

- kerosene	25	96.2	26	100	25	96.2	26	100
- grid electricity	0	0	0	0	0	0	0	0
- charcoal	1	3.8	0	0	1	3.8	0	0
Totals	26	100	26	100	26	100	26	100

Table 1 (Nepal): Type of Fuel Used (General)

	Round 1		Round 2		Round 3		Round 4	
	n	%	n	%	n	%	n	%
Cooking (1 st)								
- wood	31	100	31	100	31	100	31	100
Totals	31	100	31	100	31	100	31	100
Cooking (2 nd)								
- agg residues	31	100	31	100	25	100	30	100
Totals	31	100	31	100	25	100	30	100
Lighting (1 st)								
- kerosene	17	54.8	13	41.9	13	41.9	10	32.3
- solar PV	0	0	0	0	0	0	3	9.7
- grid electricity	14	45.2	18	58.1	18	58.1	18	58.1
Totals	31	100	31	100	31	100	31	100

Table 1 (Sudan): Type of Fuel Used (General)

	Round 1		Round 2		Round 3		Round 4	
	n	%	n	%	n	%	n	%
Cooking (1 st)								
- wood	17	60.7	14	50.0	0	0	0	0
- agg residues	1	3.6	1	3.6	0	0	0	0
- charcoal	10	35.7	11	39.3	3	10.7	1	3.6
- lpg	0	0	2	7.1	25	89.3	27	96.4
Totals	28	100	28	100	28	100	28	100
Cooking (2 nd)								
- wood	11	39.3	10	37.0	3	11.1	4	15.4
- dung	1	3.6	1	3.7	1	3.7	0	0
- charcoal	16	57.1	15	55.6	22	81.5	22	84.6
- lpg	0	0	1	3.7	0	0	0	0
- solar cooker	0	0	0	0	1	3.7	0	0
Totals	28	100	27	100	27	100	26	100
Selling (1 st)								
- wood	14	70.0	11	78.6	4		8	53.3
- agg residues	1	5.0	0	0	0		0	0
- charcoal	4	20.0	3	21.4	0		3	20.0
- kerosene	1	5.0	0	0	0		0	0
- lpg	0	0	0	0	3		1	6.7
- solar cooker	0	0	0	0	1*		3*	20.0
Totals	20	100	14	100	8	M!	15	100
Lighting (1 st)								
- Agg residues	0	0	1	3.7	0	0	0	0
- kerosene	21	75.0	20	74.1	17	60.7	10	35.7
- grid electricity	1	3.6	1	3.7	2	7.1	1	3.6
- batteries	0	0	0	0	1	3.6	0	0
- wax candle	0	0	1	3.7	2	7.1	0	0
- other (local grid)	6	21.4	4	14.8	4	14.3	17	60.7
- miscode	0	0	0	0	2	7.1	0	0
Totals	28	100	27	100	28	100	28	100

Table 2 – Type of Fuel Used (for cooking each meal during monitoring 24 hrs)

Kenya

Many households did not cook a fourth meal during the day, so the numbers recorded for this measure are low. A few households record that 'other cooking' was done.

Nepal

Wood is the dominant fuel across all four rounds. In the fourth round there appears to be less food cooking, although a few more households were involved in brewing. The Adult Male Equivalent (AME) mean values assess the number of people for whom cooking was done. This is a factor which could be expected to change pollution levels. See table of association with pollution and exposure.

Sudan

The marked switch to LPG seen in the general fuel use question is confirmed in the 24-hour monitoring period, although there is some continued use of biomass. A very striking observation is that, whereas in Round 1 and 2 quite a few (between one-third and one-half) of homes reported using a second fuel (and this was mainly charcoal, wood, residues), after the intervention very few homes reported using a second fuel for these meals. There was very little change in the numbers (%) who reported other uses of the stove during the 24-hour monitoring period. Although homes reporting other uses of the stove had slightly higher levels of PM, room CO and woman CO, these were non-significant (t-test; Mann-Whitney)

