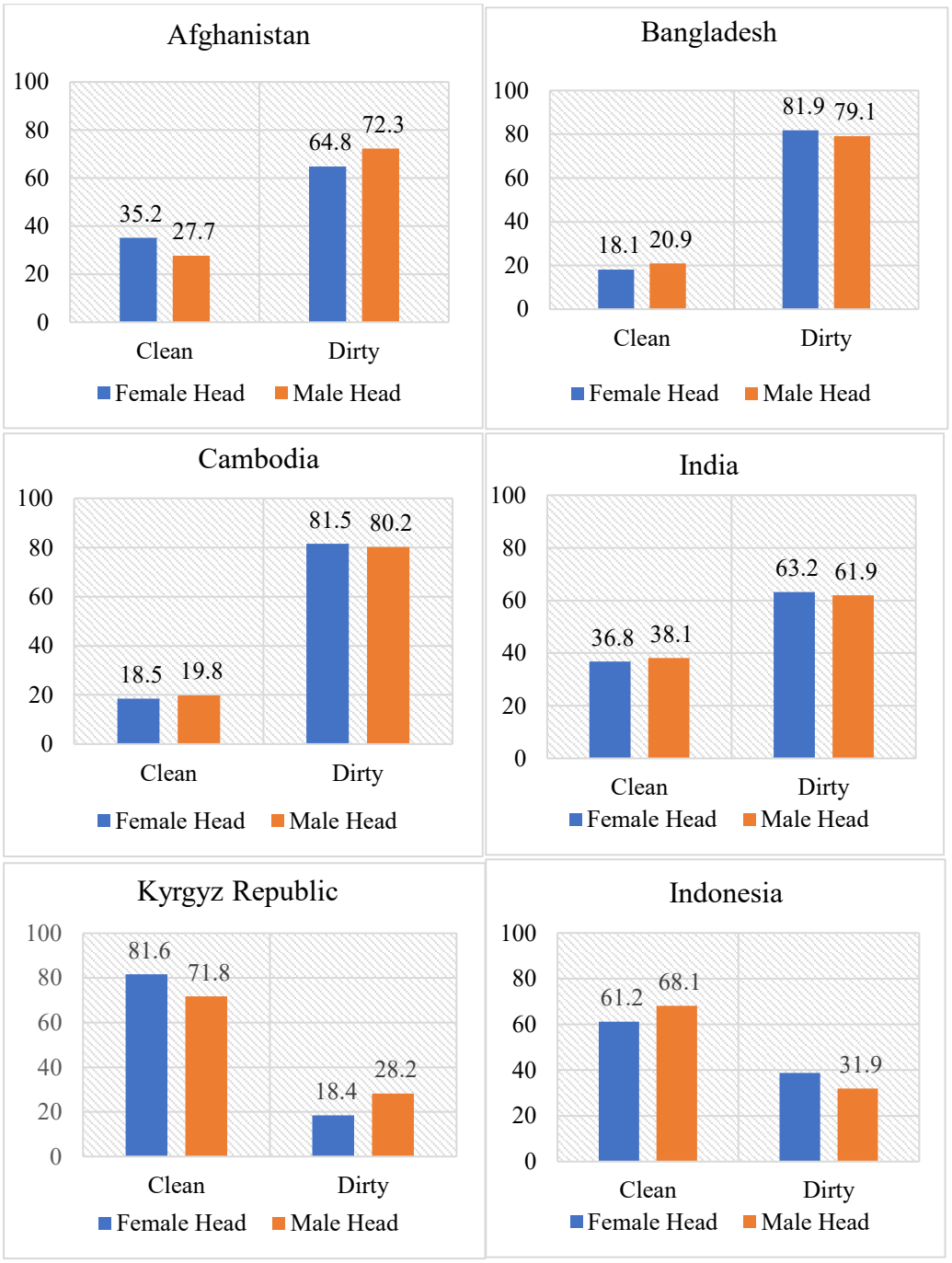
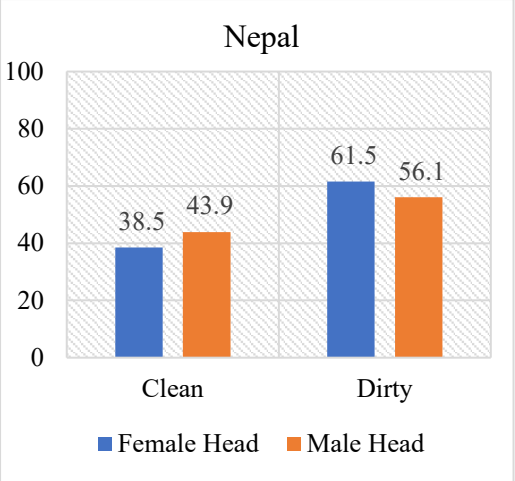
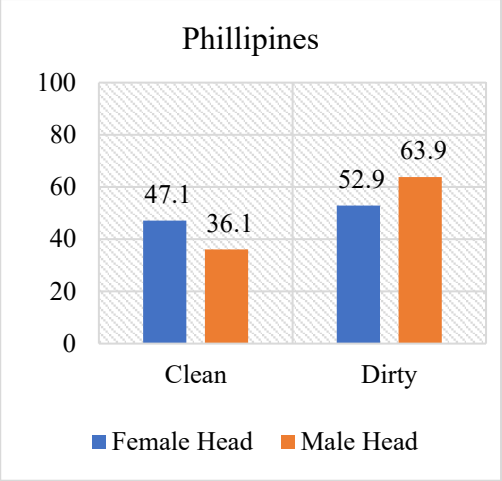
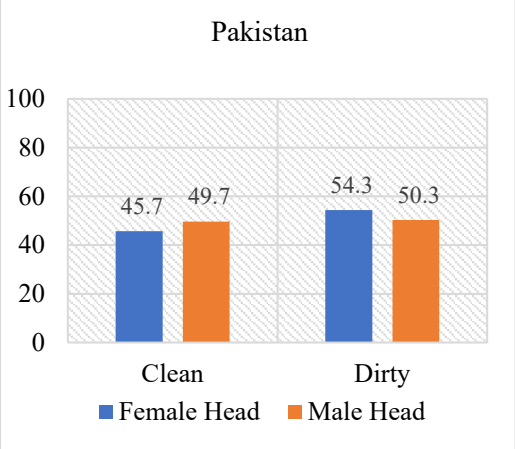
In Pursuit of Sustainable Development Goal 7- Evidence of Clean Cooking Fuel Usage from 46 Developing Countries

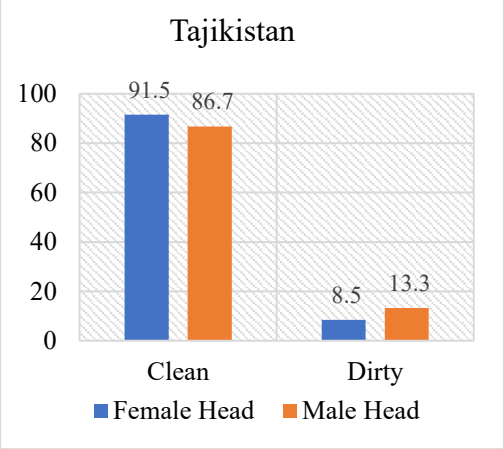
Appendix 1: Primary Clean Cooking Fuel in Developing Countries

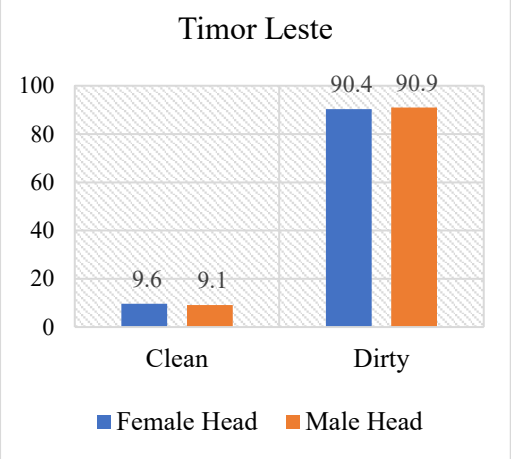


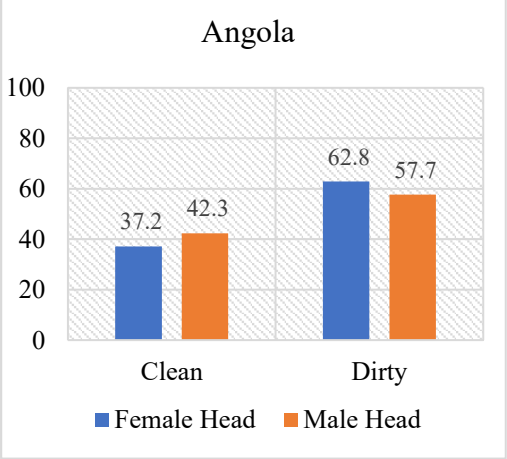

Nepal
100
80
60
40
20
0
38.5
43.9
61.5
56.1
Clean
Dirty
Female Head
Male Head

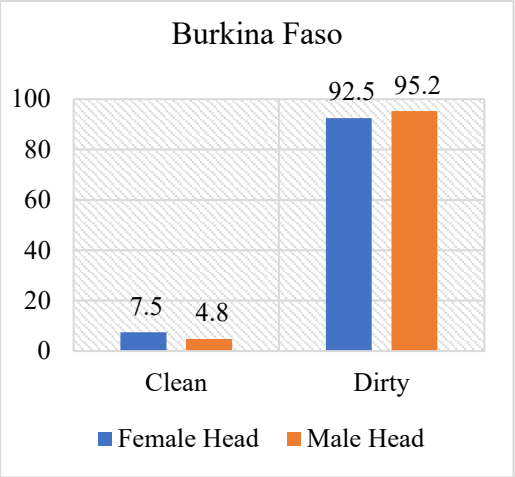

Phillipines
100
80
60
40
20
0
47.1
36.1
52.9
63.9
Clean
Dirty
Female Head
Male Head

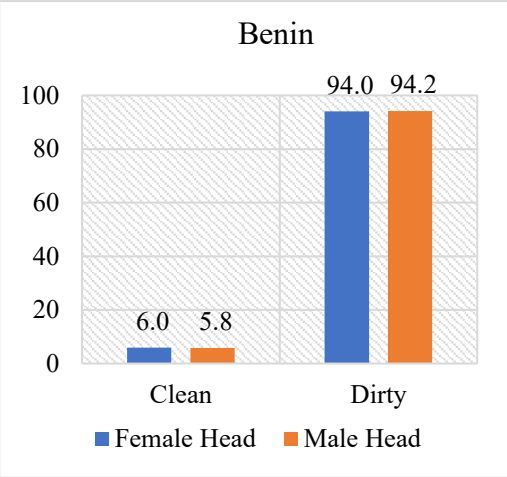

Pakistan
100
80
60
40
20
0
45.7
49.7
54.3
50.3
Clean
Dirty
Female Head
Male Head

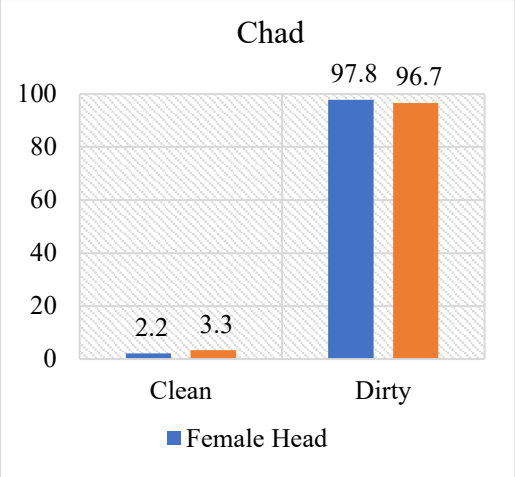

Tajikistan
100
80
60
40
20
0
91.5
86.7
8.5
13.3
Clean
Dirty
Female Head
Male Head

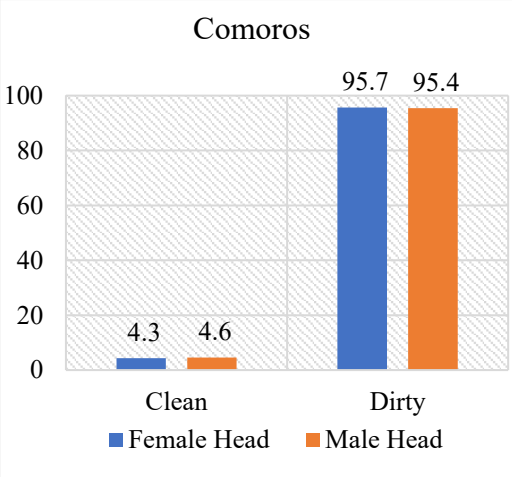

Timor Leste
100
80
60
40
20
0
9.6
9.1
90.4
90.9
Clean
Dirty
Female Head
Male Head

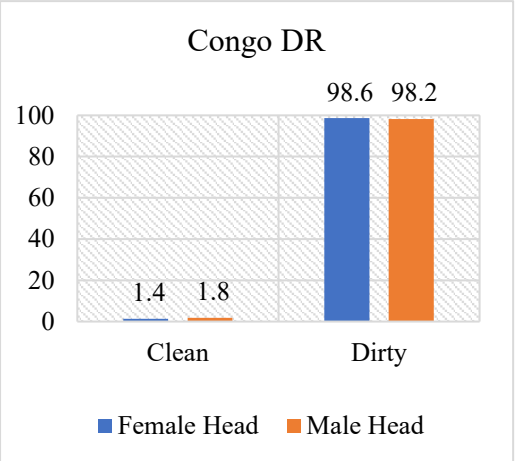

Angola
100
80
60
40
20
0
37.2
42.3
62.8
57.7
Clean
Dirty
Female Head
Male Head

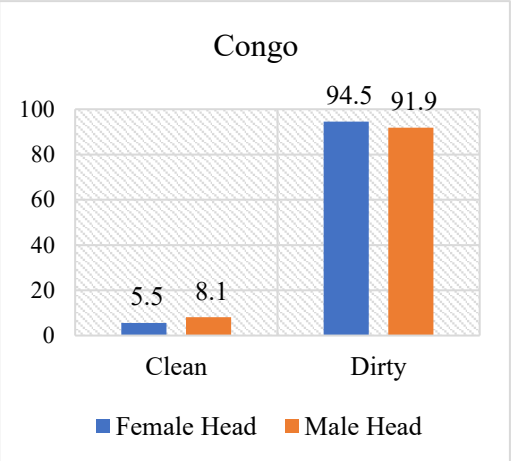

Burkina Faso
100
80
60
40
20
0
7.5
4.8
92.5
95.2
Clean
Dirty
Female Head
Male Head

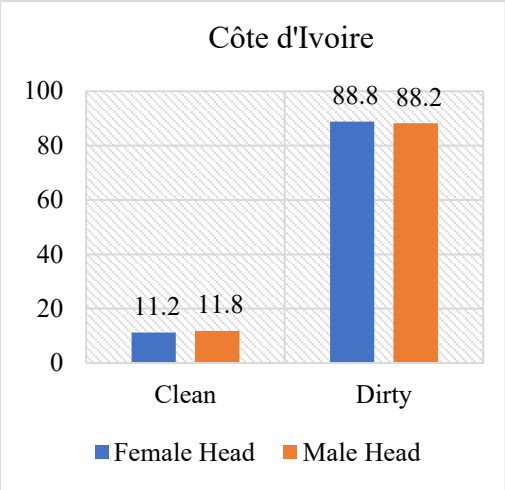

Benin
100
80
60
40
20
0
6.0
5.8
94.0
94.2
Clean
Dirty
Female Head
Male Head

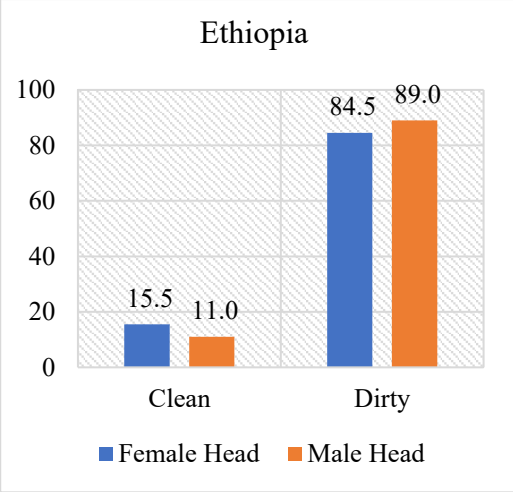

Chad
100
80
60
40
20
0
2.2
3.3
97.8
96.7
Clean
Dirty
Female Head

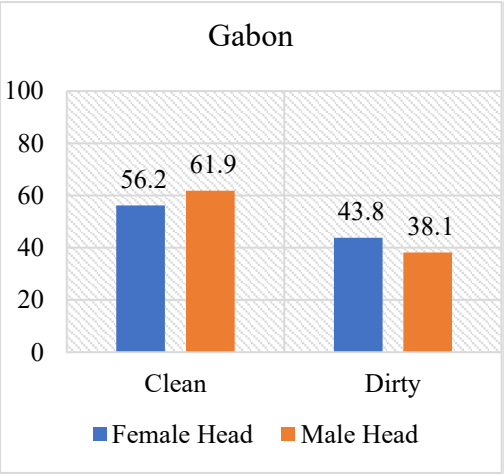

Comoros
100
80
60
40
20
0
4.3
4.6
95.7
95.4
Clean
Dirty
Female Head
Male Head

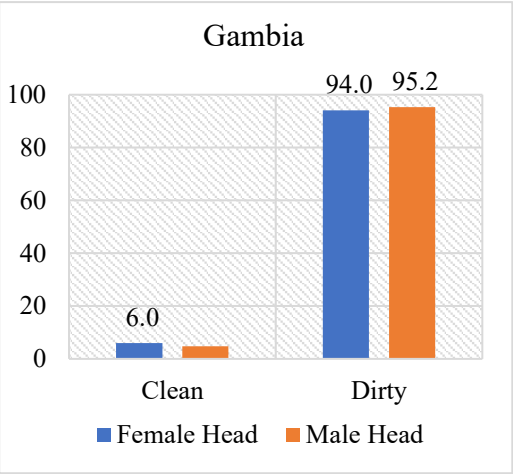

Congo DR
100
80
60
40
20
0
1.4
1.8
98.6
98.2
Clean
Dirty
Female Head
Male Head

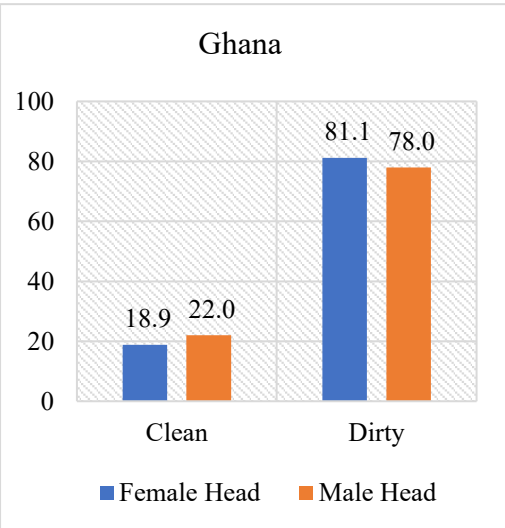

Congo
100
80
60
40
20
0
5.5
8.1
94.5
91.9
Clean
Dirty
Female Head
Male Head

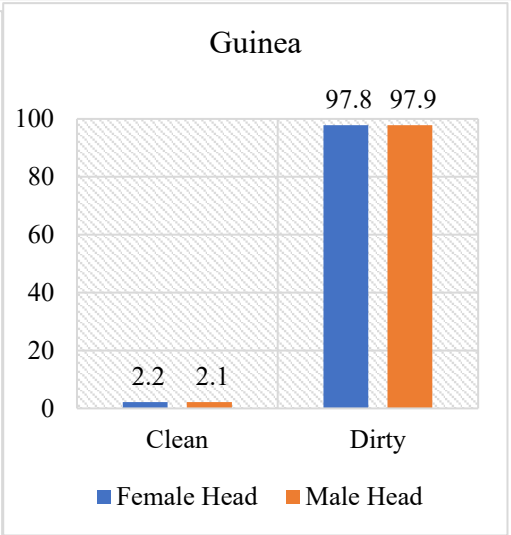

Côte d'Ivoire
100
80
60
40
20
0
11.2
11.8
88.8
88.2
Clean
Dirty
Female Head
Male Head

