

Annex 1: Questionnaires – Rounds 1 – 3

Note: the third round differed slightly by country. The Nepal questionnaire is presented here

Pathways to sustainable smoke alleviation

Day 1

Annex 3 Household questionnaire

FIRST VISIT AT START OF 24-hour MONITORING			
IH. Identifying household and cook			
IH1	Household number		
IH2	Name of interviewer		
IH3	Identifier for interviewee (NOT her name or initials)		
IH4	Date of interview		
EQ. Setting up equipment			
<i>Describe to the woman the reason for using the equipment and ensure she is still happy to have the monitor set up in her kitchen. If 'yes', set up monitor</i>			
EQ1	Is the woman happy to have the CO monitor set up in her kitchen?	No (terminate session) Yes (turn on CO monitor)	1 2
EQ2	Initial reading on monitor		
EQ3	Time of day		
EQ4	Morning or Evening?	Morning Evening	1 2
<i>What interventions is the woman having in her home to reduce smoke?</i>			
EQ5	Smoke hood	No Yes	1 2
EQ6	Eaves spaces	No Yes	1 2
EQ7	Upesi or other ceramic stove (Kenya)	No Yes	1 2
EQ8	'Rocket' type stove (Kenya)	No Yes	1 2
EQ9	Fireless cooker (Kenya)	No Yes	1 2
EQ10	LPG stove	No Yes	1 2
EQ11	Solar cooker	No Yes	1 2
EQ12	Kisra plate	No Yes	1 2

EQ13	Cooking outside?	No Yes	1 2
EQ14	Other	No Yes	1 2
EQ15	If 'other intervention' please describe		

ED. Education and employment

ED1	How many of your children go to school ? _ (this applies to any age) Enter zero if none go to school		
ED2	Are you able to read?	No Yes	1 2
ED3 ED4	If you went to school, for how long did you attend school? (insert years and months)	Years	
		Months	
ED5	How do you earn a living? (This question is to the woman)		
ED6	How does your husband earn a living? (only ask if the woman is married) – please describe status if woman is not married (eg unmarried; widow etc.)		

Annex 3 Household questionnaire

SECOND VISIT AFTER THE 24-hour MONITORING - all the questions in this section refer to the time when the monitoring was taking place

ST. Type of stove

ST1	What was the main stove type you used when the monitoring was taking place?	Three-stone fire	1
		Improved ceramic stove	2
		Metal sawdust/residue stove	3
		Traditional charcoal stove	4
		Improved (ceramic lined) charcoal stove	5
		Traditional tripod stove (Nepal)	6
		Improved tripod stove (Nepal)	7
		Kisra plate (Sudan)	8
		Kisra plate and three-stone fire (Sudan)	9
		LPG stove	10
		Other	11
ST2	If 'other' please describe type of stove		

FL. Fuel use on day of monitoring

FL1	What was the main fuel you used for cooking (and keeping warm) in your kitchen whilst the monitoring was taking place? <i>Only mention 'keeping warm' if appropriate</i>	Wood	1
		Charcoal	2
		Residues	3
		LPG	4
		Kerosene	5
		Solar	6
		Other	7
FL2	If 'other main fuel' please describe other fuel used		
FL3	If you used more than one fuel, what was the second fuel you used for cooking (and keeping warm) whilst the monitoring was taking place? <i>Only mention 'keeping warm' if appropriate</i>	Wood	1
		Charcoal	2
		Residues	3
		LPG	4
		Kerosene	5
		Solar	6
		Other	7
FL4	If 'other second fuel' please describe other fuel used		
FL5	Was the main fuel you used whilst the monitoring was taking place completely dead or 'green' ? (Green wood is wood that has just been cut down from a living tree and is not completely dried out)	Did not use biomass	1
		Completely dead	2
		'Green'	3

FL6	How dry was the fuel you used whilst the monitoring was taking place?	Did not use biomass Wet Quite dry Very dry	1 2 3 4
FL7	Was the fuel that you used for cooking (and heating) during the monitoring period bought or gathered ?	All or mainly gathered –go to FL16 About half gathered, rest bought All or mainly bought	1 2 3
FL8	How much did you pay for fuel the last time you bought it? <i>(This can be formal – e.g. Kenya Shillings per bag, or Rupees per kilo, or whatever is appropriate that gives the currency for the quantity you've written)</i>	Quantity of fuel bought	
FL9		Cost for this quantity	
FL10		Currency per unit (eg Kenya Shillings per bag)	
FL11	How many days do you expect this quantity of fuel to last?	Days =	
FL12 FL13 FL14	What were the reasons for buying this fuel? <i>(circle up to three reasons)</i> Please do not prompt	Convenience Cleanliness Time Scarcity Other reason	1 2 3 4 5
FL15	If 'other reason' what was the reason for buying fuel?		
FL16	If you gathered any fuel, how adequate were the supplies ? <i>(Circle '1' if person did not gather fuel)</i>	Did not gather any (Go to CK1) Very scarce Rather scarce Just enough Plentiful	1 2 3 4 5
FL17	About how long did your collection trip take (hours and minutes)? (Enter zero if did not gather)	Hours	
FL18		Minutes	
FL19	In the last week (seven days) how many times did you or your family gather fuel?		
FL20	How many children, aged under 16 years, gathered fuel in the last week (seven days)?		
CK. Cooking sessions			
Times when cooking started - What time did each session begin since monitor switched on? Please write "No Cooking" in each box where cooking did not take place (for example, if there were only two lots of cooking done, please mark the remaining three with 'No Cooking' in each box)			
CK1	First session started at		AM / PM
CK2	Second session started at		AM / PM
CK3	Third session started at		AM / PM
CK4	Fourth session started at		AM / PM

CK5	Fifth session started at		AM / PM
CK6	Did you sleep in the room with the fire alight during the monitoring period?	No Yes	1 2
CK7	Did you sleep in a room with a different stove alight during the monitoring period?	No Yes	1 2
LT. Lighting			
LT1	What was the main fuel you used for lighting whilst the monitoring was taking place?	Electricity (grid) Electricity (battery) Electricity (local generator) LPG Kerosene Candles Other	1 2 3 4 5 6 7
LT2	If 'other lighting fuel' please specify		
LT3	Did you buy the lighting fuel you used whilst the monitoring was taking place?	No (go to OT1) Yes	1 2
LT4	How much did you pay last time for lighting fuel? <i>(Eg Kenya Shillings per bag, or Rupees per kilo, or whatever is appropriate – could be electricity per day – if that is how it is bought)</i>	Quantity	
LT5		Cost	
LT6		Currency per unit	
LT7	When you buy this quantity of fuel for lighting, how many days does this usually last? <i>(if electricity is bought per day, then in the 'days' box, put '1', if it is per week, then put '7')</i>	Days	
OT. Enterprise & other uses			
OT1	For how many days each week do you use fuel in your own house for an enterprise or small business? <i>(Enter '0' if no enterprise or small business)</i>	No of days per week =	
OT2	Did you use fuel for an enterprise or small business whilst the monitoring was taking place?	No – go to OT6 Yes	1 2
OT3	If 'yes', how much of the fuel you used whilst the monitor was switched on was used for enterprise?	None or very little Quarter Half Three-quarters Almost all	1 2 3 4 5
OT4	What was the enterprise?	Food for sale Drink for sale Other	1 2 3
OT5	If 'other enterprise' please specify		
OT6	Did you use fuel for tasks other than cooking and/or enterprise whilst the monitoring was taking place?	No – go to WM1 Yes	1 2
OT7	If 'yes' what were those tasks? Please do not prompt	Animal feed Water boiling for washing Ironing Other	1 2 3 4

OT8	If 'other tasks' please specify the tasks		
OT9	What fuels did you use for any other task or tasks?	Wood Charcoal Residues LPG Kerosene Solar Electricity (grid) Electricity (battery) Electricity (local generator) Other	1 2 3 4 5 6 7 8 9 10
WM. Comments and observations on non-health issues from interviewee			
WM1	Can you think of any ways in which your last 24 hours (since my visit yesterday) was different from how it would have been if monitoring had not been taking place?	No (go to WM3) Yes	1 2
WM2	Please describe how your day was different		
WM3	What impacts do you feel that the interventions that you are planning to install will have? <i>Please do not prompt – continue on reverse if needed</i>		
WM3	Are there any comments you would like to make which you feel we should know? <i>Please do not prompt – continue on reverse if needed</i>		
HS. Section for interviewer			
HS1	Is the kitchen.....	Enclosed? Semi-open?	1 2
HS2	Location of kitchen	Separate building Separate room attached to rest of main house Main living area in house?	1 2 3
HS3	Kitchen size?	Much larger than average About average Much smaller than average	1 2 3
HS4	What is the roof made of in the room with the main stove?	Thatch Mud and thatch Tin roof Wooden tiles Other	1 2 3 4 5
HS5	If 'other' please specify		