<i>Table 2 (Kenya) – Type of Fuel Used(24hr monitoring)</i>								
	Round 1		Round 2		Round 3		Round 4	
	n	%	n	%	n	%	n	%
Meal 1 (1 st fuel)								
- no cooking	0	0	0	0	1	3.8	0	0
- wood	16	64.0	19	73.1	19	73.1	14	53.8
- agric residues	3	12.0	3	11.5	0	0	2	7.7
- Other residues	0	0	1	3.8	2	7.7	5	19.2
- charcoal	3	12.0	2	7.7	1	3.8	1	3.8
- lpg	0	0	0	0	2	7.7	2	7.7
- other	3	12.0	1	3.8	1	3.8	2	7.7
Totals	25	100	26	100	26	100	26	100
Meal 2 (1 st fuel)								
- no cooking	0	0	0	0	0	0	1	3.8
- wood	15	62.5	20	76.9	20	76.9	13	50.0
- agric residues	3	12.5	1	3.8	0	0	3	11.5
- other residues	0	0	0	0	3	11.5	3	11.5
- charcoal	3	12.5	3	11.5	1	3.8	1	3.8
- lpg	0	0	0	0	1	3.8	2	7.7
- other	3	12.5	2	7.7	1	3.8	3	11.5
Totals	24	100	26	100	26	100	26	100
Meal 3 (1 st fuel)								
- no cooking	0	0	2	7.7	0	0	0	0
- wood	17	68.0	20	76.9	21	80.8	13	50.0
- agric residues	3	12.0	1	3.8	0	0	3	11.5
- other residues	0	0	1	3.8	2	7.7	4	15.4
- charcoal	2	8.0	2	7.7	1	3.8	1	3.8
- lpg	0	0	0	0	2	7.7	2	7.7
- other	3	12.0	0	0	0	0	3	11.5
Totals	25	100	26	100	26	100	26	100
Meal 4 (1 st fuel)								
- no cooking	1	5.3	11	47.8	5		10	40.0
- wood	12	63.2	10	43.5	8		9	36.0

- agric residues	2	10.5	0	0	0		1	4.0
- other residues	0	0	1	4.3	0		3	12.0
- charcoal	2	10.5	0	0	1		0	0
- lpg	0	0	0	0	0		0	0
- other	2	10.5	1	4.3	0		2	8.0
Totals	19!	100!	23	100	14	M!	25	100
Other cooking in 24 hrs?								
No	2		17	73.9	11		23	88.5
Yes	6		6	26.1	5		3	11.5
Totals	8	M!	23	100	16	M!	26	100

Table 2 (Nepal) – Type of Fuel Used(24hr monitoring)

	Round 1		Round 2		Round 3		Round 4	
	n	%	n	%	n	%	n	%
Meal 1 (1 st fuel)								
- no cooking	0	0	1	3.2	0	0	0	0
- wood	31	100	30	96.8	31	100	31	100
Totals	31	100	31	100	31	100	31	100
Meal 2 (1 st fuel)								
- no cooking	6	19.4	3	9.7	4	12.9	5	16.7
- wood	25	80.6	28	90.3	27	87.1	25	83.3
Totals	31	100	31	100	31	100	31	100
Meal 3 (1 st fuel)								
- no cooking	1	3.2	4	12.9	3	9.7	4	13.3
- wood	30	96.8	27	87.1	38	90.3	26	86.7
Totals	31	100	31	100	31	100	30	100
Meal 4 (1 st fuel)								
- no cooking	7	22.6	16	51.6	15	48.4	23	76.7
- wood	24	77.4	15	48.4	16	51.6	7	23.3
Totals	31	100	31	100	31	100	30	100
Other cooking in 24 hrs?								
No	26	83.9	26	83.9	31	100	23	74.2
Yes	5	16.1	5	16.1	0	0	8	25.8
Totals	31	100	31	100	31	100	31	100

Table 2 (Sudan) – Type of Fuel Used(24hr monitoring)