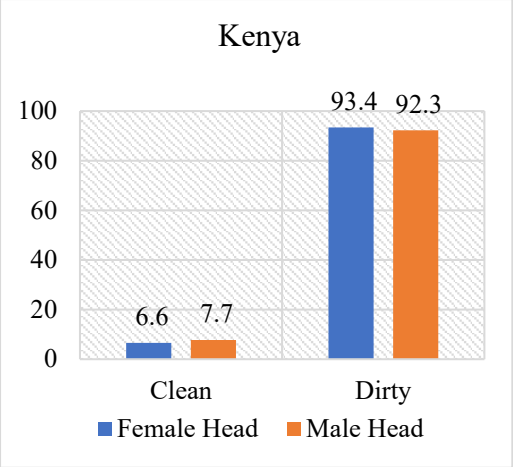

Ethiopia
100
80
60
40
20
0
15.5
11.0
84.5
89.0
Clean
Dirty
Female Head
Male Head

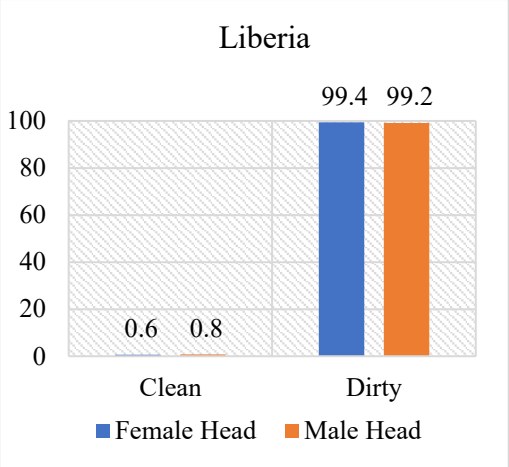

Gabon
100
80
60
40
20
0
56.2
61.9
43.8
38.1
Clean
Dirty
Female Head
Male Head

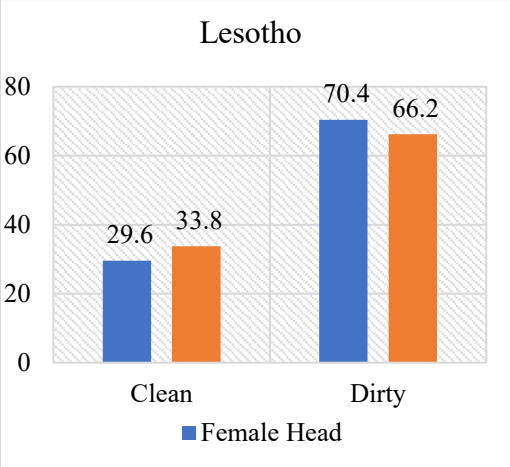

Gambia
100
80
60
40
20
0
6.0
94.0
95.2
Clean
Dirty
Female Head
Male Head

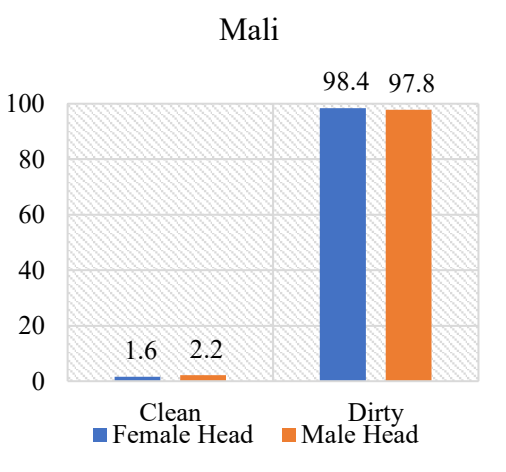

Ghana
100
80
60
40
20
0
18.9
22.0
81.1
78.0
Clean
Dirty
Female Head
Male Head

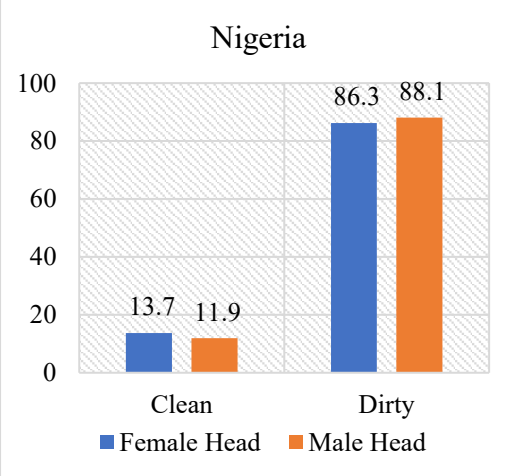

Guinea
100
80
60
40
20
0
2.2
2.1
97.8
97.9
Clean
Dirty
Female Head
Male Head

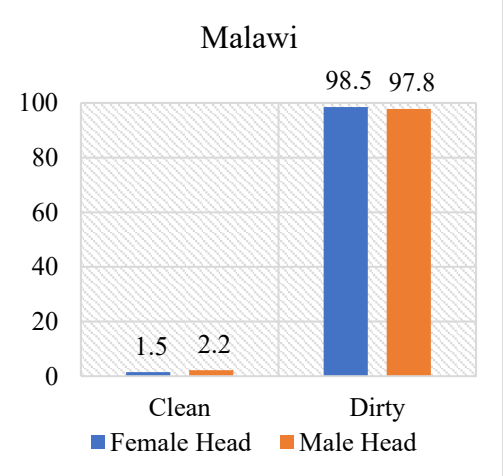

Kenya
100
80
60
40
20
0
93.4
92.3
6.6
7.7
Clean
Dirty
Female Head
Male Head

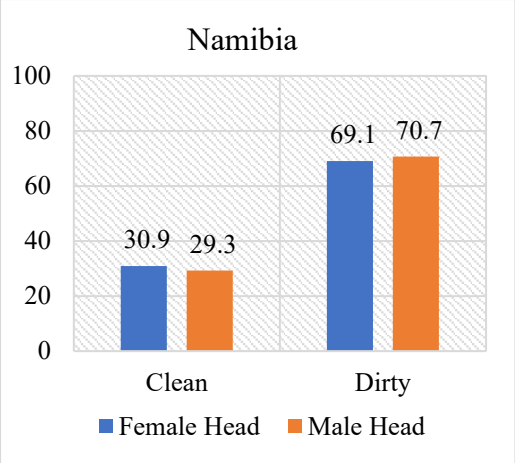

Liberia
100
80
60
40
20
0
99.4
99.2
0.6
0.8
Clean
Dirty
Female Head
Male Head

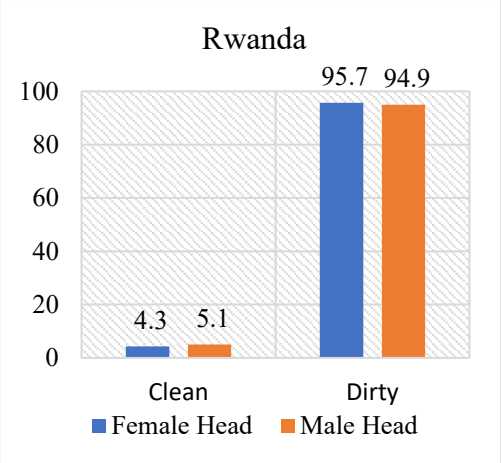

Lesotho
80
60
40
20
0
70.4
66.2
29.6
33.8
Clean
Dirty
Female Head

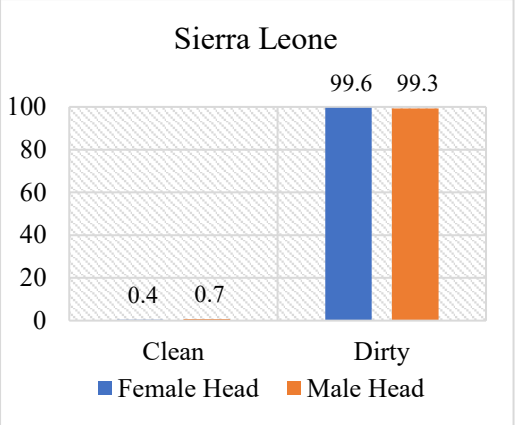

Mali
100
80
60
40
20
0
98.4
97.8
1.6
2.2
Clean
Dirty
Female Head
Male Head

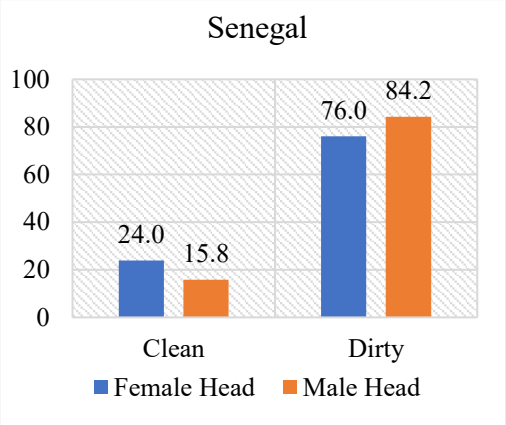

Nigeria
100
80
60
40
20
0
86.3
88.1
13.7
11.9
Clean
Dirty
Female Head
Male Head

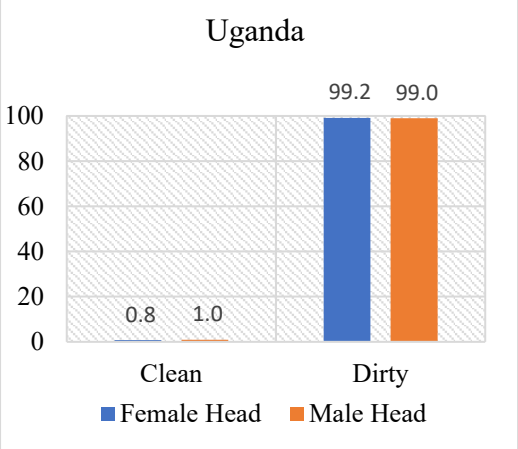

Malawi
100
80
60
40
20
0
98.5
97.8
1.5
2.2
Clean
Dirty
Female Head
Male Head

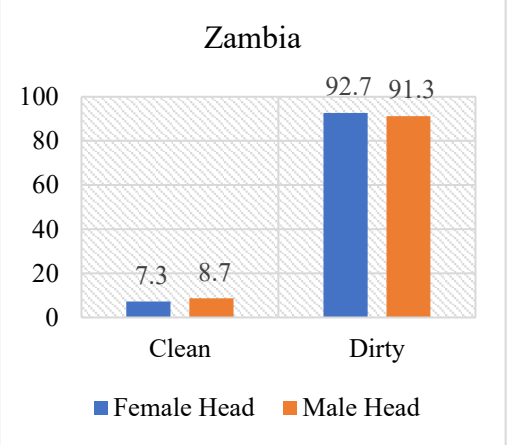

Namibia
100
80
60
40
20
0
30.9
29.3
69.1
70.7
Clean
Dirty
Female Head
Male Head

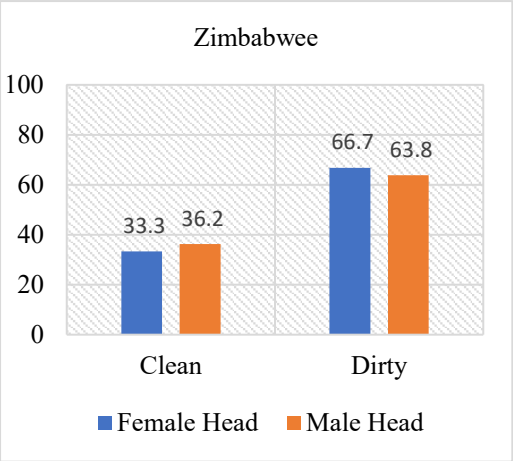

Rwanda
100
80
60
40
20
0
4.3
5.1
95.7
94.9
Clean
Dirty
Female Head
Male Head

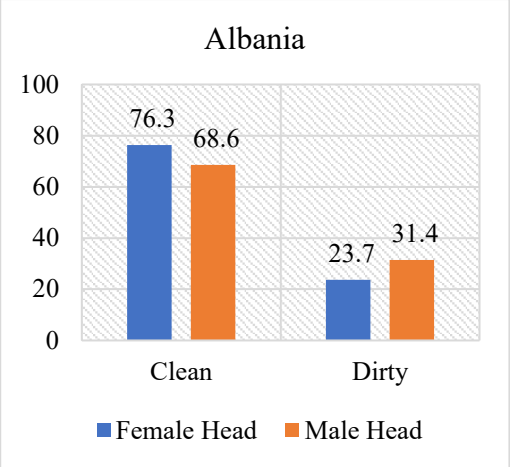

Sierra Leone
100
80
60
40
20
0
0.4
0.7
99.6
99.3
Clean
Dirty
Female Head
Male Head

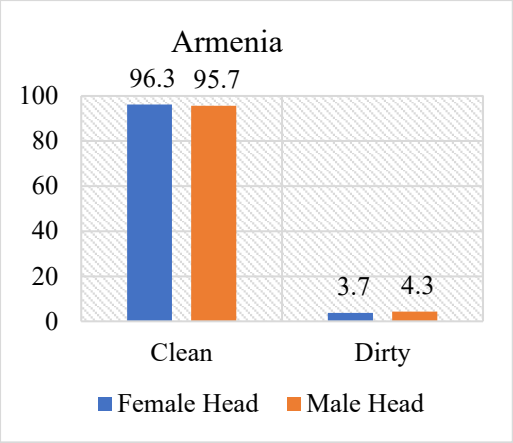

Senegal
100
80
60
40
20
0
24.0
15.8
76.0
84.2
Clean
Dirty
Female Head
Male Head

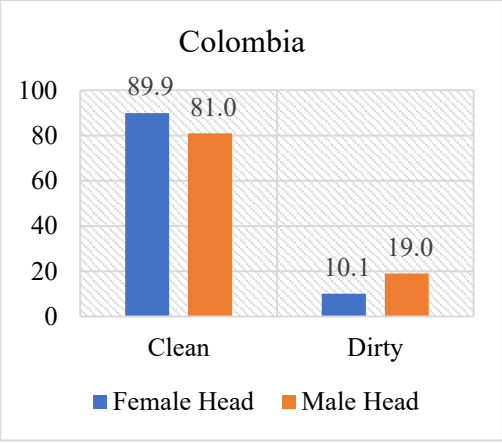

Uganda
100
80
60
40
20
0
0.8
1.0
99.2
99.0
Clean
Dirty
Female Head
Male Head

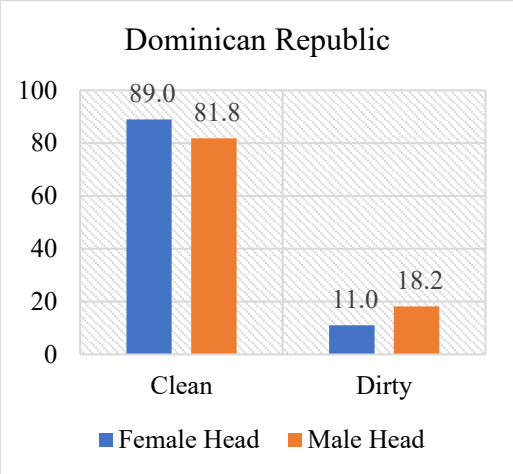

Zambia
100
80
60
40
20
0
7.3
8.7
92.7
91.3
Clean
Dirty
Female Head
Male Head

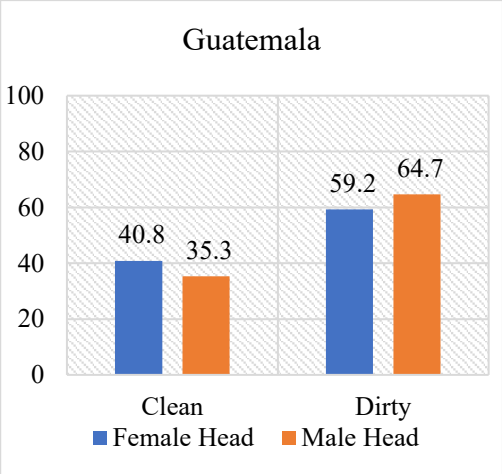

Zimbabwee
100
80
60
40
20
0
33.3
36.2
66.7
63.8
Clean
Dirty
Female Head
Male Head

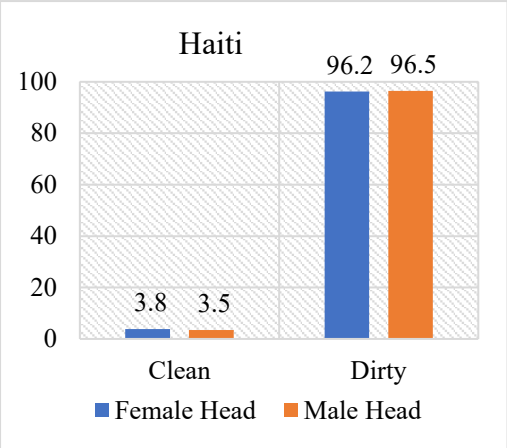

Albania
100
80
60
40
20
0
76.3
68.6
23.7
31.4
Clean
Dirty
Female Head
Male Head

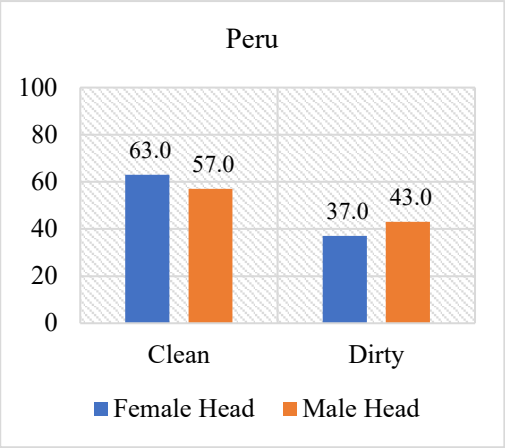

Armenia
100
80
60
40
20
0
96.3
95.7
3.7
4.3
Clean
Dirty
Female Head
Male Head

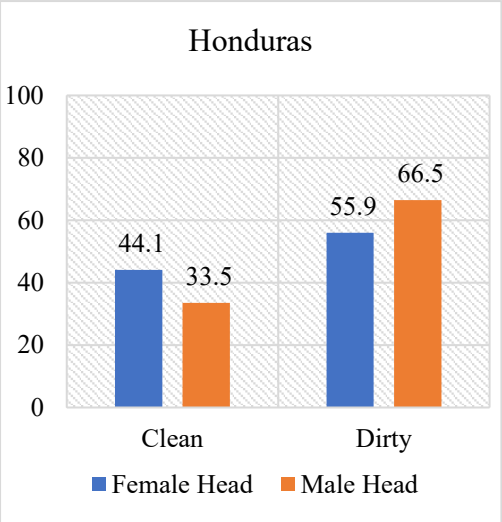

Colombia
100
80
60
40
20
0
89.9
81.0
10.1
19.0
Clean
Dirty
Female Head
Male Head


Dominican Republic
100
80
60
40
20
0
89.0
81.8
11.0
18.2
Clean
Dirty
Female Head
Male Head

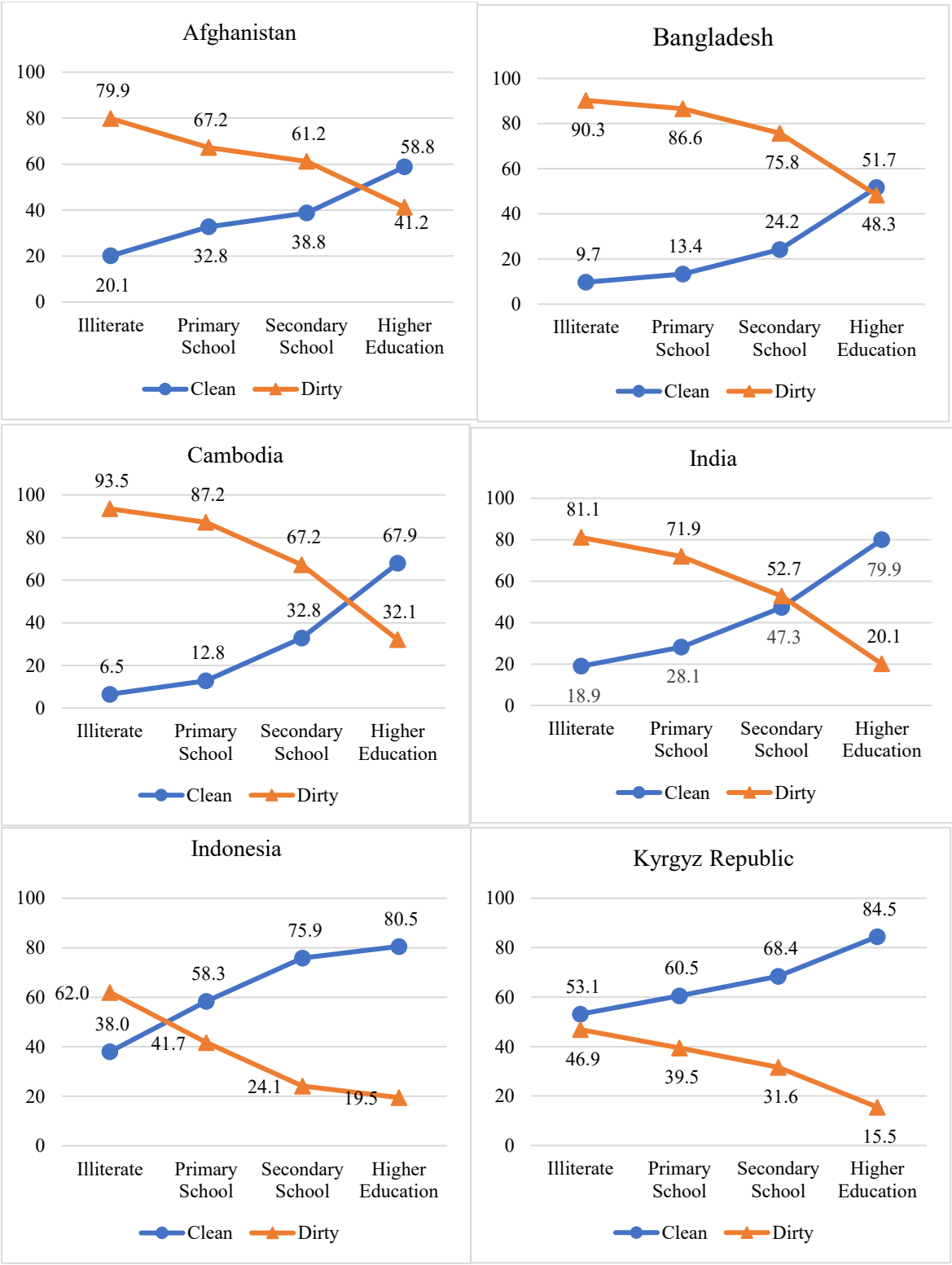

Guatemala
100
80
60
40
20
0
40.8
35.3
59.2
64.7
Clean
Dirty
Female Head
Male Head

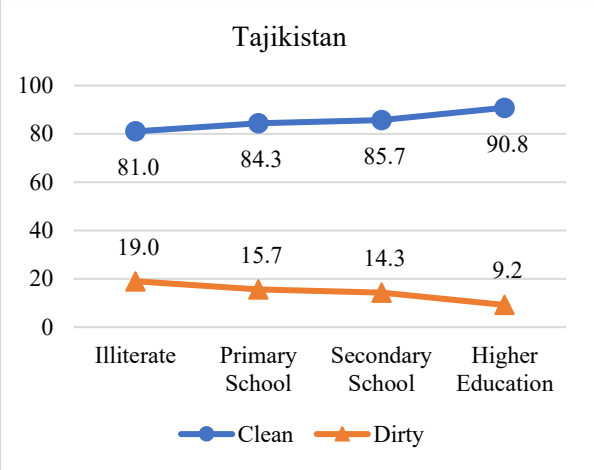

Haiti
100
80
60
40
20
0
3.8
3.5
96.2
96.5
Clean
Dirty
Female Head
Male Head

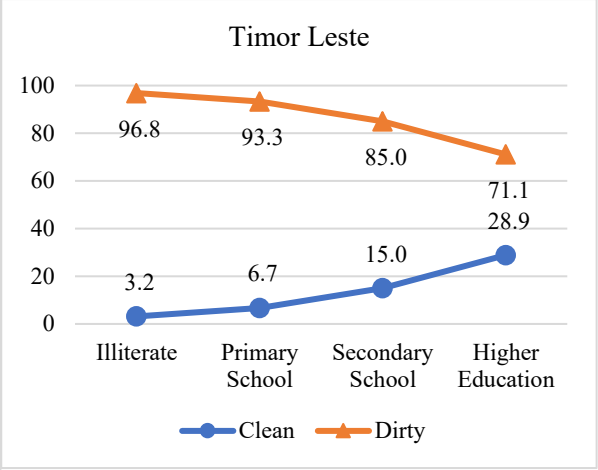

Peru
100
80
60
40
20
0
63.0
57.0
37.0
43.0
Clean
Dirty
Female Head
Male Head

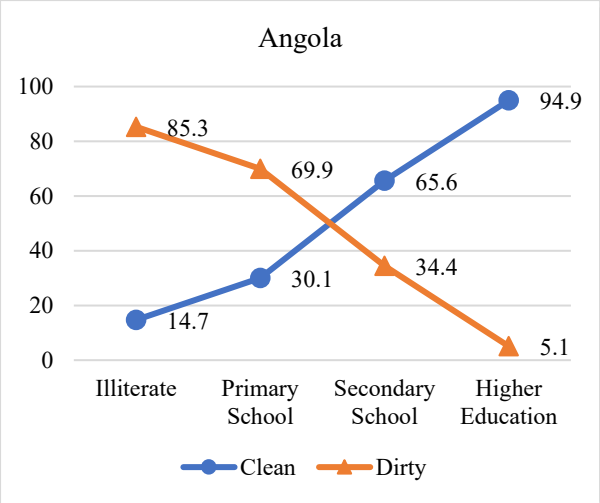

Honduras
100
80
60
40
20
0
44.1
33.5
55.9
66.5
Clean
Dirty
Female Head
Male Head

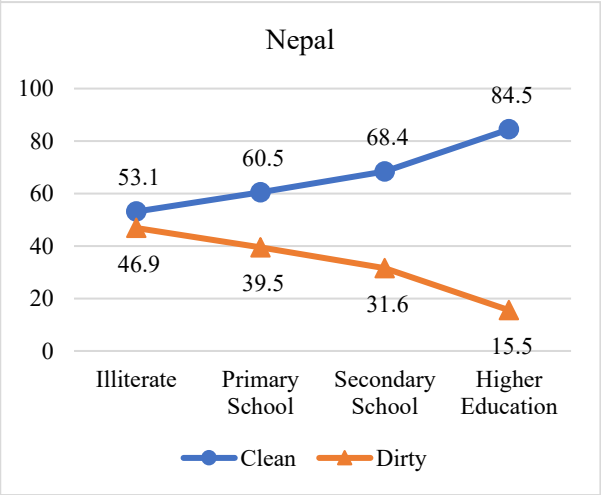
Appendix 2: Education of household head and the clean cooking fuel usage

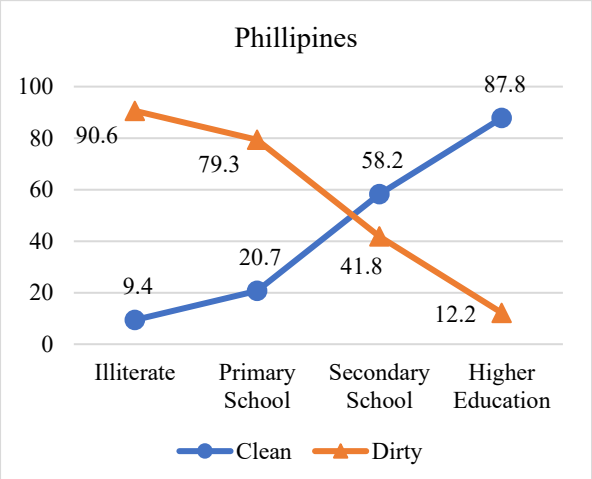


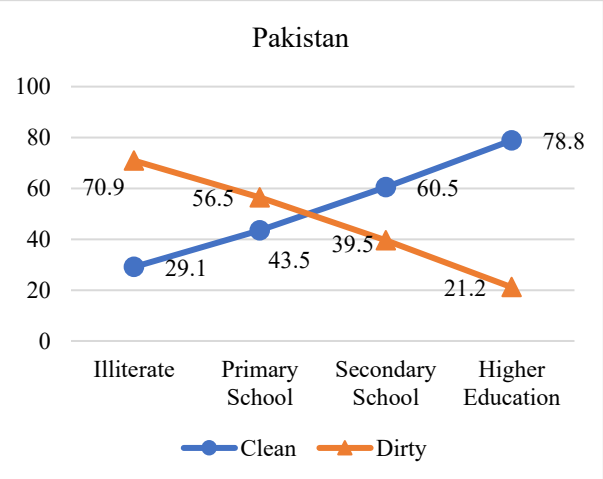

Tajikistan
100
80
60
40
20
0
81.0
84.3
85.7
90.8
19.0
15.7
14.3
9.2
Illiterate
Primary School
Secondary School
Higher Education
Clean
Dirty