HS6	What are the walls made of in the room with the main stove?	Mud Woven sticks Stone Stone and wood Woven reed Other	1 2 3 4 5 6
HS7	If 'other, please specify		
HS8	Approximately how deep is the eaves space between the walls and the roof?(in centimetres) - if there is no space, put zero	None Small (up to 9cm) Medium (10cm -29cm) Large (30cm or more)	1 2 3 4
HS9	About how many metres of wall have eaves space between the wall next to the stove and the roof? - if there is no space, put zero	Approximate length in metres =	
HS10	Is the kitchen	Bright and airy? Average? Dark and enclosed?	1 2 3
HS11	Were there any other sources of smoke during the monitoring in the house or just outside?	No Incense Sauna (Sudan) Heavy traffic Rubbish burning Dust from industry / enterprise Other	1 2 3 4 5 6 7
HS12	If 'other' please describe:		
WE. Weather			
WE1	Over the monitoring period, has the weather been.....	Hot and dry? Hot and humid? Moderate temperature and dry? Moderate temperature and humid? Cold and dry? Cold and damp / wet? Other	1 2 3 4 5 6 7
WE2	If 'other' please describe the weather		
WE3	Wind – has it been	Still (no wind) Breezy (light wind) Very windy	1 2 3
EQ. & IN. End of monitoring session & comments from interviewer			
EQ17	Final reading on monitor		
EQ18	Monitor is switched off	No Yes	1 2
IN1	Observations from interviewer on anything whilst the monitoring was taking place which you may feel affect the results		

Annex 4 –Health questionnaire

ID. Identifying household and cook			
ID1	Household number		
ID2	Name of interviewer		
ID3	Identifier for interviewee (NOT her name)		
ID4	Date of interview		
ID5	Age of interviewee		
ID6	Height of interviewee		
A. Cough			
A1	Over the last 12 months, have you usually had a cough first thing in the morning, or at other times of the day?	No (go to B1) Yes	1 2
A2	Do you usually cough like this on most days?	No Yes	1 2
A3	For how many months, in total, in the last year have you coughed like this?	9 or more months 5 - 8 months 3 - 4 months 1 – 2 months less than 1 month	1 2 3 4 5
A4	For how many years have you coughed like this?	Years:	
B. Phlegm			
B1	Over the last 12 months, have you usually brought up phlegm from your chest (deep down in your lungs) first thing in the morning, or at other times of the day?	No (go to C1) Yes	1 2
B2	Do you usually bring up phlegm like this on most days?	No Yes	1 2
B3	What colour is the phlegm usually?	Clear or white Yellow or green Brown or black Red (streaked)	1 2 3 4
B4	For how many months, in total, in the last year have you brought up phlegm like this?	9 or more months 5 - 8 months 3 - 4 months 1 – 2 months less than 1 month	1 2 3 4 5
B5	For how many years have you brought up phlegm like this?	Years:	
C. Episodes of cough and phlegm			
C1	Over the last 12 months, have you had episodes of both (increased*) cough and phlegm together lasting for 3 weeks or more? <i>*Increased if already have cough and/or phlegm</i>	No (go to section WH1) Yes	1 2

C2	How many such episodes did you have in the last year?	Number:	
C3	For how many years have you had at least one episode per year like this?	Years:	
WH: Wheezing			
WH1	Over the last 12 months, has your chest (your lungs) sounded wheezy or whistling ?	No (go to H1) Yes	1 2
WH2	Has this happened when you have a cold?	No Yes	1 2
WH3	Has this happened at other times when you do not have a cold?	No Yes	1 2
WH4	For how many years has this wheeze been present (whether or not when you have a cold)?	Years: (Put '1' if less than one year)	
H. Headaches			
H1	Over the last 12 months, have you tended to get headaches ?	No (go to D1) Yes	1 2
H2	How often do you have headaches ?	Every day Most days Few days per week Once per week Less often	1 2 3 4 5
H3	How strong are the headaches usually?	Very strong Fairly strong Mild	1 2 3
H4	What do you think usually causes these headaches ? Do not prompt!	Smoke Having a cold Weakness of sight Other	1 2 3 4
H5	If 'other' please specify		
D: Respiratory health of under-five children as rated by mother			
Please ensure that the mother understands what is meant by 'respiratory health'.			
<i>Respiratory health problems to include all upper (coughs, colds, etc) and more severe respiratory problems including coughs going onto chest, with fever, etc.</i>			
D1	How many children under five years of age do you have? If none, insert '0' and go to TM1)	Number of children under 5	
D2	Have any of your under-five children had an illness with a cough at any time in the last two weeks?	No (go to D6) Yes	1 2
D3	If yes, did they breathe very noticeably faster than usual with short, rapid breaths? <i>(if more than one child with cough, discuss youngest)</i>	No Yes	1 2
D4	How old is the child with the cough ? <i>(if more than one child with cough, discuss youngest)</i>	Years	
D5		Months	
D6	What (other) respiratory health problems, if any, have your under-five children experienced in the last year? Do not prompt!	None (go to D8) Coughs and colds More serious illness with difficulty breathing Other (specify)	1 2 3 4

D7	If 'other' please describe			
D8	How many times have burns or scalds occurred to any of your under-five children in the last year? (if none, insert '0' and go to next section)	Number of times:		
D9	What was age of that child at the time?	Years		
D10	<i>If more than one child – discuss youngest</i>	Months		
D11	For the most severe occasion in the last year, how severe was this burn ? Insert locally appropriate coin about 2 cm across – then delete this sentence.	No scar (go to next section) Small scar (<2 Rs coin) Large scar (>2 Rs coin)	1 2 3	
D12	Where did this burn or scald occur?	Your kitchen Not in your kitchen	1 2	
D13	How did this burn or scald occur? Do not prompt!	Fell into fire Touched hot object Scalded when pot fell over Clothes caught fire Other (describe)	1 2 3 4 5	
D14	If 'other' please describe –			
D15	What concerns, if any, do you have about burns and scalds to you children at the present time? – continue over page if needed			
D16	Is there anything else you would you like to say about the health of your children under 5 at the present time? – continue over page if needed			
TM: Treatment for respiratory health problems				
<i>In the last 12 months have you or your family visited any of the following health providers for respiratory health problems?</i>				
	Health provider (put '0' for no visits)	Number of visits in last year for yourself or other adult in household	Number of visits in last year for your children	Approx total cost in last year
TM1 TM2 TM3	Health post	TM1	TM2	TM3
TM4 TM5 TM6	Traditional healer	TM4	TM5	TM6
TM7 TM8 TM9	Other health provider	TM7	TM8	TM9
TM10	If 'other health provider' please describe who this is			TM10

IN. Inhaling pollutant (this is needed for analysing breath-CO tests)			
IN1	How long ago (in hours) did you last cook using your stove?	Hours ago	
IN2	Over the last day, have you sat close to your own or a neighbours fire, when the fire was burning brightly?	No (go to IN4) Yes	1 2
IN3	How many hours ago did this happen?	Hours ago	
IN4	Do you smoke, or have you ever smoked, cigarettes? Answer 1: Go to IN8 Answers 2 & 3: Go to IN7	Never Gave up more than year ago Gave up during last year Yes	1 2 3 4
IN5	Average smoked per day	Less than 5 per day 5 – 9 per day 10-19 per day 20 or more per day	1 2 3 4
IN6	How many hours since you smoked your last cigarette?	Hours ago	
IN7	[Current and ex-smokers] For how many years have you smoked (or did you smoke) cigarettes?	Years:	
IN8	Have you, in the last 24 hours, spent more than about half an hour in the same room as someone smoking cigarettes?	No (end interview) Yes	1 2
IN9	how many hours ago?	Hours ago =	

Annex 4 –Health questionnaire

Day 2

IN10	How long ago (in hours) did you last cook using your stove?	Hours ago	
IN11	Over the last day, have you sat close to your own or a neighbours fire, when the fire was burning brightly?	No (go to IN13) Yes	1 2
IN12	How many hours ago did this happen?	Hours ago	
IN13	Do you smoke, or have you ever smoked, cigarettes? Answer 1: Go to IN17 Answers 2 & 3: Go to IN16	Never Gave up more than year ago Gave up last year Yes	1 2 3 4
IN14	Average smoked per day	Less than 5 per day 5 – 9 per day 10-19 per day 20 or more per day	1 2 3 4
IN15	How many hours since you smoked your last cigarette?	Hours ago	
IN16	[Current and ex-smokers] For how many years have you smoked (or did you smoke) cigarettes?	Years:	
IN17	Have you, in the last 24 hours, spent more than about half an hour in the same room as someone smoking cigarettes?	No (end interview) Yes	1 2
IN18	About how many hours ago?	Hours ago =	