	Round 1		Round 2		Round 3		Round 4	
	n	%	n	%	n	%	n	%
Meal 1 (1 st fuel)								
- no cooking	0	0	5	19.2	4	14.8	7	25.0
- wood	19	67.9	9	34.6	0	0	0	0
- agric residues	1	3.6	0	0	0	0	0	0
- Other residues	0	0	0	0	0	0	2	7.1
- charcoal	8	28.6	10	38.5	5	18.5	1	3.6
- lpg	0	0	2	7.7	18	66.7	18	64.3
Totals	28	100	26	100	27	100	28	100
Meal 1 (2 nd fuel)								
- no cooking	0		0		0		0	
- wood	3		1		0		0	
- agric residues	0		1		0		0	
- Other residues	1		2		0		1	
- charcoal	10		5		0		0	
- lpg	0		0		1		0	
Totals	14		9		1		1	
Meal 2 (1 st fuel)								
- no cooking	0	0	0	0	4	14.8	4	14.3
- wood	18	64.3	13	50.0	0	0	0	0
- agric residues	1	3.6	0	0	0	0	0	0
- other residues	2	7.1	3	11.5	1	3.7	1	3.6
- charcoal	7	25.0	9	34.6	1	3.7	3	10.7
- lpg	0	0	1	3.8	21	77.8	20	71.4
Totals	28	100	26	100	27	100	28	100
Meal 2 (2 nd fuel)								
- no cooking	0		0		1		0	
- wood	1		6		0		1	
- charcoal	0		1		0		1	

- agric residues	0		0		1		2	
- other residues	8		8		1		0	
- charcoal	0		1		0		1	
- lpg								
Totals	9		16		3		5	
Meal 3 (1 st fuel)								
- no cooking	0	0	1	3.7	2	7.4	2	7.1
- wood	5	20.8	11	40.7	1	3.7	0	0
- agric residues	1	4.2	0	0	0	0	0	0
- other residues	2	8.3	3	11.1	2	7.4	2	7.1
- charcoal	16	66.7	10	37.0	2	7.4	2	7.1
- lpg	0	0	2	7.4	20	74.1	22	78.6
Totals	24	100	27	100	27	100	28	100
Meal 3 (2 nd fuel)								
- no cooking	0		0		0		0	
- wood	0		0		0		1	
- agric residues	0		1		0		0	
- charcoal	2		7		0		0	
Totals	2		8		0		1	
Meal 4 (1 st fuel)								
- no cooking	0		0		0		27	
- wood	0		1		0		0	
- agric residues	0		0		0		0	
- other residues	0		0		0		0	
- charcoal	0		0		0		0	
- lpg	0		0		0		1	
Totals	0		1		0		28	
Meal 4 (2 nd fuel)								
- no cooking	0		0		0		0	
- wood	0		0		0		0	
- other residue	0		1		0		0	
- agric residues	0		0		0		0	
- charcoal	0		0		0		0	
Totals	0		1		0		0	
Other cooking in 24 hrs?								
No	18	64.3	17	63.0	18	66.7	18	64.3
Yes	10	35.7	10	37.0	9	33.3	10	35.7
Totals	28	100	27	100	27	100	28	100

- all gathered	28	90.3			17	54.8	31	100
- mostly gathered	3	9.7			14	45.2	0	0
- mostly bought	0	0			0	0	0	0
- all bought	0	0			0	0	0	0
Totals	31	100			31	100	31	100
If fuel bought, why?								
- scarcity	21	77.8	31	100	30	96.8	30	96.8
-other	6	22.2	0	0	0	0	0	0
- 6 (?)	0		0		1	3.2	1	3.2
Totals	27	100	31	100	31	100	31	100
How adequate supplies?								
- very scarce	9	29.0	8	25.8	5	16.1	1	3.2
- rather scarce	16	51.6	8	25.8	15	48.4	3	9.7
- just enough	6	19.4	14	45.2	11	35.5	26	83.9
- plentiful	0	0	1	3.2	0	0	1	1
Totals	31	100	31	100	31	100	31	100
How often use green fuel?								
- n/a	0	0	1	3.2	0	0	0	0
- never	9	29.0	17	54.8	5	16.1	26	83.9
- occasionally	22	71.0	12	38.7	26	83.9	5	16.1
- usually	0	0	1	3.2	0	0	0	0
Totals	31	100	31	100	31	100	31	100
How dry is main fuel?								
- very dry	3	9.7	1	3.2	4	12.9	0	0
- dry	12	38.7	22	71.0	25	80.6	21	67.7
- damp	13	41.9	8	25.8	2	6.5	9	29.0
- wet	1	3.2	0	0	0	0	1	3.2
- green	2	6.5	0	0	0	0	0	0
Totals	31	100	31	100	31	100	31	100