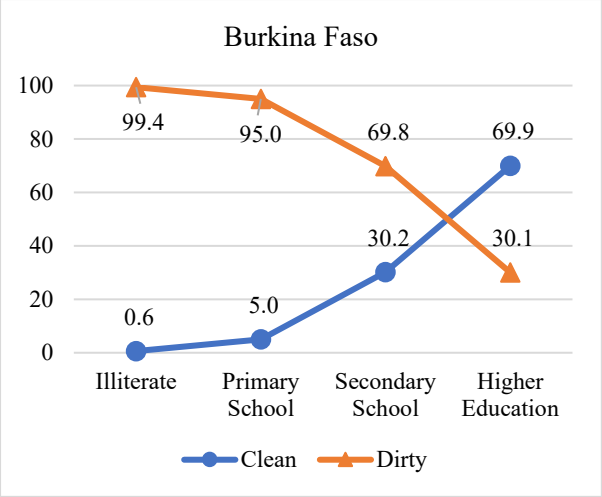

Timor Leste
100
80
60
40
20
0
96.8
93.3
85.0
71.1
3.2
6.7
15.0
28.9
Illiterate
Primary School
Secondary School
Higher Education
Clean
Dirty

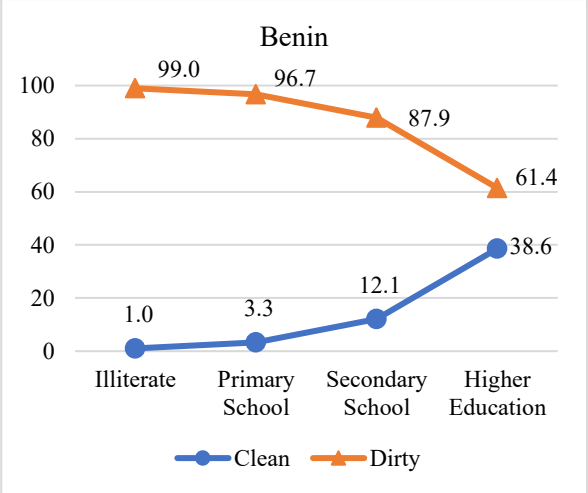

Angola
100
80
60
40
20
0
85.3
69.9
34.4
5.1
14.7
30.1
65.6
94.9
Illiterate
Primary School
Secondary School
Higher Education
Clean
Dirty

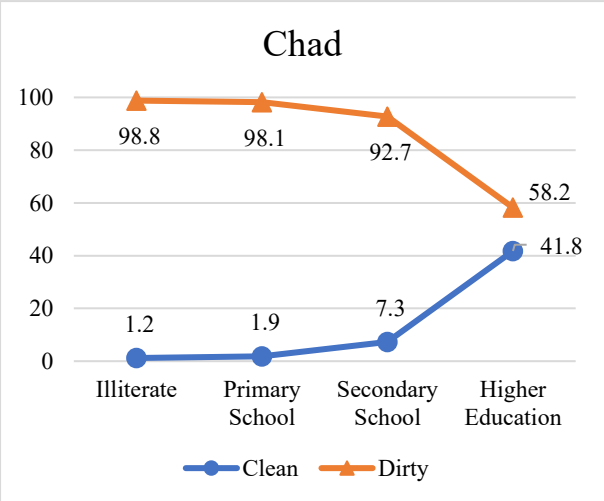

Nepal
100
80
60
40
20
0
53.1
60.5
68.4
84.5
46.9
39.5
31.6
15.5
Illiterate
Primary School
Secondary School
Higher Education
Clean
Dirty

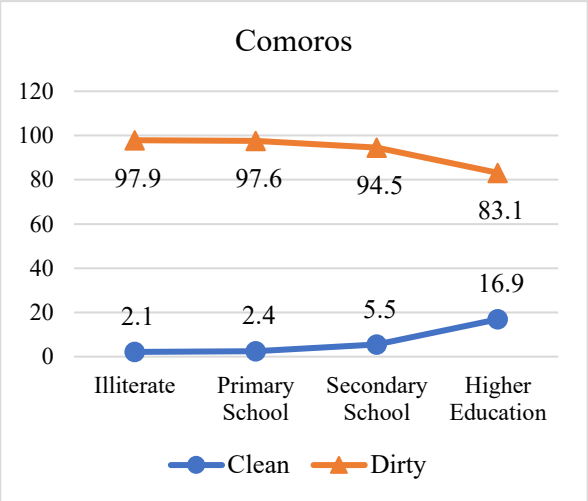

Phillipines
100
80
60
40
20
0
90.6
79.3
41.8
12.2
9.4
20.7
58.2
87.8
Illiterate
Primary School
Secondary School
Higher Education
Clean
Dirty

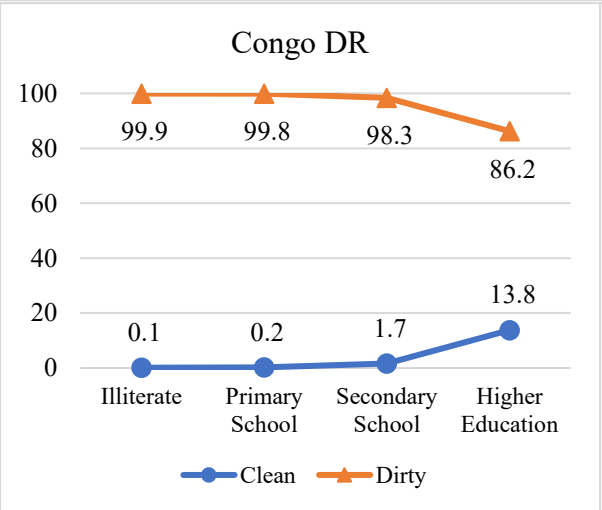

Pakistan
100
80
60
40
20
0
70.9
56.5
39.5
21.2
29.1
43.5
60.5
78.8
Illiterate
Primary School
Secondary School
Higher Education
Clean
Dirty

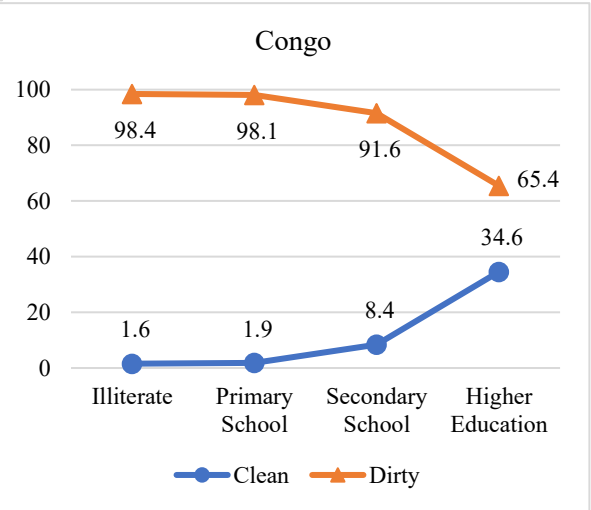

Burkina Faso
100
80
60
40
20
0
99.4
95.0
69.8
69.9
30.2
30.1
0.6
5.0
Illiterate
Primary School
Secondary School
Higher Education
Clean
Dirty

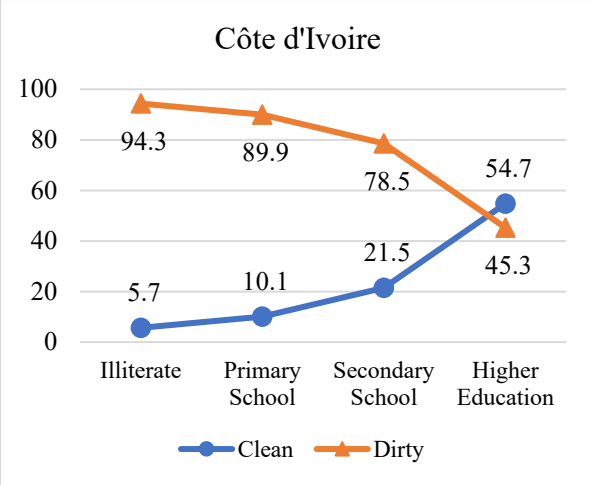

Benin
100
80
60
40
20
0
99.0
96.7
87.9
61.4
38.6
12.1
1.0
3.3
Illiterate
Primary School
Secondary School
Higher Education
Clean
Dirty

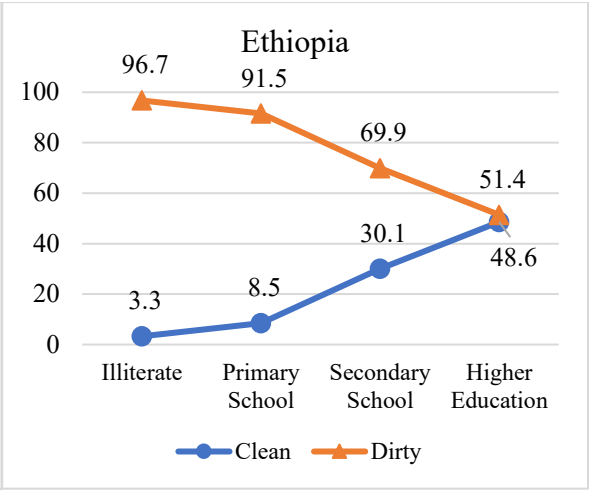

Chad
100
80
60
40
20
0
98.8
98.1
92.7
58.2
41.8
7.3
1.2
1.9
Illiterate
Primary School
Secondary School
Higher Education
Clean
Dirty

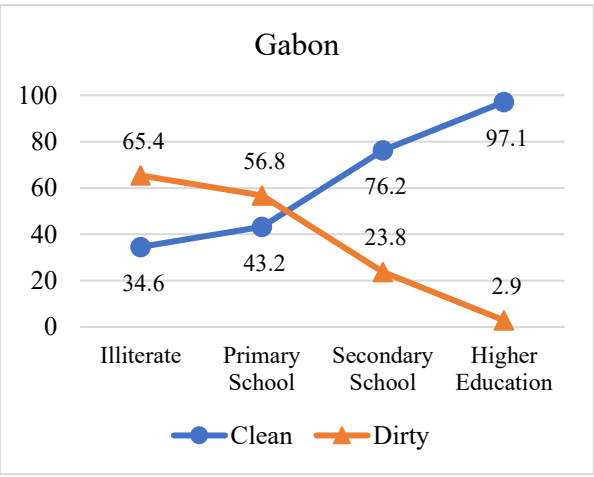

Comoros
120
100
80
60
40
20
0
97.9
97.6
94.5
83.1
16.9
5.5
2.1
2.4
Illiterate
Primary School
Secondary School
Higher Education
Clean
Dirty

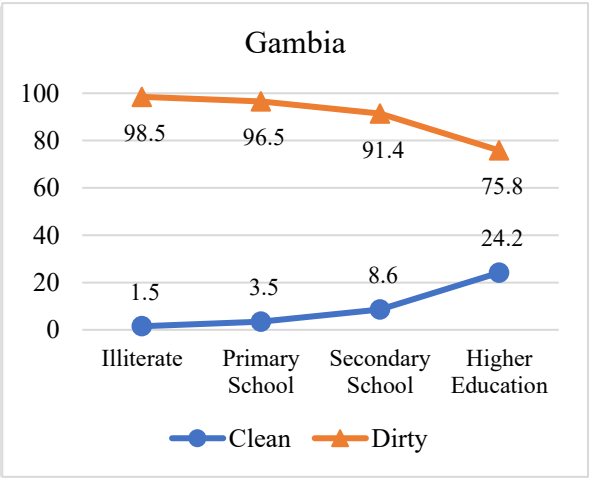

Congo DR
100
80
60
40
20
0
99.9
99.8
98.3
86.2
13.8
1.7
0.1
0.2
Illiterate
Primary School
Secondary School
Higher Education
Clean
Dirty

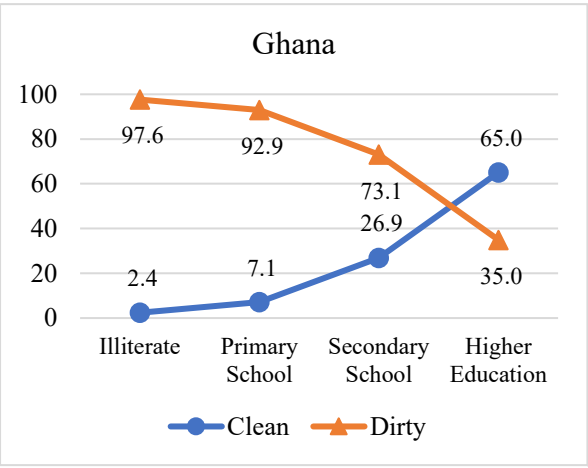

Congo
100
80
60
40
20
0
98.4
98.1
91.6
65.4
34.6
8.4
1.6
1.9
Illiterate
Primary School
Secondary School
Higher Education
Clean
Dirty

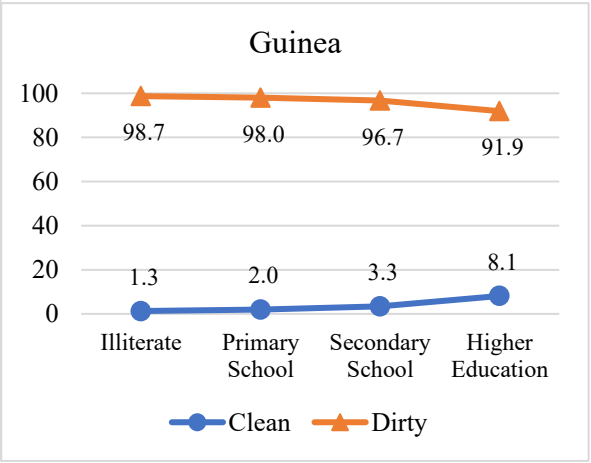

Côte d'Ivoire
100
80
60
40
20
0
94.3
89.9
78.5
54.7
5.7
10.1
21.5
45.3
Illiterate
Primary School
Secondary School
Higher Education
Clean
Dirty

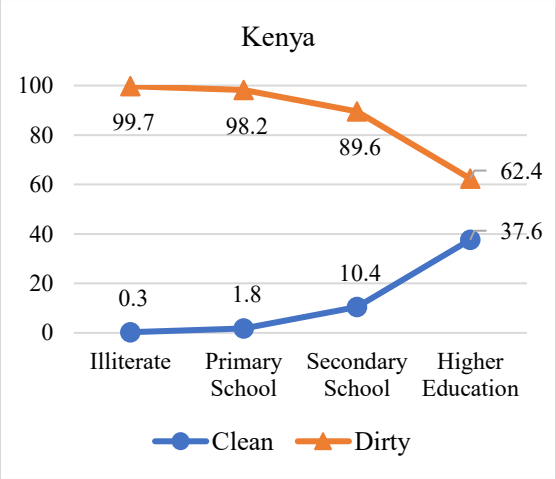

Ethiopia
96.7
91.5
69.9
51.4
3.3
8.5
30.1
48.6
Illiterate
Primary School
Secondary School
Higher Education
Clean
Dirty

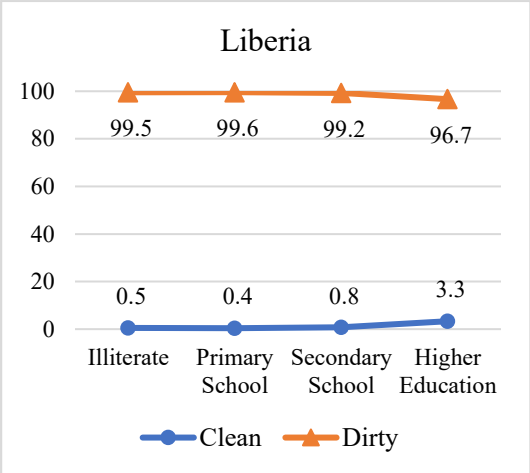

Gabon
65.4
56.8
76.2
97.1
34.6
43.2
23.8
2.9
Illiterate
Primary School
Secondary School
Higher Education
Clean
Dirty

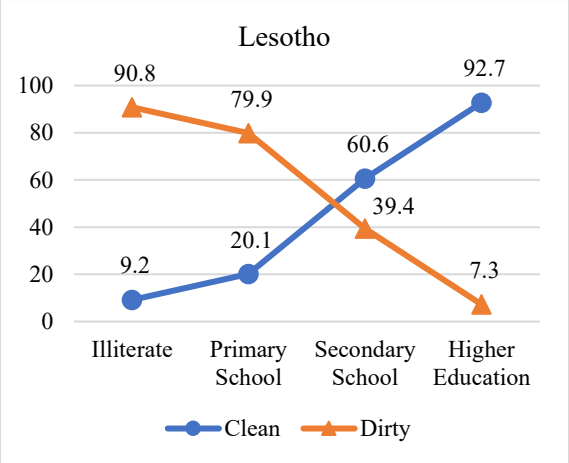

Gambia
98.5
96.5
91.4
75.8
1.5
3.5
8.6
24.2
Illiterate
Primary School
Secondary School
Higher Education
Clean
Dirty

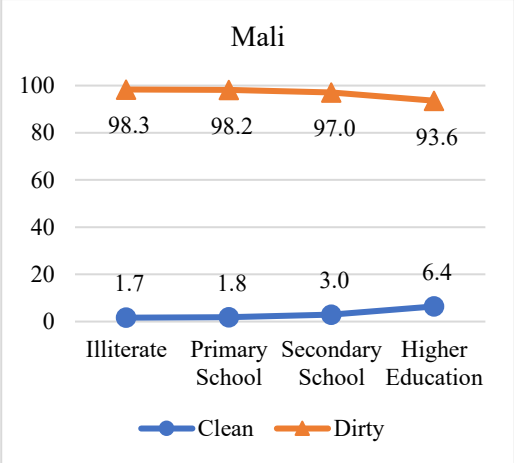

Ghana
97.6
92.9
73.1
65.0
2.4
7.1
26.9
35.0
Illiterate
Primary School
Secondary School
Higher Education
Clean
Dirty

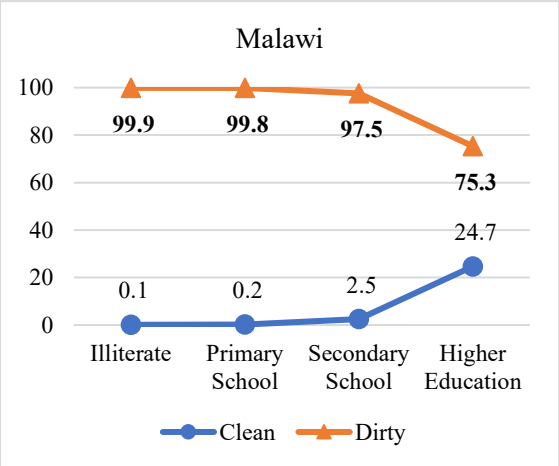

Guinea
98.7
98.0
96.7
91.9
1.3
2.0
3.3
8.1
Illiterate
Primary School
Secondary School
Higher Education
Clean
Dirty

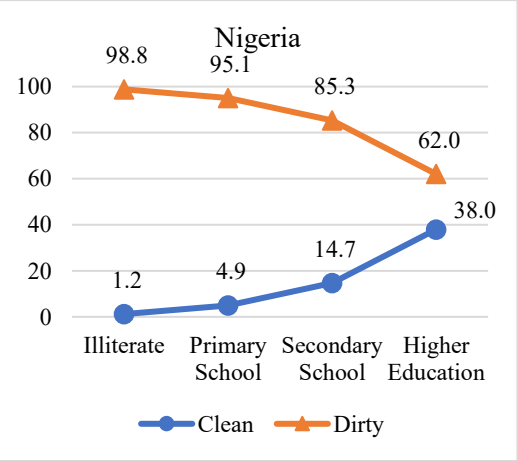

Kenya
100
80
60
40
20
0
99.7
98.2
89.6
62.4
37.6
10.4
0.3
1.8
Illiterate
Primary School
Secondary School
Higher Education
Clean
Dirty

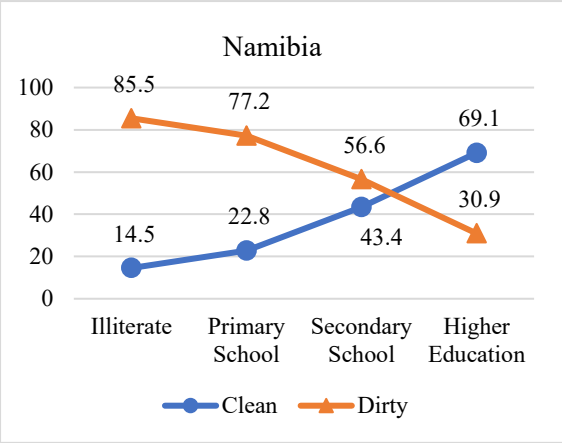

Liberia
100
80
60
40
20
0
99.5
99.6
99.2
96.7
0.5
0.4
0.8
3.3
Illiterate
Primary School
Secondary School
Higher Education
Clean
Dirty

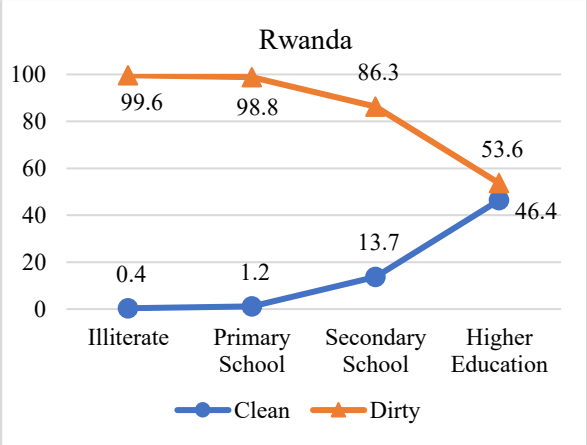

Lesotho
100
80
60
40
20
0
90.8
79.9
60.6
39.4
20.1
9.2
92.7
7.3
Illiterate
Primary School
Secondary School
Higher Education
Clean
Dirty

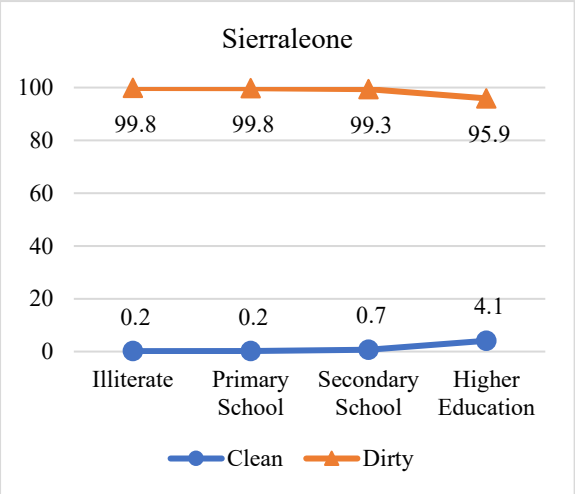

Mali
100
80
60
40
20
0
98.3
98.2
97.0
93.6
1.7
1.8
3.0
6.4
Illiterate
Primary School
Secondary School
Higher Education
Clean
Dirty

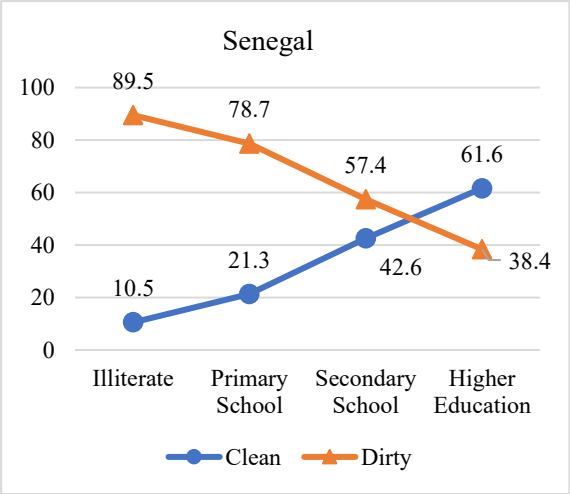

Malawi
100
80
60
40
20
0
99.9
99.8
97.5
75.3
24.7
0.1
0.2
2.5
Illiterate
Primary School
Secondary School
Higher Education
Clean
Dirty