Impact monitoring survey: GROUP MEETINGS – Sustainable smoke alleviation – FINAL VERSION v2

THIS SURVEY IS FOR THOSE WHO HAVE ADOPTED INTERVENTIONS WITHIN THE PROJECT						
For all this data, put a tick (✓) if mentioned by at least one person, TWO ticks (✓✓) if three or more people agree, and THREE ticks (✓✓✓) if most people agree.						
In all cases, tick as many options as are needed						
CG1	Name of group					
CG2	Name of facilitator					
CG3	Entrepreneur present?		Yes			
			No			
CG 4-5	Number attending		Women			
			Men			
CG6	Date of meeting					
Part 1 This part explores how the group feels about the ways in which they are removing smoke.						
What interventions did you choose to have in your house to alleviate smoke? (do not prompt)						
GT 1-11	Intervention		Ticks below		Intervention	
	LPG stove		1		Rocket stove	
	LPG stove with kisra sag (Sudan)		2		Fireless cooker (hay box)	
	Smoke hood		3		Solar cooker	
	Upesi stove – portable (Kenya)		4		Eaves spaces	
	Installed upesi stove (Kenya)		5		Wall insulation	
	Improved tripod stove (Nepal)		6			
GT 12-20	Please write down any other interventions not listed that are mentioned by the group. Use ticks to indicate level of uptake.					
GT 21-24	How satisfied are you with the interventions? Read out choices first. Use ticks to indicate levels of agreement		Ticks below either (✓) or (✓✓) or (✓✓✓)			
			Very Dissatisfied			
			Dissatisfied			
			Satisfied			
Very satisfied						
GT 25-40	Please describe any problems you have noticed? (do not prompt) – use ticks					
	Appliance is too expensive		1		Still smoky	
	Fuel too expensive		2		Poor quality - starting to wear out	
	Stove is difficult to light		3		It has had to be mended	
	Time to cut wood into thinner pieces		4		Takes up too much space	
	Fuel not always available locally		5		Lets in too many mosquitoes	
	Takes longer to cook		6		Lets in vermin	
	Noise of wind in smoke flue		7		Lets in other cats & other wild animals	

	Room does not warm up as well	8	No problems	16
GT 41-50	If anyone responds to last question with '10' or '11' ask them to describe more about what is wearing out or has broken			
GT 51-60	Write down any other problems mentioned by the group that are not in this list of things that are a problem. Use ticks to indicate numbers of people with these problems.			
GT 61-67	Have any of you made any other changes to the way you do things in order to reduce smoke (do not prompt) - use ticks			Tick below
		Drying fuel well	1	
		Using lids on pots	2	
		Using a pressure cooker	3	
		Keeping children away from fire	4	
		Keeping face away from smoke when lighting stove	5	
		Cooking outside when the weather is good	6	
	Cutting up the fuel into thinner pieces	7		
GT 68-77	Please list any other changes made by the group that are not listed. Use ticks to indicate popularity of these changes			
GT 78-83	Do you feel that you have more or less smoke in your kitchen as a result of all of these changes and interventions? Read out choices first. Use ticks to indicate levels of agreement	<i>A lot more smoke</i>	1	
		<i>A bit more smoke</i>	2	
		<i>No change in the smoke</i>	3	
		<i>A bit less smoke</i>	4	
		<i>A lot less smoke</i>	5	

		<i>No smoke at all</i>	6	
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Part 2 We want to know exactly what the group feels about smoke alleviation. Please give the group time to make comments, both positive and negative. The changes are in five groups: **Health; Household physical environment; Savings and income; Time; Social & cultural aspects**

HEALTH: We are interested to learn about any changes in health for the cook, or that of family members as a result of the smoke interventions.

Please record health changes (both good and bad). Please do not prompt until each question has been explored by the group.

Record in one section anything people say without prompting and in the next block anything that people say after prompting.

Only ask about the items listed below if they have not already been discussed. If you ask about something and people say there is not a problem, please record this as a zero: (e.g. less wheeze (0) means that nobody thinks they wheeze less, whilst (less cough (√ √)) means that three or more people agree that they have less of a cough, but most people do not think that their cough has been reduced.

1.Eyes 2. Headaches 3. Chest pains / tightness 4. Coughs 5. Wheeze 6. Tiredness 7. Dizziness 8.Burns 9. Reduced burden of fuel collection 10. Cleanliness (hands, face, hair etc.)

HWB 1-10	<p>Has the health or well-being of the cooks been affected as a result of the smoke interventions.</p> <p>Read out choices first. Use ticks to indicate levels of agreement</p> <p>Only for the cooks, record men and women's responses separately</p>		Women	Men
		Health is a lot worse		
		Health is a bit worse		
		Health has not changed		
		Health is a bit better		
		Health is a lot better		
HWB 11-20	<p>Please ask the cooks to describe changes in their health and well-being as a result of the smoke interventions Use ticks to indicate level of agreement for each change <i>Without prompting</i></p>			
HWB 21-30	<p>Check – have you got information on 1.Eyes 2. Headaches 3. Chest pains / tightness 4. Coughs 5. Wheeze 6. Tiredness 7. Dizziness 8.Burns 9. Reduced burden of fuel collection 10. Cleanliness (hands, face, hair etc.) for the cook Use ticks to indicate levels of agreement <i>With prompting</i></p>			
HW 31-35	<p>Have your under-5yrs children's health or well-being been affected ?</p> <p>Read out choices first. Use ticks to</p>	Health is a lot worse	1	
		Health is a bit worse	2	
		Health has not changed	3	

	indicate levels of agreement	Health is a bit better	4	
		Health is a lot better	5	
HWB 36-45	Please ask about changes in under-5yrs children's health and well-being. Use ticks to indicate level of agreement for each change. <i>Without prompting</i>			
HWB 46-55	Check – have you got information on 1.Eyes 2. Headaches 3. Chest pains / tightness 4. Coughs 5. Wheeze 6. Tiredness 7. Dizziness 8.Burns 9. Reduced burden of fuel collection 10. Cleanliness (hands, face, hair etc.) for the under-5yrs children Use ticks to indicate levels of agreement <i>With prompting</i>			
HWB 56-60	Have your children 5yrs and over health or well-being been affected ? Read out choices first. Use ticks to indicate levels of agreement	Health is a lot worse	1	
		Health is a bit worse	2	
		Health has not changed	3	
		Health is a bit better	4	
		Health is a lot better	5	
HWB 61-70	Please ask about changes in children 5yrs and over health and well-being. Use ticks to indicate level of agreement for each change. Use ticks to indicate levels of agreement <i>Without prompting</i>			
HWB 71-80	Check – have you got information on 1.Eyes 2. Headaches 3. Chest pains / tightness 4. Coughs 5. Wheeze 6. Tiredness 7. Dizziness 8.Burns 9. Reduced burden of fuel collection 10. Cleanliness (hands, face, hair etc.) children 5yrs and over Use ticks to indicate levels of agreement <i>With prompting</i>			

HWB 81-85	Do husbands present feel that their health or well-being been affected? If no men are present, please ask this question to the whole group Read out choices first. Use ticks to indicate levels of agreement	Health is a lot worse	1	
		Health is a bit worse	2	
		Health has not changed	3	
		Health is a bit better	4	
		Health is a lot better	5	
HWB 86-95	Please ask husbands to describe changes in the health and well-being as a result of the smoke interventions Use ticks to indicate level of agreement for each change. If no men are present, please ask this question to the whole group. Use ticks to indicate level of agreement for each change <i>Without prompting</i>			
HWB 96-105	Check – have you got information on 1.Eyes 2. Headaches 3. Chest pains / tightness 4. Coughs 5. Wheeze 6. Tiredness 7. Dizziness 8.Burns 9. Reduced burden of fuel collection 10. Cleanliness (hands, face, hair etc.) for husbands Use ticks to indicate levels of agreement <i>With prompting</i>			
HWB 106-110	Has the health or well-being of other adult members of your families been affected Read out choices first. Use ticks to indicate levels of agreement	Health is a lot worse	1	
		Health is a bit worse	2	
		Health has not changed	3	
		Health is a bit better	4	
		Health is a lot better	5	
HWB 111-120	Please tell us which adult member(s) , and describe the changes in the health and well-being of other family members as a result of the smoke interventions. Use ticks to indicate level of agreement. <i>Without prompting</i>			

HWB 121-130	<p>Check – have you got information on 1.Eyes 2. Headaches 3. Chest pains / tightness 4. Coughs 5. Wheeze 6. Tiredness 7. Dizziness 8.Burns 9. Reduced burden of fuel collection 10. Cleanliness (hands, face, hair etc.)for other adult family members AT THE END OF THE DISCUSSION, if not already mentioned, ask about those who are too old to get out a lot, and those with disabilities. Use ticks to indicate levels of agreement <i>With prompting</i></p>

HOUSEHOLD ENVIRONMENT: This section is about the changes caused by the interventions on the structure of the house and items, such as clothes, pots, pans, and any other physical items. Please remember that these comments can be either good or bad, and we need to report both.