Table 3 Sudan – Gathering of fuel, scarcity and dampness

	Round 1		Round 2		Round 3		Round 4	
	n	%	n	%	n	%	n	%
Is fuel gathered?								
- all gathered	1	3.8	1	3.7	0	0	0	0
- mostly gathered	0	0	0	0	0	0	0	0
- mostly bought	5	19.2	6	22.2	1	4.2	1	3.7
- all bought	20	76.9	16	59.3	22	91.7	25	92.6
- code 5	0	0	0	0	0	0	1	3.7
- 99	0	0	4	14.8	1	4.2	0	0
Totals	26	100	27	100	24	100	27	100
If fuel bought, why?								
- scarcity	27	100	23	85.2	17	60.7	13	46.4
- faster than gathering	0	0	0	0	5	17.9	6	21.4
- cleaner	0	0	0	0	4	14.3	8	28.6
- other	0	0	4	14.8	2	7.1	1	3.6
Totals	27	100	27	100	28	100	28	100
How adequate supplies?								
- very scarce	1		2		0		0	
- rather scarce	2		0		0		0	
- just enough	1		1		1		0	
- code 9	0		0		0		1	
Totals	4		3		1		1	
How often use green fuel?								
- n/a	2	7.4	1	3.7	8	28.6	13	48.1
- never	4	14.8	14	51.9	7	25.0	5	18.5
- occasionally	17	63.0	10	37.0	12	42.9	9	33.3
- usually	4	14.8	2	7.4	1	3.6	0	0
Totals	27	100	27	100	28	100	27	100
How dry is main fuel?								
- n/a	0	0	1	3.7	7	25.9	11	40.7
- very dry	0	0	13	48.1	1	3.7	6	22.2
- dry	16	57.1	10	37.0	9	33.3	10	37.0
- damp	11	39.3	3	11.1	9	33.3	0	0
- wet	1	3.6	0	0	1	3.7	0	0
Totals	28	100	27	100	27	100	27	100

Table 4: Total cost of fuel

Table 2 (Kenya): Total cost of fuel				
Round 1		Round 3		Sig.
Mean	95% CI	Mean	95% CI	p-value*
323.52	248.01-399.03	312.02	239.34-384.70	0.777
Median	IQR[@]	Median	IQR[@]	p-value⁺
295.00	170.00-445.00	330.00	135.00-485.00	0.849
Round 2		Round 4		Sig.
Mean	95% CI	Mean	95% CI	p-value*
301.08	238.34-363.81	190.38	148.39-232.38	0.004
Median	IQR[@]	Median	IQR[@]	p-value⁺
297.50	182.00-430.00	175.00	137.50-246.25	0.003
Table 4 (Nepal): Total cost of fuel				
Round 1		Round 3		Sig.
Mean	95% CI	Mean	95% CI	p-value*
91.74	76.76-106.73	55.54	48.00-63.10	<0.0005
Median	IQR[@]	Median	IQR[@]	p-value⁺
80.00	60.00-120.00	57.00	40.00-70.00	<0.0005
Round 2		Round 4		Sig.
Mean	95% CI	Mean	95% CI	p-value*
90.81	70.59-111.03	78.06	68.91-87.22	0.265
Median	IQR[@]	Median	IQR[@]	p-value⁺
80.00	40.00-120.00	80.00	50.00-100.00	0.546
Table 4 (Sudan): Total cost of fuel				
Round 1		Round 3		Sig.
Mean	95% CI	Mean	95% CI	p-value*
1382.53	1192.68-1572.39	789.07	651.27-926.86	<0.0005
Median	IQR[@]	Median	IQR[@]	p-value⁺
1370.00	1046.00-1732.50	681.00	508.50-969.50	<0.0005
Round 2		Round 4		Sig.
Mean	95% CI	Mean	95% CI	p-value*
1299.75	969.25-1630.25	969.35	830.32-1108.38	0.057
Median	IQR[@]	Median	IQR[@]	p-value⁺
1205.00	792.50-1597.50	893.65	726.25-1088.75	0.062

[@]Inter-quartile range

*Paired t-test (parametric)

*Wilcoxon Signed Ranks Test (non-parametric)

Table 5: Smoking status

Kenya

No smoking was reported by any of the cooks involved in this study, and the level of reporting of others in the kitchen was also very low.