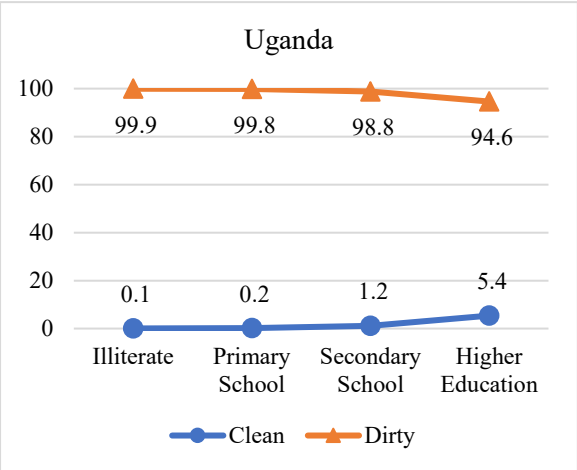

Nigeria
100
80
60
40
20
0
98.8
95.1
85.3
62.0
38.0
14.7
1.2
4.9
Illiterate
Primary School
Secondary School
Higher Education
Clean
Dirty

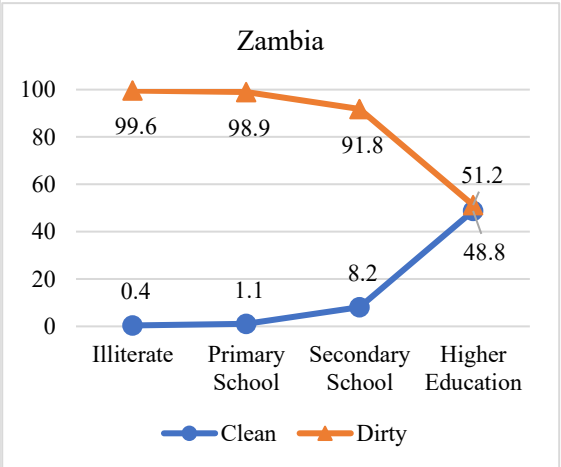

Namibia
100
80
60
40
20
0
85.5
77.2
56.6
30.9
14.5
22.8
43.4
69.1
Illiterate
Primary School
Secondary School
Higher Education
Clean
Dirty

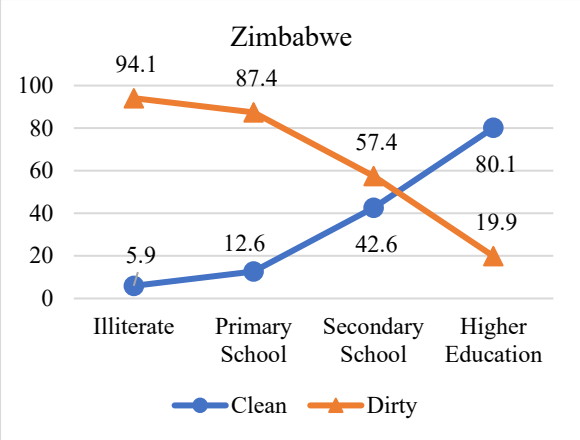

Rwanda
100
80
60
40
20
0
99.6
98.8
86.3
53.6
0.4
1.2
13.7
46.4
Illiterate
Primary School
Secondary School
Higher Education
Clean
Dirty

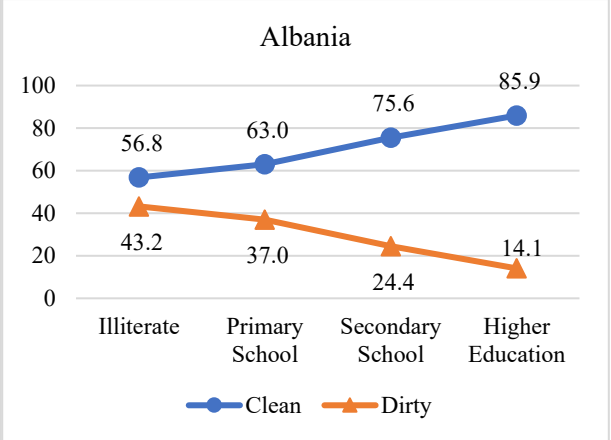

Sierraleone
100
80
60
40
20
0
99.8
99.8
99.3
95.9
0.2
0.2
0.7
4.1
Illiterate
Primary School
Secondary School
Higher Education
Clean
Dirty

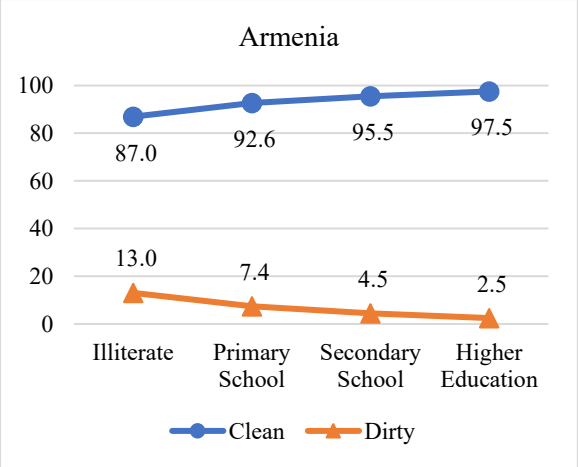

Senegal
100
80
60
40
20
0
89.5
78.7
57.4
38.4
10.5
21.3
42.6
61.6
Illiterate
Primary School
Secondary School
Higher Education
Clean
Dirty

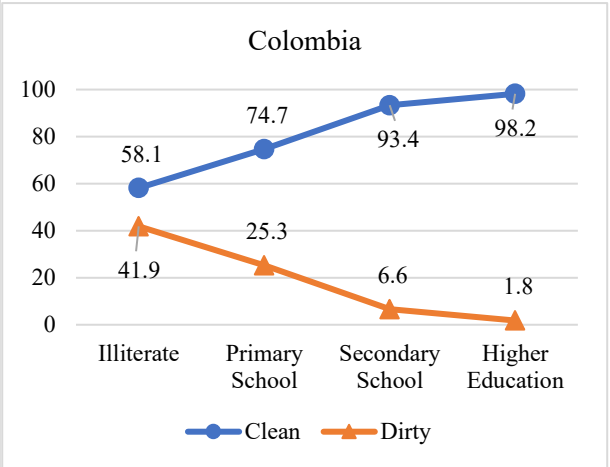

Uganda
100
80
60
40
20
0
99.9
99.8
98.8
94.6
0.1
0.2
1.2
5.4
Illiterate
Primary School
Secondary School
Higher Education
Clean
Dirty

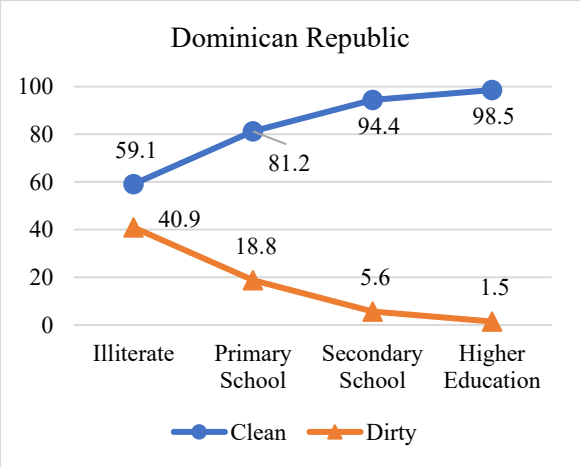

Zambia
100
80
60
40
20
0
99.6
98.9
91.8
51.2
48.8
0.4
1.1
8.2
Illiterate
Primary School
Secondary School
Higher Education
Clean
Dirty

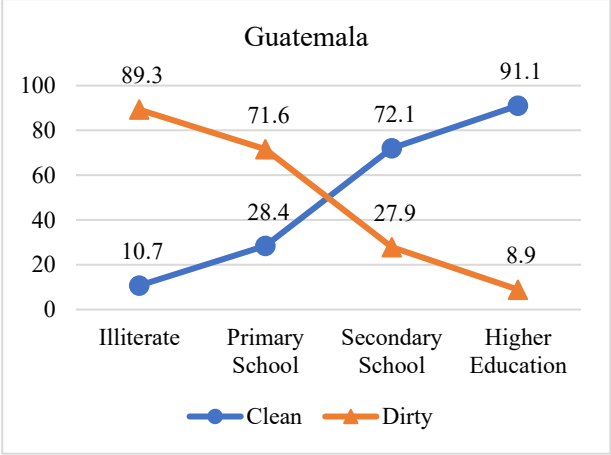

Zimbabwe
100
80
60
40
20
0
94.1
87.4
57.4
80.1
19.9
5.9
12.6
42.6
Illiterate
Primary School
Secondary School
Higher Education
Clean
Dirty

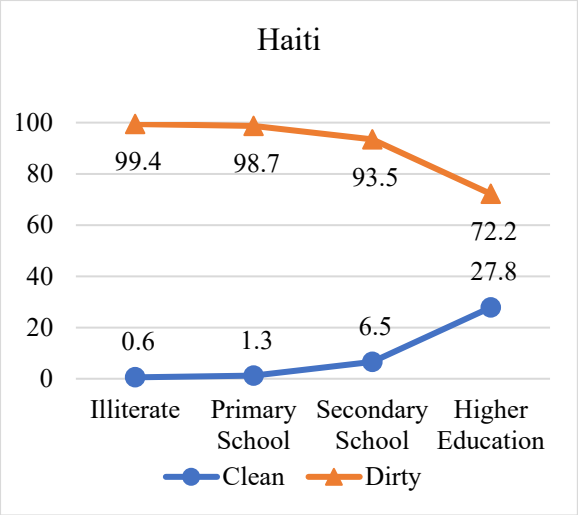

Albania
100
80
60
40
20
0
85.9
75.6
63.0
56.8
43.2
37.0
24.4
14.1
Illiterate
Primary School
Secondary School
Higher Education
Clean
Dirty

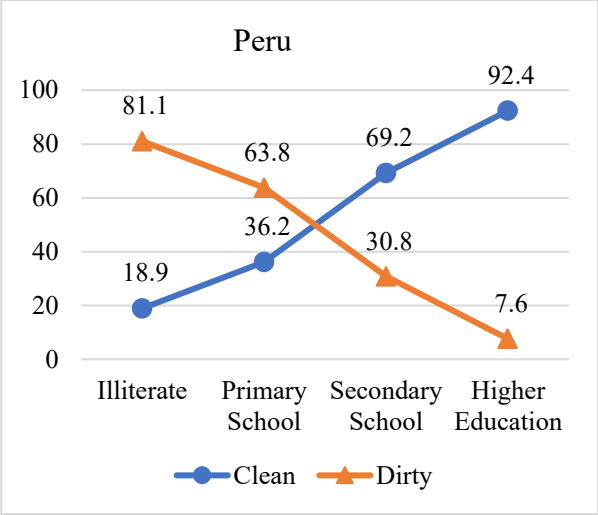

Armenia
100
80
60
40
20
0
87.0
92.6
95.5
97.5
13.0
7.4
4.5
2.5
Illiterate
Primary School
Secondary School
Higher Education
Clean
Dirty

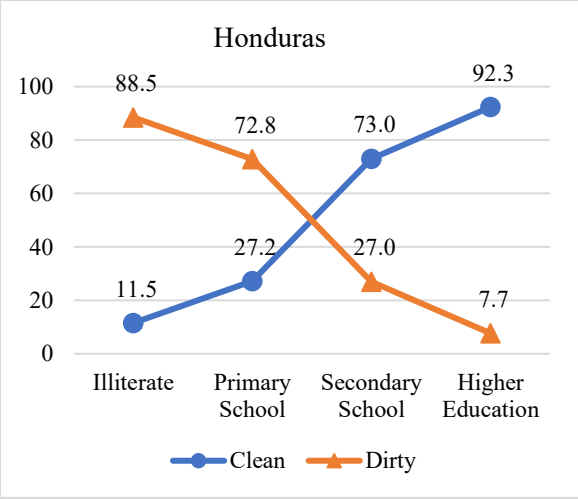

Colombia
100
80
60
40
20
0
58.1
74.7
93.4
98.2
41.9
25.3
6.6
1.8
Illiterate
Primary School
Secondary School
Higher Education
Clean
Dirty


Dominican Republic
100
80
60
40
20
0
59.1
81.2
94.4
98.5
40.9
18.8
5.6
1.5
Illiterate
Primary School
Secondary School
Higher Education
Clean
Dirty

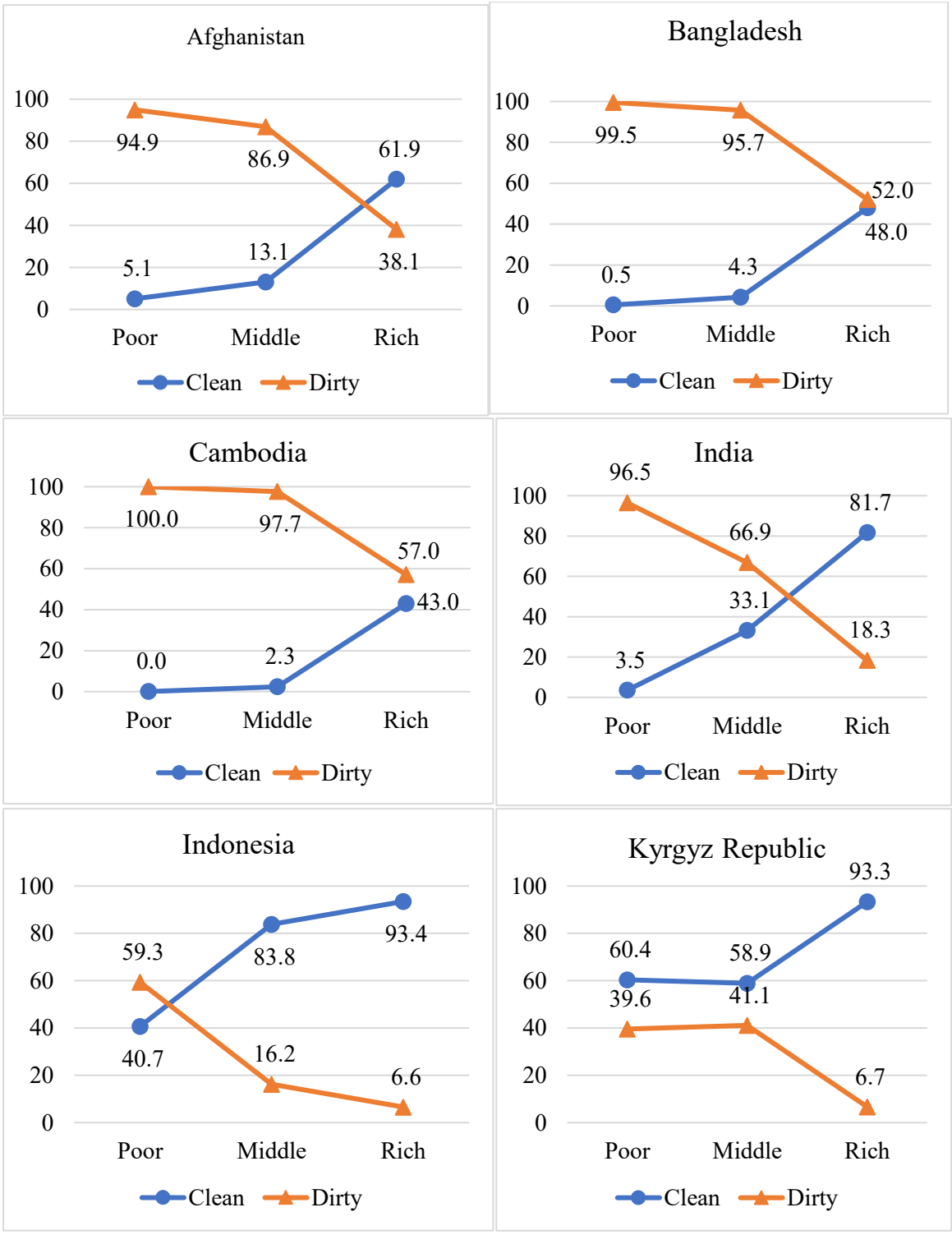

Guatemala
100
80
60
40
20
0
89.3
71.6
72.1
91.1
10.7
28.4
27.9
8.9
Illiterate
Primary School
Secondary School
Higher Education
Clean
Dirty

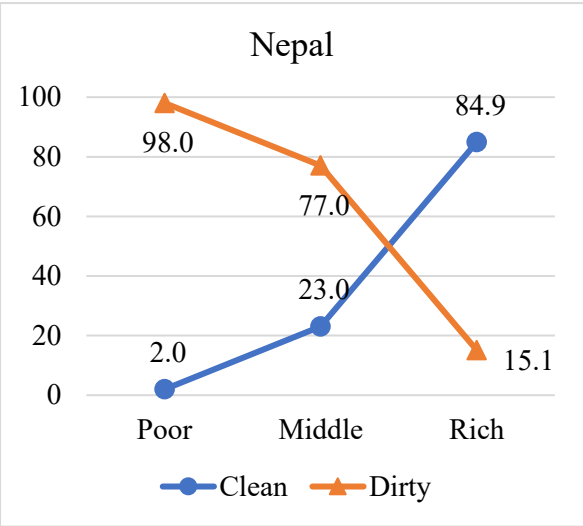

Haiti
100
80
60
40
20
0
99.4
98.7
93.5
72.2
27.8
0.6
1.3
6.5
Illiterate
Primary School
Secondary School
Higher Education
Clean
Dirty

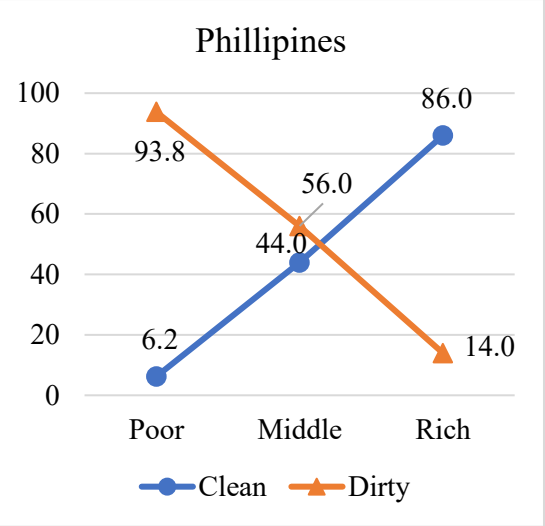

Peru
100
80
60
40
20
0
81.1
63.8
36.2
30.8
18.9
92.4
69.2
7.6
Illiterate
Primary School
Secondary School
Higher Education
Clean
Dirty

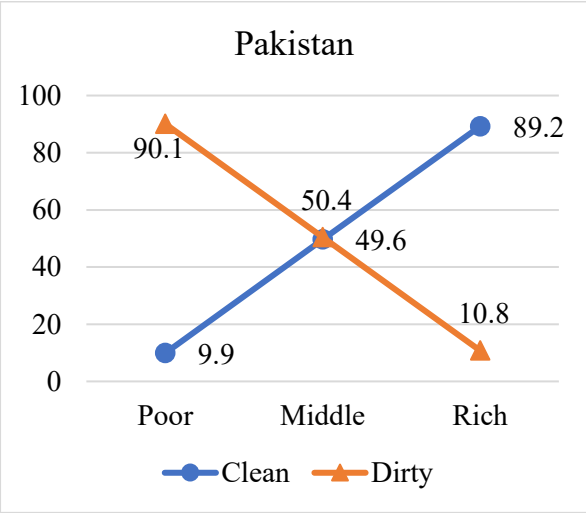

Honduras
100
80
60
40
20
0
88.5
72.8
27.2
27.0
11.5
92.3
73.0
7.7
Illiterate
Primary School
Secondary School
Higher Education
Clean
Dirty

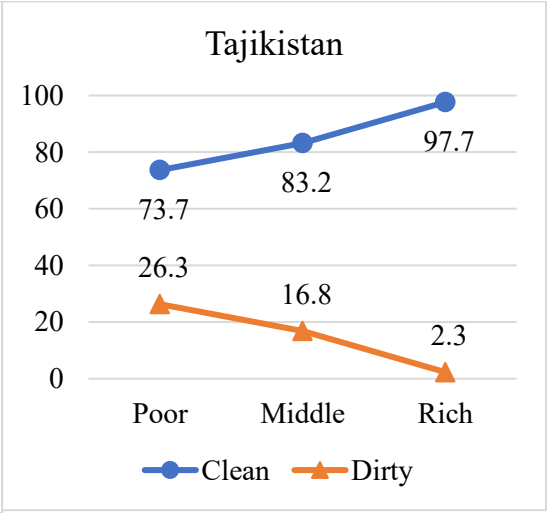
Appendix 3: Economic Status (Wealth) and Clean Cooking Fuel Use

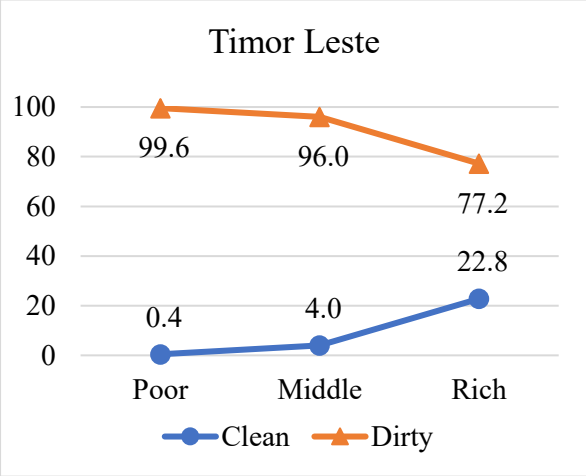


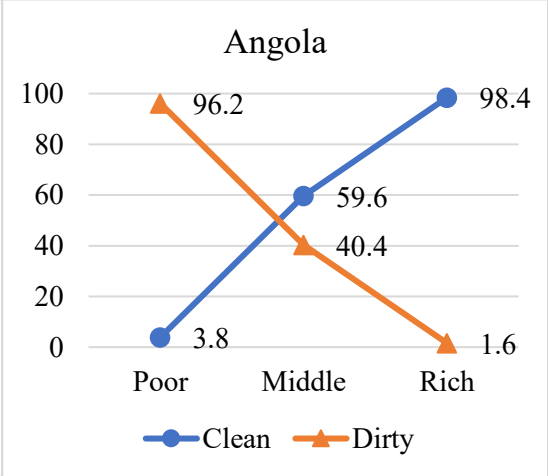

Nepal
100
80
60
40
20
0
98.0
77.0
15.1
2.0
23.0
84.9
Poor
Middle
Rich
Clean
Dirty

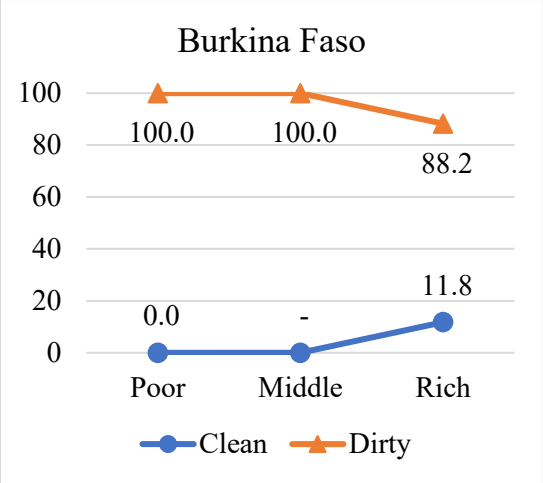

Phillipines
100
80
60
40
20
0
93.8
56.0
14.0
6.2
44.0
86.0
Poor
Middle
Rich
Clean
Dirty

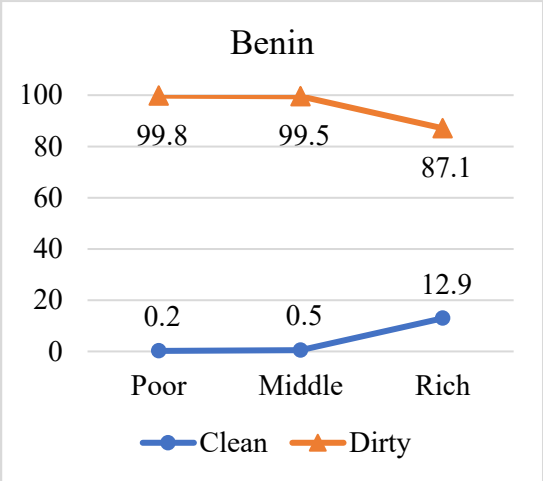

Pakistan
100
80
60
40
20
0
90.1
50.4
10.8
9.9
49.6
89.2
Poor
Middle
Rich
Clean
Dirty