IND 1-10	Can you think of any changes in the house, or your belongings or other items that have been affected by the smoke interventions? PLEASE DO NOT PROMPT	No (go to MON1)	1	
		Cleaner walls and/or roof	2	
		Pots less dirty	3	
		Clothes less dirty	4	
		More light in the kitchen	5	
		Less dust and dirt blows into the house	6	
		Fewer mice and other vermin get into the house	7	
		Crops do not get preserved by smoke	8	
		Wooden timbers are rotting more quickly	9	
		Storing fuel indoors takes up too much space	10	

IND 11-20	<p>Please record any other physical changes (both good and bad) that are mentioned by the group (please do not prompt). Use ticks to indicate level of agreement for each change</p>
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SAVINGS / INCOME: This section is looking at whether people feel that they are better off, or worse off, in money terms, because of the smoke interventions.

MON 1-5	Do you feel that you are better or worse off financially, or about the same, as a result of the smoke interventions in your house? Read out choices first. Use ticks to indicate levels of agreement			Tick below
		A lot worse off	1	
		Worse off	2	
		Just the same	3	
		Better off	4	
		A lot better off	5	
MON 6-15	<i>Only ask if people say there has been a change – leave out if everyone says it is just the same</i>			
	Can you tell us in what ways you are better / worse off and why (please do not prompt) Use ticks to indicate level of agreement for each reason mentioned			

TIME: This section is exploring whether getting rid of smoke has saved people time or is taking more time.

HRS 1-5	As a result of your efforts in alleviating smoke, do you feel that you have more or less time to do other things. Read out choices first. Use ticks to indicate levels of agreement			Tick below
		A lot less time	1	
		Less time	2	
		No change	3	
		More time	4	
		A lot more time	5	
HRS 6-15	<i>Ask this question unless everyone says that time has not changed</i>			
	Please describe why you have more/less time available for other things (please do not prompt) . Use ticks to indicate level of agreement for each reason for change in time			

HRS 16-25	What do you do with this increased time? AND / OR What can you no longer do because of this lost time? (please do not prompt) . Use ticks to indicate level of agreement
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SOCIAL & CULTURAL CHANGES: This section is now looking at ways in which the people in the household behave differently as a result of smoke alleviation in their homes. Use ticks to indicate level of agreement
Please do not prompt – REMEMBER TO RECORD TICKS

CUL 1-5	Has family life changed in any way as a result of changes/ interventions to alleviate smoke? Use ticks to indicate level of agreement. Read out choices first , Use ticks to indicate levels of agreement	It has changed a lot for the worse	1	
		It has changed a little for the worse	2	
		It has not changed	3	
		It has changed a lot for the better	4	
		It has changed a little for the better	5	

CUL 6-15	Please describe the changes (both good and bad) that have happened in your family life as a result of alleviating smoke in your kitchen (do not prompt)				
	Husband now spends more time in kitchen	1		Husband more willing to cook	6
	Under-5 children spend more time in kitchen	2		More visitors	7
	School age children do homework in kitchen	3		More confident to invite visitors	8
	Family members have meals in kitchen, and are eating together (including woman, if previously excluded by duties in kitchen, etc.)	4		Family pressures as very short of cash while paying off cost of intervention	9
	Family entertains guests in kitchen	5		Less space in kitchen for family to move around	10

CUL 16-25	Please record any other social and / or cultural changes (both good and bad) that are mentioned by the group (please do not prompt) Use ticks to indicate level of agreement for each change
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CUL 26-35	Please can you tell us anything else that we might have missed that has changed as a result of changes / interventions to alleviate smoke. Please feel welcome to tell us the bad things as well as the good, as we need to learn from you. (please do not prompt) Use ticks to indicate level of agreement																													
OWN 1-8	<p>We want to build a picture of the type of household which is installing interventions. For this reason, please can you tell me if you own any of the following.</p> <p>PLEASE WRITE IN THE NUMBERS of those owning these goods – just ask people to raise their hands and do a quick count</p>	<table border="1"> <thead> <tr> <th></th> <th></th> <th>Numbers</th> </tr> </thead> <tbody> <tr> <td>Motor-cycle</td> <td>1</td> <td></td> </tr> <tr> <td>Refrigerator</td> <td>2</td> <td></td> </tr> <tr> <td>Piped water supply</td> <td>3</td> <td></td> </tr> <tr> <td>Access to electricity</td> <td>4</td> <td></td> </tr> <tr> <td>Radio</td> <td>5</td> <td></td> </tr> <tr> <td>TV</td> <td>6</td> <td></td> </tr> <tr> <td>Bicycle</td> <td>7</td> <td></td> </tr> <tr> <td>Latrine or Toilet</td> <td>8</td> <td></td> </tr> </tbody> </table>			Numbers	Motor-cycle	1		Refrigerator	2		Piped water supply	3		Access to electricity	4		Radio	5		TV	6		Bicycle	7		Latrine or Toilet	8		
		Numbers																												
Motor-cycle	1																													
Refrigerator	2																													
Piped water supply	3																													
Access to electricity	4																													
Radio	5																													
TV	6																													
Bicycle	7																													
Latrine or Toilet	8																													
GRP 1-10	Group comments: Please invite the group to record anything else they wish to say																													
GRP 11-20	Facilitator comments: Please record any observations which you feel might be useful or appropriate about this meeting																													
GRP 21-25	We have talked about the changes that have happened. Out of all the changes we have discussed, what are the most important for you? (Please get agreement on UP TO FIVE changes – either																													

good or bad)

THANK YOU VERY MUCH FOR YOUR CO-OPERATION

Impact monitoring survey: INDIVIDUAL HOUSEHOLDS – Sust. smoke alleviation – FINAL VERSION

These questions should be put **to the person who does most of the cooking**. In all cases tick **up to five** choices in the boxes and write down **up to five** items which are not listed. All the questions need to be put in a way that ensures that people only list the changes they feel are caused by the project. **Please do not prompt unless this is specified**

Identifying household and cook						
HC1	Household number					
HC2	Name of interviewer					
HC3	Entrepreneur present?		Yes			
			No			
HC4	Identifier for interviewee (NOT her name or initials)					
HC5	Date of interview					
HC6	Is it the cook, or the cook <i>with her husband present</i> who is responding to these questions?		Cook	1		
			Cook with husband present	2		
Part 1 This part explores how the woman feels about the ways in which she is removing smoke						
What interventions did you choose to have in your house to alleviate smoke? (do not prompt)						
INT 1-5	LPG stove	1		Rocket stove	7	
	LPG stove with kisra sag (Sudan)	2		Fireless cooker (hay box)	8	
	Smoke hood	3		Solar cooker	9	
	Upesi stove – portable (Kenya)	4		Eaves spaces	10	
	Installed upesi stove (Kenya)	5		Wall insulation	11	
	Improved tripod stove (Nepal)	6				
INT 6-10	Write down any other installed interventions not listed that are mentioned by the woman					
INT11	How satisfied are you with the intervention (s)? Read out choices		Very Dissatisfied		1	
			Dissatisfied		2	
			Satisfied		3	
			Very Satisfied (Go to INT 23)		4	
INT 12-16	Please describe any problems you have noticed? (do not prompt)					
	Appliance is too expensive	1		Still smoky	9	
	Fuel too expensive	2		Poor quality - starting to wear out	10	
	Stove is difficult to light	3		It has had to be mended	11	
	Time to cut wood into thinner pieces	4		Takes up too much space	12	
	Fuel not always available locally	5		Lets in too many mosquitoes	13	
	Takes longer to cook	6		Lets in vermin	14	
	Noise of wind in smoke flue	7		Lets in other cats & other wild animals	15	