Nepal

There appears to be a reduction in smoking across the rounds.

Sudan

Only two / three woman smoke, but at least half of homes report others smoking in the kitchen, albeit 'occasionally' for most. See separate analysis of pollution and exposure levels in smokers.

Table 5 (Kenya): Smoking status								
	Round 1		Round 2		Round 3		Round 4	
	n	%	n	%	n	%	n	%
Do you smoke?								
- No	18	100	26	100	23	100	26	100
- Yes	0	0	0	0	0	0	0	0
Totals	18	100	26	100	23	100	26	100
Others smoke in kitchen?								
- no	9		18	81.8	20	90.9	23	88.5
- occasionally	1		1	4.5	1	4.5	1	3.8
- regularly	3		3	13.6	1	4.5	2	7.7
Totals	13		22	100	22	100	26	100
Table 5 (Nepal): Smoking status								
	Round 1		Round 2		Round 3		Round 4	
	n	%	n	%	n	%	n	%
Do you smoke?								
- yes	3	11.1	4	12.9	0	0	0	0
- no	24	88.9	27	87.1	31	100	31	100
Totals	27	100	31	100	31	100	31	100
Others smoke in kitchen?								
- no	9	?	7	22.6	16	51.6	22	71.0
- occasionally	6	?	21	67.7	15	48.4	9	29.0
- regularly	2	?	3	9.7	0	0	0	0
Totals	17	M!	31	100	31	100	31	100
Table 5 (Sudan): Smoking status								
	Round 1		Round 2		Round 3		Round 4	
	n	%	n	%	n	%	n	%
Do you smoke?								
- yes	2	7.1	3	11.5	2	7.7	3	10.7
- no	26	92.9	23	88.5	24	92.3	25	89.3
Totals	28	100	26	100	26	100	28	100
Others smoke in kitchen?								
- no	12	42.9	9	37.5	12	46.2	13	54.2
- occasionally	14	50.0	13	54.2	12	46.2	10	41.7
- regularly	2	7.1	2	8.3	2	7.7	1	4.2
Totals	28	100	24	100	26	100	24	100

Table 6 – Features of kitchen and house

Kenya

Note the change in number of windows. It can be seen that about 70% of homes have hood/flue based on extraction data. Shape codes allow the volume of the kitchen to be calculated.

Nepal

Changes recorded in kitchen type, windows and roof type are due to interpretation. Permanent ventilation inconsistencies in R1 and R2 are due to way dimensions interpreted.

Sudan

There is a gradual change across rounds in kitchen type (enclosed/semi-open) and an increase in the number of households with the kitchen as part of the main living area. Changes in roof type are reported, whilst permanent ventilation unchanged. There was essentially no change in type of walls for kitchen but the number of windows has increased.