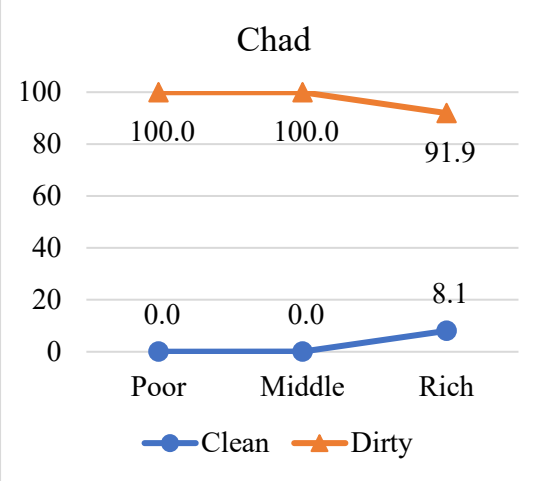

Tajikistan
100
80
60
40
20
0
73.7
83.2
97.7
26.3
16.8
2.3
Poor
Middle
Rich
Clean
Dirty

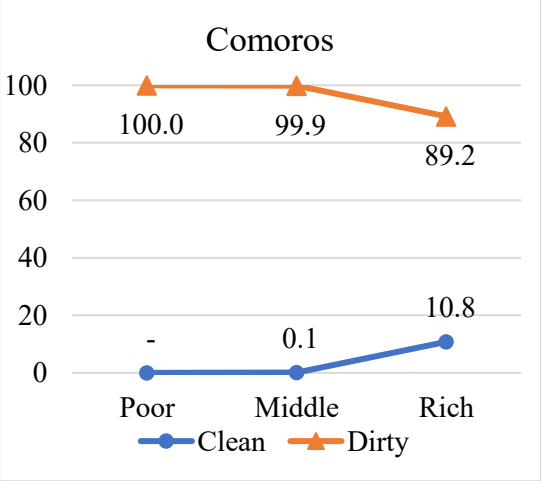

Timor Leste
100
80
60
40
20
0
99.6
96.0
77.2
0.4
4.0
22.8
Poor
Middle
Rich
Clean
Dirty

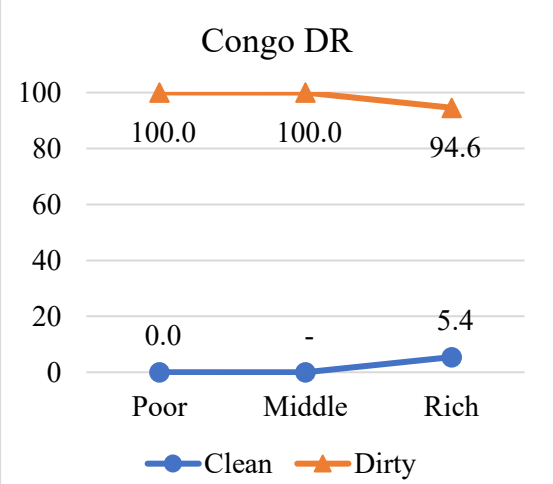

Angola
100
80
60
40
20
0
96.2
59.6
40.4
1.6
3.8
98.4
Poor
Middle
Rich
Clean
Dirty

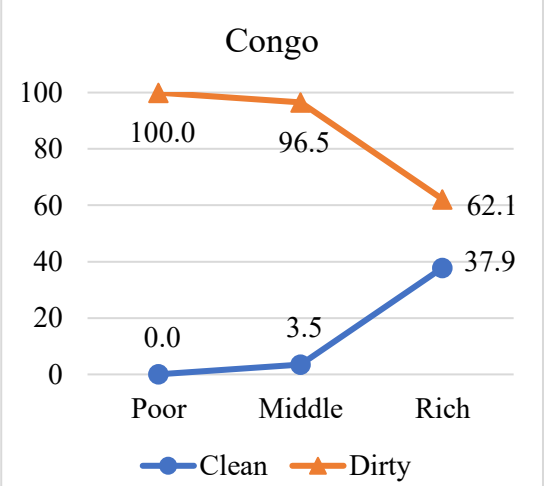

Burkina Faso
100
80
60
40
20
0
100.0
100.0
88.2
0.0
-
11.8
Poor
Middle
Rich
Clean
Dirty

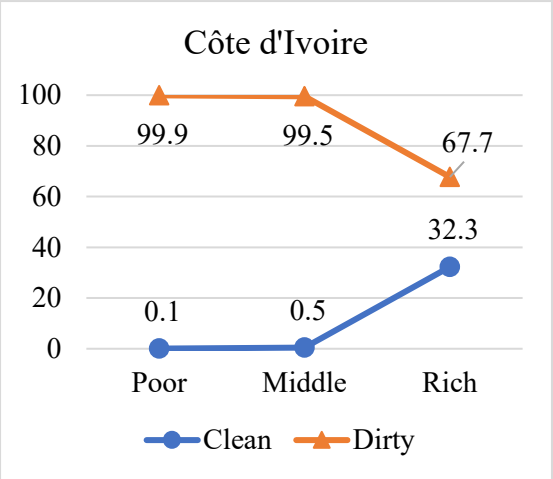

Benin
100
80
60
40
20
0
99.8
99.5
87.1
0.2
0.5
12.9
Poor
Middle
Rich
Clean
Dirty

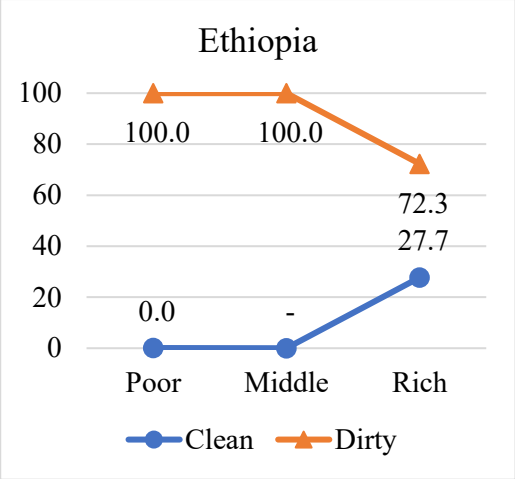

Chad
100
80
60
40
20
0
100.0
100.0
91.9
0.0
0.0
8.1
Poor
Middle
Rich
Clean
Dirty

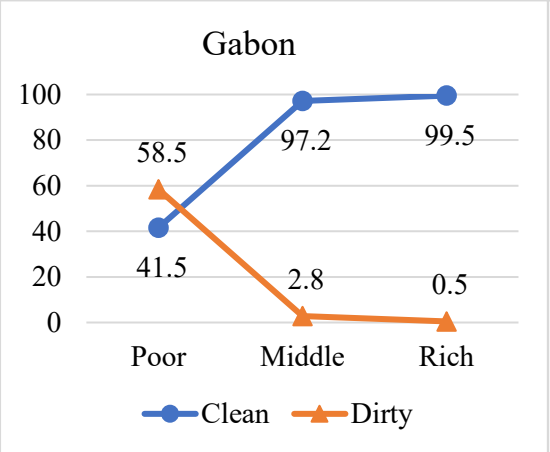

Comoros
100
80
60
40
20
0
100.0
99.9
89.2
-
0.1
10.8
Poor
Middle
Rich
Clean
Dirty

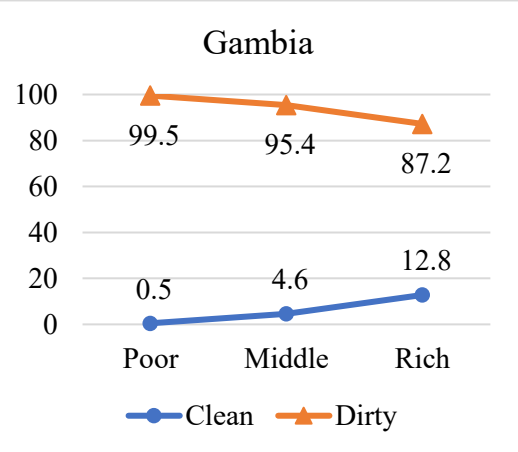

Congo DR
100
80
60
40
20
0
100.0
100.0
94.6
0.0
-
5.4
Poor
Middle
Rich
Clean
Dirty

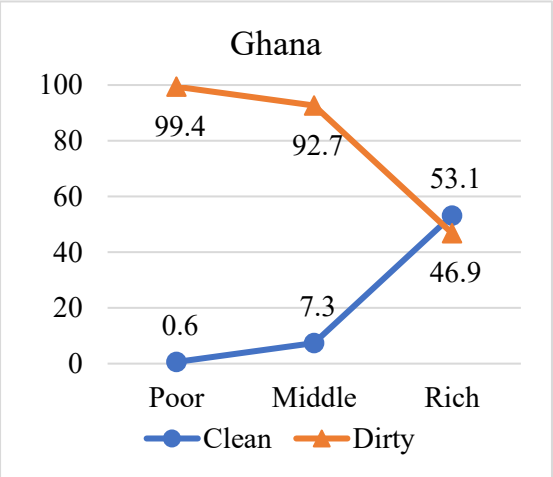

Congo
100
80
60
40
20
0
100.0
96.5
62.1
37.9
0.0
3.5
Poor
Middle
Rich
Clean
Dirty

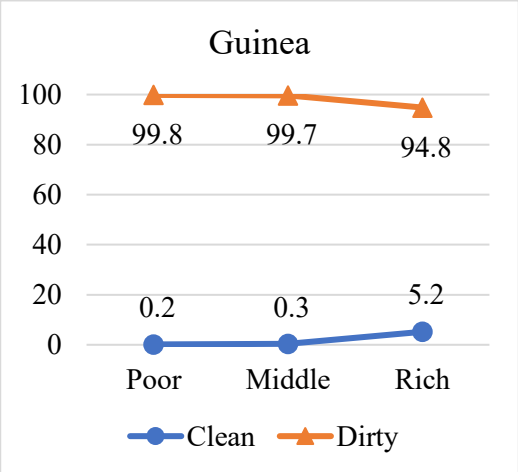

Côte d'Ivoire
100
80
60
40
20
0
99.9
99.5
67.7
32.3
0.1
0.5
Poor
Middle
Rich
Clean
Dirty

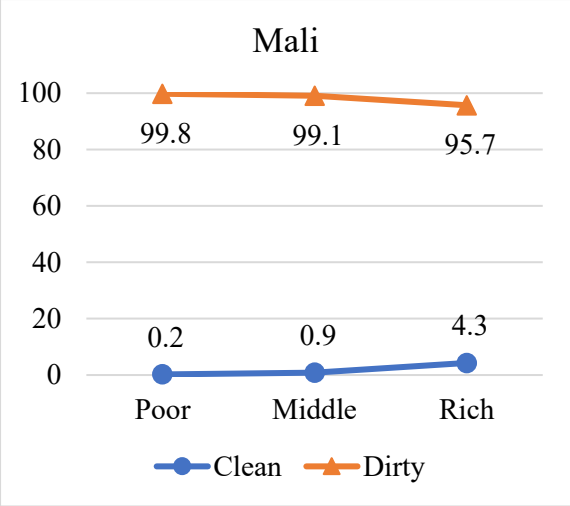

Ethiopia
100
80
60
40
20
0
100.0
100.0
72.3
27.7
0.0
-
Poor
Middle
Rich
Clean
Dirty

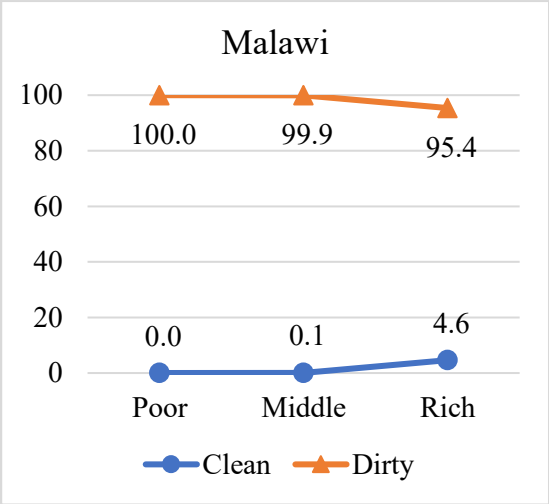

Gabon
100
80
60
40
20
0
58.5
97.2
99.5
41.5
2.8
0.5
Poor
Middle
Rich
Clean
Dirty

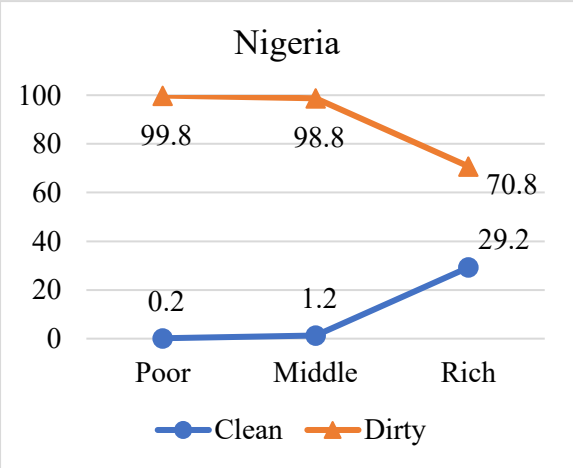

Gambia
100
80
60
40
20
0
99.5
95.4
87.2
0.5
4.6
12.8
Poor
Middle
Rich
Clean
Dirty

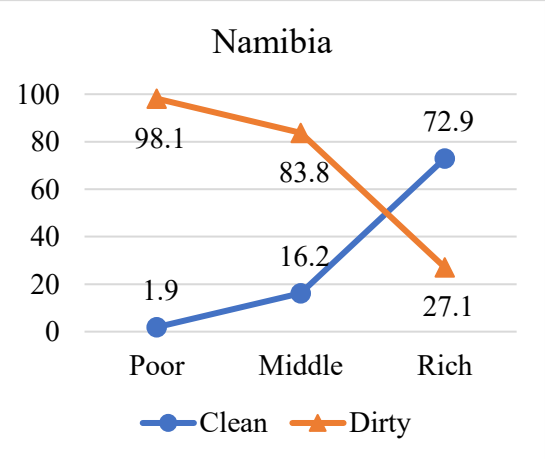

Ghana
100
80
60
40
20
0
99.4
92.7
53.1
46.9
0.6
7.3
Poor
Middle
Rich
Clean
Dirty

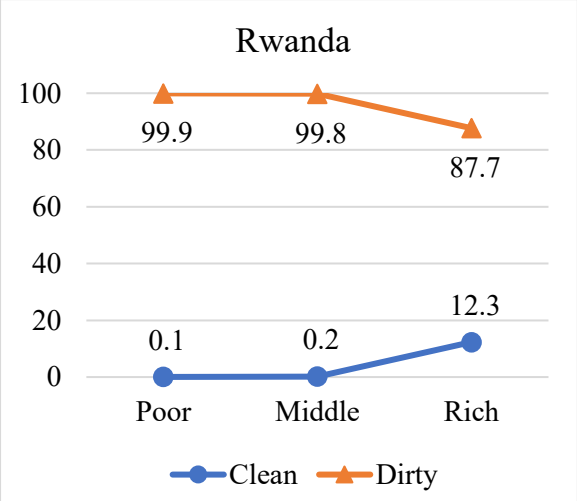

Guinea
100
80
60
40
20
0
99.8
99.7
94.8
0.2
0.3
5.2
Poor
Middle
Rich
Clean
Dirty

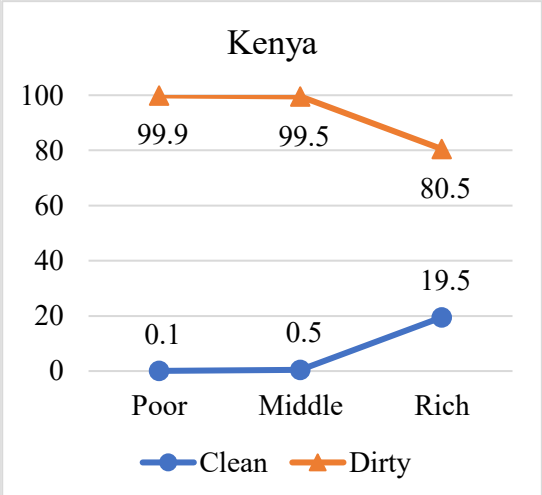

Mali
100
80
60
40
20
0
99.8
99.1
95.7
0.2
0.9
4.3
Poor
Middle
Rich
Clean
Dirty

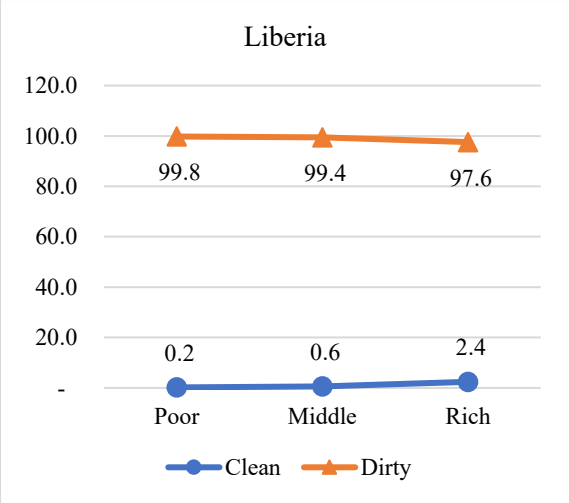

Malawi
100
80
60
40
20
0
100.0
99.9
95.4
0.0
0.1
4.6
Poor
Middle
Rich
Clean
Dirty

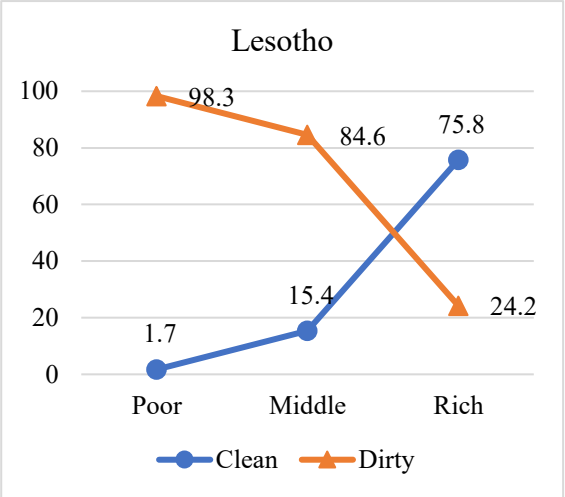

Nigeria
100
80
60
40
20
0
99.8
98.8
70.8
29.2
0.2
1.2
Poor
Middle
Rich
Clean
Dirty

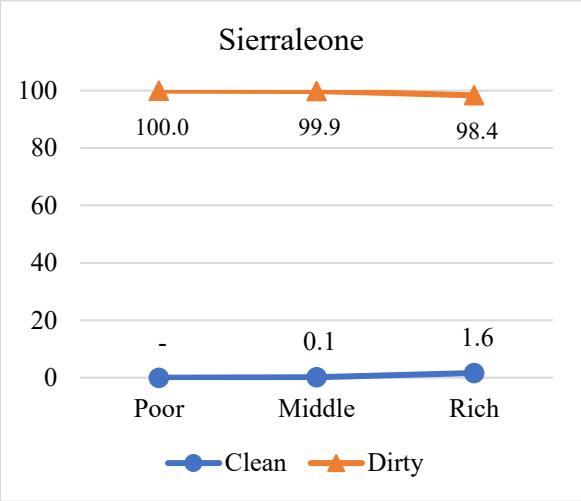

Namibia
100
80
60
40
20
0
98.1
83.8
72.9
16.2
1.9
27.1
Poor
Middle
Rich
Clean
Dirty

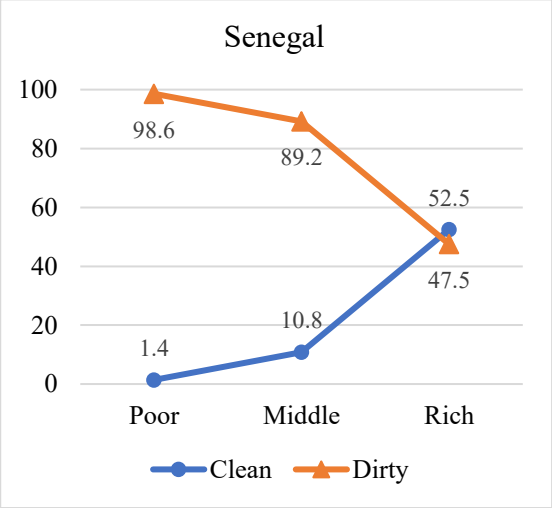

Rwanda
100
80
60
40
20
0
99.9
99.8
87.7
12.3
0.1
0.2
Poor
Middle
Rich
Clean
Dirty

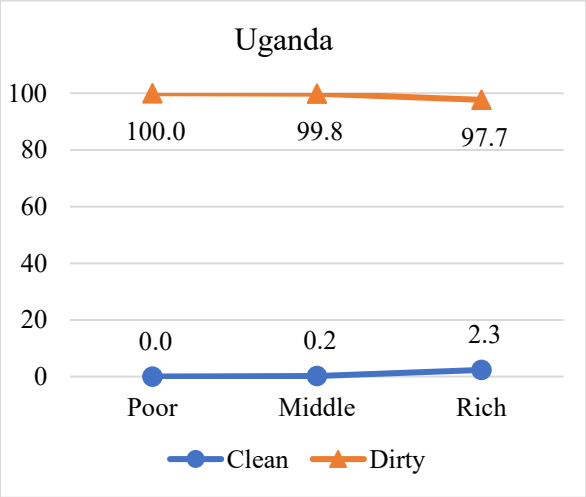

Kenya
100
80
60
40
20
0
99.9
99.5
80.5
19.5
0.1
0.5
Poor
Middle
Rich
Clean
Dirty

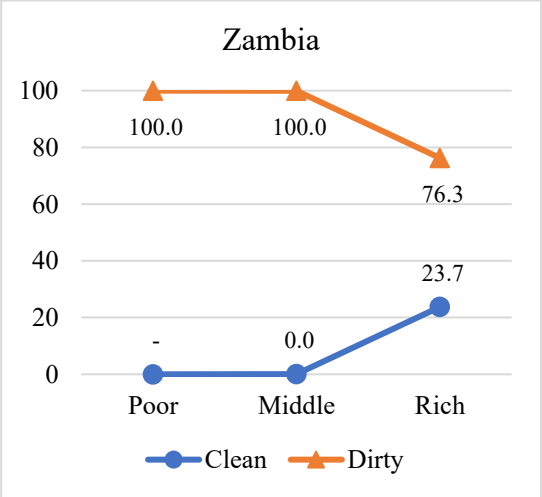

Liberia
120.0
100.0
80.0
60.0
40.0
20.0
-
99.8
99.4
97.6
0.2
0.6
2.4
Poor
Middle
Rich
Clean
Dirty

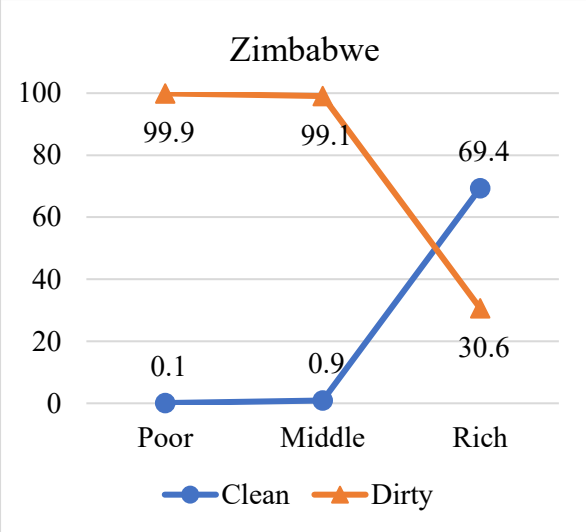

Lesotho
100
80
60
40
20
0
98.3
84.6
75.8
24.2
15.4
1.7
Poor
Middle
Rich
Clean
Dirty