	Room does not warm up as well	8	No problems	16
INT 17	If response to last question is '10' or '11' ask interviewee to specify more about what is wearing out or has broken			
INT 18-22	Write down any other problems mentioned by the woman that are not in this list			
INT 23-27	Have you made any other changes to the way you do things to reduce smoke? (do not prompt)	No (go to HLT1)	1	
		Drying fuel well	2	
		Using lids on pots	3	
		Using a pressure cooker	4	
		Keeping children away from fire	5	
		Keeping face away from smoke when lighting stove	6	
		Cooking outside when the weather is good	7	
		Keeping door open	8	
	Cutting up the fuel into thinner pieces	9		
INT 28-32	Write down any of the other changes reported by the woman on the the way she does things not been listed above			
INT 33	Do you feel that you have more or less smoke in your kitchen as a result of all of these changes and interventions? Read out choices	A lot more smoke	1	
		A bit more smoke	2	
		No change in the smoke	3	
		A bit less smoke	4	
		A lot less smoke	5	

	No smoke at all	6	
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IF ENTREPRENEUR IS PRESENT, PLEASE SUGGEST THAT SHE / HE LEAVES AT THIS POINT

Part 2 We want to know exactly what women feel about smoke alleviation. Please give women time to make comments, both positive and negative. The changes are in five groups: **Health; Household physical environment; Savings and income; Time; Social & cultural aspects**

HEALTH: Please record changes in health (both good and bad) as a result of the project. Make sure women know that what they tell you **is as a result of interventions – not just their general health**

HLT1	If you feel that your health or well-being has been affected, could you tell us how much it has changed? Read out choices	It is much worse	1	
		It is worse	2	
		It has stayed the same (go to HLT7)	3	
		It is better	4	
		It is much better	5	
HLT 2-6	Please describe the changes in your own health and well-being as a result of this work (do not prompt)			
HLT7	I would like to discuss the health of your children: Do you feel that the health or well-being of your children aged under 5 years been affected? Read out choices	It is much worse	1	
		It is worse	2	
		It has stayed the same (go to HLT13)	3	
		It is better	4	
		It is much better	5	
	Do not have children under 5 years	6		
HLT 8-12	Please describe the changes in the health, safety and well-being of your under-5 children as a result of this work(do not prompt)			
HLT13	If you feel that that your husband's health or well-being been affected, could you tell us how much it has changed? Read out choices	It is much worse	1	
		It is worse	2	
		It has stayed the same (go to HLT19)	3	
		It is better	4	
		It is much better	5	
	Not married, widowed, divorced / separated (go to HLT19)	6		
HLT 14-18	<i>Please describe the changes in the health and well-being of your husband as a result of this work (do not prompt)</i>			

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HLT19	Has the health or well-being of other members of your family been affected? Read out choices	It is much worse	1	
		It is worse	2	
		It has stayed the same (go to ENV1)	3	
		It is better	4	
		It is much better	5	
		Lives alone (go to ENV1)	6	
HLT 20-24	Please tell us which family member(s), and describe the changes in the health and well-being (do not prompt)			
HOUSEHOLD ENVIRONMENT: This section is about the changes resulting from the interventions to the structure of the house and household items, such as clothes, pots, pans, and any other physical item. If the woman mentions any on the list, then tick them.				
ENV 1-5	Can you think of any changes in the house, or your belongings or other items that have been affected by the smoke interventions? (do not prompt)	No (go to SAV1)	1	
		Cleaner walls and/or roof	2	
		Pots less dirty	3	
		Clothes less dirty	4	
		More light in the kitchen	5	
		Less dust and dirt blows into the house	6	
		Fewer mice and other vermin get into the house	7	
		Crops do not get preserved by smoke	8	
		Wooden timbers are rotting more quickly	9	
		Storing fuel indoors takes up too much space	10	
ENV 6-10	Please record any other physical changes mentioned, both good and bad (do not prompt)			
SAVINGS / INCOME: This section is looking at whether people feel that they are better off, or worse off, in money terms, because of the smoke interventions. Do not prompt				
SAV 1	Do you feel that you are better or worse off, or about the same, as a result of the smoke interventions in your house? Read out choices	A lot worse off	1	
		Worse off	2	
		Just the same (go to TIM1)	3	
		Better off	4	
		A lot better off	5	
SAV 2-6	Can you tell us in what ways you are better / worse off and why (do not prompt)			

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TIME: This section is exploring whether getting rid of smoke has saved people time or is taking more time.					
TIM1	Do you feel that you have more or less time, or about the same time, to do other things? Read out choices	A lot less time		1	
		Less time		2	
		No change (go to SOC1)		3	
		More time		4	
		A lot more time		5	
TIM 2-6	Please describe why you have more/less time available for other things (do not prompt)				
TIM 7-11	What do you do with this increased time? OR What can you no longer do because of this lost time? (do not prompt)				
SOCIAL & CULTURAL CHANGES: This section is looking at whether or not people in the household behave differently as a result of smoke alleviation in their homes, and if so, in what ways. If the woman mentions any on the list, then tick them.					
SOC1	Has your family life changed in any way as a result of smoke interventions Read out choices	It has changed a lot		1	
		It has changed a little		2	
		It has not changed		3	
SOC 2-6	Please describe the changes (both good and bad) that have happened in your family life as a result of alleviating smoke in your kitchen (do not prompt)				
	Husband now spends time in kitchen	1		Husband more willing to cook	6
	Under-5 children spend more time in kitchen	2		More visitors	7
	Under-5 children do homework in kitchen	3		More confident to invite visitors	8
	Family have meals in kitchen as above, and are they eating together (including woman, if previously excluded by duties in kitchen, etc.)	4		Family pressures as very short of cash while paying off cost of intervention	9
	Family entertains guests in kitchen	5		Less space in kitchen for family to move around	10
SOC 7-11	Please record any other social and / or cultural changes (both good and bad) that are mentioned by the woman (do not prompt)				

SOC 12-16	Please can you tell us anything else that we might have missed that has changed. Please tell us the bad things as well as the good, as we need to learn from you. (do not prompt)				
POS 1-8	We would like to build a picture of the type of household that is installing interventions. For this reason, please can you tell me if you own any of the following: Read out choices				
	Motor-cycle	1		Radio	5
	Refrigerator	2		TV	6
	Piped water supply	3		Bicycle	7
	Access to electricity	4		Latrine or Toilet	8
POS 9	<i>Interviewer: Please describe house briefly: Roof and wall materials, size, any other notable features</i>				
CMT1	Interviewee comments: Please invite the person being interviewed to record anything else they wish to say				
CMT2	Interviewer comments: Please record any observations which you feel might be useful or appropriate about this interview				
CMT 3-5	We want to learn what is most important for the woman in the house. We have talked about the changes that have happened. Out of all the changes we have discussed, what are the most important for you? – list up to three				
THANK YOU VERY MUCH FOR YOUR CO-OPERATION					

Annex 4 –Health questionnaire Round 3

HH. Identifying household and cook			
HH1	Household number		
HH2	Name of interviewer		
HH3	Identifier for interviewee (NOT her name)		
HH4	Date of interview		
HH5	Age of interviewee		
HH6	Height of interviewee		
Cgh. Cough			
Cgh1	Over the last 12 months, have you usually had a cough first thing in the morning, or at other times of the day?	No (go to Ph1) Yes	1 2
Cgh 2	Do you usually cough like this on most days?	No Yes	1 2
Cgh 3	For how many months, in total, in the last year have you coughed like this?	9 or more months 5 - 8 months 3 - 4 months 1 – 2 months less than 1 month	1 2 3 4 5
Cgh 4	For how many years have you coughed like this?	Years:	
Ph. Phlegm			
Ph1	Over the last 12 months, have you usually brought up phlegm from your chest (deep down in your lungs) first thing in the morning, or at other times of the day?	No (go to CnP1) Yes	1 2
Ph2	Do you usually bring up phlegm like this on most days?	No Yes	1 2
Ph3	What colour is the phlegm usually?	Clear or white Yellow or green Brown or black Red (streaked)	1 2 3 4
Ph4	For how many months, in total, in the last year have you brought up phlegm like this?	9 or more months 5 - 8 months 3 - 4 months 1 – 2 months less than 1 month	1 2 3 4 5
Ph5	For how many years have you brought up phlegm like this?	Years:	
CnP. Episodes of cough and phlegm			
CnP1	Over the last 12months, have you had episodes of both (increased*) cough and phlegm together lasting for 3 weeks or more? <i>*Increased if already have cough and/or phlegm</i>	No (go to section Wh1) Yes	1 2