	Round 1		Round 2		Round 3		Round 4	
	n	%	n	%	n	%	n	%
Type of kitchen								
- enclosed	23	88.5	25	96.2	25	96.2	25	96.2
- semi-open	3	11.5	1	3.8	1	3.8	1	3.8
Totals	26	100	26	100	26	100	26	100
Type of kitchen building								
- separate building	17	65.4	16	64.0	16	61.5	16	63.1
- sep/attached	4	15.4	3	12.0	4	15.4	2	7.7
- part of main liv area	5	19.2	6	24.0	6	23.1	8	30.8
Totals	26	100	25	100	26	100	26	100
Type of roof								
- iron sheets	21	80.8	21	80.8	22	84.6	23	88.5
- thatch	4	15.4	4	15.4	3	11.5	3	11.5
- tiles	1	3.8	1	3.8	1	3.8	0	0
Totals	26	100	26	100	26	100	26	100
Permanent ventilation								
- none	24	100	24	100	26	100	26	100
Totals	24	100	24	100	26	100	26	100
Type of walls								
- mud	25	96.2	25	96.2	25	96.2	25	96.2
- soil/ cement blocks	1	3.8	1	3.8	1	3.8	1	3.8
Totals	26	100	26	100	26	100	26	100
Number of windows								
- 0	11	44.0	10	40.0	2	7.7	3	11.5
- 1	11	44.0	12	48.0	11	42.3	12	46.2
- 2+	3	12.0	3	12.0	13	50.0	11	42.3
Totals	25	100	25	100	26	100	26	100
Door status								
- open most time	21	84.0	20	80.0	21	80.8	25	96.2
- closed most time	4	16.0	5	20.0	5	19.2	1	3.8
Totals	25	100	25	100	26	100	26	100
Stove alight at night?								
- yes	3	13.08	1	3.8	1	4.0	0	0
- no	20	7.0	25	96.2	24	96.0	26	100
Totals	23	100	26	100	25	100	26	100
Any smoke extraction?								
- yes	0	0	0	0	18	69.2	19	73.1
- no	25	100	25	100	8	30.8	7	26.9
Totals	25	100	25	100	26	100	26	100
Shape code for kitchen								
- A	3	12.0	3	12.0	3	12.5	3	12.5
- B	9	36.0	9	36.0	8	33.3	9	37.5
- C	0	0	0	0	1	4.2	1	4.2
- D	13	52.0	13	52.0	12	50.0	10	41.7
- 5	0	0	0	0	0	0	1	4.2
Totals	25	100	25	100	24	100	24	100

Table 6 (Nepal)– Features of kitchen and house								
	Round 1		Round 2		Round 3		Round 4	
	n	%	n	%	n	%	n	%
Type of kitchen								
- enclosed	3	9.7	1	3.2	2	6.5	0	0
- semi-open (see note)	28	90.3	30	96.8	29	93.5	31	100
Totals	31	100	31	100	31	100	31	100
Type of kitchen building								
- separate building	1	3.2	1	3.2	0	0	0	0
- part of main liv area	30	96.8	30	96.8	31	100	31	100
Totals	31	100	31	100		100		100
Type of roof (see note)								
- Mud or dung	0		0		0		4	
- iron sheets	1		0		0		0	
- thatch	0		0		1		0	
- other (wood tiles)	30		31		30		27	
Totals	31	100	31	100	31	100	31	100
Permanent ventilation								
- None	4	12.9	1	3.2	0	0	0	0
- Small holes (<10 cm)	11	35.5	26	83.9	0	0	2	6.5
- Large holes (>10 cm)	15	48.4	2	6.5	31	100	29	93.5
- No roof, very open roof	1	3.2	2	6.5	0	0	0	0
Totals	31	100	31	100	31	100	31	100
Type of walls								
- stone	31	100	31	100	30	96.8	31	100
- other	0	0	0	0	1	3.2	0	0
Totals	31	100	31	100	31	100	31	100
Number of windows								
- 0	0	0	0	0	0	0	0	0
- 1	27	87.1	14	45.2	30	96.8	30	96.8
- 2+	4	12.9	17	54.8	1	3.2	1	3.2
Totals	31	100	31	100	31	100	31	100
Door status								
- open most time	27	90.0	22	71.0	30	96.8	31	100
- closed most time	3	10.0	9	29.0	1	3.2	0	0
Totals	30	100	31	100	31	100	31	100
Stove alight at night?								
- yes	9	29.0	4	12.9	3	9.7	No Data	
- no	22	71.0	23	74.2	28	90.3		
- code 3	0	0	4	12.9	0	0		
Totals	31	100	31	100	31	100	31	100
Any smoke extraction?								
- yes	0	0	0	0	31	100	31	100
- no	31	100	31	100	0	0	0	0
Totals	31	100	31	100	31	100	31	100
Shape code for kitchen								
- A	29		31		31		31	
- B	2		0		0		0	
Totals	31		31		31		31	