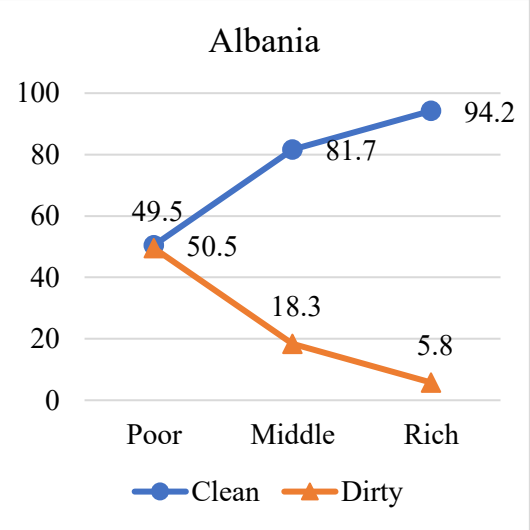

Sierraleone
100
80
60
40
20
0
100.0
99.9
98.4
-
0.1
1.6
Poor
Middle
Rich
Clean
Dirty

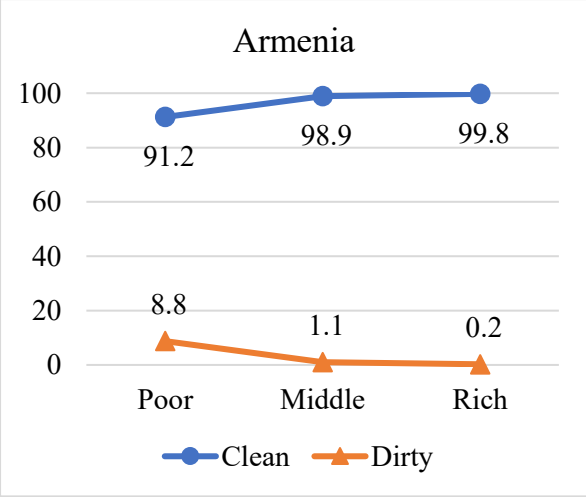

Senegal
100
80
60
40
20
0
98.6
89.2
52.5
47.5
10.8
1.4
Poor
Middle
Rich
Clean
Dirty

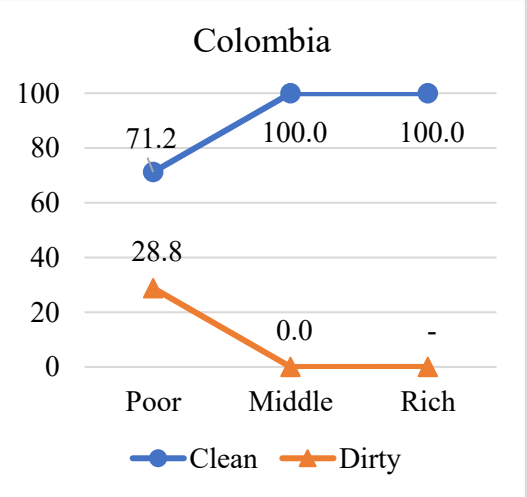

Uganda
100
80
60
40
20
0
100.0
99.8
97.7
0.0
0.2
2.3
Poor
Middle
Rich
Clean
Dirty

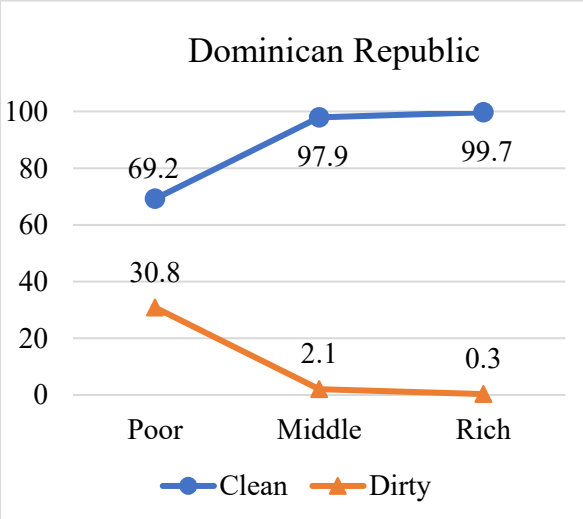

Zambia
100
80
60
40
20
0
100.0
100.0
76.3
23.7
-
0.0
Poor
Middle
Rich
Clean
Dirty

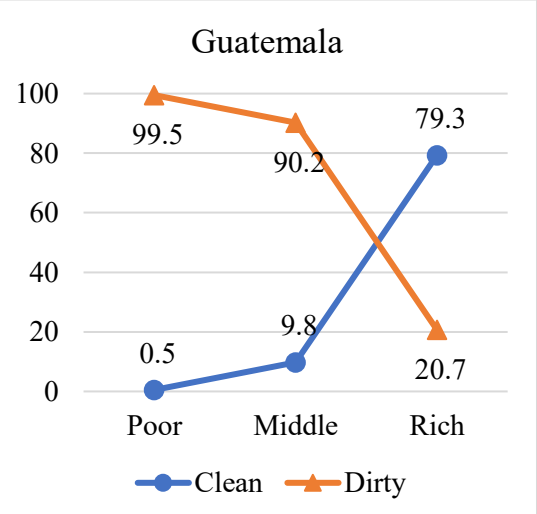

Zimbabwe
100
80
60
40
20
0
99.9
99.1
69.4
0.1
0.9
30.6
Poor
Middle
Rich
Clean
Dirty

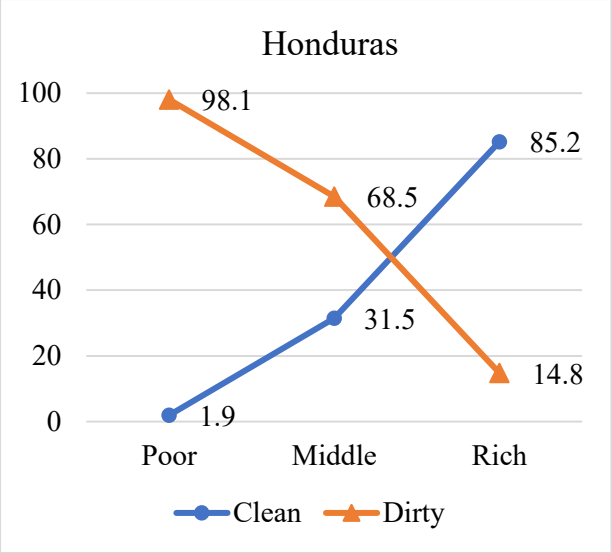

Albania
100
80
60
40
20
0
94.2
81.7
49.5
50.5
18.3
5.8
Poor
Middle
Rich
Clean
Dirty

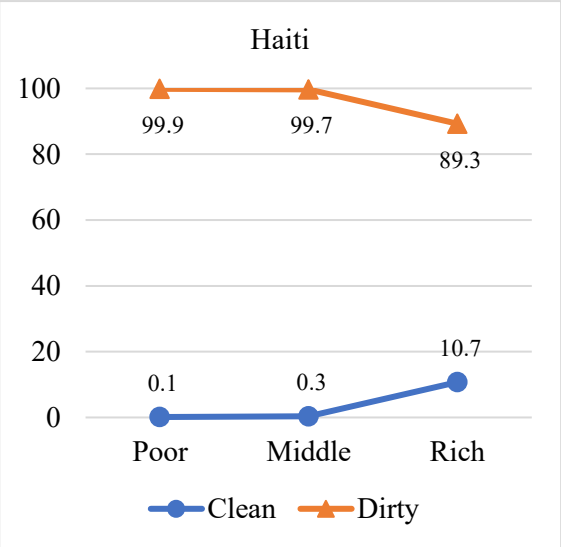

Armenia
100
80
60
40
20
0
91.2
98.9
99.8
8.8
1.1
0.2
Poor
Middle
Rich
Clean
Dirty

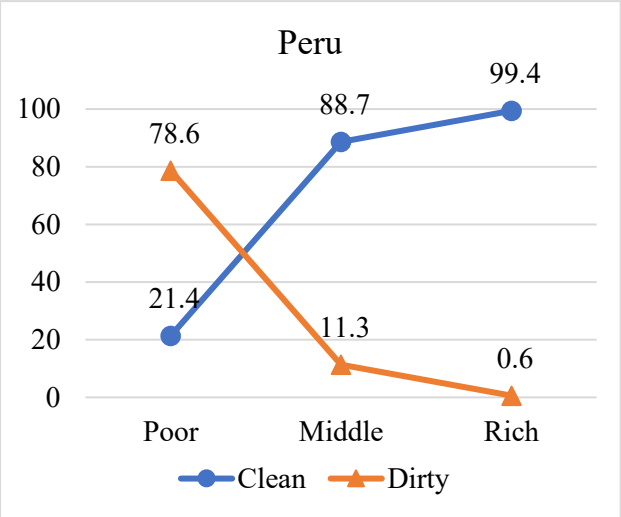

Colombia
100
80
60
40
20
0
71.2
100.0
100.0
28.8
0.0
-
Poor
Middle
Rich
Clean
Dirty


Dominican Republic
100
80
60
40
20
0
69.2
97.9
99.7
30.8
2.1
0.3
Poor
Middle
Rich
Clean
Dirty

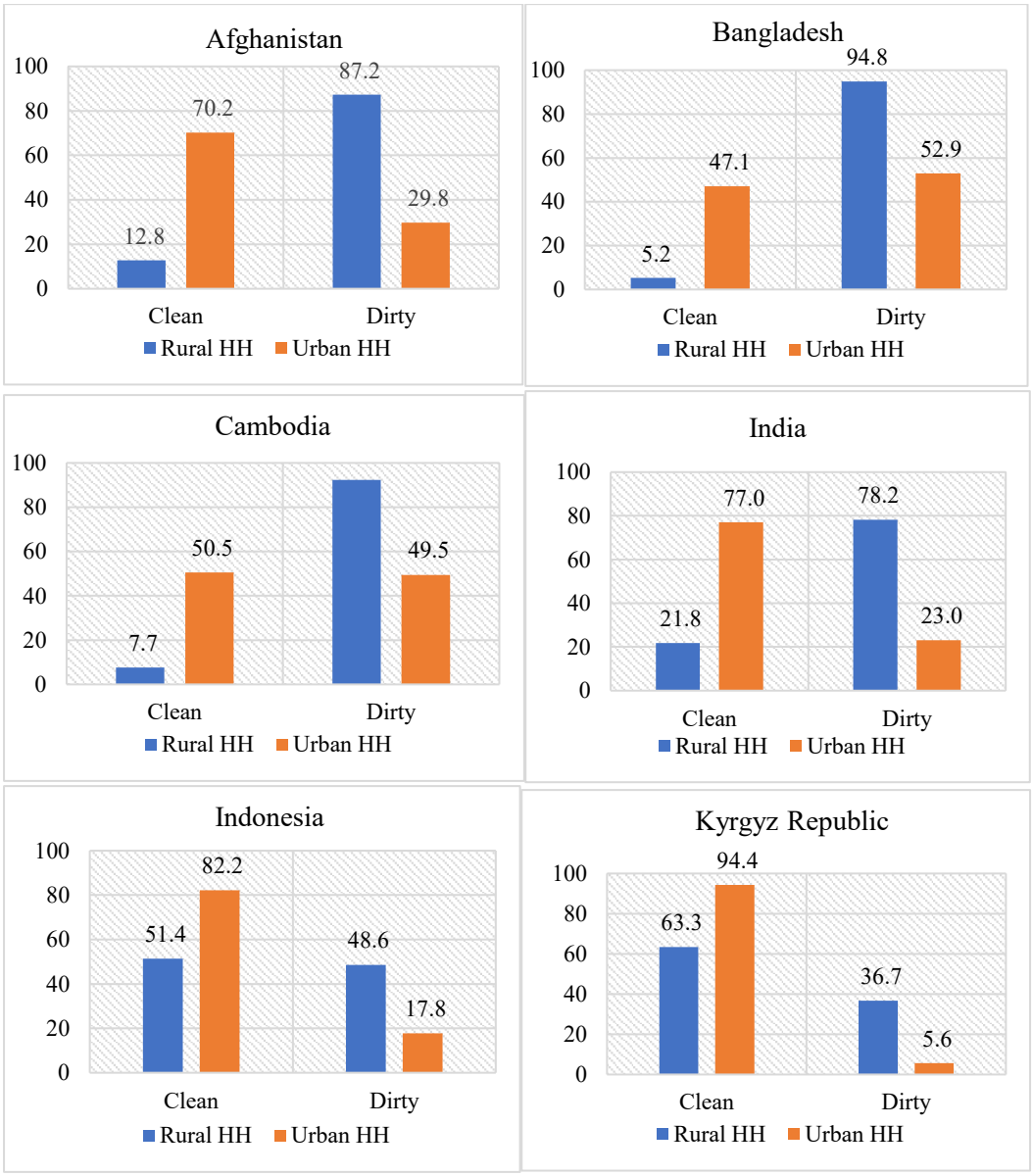

Guatemala
100
80
60
40
20
0
99.5
90.2
79.3
9.8
0.5
20.7
Poor
Middle
Rich
Clean
Dirty

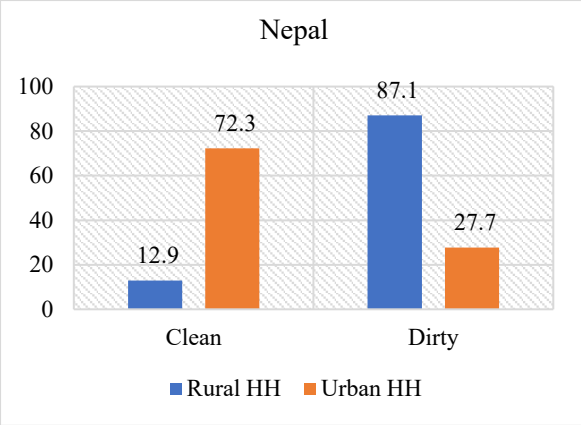

Honduras
100
80
60
40
20
0
98.1
68.5
14.8
85.2
31.5
1.9
Poor
Middle
Rich
Clean
Dirty

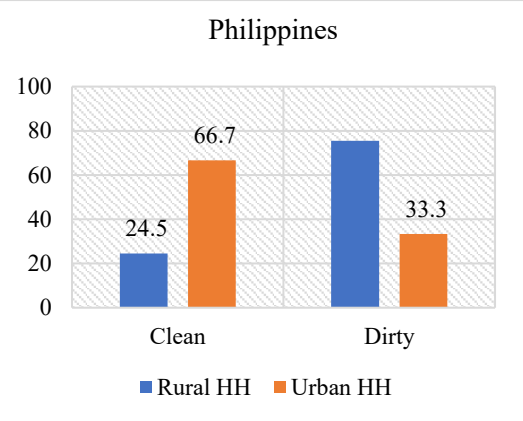

Haiti
100
80
60
40
20
0
99.9
99.7
89.3
10.7
0.1
0.3
Poor
Middle
Rich
Clean
Dirty

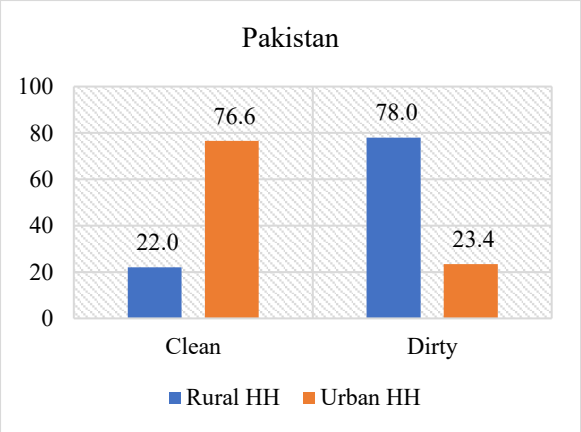

Peru
100
80
60
40
20
0
99.4
88.7
78.6
21.4
11.3
0.6
Poor
Middle
Rich
Clean
Dirty

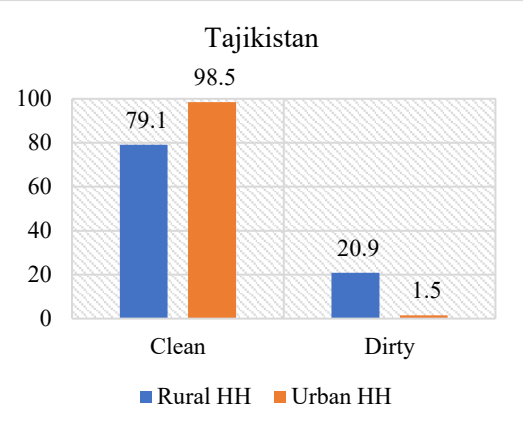
Appendix 4: Location (Urban versus Rural) and Clean Cooking Fuel

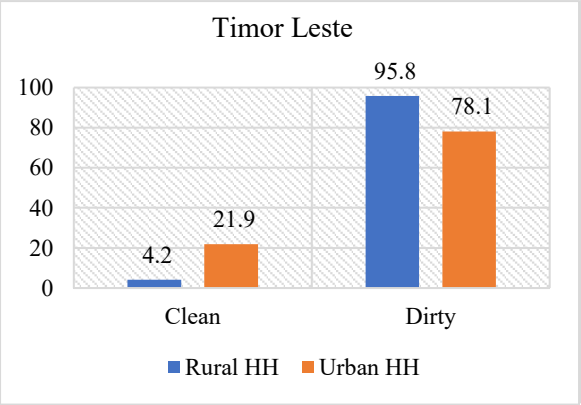



Nepal
100
80
60
40
20
0
12.9
72.3
87.1
27.7
Clean
Dirty
Rural HH
Urban HH


Philippines
100
80
60
40
20
0
24.5
66.7
33.3
Clean
Dirty
Rural HH
Urban HH


Pakistan
100
80
60
40
20
0
22.0
76.6
78.0
23.4
Clean
Dirty
Rural HH
Urban HH


Tajikistan
100
80
60
40
20
0
79.1
98.5
20.9
1.5
Clean
Dirty
Rural HH
Urban HH


Timor Leste
100
80
60
40
20
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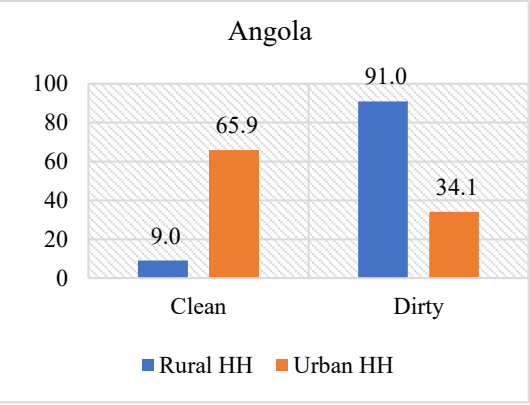
4.2
21.9
95.8
78.1
Clean
Dirty
Rural HH
Urban HH


Angola
100
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60
40
20
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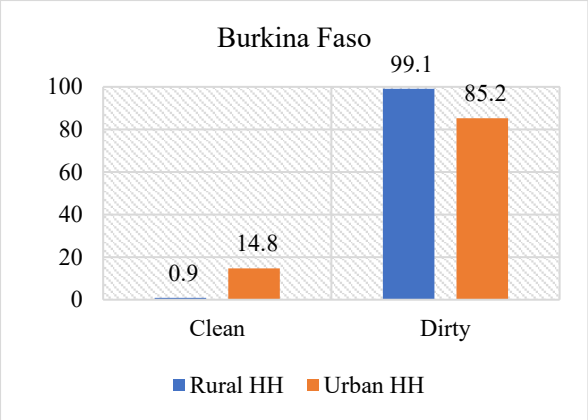
65.9
91.0
34.1
Clean
Dirty
Rural HH
Urban HH


Burkina Faso
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80
60
40
20
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0.9
14.8
99.1
85.2
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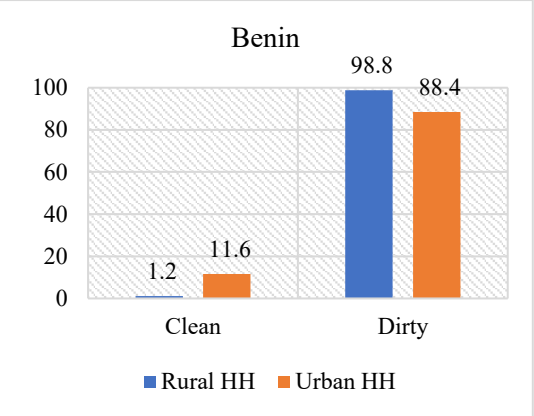
Dirty
Rural HH
Urban HH


Benin
100
80
60
40
20
0
1.2
11.6
98.8
88.4
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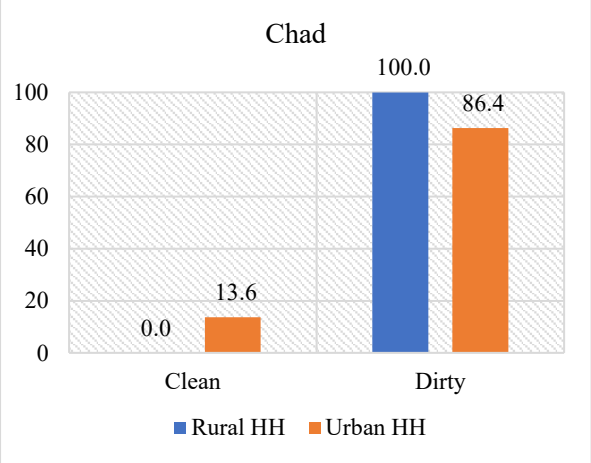
Dirty
Rural HH
Urban HH


Chad
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60
40
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0.0
13.6
100.0
86.4
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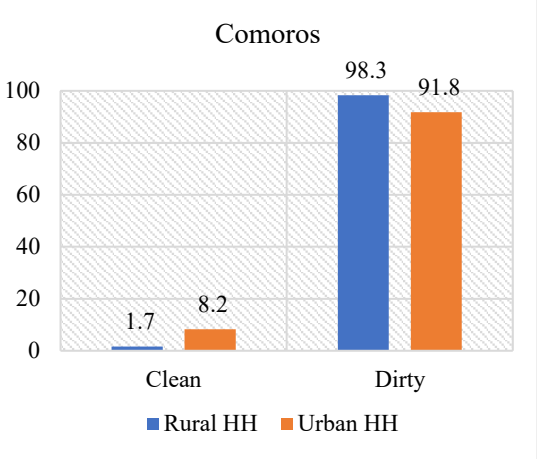
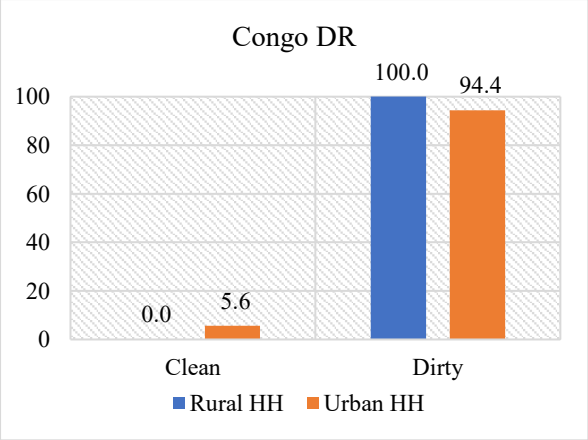
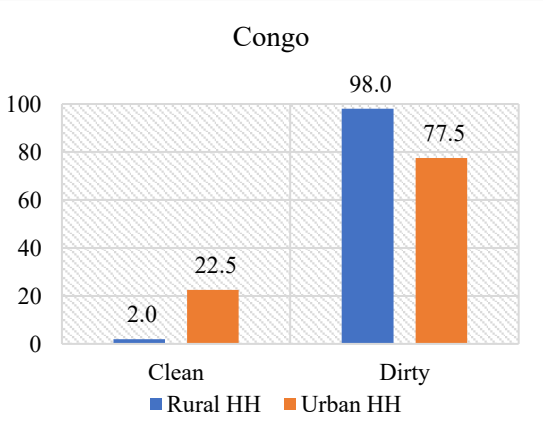
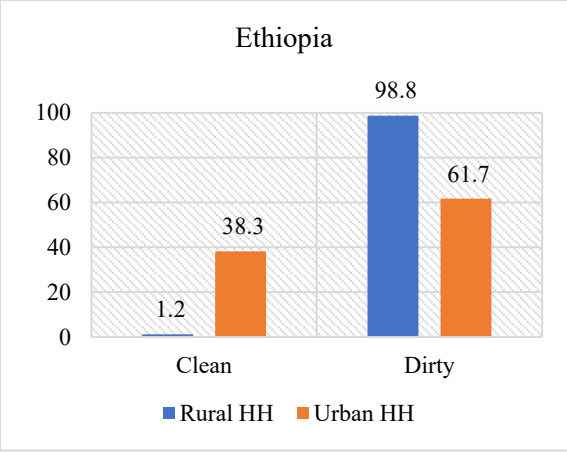
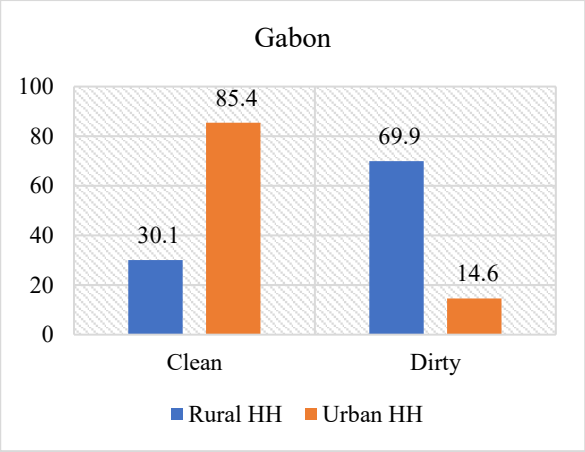
Dirty
Rural HH
Urban HH