CnP 2	How many such episodes did you have in the last year?	Number:	
CnP 3	For how many years have you had at least one episode per year like this?	Years:	
Wh: Wheezing			
Wh1	Over the last 12 months, has your chest (your lungs) sounded wheezy or whistling	No (go to He1) Yes	1 2
Wh2	Has this happened when you have a cold?	No Yes	1 2
Wh3	Has this happened at other times when you do not have a cold?	No Yes	1 2
Wh4	For how many years has this wheeze been present (whether or not when you have a cold)?	Years: (Put '1' if less than one year)	
He. Headaches			
He1	Over the last 12 months, have you tended to get headaches ?	No (go to Uf1) Yes	1 2
He2	How often do you have headaches ?	Every day Most days Few days per week Once per week Less often	1 2 3 4 5
He3	How strong are the headaches usually?	Very strong Fairly strong Mild	1 2 3
He4	What do you think usually causes these headaches ? Do not prompt!	Smoke Having a cold Weakness of sight Other	1 2 3 4
He5	If 'other' please specify		
Uf: Respiratory health of under-five children as rated by mother			
Please ensure that the mother understands what is meant by 'respiratory health'.			
<i>Respiratory health problems to include all upper (coughs, colds, etc) and more severe respiratory problems including coughs going onto chest, with fever, etc.</i>			
Uf1	How many children under five years of age do you have? If none, insert '0' and go to HP1)	Number of children under 5	
Uf2	Have any of your under-five children had an illness with a cough at any time in the last two weeks?	No (go to Uf6) Yes	1 2
Uf3	If yes, did they breathe very noticeably faster than usual with short, rapid breaths? <i>(if more than one child with cough, discuss youngest)</i>	No Yes	1 2
Uf4	How old is the child with the cough ? <i>(if more than one child with cough, discuss youngest)</i>	Years	
Uf5		Months	
Uf6	What (other) respiratory health problems, if any, have your under-five children experienced in the last year? Do not prompt!	None (go to Uf8) Coughs and colds More serious illness with difficulty breathing Other (specify)	1 2 3 4

Uf7	If 'other' please describe			
Uf8	How many times have burns or scalds occurred to any of your under-five children in the last year? (if none, insert '0' and go to HP1)	Number of times:		
Uf9	What was age of that child at the time?	Years		
Uf10	<i>If more than one child – discuss youngest</i>	Months		
Uf11	For the most severe occasion in the last year, how severe was this burn ? Insert locally appropriate coin about 2 cm across – then delete this sentence.	No scar (go to next section) Small scar (<2 Rs coin) Large scar (>2 Rs coin)	1 2 3	
Uf12	Where did this burn or scald occur?	Your kitchen Not in your kitchen	1 2	
Uf13	How did this burn or scald occur? Do not prompt!	Fell into fire Touched hot object Scalded when pot fell over Clothes caught fire Other (describe)	1 2 3 4 5	
Uf14	If 'other' please describe –			
Uf15	What concerns, if any, do you have about burns and scalds to you children at the present time? – continue over page if needed			
Uf16	Is there anything else you would you like to say about the health of your children under 5 at the present time? – continue over page if needed			
HP: Treatment for respiratory health problems				
<i>In the last 12 months have you or your family visited any of the following health providers for respiratory health problems?</i>				
	Health provider (put '0' for no visits)	Number of visits in last year for yourself or other adult in household	Number of visits in last year for your children	Approx total cost in last year
HP1 HP2 HP3	Medical staff at health post	HP1	HP2	HP3
HP4 HP5 HP6	Traditional healer	HP4	HP5	HP6
HP7 HP8 HP9	Private doctor / hospital	HP7	HP8	HP9
HP10 HP11 HP12	Other health provider	HP10	HP11	HP12
HP13	If 'other health provider' please describe who this is			HP13

Data sheet for lung measurements round 3

DAY 1 breath-CO monitoring

C1	Household number		
C2	Name of interviewer		
C3	Identifier for interviewee (NOT her name or initials)		
C4	Date	dd / mm / yy	
C5	ID number of breath- CO Monitor	ID:	
C6	Time of test (use 24-hr clock)	hh:mm	__ : __
C7	Results	PPM ₁	
C8	Please ensure the mouthpiece and adaptor are removed between tests, and allowed to dry for at least 1 minute	PPM ₂	
C9		PPM ₃	

SPIROMETRY – DAY 1 – practice session

Since woman has already done these tests in round 1 – just remind her of how it is done and get her to do one or two good practice blows. Explain that the proper test is next day . If you want to practice entering data whilst she is practising, use the sheet at the end called 'Practice sheet'

DAY 2 breath-CO monitoring

C10	Household number		
C11	Identifier for interviewee (NOT her name or initials)		
C12	ID number of breath CO Monitor	ID:	
C13	Time of test (use 24 hour clock)	hh:mm	__ : __
C14	Results	PPM ₁	
C15	Please ensure the mouthpiece and adaptor are removed between tests, and allowed to dry for at least 1 minute	PPM ₂	
C16		PPM ₃	

P1 Pregnancy

Ask this question if it seems appropriate – i.e. woman is of child-bearing age

P1	The information from these tests are very valuable. However, when you are pregnant, it can change the way in which your lungs work a bit, so it would be helpful to know if you are pregnant. Are you comfortable about discussing this?	No (go to S1) Yes	1 2
P2	Are you pregnant?	No Yes	1 2

P3	If yes, (about) how many months?	Months:	
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Day 2 Spirometry data sheet: Remember: -only three good blows needed then fill in the best and second best column once you have the three good blows

S1	Do you have a cold at present?	No (go to S4) Yes	1 2
S2	If Yes, for how long?	Days:	
S3	ID Number of Spirometer	ID:	

Lung function measurements (Measurement session)

Breath	Assessment of blow by field worker (use codes below)	FEV1		FVC		PEF	FER
		Result	Best = 1 2 nd best = 2	Result	Best = 1 2 nd best = 2		
1							
2							
3							
4							
5							
6							
7							
8							
Difference between best and second best good blows							
S7	Acceptability of FEV1 (<i>difference should be less than 0.2 litre</i>)	Acceptable		Not acceptable		1 2	
S8	Acceptability of FVC (<i>difference should be less than 0.2 litre</i>)	Acceptable		Not acceptable		1 2	
S4	Best FEV1						
S5	Best FVC						
S6	Best PEF						
Coding for assessment of blows:							
Good blow = 1				Cough = 5			
Slow start = 2				Poor technique = 6			
Poor effort = 3				Very short blow = 7			
Abrupt finish = 4							

**If you find it difficult to work out whether the difference is less than 0.2 litres – write down the numbers from the machine on a separate piece of paper without the decimal point. If either number has only two digits, add a nought to the end of this number. Subtract one new number from the other new number, and if the number is 20 or less, then accept; for example:

Example 1 – good result	Example 2 – bad result
Original numbers: 3.0 and 3.07	Original numbers 4.13 and 4.42
Write down numbers without decimal point – 30 and 307 - add a nought to the end of the two figure number – 300 and 307	New numbers 413 and 442

Subtract one from the other $307-300 = 7$ which is less than 20 so accept

Difference: 29 – which is more than 20 – so reject

THANK YOU – THIS IS THE END OF THE LUNG FUNCTION TESTS

Practice sheet for spirometry day 1.

This sheet is for your own use but you do not have to use it – it is just for practising.

Breath	Assessment of blow by filed worker (use codes below)	FEV1		FVC		PEF	FER
		Result	Best = 1 2 nd best = 2	Result	Best = 1 2 nd best = 2		
1							
2							
3							
4							
5							
6							
7							
8							
Difference between best and second best good blows							
	Acceptability of FEV1** (difference should be less than 0.2 litre)			Acceptable Not acceptable		1 2	
	Acceptability of FVC** (difference should be less than 0.2 litre)			Acceptable Not acceptable		1 2	
	Best FEV1						
	Best FVC						
	Best PEF						
Coding for assessment of blows:							
Good blow = 1				Cough = 5			
Slow start = 2				Poor technique = 6			
Poor effort = 3				Very short blow = 7			
Abrupt finish = 4							

**If you find it difficult to work out whether the difference is less than 0.2 litres – write down the numbers from the machine on a separate piece of paper without the decimal point. If either number has only two digits, add a nought to the end of this number. Subtract one new number from the other new number, and if the number is 20 or less, then accept. E.g.