Table 6 (Sudan)– Features of kitchen and house								
	Round 1		Round 2		Round 3		Round 4	
	n	%	n	%	n	%	n	%
Type of kitchen								
- enclosed	19	67.9	20	71.4	21	75.0	22	78.6
- semi-open	9	32.1	8	28.6	7	25.0	6	21.4
Totals	28	100	28	100	28	100	28	100
Type of kitchen building								
- separate building	24	85.7	23	82.1	22	78.6	19	67.9
- sep/attached	4	14.3	4	14.3	4	14.3	5	17.9
- part of main liv area	0	0	1	3.6	2	7.1	4	14.3
Totals	28	100	28	100	28	100	28	100
Type of roof								
- mud or dung	2	7.1	3	10.7	6	21.4	5	17.9
- ferro-cement	0	0	1	3.6	1	3.6	0	0
- thatch	24	85.7	23	82.1	21	75.0	22	78.6
- other	2	7.1	1	3.6	0	0	1	3.6
Totals	28	100	28	100	28	100	28	100
Permanent ventilation								
- None	25	92.6	25	92.6	26	92.9	27	96.4
- Small holes <10cm	1	3.7	1	3.7	1	3.6	1	3.6
- No roof/v open roof	1	3.7	1	3.7	1	3.6	0	0
Totals	27	100	27	100	28	100	28	100
Type of walls								
- mud	11	39.3	10	35.7	10	35.7	11	39.3
- soil/ cement blocks	0	0	1	3.6	1	3.6	0	0
- wattle	3	10.7	5	17.9	4	14.3	4	14.3
- other (thatch, plastic)	14	50.0	12	42.9	12	42.9	12	42.9
- code 8	0	0	0	0	1	3.6	1	3.6
Totals	28	100	28	100	28	100	28	100
Number of windows								
- 0	15	53.6	12	42.9	9	33.3	9	33.3
- 1	3	10.7	5	17.9	6	22.2	6	22.2
- 2+	10	35.7	11	39.2	12	44.4	12	44.4
Totals	28	100	28	100	27	100	27	100
Door status								
- open most time	27	96.4	25	89.3	24	88.9	26	96.3
- closed most time	1	3.6	3	10.7	3	11.1	1	3.7
Totals	28	100	28	100	27	100	27	100
Stove alight at night?								
- yes	0	0	0	0	0	0	0	0
- no	28	100	25	100	27	100	27	100
Totals	28	100	25	100	27	100	27	100
Any smoke extraction?								
- yes	0	0	0	0	0	0	0	0
- no	28	100	28	100	28	100	28	100
Totals	28	100	28	100	28	100	28	100
Shape code for kitchen								
- A	9	32.1	11	39.3	10	35.7	9	32.1
- B	9	32.1	9	32.1	9	32.1	11	39.3
- C	9	32.1	8	28.6	9	32.1	8	28.6
- D	1	3.6	0	0	0	0	0	0
Totals	28	100	28	100	28	100	28	100

Table 7: Season, Temperature and Rainfall

One aspect that was not measured during this study was the amount of wind. In Gatlang, when the wind blew, it adversely affected the efficacy of the smoke hood.

Kenya

General rainfall reflects season variation, but note that Round 4 is very dry
24 hour monitoring rainfall is consistent with general rainfall, Round 4 again very dry

Nepal

Adult Male Equivalent (AME) of those for whom food was cooked shows some reduction across the rounds. There is a weak (marginally significant) +ve correlation (Spearman rho = 0.183; p=0.042) between PM3.5 and AME [but this is not independent of the effect of the intervention]. Both general rainfall, and 24-hour rainfall show that Round 4 was wetter.

Sudan

There is a reduction in AME across rounds. Post-intervention rounds were a little cooler and recent rainfall reflects season variation, although Round 1 (wet) was drier than Round 3 (wet). 24 hour monitoring rainfall is consistent with general rainfall.