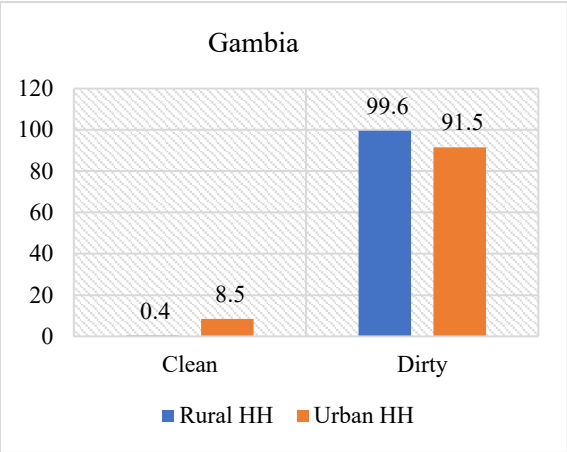

Comoros
100
80
60
40
20
0
1.7
8.2
98.3
91.8
Clean
Dirty
Rural HH
Urban HH

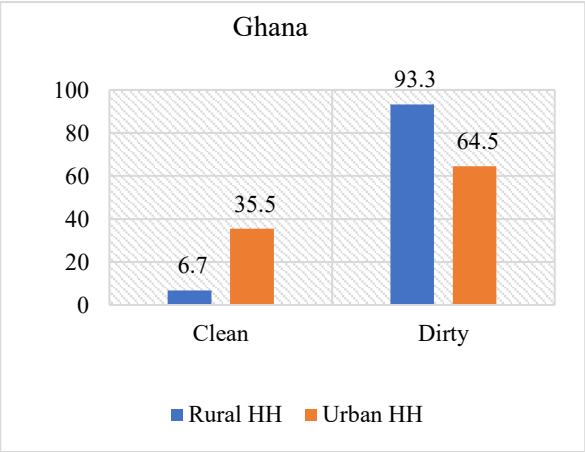

Congo DR
100
80
60
40
20
0
0.0
5.6
100.0
94.4
Clean
Dirty
Rural HH
Urban HH

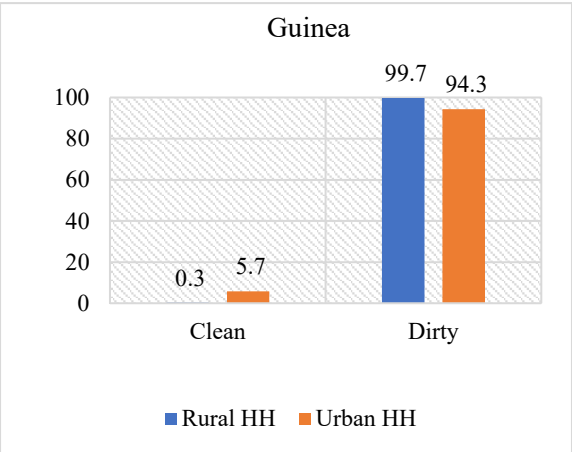

Congo
100
80
60
40
20
0
2.0
22.5
98.0
77.5
Clean
Dirty
Rural HH
Urban HH

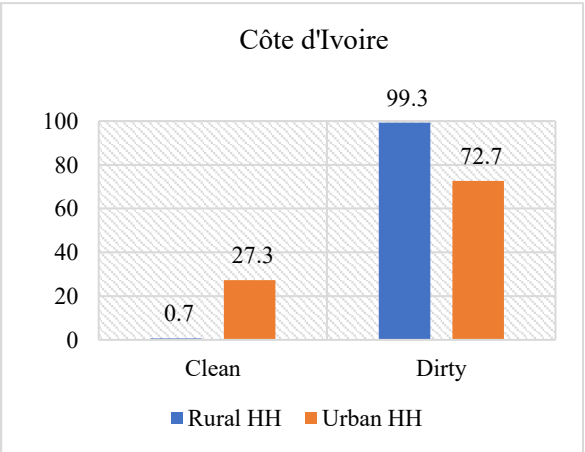

Ethiopia
100
80
60
40
20
0
1.2
38.3
98.8
61.7
Clean
Dirty
Rural HH
Urban HH

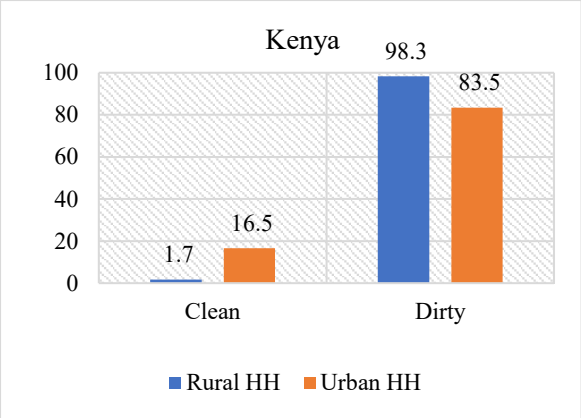

Gabon
100
80
60
40
20
0
30.1
85.4
69.9
14.6
Clean
Dirty
Rural HH
Urban HH

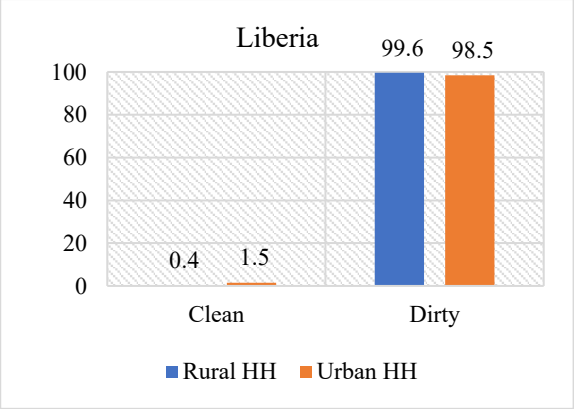

Gambia
120
100
80
60
40
20
0
0.4
8.5
99.6
91.5
Clean
Dirty
Rural HH
Urban HH

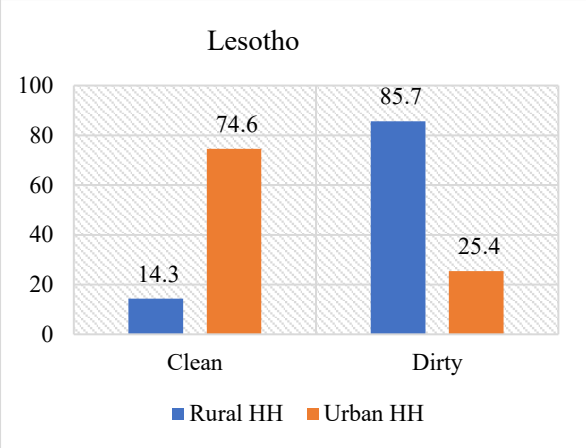

Ghana
100
80
60
40
20
0
6.7
35.5
93.3
64.5
Clean
Dirty
Rural HH
Urban HH

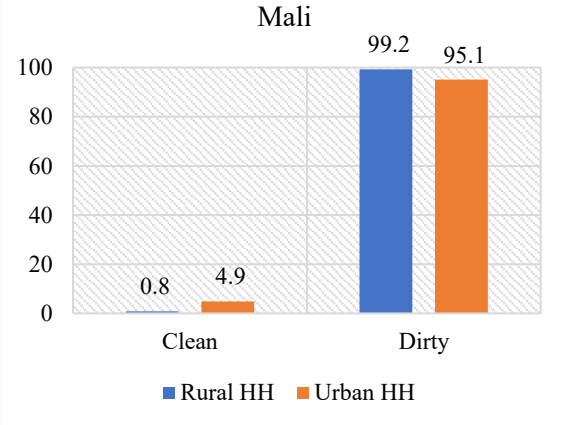

Guinea
100
80
60
40
20
0
0.3
5.7
99.7
94.3
Clean
Dirty
Rural HH
Urban HH

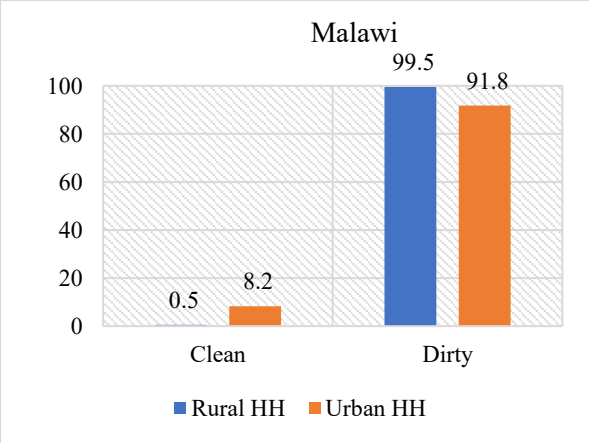

Côte d'Ivoire
100
80
60
40
20
0
0.7
27.3
99.3
72.7
Clean
Dirty
Rural HH
Urban HH

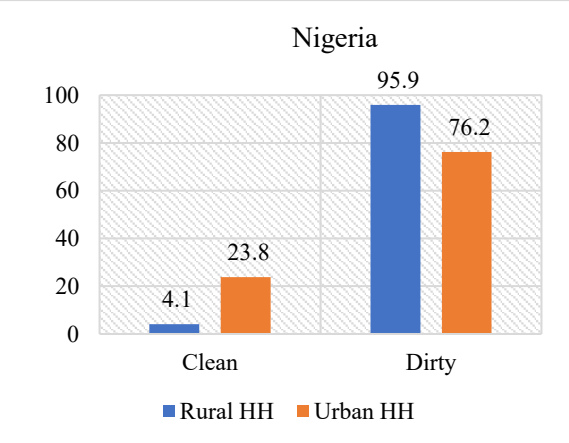

Kenya
100
80
60
40
20
0
1.7
16.5
98.3
83.5
Clean
Dirty
Rural HH
Urban HH

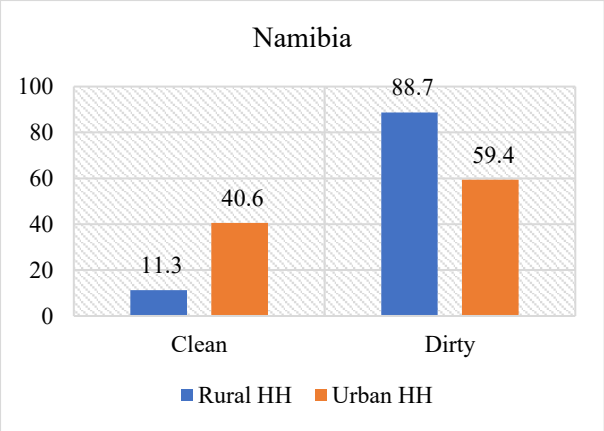

Liberia
100
80
60
40
20
0
0.4
1.5
99.6
98.5
Clean
Dirty
Rural HH
Urban HH

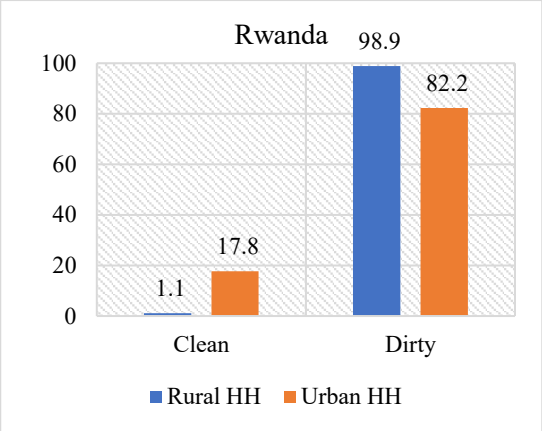

Lesotho
100
80
60
40
20
0
14.3
74.6
85.7
25.4
Clean
Dirty
Rural HH
Urban HH

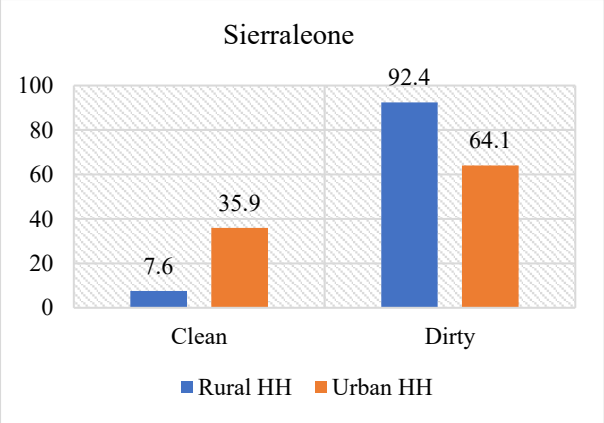

Mali
100
80
60
40
20
0
0.8
4.9
99.2
95.1
Clean
Dirty
Rural HH
Urban HH

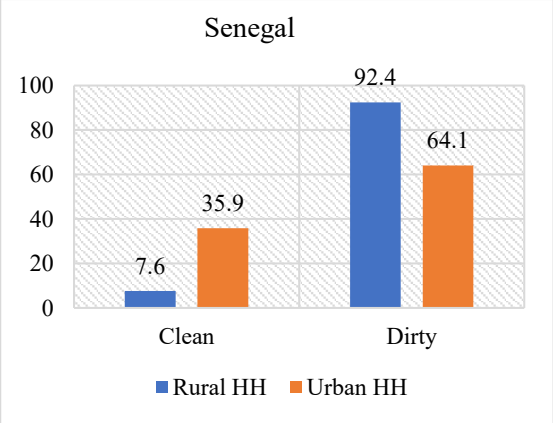

Malawi
100
80
60
40
20
0
0.5
8.2
99.5
91.8
Clean
Dirty
Rural HH
Urban HH

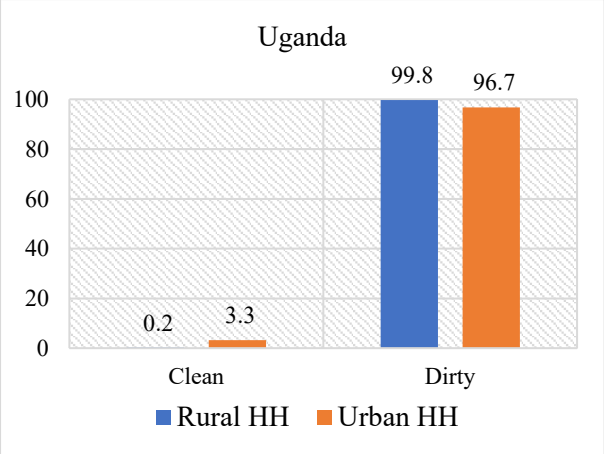

Nigeria
100
80
60
40
20
0
4.1
23.8
95.9
76.2
Clean
Dirty
Rural HH
Urban HH

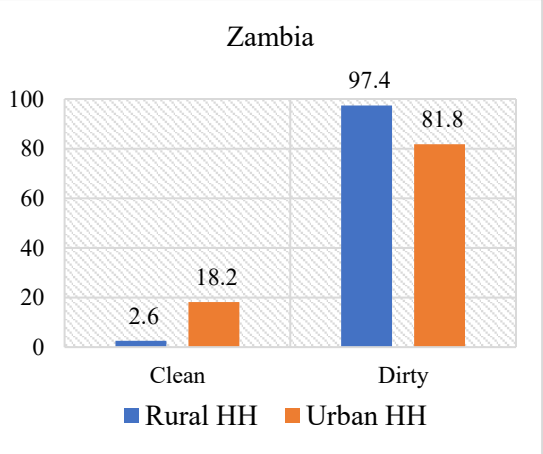

Namibia
100
80
60
40
20
0
11.3
40.6
88.7
59.4
Clean
Dirty
Rural HH
Urban HH

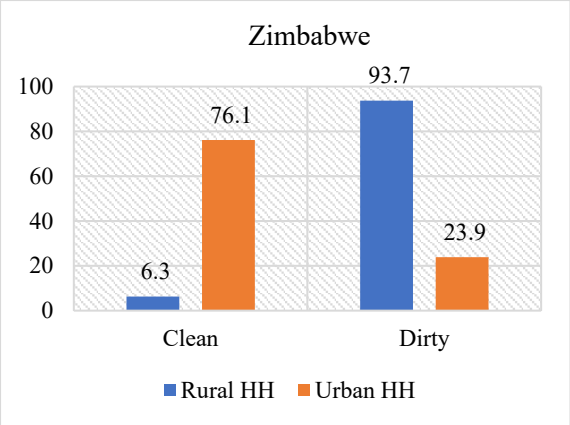

Rwanda
100
80
60
40
20
0
1.1
17.8
98.9
82.2
Clean
Dirty
Rural HH
Urban HH

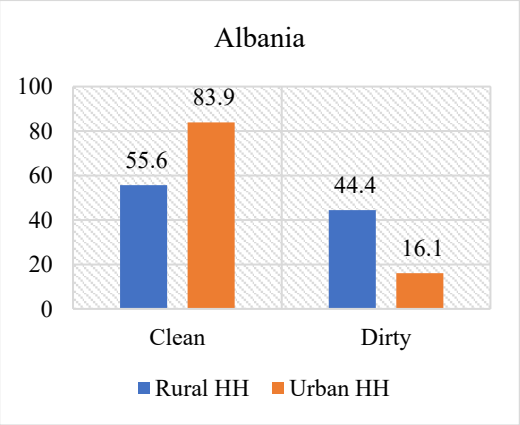

Sierraleone
100
80
60
40
20
0
7.6
35.9
92.4
64.1
Clean
Dirty
Rural HH
Urban HH

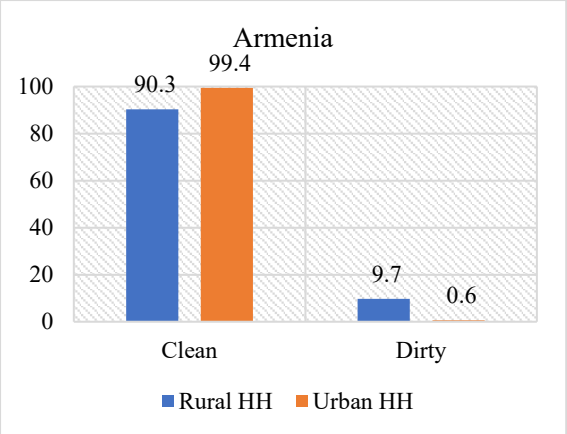

Senegal
100
80
60
40
20
0
7.6
35.9
92.4
64.1
Clean
Dirty
Rural HH
Urban HH

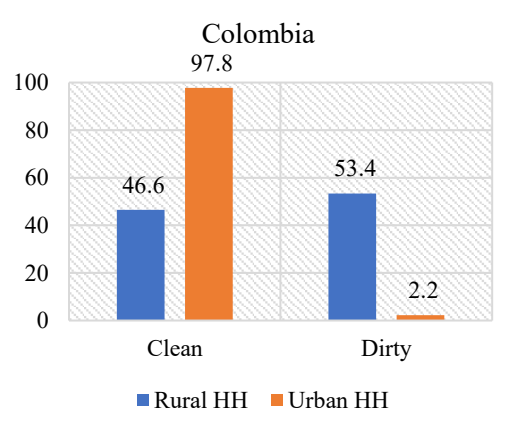

Uganda
100
80
60
40
20
0
0.2
3.3
99.8
96.7
Clean
Dirty
Rural HH
Urban HH

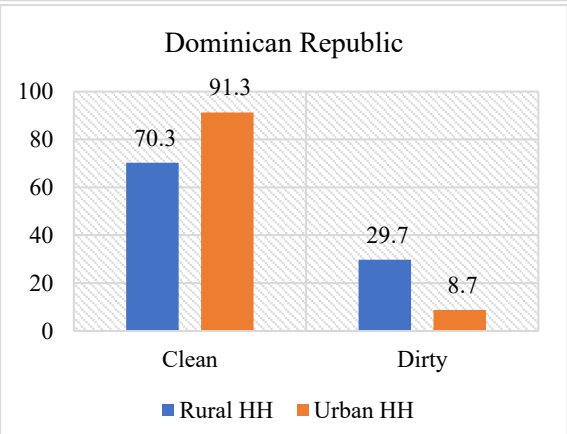

Zambia
100
80
60
40
20
0
2.6
18.2
97.4
81.8
Clean
Dirty
Rural HH
Urban HH

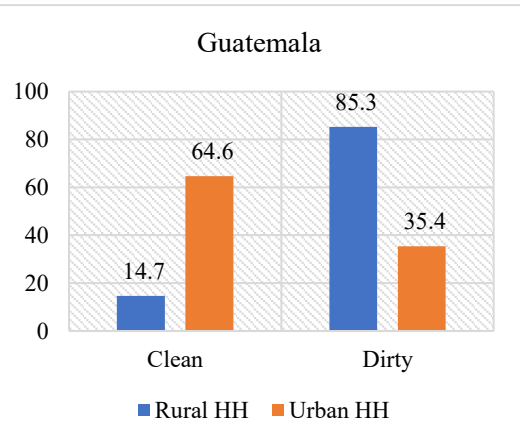

Zimbabwe
100
80
60
40
20
0
6.3
76.1
93.7
23.9
Clean
Dirty
Rural HH
Urban HH

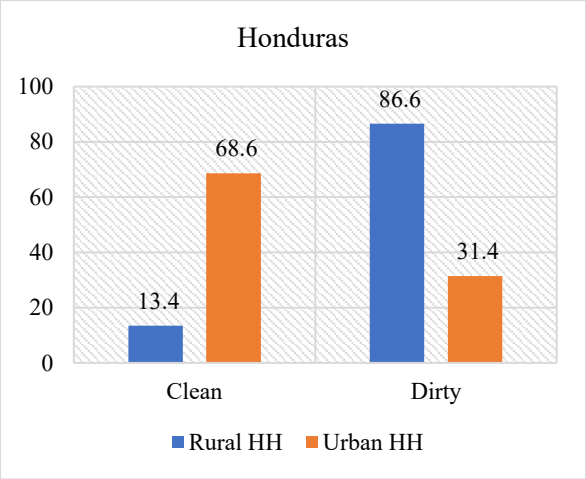

Albania
100
80
60
40
20
0
55.6
83.9
44.4
16.1
Clean
Dirty
Rural HH
Urban HH

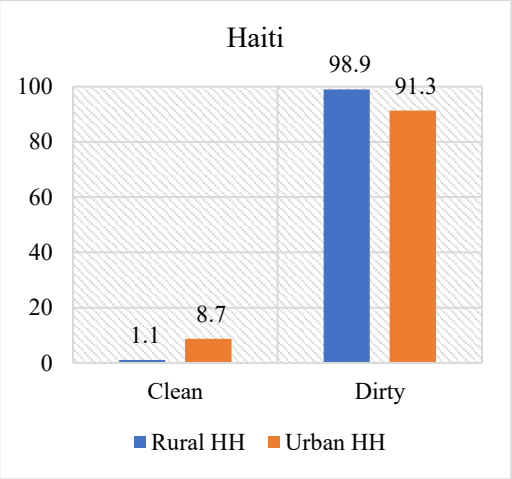

Armenia
100
80
60
40
20
0
90.3
99.4
9.7
0.6
Clean
Dirty
Rural HH
Urban HH

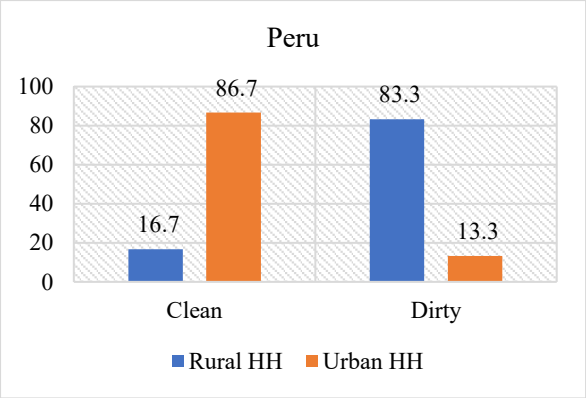

Colombia
100
80
60
40
20
0
46.6
97.8
53.4
2.2
Clean
Dirty
Rural HH
Urban HH


Dominican Republic
100
80
60
40
20
0
70.3
91.3
29.7
8.7
Clean
Dirty
Rural HH
Urban HH


Guatemala
100
80
60
40
20
0
14.7
64.6
85.3
35.4
Clean
Dirty
Rural HH
Urban HH


Honduras
100
80
60
40
20
0
13.4
68.6
86.6
31.4
Clean
Dirty
Rural HH
Urban HH


Haiti
100
80
60
40
20
0
1.1
8.7
98.9
91.3
Clean
Dirty
Rural HH
Urban HH


Peru
100
80
60
40
20
0
16.7
86.7
83.3
13.3
Clean
Dirty
Rural HH
Urban HH

Appendix 5: Factors influencing the primary clean cooking fuel choice using logistics regression by country.

