23) n=9	Portability (3) n=1
Off road	Doesn't dirty pots (24) n=8	Fuel efficiency (21) n=7	Cooking time (15) n=5	Amount of smoke/ Type of fuel (15) n=5

Pearson p=0.022

Table S6. Preferred features in cookstoves including households using charcoal, compared by district.

District –all charcoal	Top 1 choice	Top 2 choice	Top 3 choice	Top 4 choice
Andapa	Fuel efficiency (40) n=44	Type of fuel (20) n=22	Cooking time (15) n=16	Doesn't dirty pots (8) n=9
Antalaha	Cooking time (32) n=20	Fuel efficiency (27) n=17	Other (15) n=9	Doesn't dirty pots (8) n=5
Sambava	Fuel efficiency (29) n=28	Cooking time (17) n=16	Amount of smoke (16) n=15	Type of fuel (14) n=13

Pearson p=0.0017