Table 7 (Kenya): Season, Temperature and Rainfall								
	Round 1		Round 2		Round 3		Round 4	
	n	Mean SD	n	Mean SD	n	Mean SD	n	Mean SD
Meals cooked - AME Total mean (sd)	25	17.3 6.92	25	16.7 8.84	24	18.5 15.11	25	15.4 6.65
Temperature (minimum) mean (sd)	25	23.1 1.61	25	23.1 2.18	24	22.9 0.92	25	22.9 0.83
Temperature (maximum) mean (sd)	25	28.6 1.67	25	27.7 2.38	24	28.0 2.38	25	28.0 1.23
Rainfall (general)								
- heavy all the time	5	19.2	0	0	6	23.1	0	0
- rain sometimes	11	42.3	7	26.9	12	26.2	1	3.8
- few showers	9	34.6	9	34.6	5	34.6	2	7.7
- very dry	1	3.8	10	38.5	3	38.5	23	88.5
Totals	26	100	26	100	26	100	26	100
Rainfall (24hr monitoring)								
- heavy all the time	2	7.7	0	0	6	23.1	0	0
- rain sometimes	8	30.8	8	30.8	11	42.3	0	0
- few showers	12	46.2	6	23.1	7	26.9	2	7.7
- very dry	4	15.4	12	46.2	2	7.7	24	92.3
Totals	26	100	26	100	26	100	26	100
Table 7 (Nepal): Season, Temperature and Rainfall								
	Round 1		Round 2		Round 3		Round 4	
	n	Mean SD	n	Mean SD	n	Mean SD	n	Mean SD
Meals cooked - AME Total mean (sd)	31	13.3 5.33	31	16.3 7.14	31	12.5 4.78	31	11.0 4.64
Temperature (minimum) mean (sd)	31	2.7 2.35	31	10.6 3.96	31	3.3 2.88	31	4.7 0.94
Temperature (maximum) mean (sd)	31	13.7 5.17	31	23.4 2.95	31	16.2 2.45	31	28.1 3.10
Rainfall (general)								
- heavy all the time	1	3.2	4	12.9	2	6.5	0	0
- rain sometimes	4	12.9	0	0	3	9.7	26	83.9
- few showers	3	9.7	4	12.9	1	3.2	5	16.1
- very dry	23	74.2	23	74.2	25	80.6	0	0
Totals	31	100	31	100	31	100	31	100

Rainfall (24hr monitoring)								
- heavy all the time	1	3.2	6	19.4	4	12.9	1	3.2
- rain sometimes	2	6.5	0	0	0	9	20	64.5
- few showers	2	6.5	5	16.1	3	9.7	9	29.0
- very dry	26	83.9	20	64.5	23	74.2	1	3.2
- code 5	0	0	0	0	1	3.2	0	0
Totals	31	100	31	100	31	100	31	100
Rainfall (24hr monitoring)								
- rain heavy/sometimes	3	9.7	6	19.4	4	13.3	21	67.8
- few showers/very dry	28	90.3	25	80.6	26	86.7	10	32.2
Totals	31	100	31	100	30	100	31	100
Table 7 (Sudan): Season, Temperature and Rainfall								
	Round 1		Round 2		Round 3		Round 4	
	Wet		Dry		Wet		Dry	
	n	Mean SD	n	Mean SD	n	Mean SD	n	Mean SD
Meals cooked - AME Total mean (sd)	28	15.7 6.83	27	14.5 7.67	28	13.5 6.38	27	11.0 6.71
Temperature (minimum) mean (sd)	28	23.9 2.66	27	23.9 2.71	28	23.7 2.00	27	20.1 2.38
Temperature (maximum) mean (sd)	28	38.3 2.03	27	38.3 2.06	28	34.4 3.71	27	37.1 2.63
Rainfall (general)								
- heavy all the time	1	3.6	0	0	1	3.7	0	0
- rain sometimes	0	0	0	0	5	18.5	0	0
- few showers	2	7.1	0	0	7	25.9	0	0
- very dry	25	89.3	28	100	13	48.1	28	100
- code 5	0	0	0	0	1	3.7	0	0
Totals	28	100	28	100	27	100	28	100
Rainfall (24hr monitoring)								
- heavy all the time	0	0	0	0	0	0	0	0
- rain sometimes	1	3.6	0	0	7	28.0	0	0
- few showers	2	7.1	0	0	8	32.0	0	0
- very dry	25	89.3	28	100	9	36.0	28	100
- code 5	0	0	0	0	1	4.0	0	0
Totals	28	100	28	100	25	100	28	100