Example 1 – good result	Example 2 – bad result
Original numbers: 3.0 and 3.07	Original numbers 4.13 and 4.42
Write down numbers without decimal point – 30 and 307 - add a nought to the end of the two figure number – 300 and 307	New numbers 413 and 442
Subtract one from the other 307-300 = 7 which is less than 20 so accept	Difference: 29 – which is more than 20 – so reject

Annex 3 Household questionnaire

Day 1

FIRST VISIT AT START OF 24-hour MONITORING - round 3			
PLEASE ENSURE THAT THE PERSON BEING INTERVIEWED IS THE SAME PERSON AS WAS INTERVIEWED IN ROUND 1. IF IT IS NOT THE SAME PERSON, CHECK IF THE SAME PERSON AS IN ROUND 1 CAN BE INTERVIEWED ON ANOTHER DAY. IF THIS IS NOT POSSIBLE, <i>TERMINATE THE INTERVIEW</i>			
NN. Identifying household and cook			
NN1	Household number		
NN2	Name of interviewer		
NN3	Identifier for interviewee (NOT her name or initials)		
NN4	Date of interview		
EN. Setting up equipment			
<i>Remind the woman about the reason for using the equipment and ensure she is still happy to have the monitor set up in her kitchen. If 'yes', set up monitor</i>			
EN1	Is the woman happy to have the CO monitor set up in her kitchen?	No (terminate session)	1
		Yes (turn on CO monitor)	2
EN2	Initial reading on monitor		
EN3	Time of day		
EN4	Morning or Evening?	Morning	1
		Evening	2
AN. Changes to the house			
AN1	Has the house been altered in any major way since Round 1 (eg new roof, extra room, change in roofing, moved house)	No (go to PN1)	1
		Yes	2
AN2	Please describe how the house has been modified		
PN: Fuel purchase and gathering			
PN1	When you need fuel, is it.....	All or mainly gathered –go to PN4	1
		About half gathered, rest bought	2
		All or mainly bought	3
PN2	How much did you pay for your main fuel the last time you bought it? <i>(This can be formal – e.g. Nepal Rupees per bag, or whatever is appropriate that gives the currency for the quantity you've written)</i>	Quantity of fuel bought	
		Cost for this quantity	
		Currency per unit (eg Nepal Rupees per bag)	NRs /

PN3	How long do you expect this quantity of fuel to last?	Days =	
PN4	If you gathered fuel recently, how adequate were the supplies ? (Circle '1' if person did not gather fuel)	Did not gather any (go to LN1)	1
		Very scarce	2
		Rather scarce	3
		Just enough	4
		Plentiful	5
PN5	About how long did this collection trip take (hours and minutes)?	Hours	
PN6		Minutes	
PN7	In the last week (seven days) how many times did you or your family gather fuel?		
PN8	How many children, aged under 16 years, gathered fuel in the last week (seven days)?		

LN.Lighting

LN1	What is your main lighting fuel?	Electricity (grid /local generator)	1
		Electricity (battery)	2
		LPG	3
		Kerosene	4
		Candles	5
		Biogas (Gobar gas)	6
		Firestick	7
		Other	8
LN2	If 'other lighting fuel' please specify		
LN3	Do you buy lighting fuel? If 'no' go to IN1	No	1
		Yes	2
LN4	How much did you pay last time for lighting fuel? (NRs) If lighting fuel is not bought, put zero	Quantity	
LN6		Cost	
LN6	When you buy this quantity of fuel for lighting, how many days does this usually last? (if electricity is bought per day, then in the 'days' box, put '1', if it is per week, then put '7')	Days	

IN. IMPACTS OF INTERVENTIONS

We want to understand how much these interventions have cost and the changes (both bad and good) that they have made. Today we discuss the cost and tomorrow what changes they have made to your life.

IN1	Which of the following interventions have you bought or built to reduce smoke in your home? Please tick those the interviewee has in her home	Name of intervention	Reference number
		Smoke hood	1
		Improved biomass stove	2
		Enclosed chimney stove	3
		Biogas (Gobar gas) stove	4
		LPG stove	5

For each intervention ticked above in IN1, write in the name and number of the intervention in the boxes below that are separated by 3 thick lines, and ask the questions for each intervention in turn. Only fill in the boxes between the 3 thick lines for interventions ticked in IN1. e.g. If the person has installed an LPG stove write in (Name of intervention **Smoke hood** Reference number **1**) or if they had a chimney stove write in (Name of intervention: **Enclosed chimney stove** Reference number **3**)

IN2	Name of intervention _____
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IN3	Reference number: _____		
IN4	How are you paying for this intervention?	I paid as a single payment (<i>go to IN5</i>)	1
		I am paying (or have paid) in instalments (<i>go to IN6</i>)	2
IN5	How much did you pay for this intervention? (NRs)		.....NRs (<i>go to IN9</i>)
IN6	What was the downpayment? (NRs)		
IN7	How much do (did) you pay each instalment? (NRs)		
IN8	How many instalments are needed (were needed) to pay for this intervention?		
IN9	How far did you travel to buy it? (Kms) – <i>put '0' if less than 1Km and go to IN12</i>		
IN10	How long did it take you to go and buy it?		.....hr.....min
IN11	How much did it cost to go and buy it (bus fare etc) (NRs.)		
IN12	How much did it cost to have intervention brought to house? (NRs)		
IN13	Did you pay to have the intervention installed?	No	1
		Yes	2
IN14	If you had to pay, how much did it cost to have it installed? (NRs)		
IN15	If you or your family installed it, how long did it take to install it?		....hr ....mins
IN16	How long does it take each week to clean intervention? <i>If not cleaned put '0'</i>		.....mins
IN17	How long ago was it installed? (months)		
IN18	Have you had to have it repaired? <i>If 'no' ignore next 2 questions about repair</i>	No	1
		Yes	2
IN19	If you paid for it to be repaired, what is the total cost of repair? (NRs)		
IN20	If you repaired it yourself, what is the total time you spent repairing it? (hrs)		... hr.....min
<hr/>			
IN21	Name of intervention _____		
IN22	Reference number: _____		
IN23	How are you paying for this intervention?	I paid as a single payment (<i>go to IN24</i>)	
		I am paying (or have paid) in instalments (<i>go to IN25</i>)	
IN24	How much did you pay for this intervention? (NRs)		.....NRs (<i>go to IN28</i>)
IN25	What was the downpayment? (NRs)		
IN26	How much do (did) you pay each instalment? (NRs)		
IN27	How many instalments are needed (were needed) to pay for this intervention?		
IN28	How far did you travel to buy it? (Kms) – <i>put '0' if less than 1Km and go to IN31</i>		
IN29	How long did it take you to go and buy it?		....hr.....min
IN30	How much did it cost to go and buy it (bus fare etc) (NRs.)		
IN31	How much did it cost to have intervention brought to house? (NRs)		
IN32	Did you pay to have the intervention installed?	No	1
		Yes	2
IN33	If you had to pay, how much did it cost to have it installed? (NRs)		
IN34	If you or your family installed it, how long did it take to install it?		....hr ....mins
IN35	How long does it take each week to clean intervention? <i>If not cleaned put '0'</i>		.....mins

IN36	How long ago was it installed? (months)			
IN37	Have you had to have it repaired? <i>If 'no' ignore next 2 questions about repair</i>		No	1
			Yes	2
IN38	If you paid for it to be repaired, what is the total cost of repair? (NRs)			
IN39	If you repaired it yourself, what is the total time you spent repairing it? (hrs)		...	hr.....min
<hr/>				
IN40	Name of intervention _____			
IN41	Reference number: _____			
IN42	How are you paying for this intervention?	I paid as a single payment (<i>go to IN43</i>)		
		I am paying (or have paid) in instalments (<i>go to IN44</i>)		
IN43	How much did you pay for this intervention? (NRs)		.....NRs (<i>go to IN47</i>)	
IN44	What was the downpayment? (NRs)			
IN45	How much do (did) you pay each instalment? (NRs)			
IN46	How many instalments are needed (were needed) to pay for this intervention?			
IN47	How far did you travel to buy it? (Kms) – <i>put '0' if less than 1Km and go to IN50</i>			
IN48	How long did it take you to go and buy it?		....hr.....min	
IN49	How much did it cost to go and buy it (bus fare etc) (NRs.)			
IN50	How much did it cost to have intervention brought to house? (NRs)			
IN51	Did you pay to have the intervention installed?		No	1
			Yes	2
IN52	If you had to pay, how much did it cost to have it installed? (NRs)			
IN53	If you or your family installed it, how long did it take to install it?		....hr ....mins	
IN54	How long does it take each week to clean intervention? <i>If not cleaned put '0'</i>		.....mins	
IN55	How long ago was it installed? (months)			
IN56	Have you had to have it repaired? <i>If 'no' ignore next 2 questions about repair</i>		No	1
			Yes	2
IN57	If you paid for it to be repaired, what is the total cost of repair? (NRs)			
IN58	If you repaired it yourself, what is the total time you spent repairing it? (hrs)		...hr.....min	
<hr/>				
IN59	Which of these interventions have you bought or built to reduce smoke in your home? <i>Please tick those the interviewee has in her home</i>	Wall insulation	1	
		Room heater	2	
		Pressure cooker	3	
		Solar cooker	4	
IN60	Have you made other changes? (this can include changes in behaviour such as using pot lids, keeping children away from fire, cooking out of doors, not brewing alcohol... or many other things etc)			

End of day 1

Household questionnaire

SECOND VISIT AFTER THE 24-hour MONITORING - all the questions in this section refer to the time when the monitoring was taking place			
NN_dy2 Identifying household and cook			
NN1_dy2	Household number		
NN2_dy2	Name of interviewer		
NN3_dy2	Identifier for interviewee (NOT her name or initials)		
NN4_dy2	Date of interview		
SN. Type of stove			
SN1	What was the main stove type you used when the monitoring was taking place?	Three-stone fire Improved biomass stove Traditional charcoal stove LPG stove Solar cooker Paraffin (kerosene) stove Other	1 2 3 4 5 6 7
SN2	If 'other' please describe type of stove		
SN3	Did you do all your cooking using this stove today?	Yes A small amount of cooking elsewhere Quite a lot of cooking elsewhere	1 2 3
MN. Fuel use on day of monitoring			
MN1	What was the main fuel you used for cooking (and keeping warm) in your kitchen whilst the monitoring was taking place?	Wood Charcoal Residues LPG Kerosene Solar Other	1 2 3 4 5 6 7
MN2	If 'other main fuel' please describe other fuel used		
MN3	If you used more than one fuel, what was the second fuel you used for cooking (and keeping warm) whilst the monitoring was taking place?	Wood Charcoal Residues LPG Kerosene Solar Other	1 2 3 4 5 6 7

MN4	If 'other second fuel' please describe other fuel used		
MN5	Was the main fuel you used whilst the monitoring was taking place completely dead or 'green' ? (Green wood is wood that has just been cut down from a living tree and is not completely dried out)	Did not use biomass Completely dead 'Green'	1 2 3
MN6	How dry was the fuel you used whilst the monitoring was taking place?	Did not use biomass Wet Quite dry Very dry	1 2 3 4
BN. Enterprise & other uses			
BN1	Did you use the stove today for any enterprise ?	No – go to DN1 Yes	1 2
BN2	Did you use fuel for an enterprise or small business whilst the monitoring was taking place?	No Yes	1 2
BN3	If 'yes', how much of the fuel you used whilst the monitor was switched on was used for enterprise?	None or very little Quarter Half Three-quarters Almost all	1 2 3 4 5
BN4	Did you use fuel for any other tasks today? – please tick if the answer is 'yes'	Animal feed Water boiling for washing Ironing Other	1 2 3 4
BN5	If 'other tasks' please specify the tasks		
DN. Comments and observations on from interviewee			
DN1	Can you think of any ways in which your last 24 hours (since my visit yesterday) was different from how it would have been if monitoring had not been taking place?	No (go to DN3) Yes	1 2
DN2	Please describe how your day was different		
	What GOOD impacts, if any, do you feel that the interventions that you have installed are having? If you do not feel there are any good impacts, please say so. Please do not give suggestions, but leave plenty of time; you do not have to use all three spaces, but put 'No good impacts' into DN3 if she does not feel there have been good impacts, so that we know her opinion – continue on reverse if needed		
DN3	Impact 1:		
DN4	Impact 2:		
DN5	Impact 3:		

	<p>We want to know about any PROBLEMS that you have you found with the interventions that you have installed ? Please tell us about those problems</p> <p>Please do not give suggestions, but leave plenty of time; , list up to three problems, you do not have to use all three spaces, but put 'No problems' into DN6 if she does not feel there have been problems, so that we know her opinion – continue on reverse if needed</p>		
DN6	Problem 1:		
DN7	Problem 2:		
DN8	Problem 3:		
Observations on health			
HN1	Could you tell us how you feel the interventions have affected your health?	A lot worse than before	1
		A bit worse than before	2
		About the same as before	3
		A bit better than before	4
		A lot better than before	5
HN2	Could you tell us how you feel the interventions have affected your under-5 children's health:	A lot worse than before	1
		A bit worse than before	2
		About the same as before	3
		A bit better than before	4
		A lot better than before	5
		Do not have under-5 children	6
HN3	Could you tell us how you feel the interventions have affected your husband's health:	A lot worse than before	1
		A bit worse than before	2
		About the same as before	3
		A bit better than before	4
		A lot better than before	5
		Widowed, not married, divorced, separated etc	6
HN4	Could you tell us how you feel the interventions have affected any other family member's health:	A lot worse than before	1
		A bit worse than before	2
		About the same as before	3
		A bit better than before	4
		A lot better than before	5
		Lives alone	6
HN5	If you feel that your health or your family's health has changed, what are the main changes?		
HN6	Could you tell us whether you feel the interventions have affected your eyes, or those of your family? – if so, how have they been affected?		
Observations on time			
TN1	If you think about the time you spend in cooking, getting fuel, and cleaning pots, as a result of the	A lot less time	1
		A bit less time	2

	interventions, do you have..	About the same (go to RN1)	3	
		A bit more time	4	
		A lot more time	5	
TN2	Could you give us some idea of how much more (or less) time each week (use more or less depending on previous question. If the person tells you per day, multiply by 7 and enter this number)		....hrs... ..mins	
TN3	What changes you have made affect your time the most?			
TN4	If you have more time, could you say what you do with the extra time? (Only ask this question if people have said that they have more time)			
Savings / income				
RN1	Do you feel that you are better or worse off, or about the same, as a result of the smoke interventions in your house?	A lot worse off	1	
		Worse off	2	
		Just the same	3	
		Better off	4	
		A lot better off	5	
RN2	Can you tell us in what ways you are better / worse off and why (do not prompt)			
RN3	Could you tell us about how much each week you feel you are better off, or worse off as a result of the intervention? <i>Ask question as appropriate. If people are reluctant to say, leave blank</i>		..... NRs /week	
RN4	With the intervention, do you save money on fuel, or is it about the same, or more expensive?	Saves money	1	
		About the same	2	
		More expensive	3	
RN5	About how much money do you save (or extra do you spend) on fuel per week?		.....NRs	
Family life				
GN1	As a result of all of these changes and interventions, do you feel that you have.....	A lot more smoke	1	
		A bit more smoke	2	
		No change in the smoke	3	
		A bit less smoke	4	
		A lot less smoke	5	
		No smoke at all	6	
GN2	As a result of all of these changes and interventions, do you feel that your kitchen is	A lot worse	1	
		A bit worse	2	
		No change	3	
		A bit better	4	
		A lot better	5	

GN3	Has your family life changed in any way as a result of smoke interventions (up till now, this is how they have been described)?	It has changed a lot	1	
		It has changed a little	2	
		It has not changed	3	
GN4	Please describe the changes (both good and bad) that have happened in your family life as a result of alleviating smoke in your kitchen (do not prompt)			
Future plans				
ZN1	Are you planning any further interventions to remove smoke in the future? <i>If 'no' go to ZN3</i>	No	1	
		Yes	2	
ZN2	What interventions are you planning for the future?			
ZN3	Are there any comments you would like to make which you feel we should know? <i>Please do not prompt – continue on reverse if needed</i>			
QN. Section for interviewer				
QN1	Over the monitoring period, has the weather been....	Hot and dry?	1	
		Hot and humid?	2	
		Moderate temperature and dry?	3	
		Moderate temperature and humid?	4	
		Cold and dry?	5	
		Cold and damp / wet?	6	
	Other	7		
QN2	If 'other' please describe the weather			
QN3	Wind – has it been	Still (no wind)	1	
		Breezy (light wind)	2	
		Very windy	3	
EN. End of monitoring session				
EN5	Final reading on monitor			
EN6	Monitor is switched off	No	1	
		Yes	2	
EN7	Observations from interviewer on anything whilst the monitoring was taking place which you may feel affect the results			
Thank you for taking part in this discussion				