Appendix 5, Table 1: Factors influencing the primary clean cooking fuel choice using logistics regression.

	Afghanistan 2015		Bangladesh 2017		Cambodia 2014		India 2016	
Demographic								
Female headed[1a] household	0.0153		-0.0119		-0.0030		0.0229	***
	(0.016)		(0.006)		(0.006)		(0.001)	
Age of household head	0.0001		-0.0010	***	-0.0018	***	-0.0001	***
	(0.000)		(0.000)		(0.000)		(0.000)	
Household size	-0.0025	***	-0.0093	***	-0.0059	***	-0.0150	***
	(0.001)		(0.001)		(0.001)		(0.000)	
Wealth: Economic status								
Middle: Wealth[1b]	0.1228	***	0.0604	***	0.0433	***	0.2612	***
	(0.007)		(0.006)		(0.005)		(0.001)	
Middle: Rich[1b]	0.3913	***	0.2933	***	0.3177	***	0.6601	***
	(0.008)		(0.006)		(0.006)		(0.002)	
Level of education								
Primary level of education[1c]	0.0400	***	0.0012		0.0276	***	0.0159	***
	(0.006)		(0.006)		(0.009)		(0.001)	
Secondary level of education[1c]	0.0517	***	0.0238	***	0.0645	***	0.0445	***
	(0.005)		(0.006)		(0.009)		(0.001)	
Tertiary level of education[1c]	0.0951	***	0.0928	***	0.1286	***	0.1036	***
	(0.008)		(0.007)		(0.013)		(0.002)	
Location								
Rural household[1d]	-0.1975	***	-0.1555	***	-0.1079	***	-0.1498	***
	(0.004)		(0.003)		(0.005)		(0.001)	
Number of obs	23,374		19,402		15,775		597,320	
LR chi2(54)	12,896		10,538		7,217		431,845	
Prob > chi2	0.000		0.000		0.000		0.000	
Pseudo R2	0.4599		0.5357		0.464		0.5448	
Log likelihood	-7573		-4567		-4169		-180443	

Note: [1]Dummy variable, [a]Basecategory: male headed household; [b]Baseategory: Poor household; [c]Basecategory: Illiterate household head; [d]Basecategory: Urban household

Appendix 5, Table 2: Factors influencing the primary clean cooking fuel choice using logistics regression.

	Indonesia 2017		Kyrgyzstan 2012		Nepal 2016		Philippines 2017	
Demographic								
Female headed household[1a]	0.0113	***	0.0130		0.0145	**	0.0322	***
	(0.004)		(0.010)		(0.007)		(0.005)	
Age of household head	-0.0021	***	-0.0003		-0.0005	**	-0.0011	***
	(0.000)		(0.000)		(0.000)		(0.000)	
Household size	-0.0043	***	-0.0192	***	-0.0132	***	-0.0134	***
	(0.001)		(0.002)		(0.001)		(0.001)	
Wealth: Economic status								
Middle: Wealth[1b]	0.2765	***	0.0599	***	0.1745	***	0.2592	***
	(0.005)		(0.010)		(0.009)		(0.007)	
Middle: Rich[1b]	0.3475	***	0.1489	***	0.6239	***	0.6094	***
	(0.005)		(0.012)		(0.010)		(0.008)	
Level of education								
Primary level of education[1c]	0.0476	***	0.0458		0.0221	***	0.0352	**
	(0.006)		(0.033)		(0.008)		(0.018)	
Secondary level of education[1c]	0.0848	***	0.0523	**	0.0466	***	0.0634	***
	(0.006)		(0.026)		(0.008)		(0.018)	
Tertiary level of education[1c]	0.0597	***	0.0973	***	0.1042	***	0.1141	***
	(0.009)		(0.027)		(0.010)		(0.018)	
Location								
Rural household[1d]	-0.0811	***	-0.1582	***	-0.0770	***	-0.1079	***
	(0.003)		(0.014)		(0.006)		(0.004)	
Number of obs	47,312		8,032		11,001		27,327	
LR chi2(54)	28,661		3,672		7,166		20,641	
Prob > chi2	0.000		0.000		0.000		0.000	
Pseudo R2	0.4779		0.4007		0.5349		0.5675	
Log likelihood	-15656		-2746		-3116		-7865	

Note: [1]Dummy variable, [a]Basecategory: male headed household; [b]Baseategory: Poor household; [c]Basecategory: Illiterate household head; [d]Basecategory: Urban household

Appendix 5, Table 3: Factors influencing the primary clean cooking fuel choice using logistics regression.

	Pakistan 2017		Tajikistan 2017		Timor Leste 2016	
Demographic						
Female headed household[1a]	0.0076		0.0039		0.0089	
	(0.009)		(0.012)		(0.007)	
Age of household head	-0.0005	**	0.0000		-0.0002	
	(0.000)		(0.000)		(0.000)	
Household size	-0.0061	***	-0.0147	***	-0.0101	***
	(0.001)		(0.001)		(0.001)	
Wealth: Economic status						
Middle: Wealth[1b]	0.3147	***	0.1088	***	0.0390	***
	(0.011)		(0.012)		(0.005)	
Middle: Rich[1b]	0.6174	***	0.1996	***	0.1744	***
	(0.011)		(0.011)		(0.007)	
Level of education						
Primary level of education[1c]	0.0070		-0.0476		0.0136	*
	(0.008)		(0.041)		(0.008)	
Secondary level of education[1c]	0.0450	***	0.0019		0.0422	***
	(0.007)		(0.035)		(0.008)	
Tertiary level of education[1c]	0.0515	***	-0.0017		0.0654	***
	(0.009)		(0.036)		(0.009)	
Location						
Rural household[1d]	-0.1771	***	-0.1223	***	-0.0328	***
	(0.005)		(0.018)		(0.006)	
Number of obs	14,448		6,257		11,488	
LR chi2(54)	10,352		981		2,028	
Prob > chi2	0.000		0.000		0.000	
Pseudo R2	0.5169		0.1833		0.2883	
Log likelihood	-4837		-2185		-2503	

Note: [1]Dummy variable, [a]Basecategory: male headed household; [b]Baseategory: Poor household; [c]Basecategory: Illiterate household head; [d]Basecategory: Urban household

Appendix 5, Table 3: Factors influencing the primary clean cooking fuel choice using logistics regression.

	Angola 2015		Burkina Faso 2010		Benin 2017		Chad 2014	
Demographic								
Female headed household[1a]	0.0309	***	0.0143	***	0.0120	***	-0.0038	
	(0.005)		(0.005)		(0.004)		(0.003)	
Age of household head	-0.0001		-0.0001		0.0005	***	-0.0001	
	(0.000)		(0.000)		(0.000)		(0.000)	
Household size	0.0033	***	-0.0122	***	-0.0043	***	-0.0010	***
	(0.001)		(0.001)		(0.001)		(0.000)	
Wealth: Economic status								
Middle: Wealth[1b]	0.4652	***	…		0.0078		0.0013	
	(0.011)				(0.005)		(0.010)	
Middle: Rich[1b]	0.8754	***	0.0667	***	0.0604	***	0.0328	***
	(0.009)		(0.003)		(0.004)		(0.006)	
Level of education								
Primary level of education[1c]	0.0262	***	0.0362	***	0.0166	***	-0.0003	
	(0.006)		(0.006)		(0.006)		(0.004)	
Secondary level of education[1c]	0.0556	***	0.0928	***	0.0635	***	0.0152	***
	(0.006)		(0.005)		(0.006)		(0.003)	
Tertiary level of education[1c]	0.0736	***	0.1398	***	0.1110	***	0.0445	***
	(0.015)		(0.006)		(0.006)		(0.003)	
Location								
Rural household[1d]	-0.0668	***	-0.0207	***	-0.0229	***	-0.0587	***
	(0.005)		(0.005)		(0.005)		(0.011)	
Number of obs	15,645		11,300		13,750		12,944	
LR chi2(54)	14,234		2,824		2,425		2,444	
Prob > chi2	0.000		0.000		0.000		0.000	
Pseudo R2	0.6762		0.5319		0.3973		0.5652	
Log likelihood	-3407		-1243		-1839		-940	

Note: [1]Dummy variable, [a]Basecategory: male headed household; [b]Baseategory: Poor household; [c]Basecategory: Illiterate household head; [d]Basecategory: Urban household

Appendix 5, Table 3: Factors influencing the primary clean cooking fuel choice using logistics regression.

	Congo DR 2013		Congo 2011		Comoros 2012		Cote d'Ivoire 2011	
Demographics								
Female headed household[1a]	0.0043		0.0082		0.0168		-0.0026	
	(0.004)		(1.590)		(0.011)		(0.006)	
Age of household head	-0.0002		0.0005	***	0.0015	***	0.0000	
	(0.000)		(2.780)		(0.000)		(0.000)	
Household size	-0.0018	***	-0.0006		-0.0078	***	-0.0050	***
	(0.001)		0.790		(0.002)		(0.001)	
Wealth: Economic status								
Middle: Wealth[1b]	…		0.0313	***	…		0.0041	
			(6.610)		0.000		(0.007)	
Middle: Rich[1b]	0.0268	***	0.2826	***	0.0950	***	0.1376	***
	(0.007)		(15.920)		(0.007)		(0.009)	
Level of education								
Primary level of education[1c]	0.0031		0.0033		0.0202	***	0.0130	**
	(0.017)		(0.270)		(0.019)		(0.006)	
Secondary level of education[1c]	0.0280	*	0.0304	***	0.0442	***	0.0369	***
	(0.015)		(2.830)		(0.015)		(0.006)	
Tertiary level of education[1c]	0.0534	***	0.0711	***	0.1048	***	0.0924	***
	(0.015)		(6.500)		(0.015)		(0.007)	
Location								
Rural household[1d]	-0.0922	***	0.0333	***	-0.0393	***	-0.0546	***
	(0.026)		(2.740)		(0.012)		(0.009)	
Number of obs	9,376		11,324		2,614		8,928	
LR chi2(54)	1,118		3,087		269		3,723	
Prob > chi2	0.000		0.000		0.000		0.000	
Pseudo R2	0.4157		0.5098		0.1937		0.5816	
Log likelihood	-786		-1485		-559		-1339	

Note: [1]Dummy variable, [a]Basecategory: male headed household; [b]Baseategory: Poor household; [c]Basecategory: Illiterate household head; [d]Basecategory: Urban household

Appendix 5, Table 3: Factors influencing the primary clean cooking fuel choice using logistics regression.

	Cameroon 2018		Ethiopia 2019		Gabon 2012		Gambia 2019	
Demographics								
Female headed household[1a]	0.0040 (0.006)		0.0056 (0.006)		0.0000 (0.008)		-0.0169 (0.005)	***
Age of household head	-0.0013 (0.000)	***	0.0012 (0.000)	***	-0.0039 (0.000)	***	-0.0004 (0.000)	**
Household size	-0.0145 (0.001)	***	-0.0020 (0.001)		-0.0013 (0.001)		-0.0173 (0.001)	***
Wealth: Economic status								
Middle: Wealth[1b]	0.0481 (0.006)	***	… 		0.3381 (0.016)	***	0.0227 (0.006)	***
Middle: Rich[1b]	0.3783 (0.009)	***	0.1519 (0.006)	***	0.4135 (0.015)	***	0.0704 (0.008)	***
Level of education								
Primary level of education[1c]	0.0048 (0.014)		0.0287 (0.009)	***	0.0050 (0.010)		-0.0032 (0.010)	
Secondary level of education[1c]	0.0664 (0.013)	***	0.0915 (0.009)	***	0.0616 (0.012)	***	0.0102 (0.007)	
Tertiary level of education[1c]	0.1682 (0.014)	***	0.1454 (0.009)	***	0.2138 (0.031)	***	0.0459 (0.007)	***
Location								
Rural household[1d]	-0.0363 (0.009)	***	-0.0894 (0.009)	***	-0.2151 (0.006)	***	-0.0109 (0.014)	
Number of obs	11,156		7,167		9,286		5,731	
LR chi2(54)	6,937		3,156		6,181		946.6	
Prob > chi2	0.000		0.000		0.000		0.000	
Pseudo R2	0.5426		0.5353		0.4935		0.4145	
Log likelihood	-2924		-1370		-3172		-669	

Note: [1]Dummy variable, [a]Basecategory: male headed household; [b]Baseategory: Poor household; [c]Basecategory: Illiterate household head; [d]Basecategory: Urban household

Appendix 5, Table 3: Factors influencing the primary clean cooking fuel choice using logistics regression.

	Ghana 2014		Guinea 2018		Kenya 2014		Liberia 2018	
Demographics								
Female headed household[1a]	-0.0250	***	-0.0008		0.0088	***	-0.0021	
	(0.006)		(0.004)		(0.002)		(0.002)	
Age of household head	-0.0018	***	0.0001		0.0002	**	0.0000	
	(0.000)		(0.000)		(0.000)		(0.000)	
Household size	-0.0152	***	-0.0014	***	-0.0106	***	-0.0008	**
	(0.001)		(0.001)		(0.001)		(0.000)	
Wealth: Economic status								
Middle: Wealth[1b]	0.0670	***	0.0040		0.0061	***	0.0040	*
	(0.006)		(0.004)		(0.002)		(0.002)	
Middle: Rich[1b]	0.3675	***	0.0235	***	0.0944	***	0.0145	***
	(0.011)		(0.004)		(0.002)		(0.004)	
Level of education								
Primary level of education[1c]	0.0206		0.0016		0.0331	***	-0.0023	
	(0.015)		(0.006)		(0.011)		(0.004)	
Secondary level of education[1c]	0.0927	***	0.0022		0.0821	***	-0.0027	
	(0.012)		(0.004)		(0.011)		(0.003)	
Tertiary level of education[1c]	0.2122	***	0.0104	***	0.1477	***	0.0042	
	(0.013)		(0.004)		(0.010)		(0.003)	
Location								
Rural household[1d]	0.0007		-0.0206	***	-0.0511	***	-0.0005	
	(0.008)		(0.008)		(0.003)		(0.003)	
Number of obs	11,366		7,793		35,682		8,828	
LR chi2(54)	5,356		347		8,266		120	
Prob > chi2	0.000		0.000		0.000		0.000	
Pseudo R2	0.4587		0.2141		0.4423		0.1491	
Log likelihood	-3161		-637		-5212		-343	

Note: [1]Dummy variable, [a]Basecategory: male headed household; [b]Baseategory: Poor household; [c]Basecategory: Illiterate household head; [d]Basecategory: Urban household

Appendix 5, Table 3: Factors influencing the primary clean cooking fuel choice using logistics regression.

	Lesotho 2014		Mali 2018		Malawi 2015		Nigeria 2018	
Demographics								
Female headed household[1a]	-0.0099		-0.0078	**	0.0000		0.0152	***
	(0.007)		(0.004)		(0.002)		(0.003)	
Age of household head	-0.0008	***	0.0000		0.0002	***	-0.00002	
	(0.000)		(0.000)		(0.000)		(0.000)	
Household size	-0.0116	***	-0.0016	***	-0.0026	***	-0.0066	***
	(0.001)		(0.001)		(0.000)		(0.001)	
Wealth: Economic status								
Middle: Wealth[1b]	0.1528	***	0.0129	***	0.0027	*	0.0129	***
	(0.010)		(0.004)		(0.002)		(0.002)	
Middle: Rich[1b]	0.5778	***	0.0370	***	0.0223	***	0.1668	***
	(0.014)		(0.004)		(0.001)		(0.003)	
Level of education								
Primary level of education[1c]	0.0178	*	-0.0001		-0.0011		0.0282	***
	(0.011)		(0.004)		(0.008)		(0.007)	
Secondary level of education[1c]	0.0732	***	0.0031		0.0265	***	0.0755	***
	(0.012)		(0.004)		(0.007)		(0.007)	
Tertiary level of education[1c]	0.1946	***	0.0180	***	0.0576	***	0.1577	***
	(0.017)		(0.005)		(0.007)		(0.007)	
Location								
Rural household[1d]	-0.0949	***	0.0039		-0.0198	***	-0.0567	***
	(0.006)		(0.005)		(0.002)		(0.003)	
Number of obs	9,211		9,299		26,136		39,731	
LR chi2(54)	6,457		476		2,087		12,638	
Prob > chi2	0.000		0.000		0.000		0.000	
Pseudo R2	0.559		0.2578		0.4133		0.4268	
Log likelihood	-2547		-685		-1481		-8486	

Note: [1]Dummy variable, [a]Basecategory: male headed household; [b]Baseategory: Poor household; [c]Basecategory: Illiterate household head; [d]Basecategory: Urban household

Appendix 5, Table 3: Factors influencing the primary clean cooking fuel choice using logistics regression.

	Namibia 2013		Rwanda 2019		Sierra Leone 2019		Senegal 2019	
Demographics								
Female headed household[1a]	0.0039		-0.0072	**	-0.0062	*	-0.0040	
	(0.005)		(0.003)		(0.003)		(0.009)	
Age of household head	-0.0014	***	0.00001		0.0001		-0.0005	
	(0.000)		(0.000)		(0.000)		(0.000)	
Household size	-0.0135	***	-0.0066	***	-0.0031	***	-0.0057	***
	(0.001)		(0.001)		(0.001)		(0.001)	
Wealth: Economic status								
Middle: Wealth[1b]	0.2049	***	0.0042		…		0.0848	***
	(0.011)		(0.004)				(0.011)	
Middle: Rich[1b]	0.5616	***	0.0552	***	0.0096	***	0.3183	***
	(0.012)		(0.003)		(0.003)		(0.019)	
Level of education								
Primary level of education[1c]	0.0109		0.0118		-0.0037		0.0209	*
	(0.009)		(0.010)		(0.007)		(0.012)	
Secondary level of education[1c]	0.0656	***	0.0560	***	0.0018		0.0673	***
	(0.009)		(0.010)		(0.004)		(0.012)	
Tertiary level of education[1c]	0.1424	***	0.1007	***	0.0188	***	0.0815	***
	(0.012)		(0.010)		(0.004)		(0.017)	
Location								
Rural household[1d]	-0.1153	***	-0.0290	***	0.0032		-0.0249	***
	(0.005)		(0.004)		(0.005)		(0.010)	
Number of obs	9,726		12,887		7,183		4,198	
LR chi2(54)	9,230		2,392		201		1,897	
Prob > chi2	0.000		0.000		0.000		0.000	
Pseudo R2	0.6984		0.4805		0.2338		0.4845	
Log likelihood	-1993		-1293		-330		-1009	

Note: [1]Dummy variable, [a]Basecategory: male headed household; [b]Baseategory: Poor household; [c]Basecategory: Illiterate household head; [d]Basecategory: Urban household

Appendix 5, Table 3: Factors influencing the primary clean cooking fuel choice using logistics regression.

	Uganda 2016		Zambia 2018		Zimbabwe 2015	
Demographics						
Female headed household[1a]	-0.0025		-0.0042		0.0107	*
	(0.002)		(0.009)		(0.006)	
Age of household head	0.0001		0.0004		0.0003	
	(0.000)		(0.000)		(0.000)	
Household size	-0.0022	***	-0.0111	***	-0.0090	***
	(0.000)		(0.002)		(0.001)	
Wealth: Economic status						
Middle: Wealth[1b]	0.0037	*	…		0.04235	***
	(0.002)				(0.011)	
Middle: Rich[1b]	0.0107	***	0.0051		0.46503	***
	(0.001)		(35.450)		(0.010)	
Level of education						
Primary level of education[1c]	0.0043		0.0513		0.05499	***
	(0.007)		(0.044)		(0.022)	
Secondary level of education[1c]	0.0108	*	0.1509	***	0.12843	***
	(0.007)		(0.042)		(0.022)	
Tertiary level of education[1c]	0.0220	***	0.3169	***	0.22348	***
	(0.007)		(0.042)		(0.023)	
Location						
Rural household[1d]	-0.0063	***	-0.0361	***	-0.12449	***
	(0.002)		(0.009)		(0.007)	
Number of obs	17,796		6,979		10,421	
LR chi2(54)	593		1,990		7,967	
Prob > chi2	0.000		0.000		0.000	
Pseudo R2	0.3088		0.3355		0.5899	
Log likelihood	-663		-1971		-2769	

Note: [1]Dummy variable, [a]Basecategory: male headed household; [b]Baseategory: Poor household; [c]Basecategory: Illiterate household head; [d]Basecategory: Urban household

Appendix 5, Table 3: Factors influencing the primary clean cooking fuel choice using logistics regression.

	Albania 2017		Armenia 2015		Colombia 2015		Dominican Republic 2013	
Demographics								
Female headed household[1a]	0.0186	**	0.0065		0.0337	***	0.0348	***
	(0.008)		(0.397)		(0.004)		(0.006)	
Age of household head	-0.00003		0.0002		-0.0002	*	0.0003	
	(0.000)		(0.492)		(0.000)		(0.000)	
Household size	-0.0060	***	0.0016	***	-0.0120	***	-0.0012	
	(0.002)		(0.012)		(0.001)		(0.001)	
Wealth: Economic status								
Middle: Wealth[1b]	0.1688	***	0.0069	***	0.2196	***	0.1965	***
	(0.008)		0.000		(0.002)		(0.007)	
Middle: Rich[1b]	0.2586	***	0.0068	***	…		0.2168	***
	(0.009)		0.000				(0.006)	
Level of education								
Primary level of education[1c]	0.0575	***	0.0336	**	0.0638	***	0.0690	***
	(0.019)		(0.032)		(0.005)		(0.008)	
Secondary level of education[1c]	0.0828	***	0.0336	***	0.1515	***	0.1528	***
	(0.019)		(0.006)		(0.006)		(0.011)	
Tertiary level of education[1c]	0.1143	***	0.0338	***	0.2211	***	0.2005	***
	(0.022)		(0.004)		(0.010)		(0.021)	
Location								
Rural household[1d]	-0.0753	***	0.0102	***	-0.2841	***	-0.0909	***
	(0.006)		0.000		(0.003)		(0.006)	
Number of obs	15,765		5,913		32,553		10,710	
LR chi2(54)	8,047						3,251	
			701		14,131			
Prob > chi2	0.000		0.000		0.000		0.000	
Pseudo R2	0.4165		0.2771		0.4238		0.3562	
Log likelihood	-5637		-914		-9606		-2937	

Note: [1]Dummy variable, [a]Basecategory: male headed household; [b]Baseategory: Poor household; [c]Basecategory: Illiterate household head; [d]Basecategory: Urban household

Appendix 5, Table 3: Factors influencing the primary clean cooking fuel choice using logistics regression.

	Guatemala 2014		Honduras 2011		Haiti 2016		Peru 2012	
Demographics								
Female headed household[1a]	0.0123	***	0.0110	***	0.0086	***	0.0114	***
	(0.004)		(0.004)		(0.003)		(0.004)	
Age of household head	-0.0003	**	-0.0014	***	0.0008	***	-0.0020	***
	(0.000)		(0.000)		(0.000)		(0.000)	
Household size	-0.0155	***	-0.0134	***	-0.0034	***	-0.0117	***
	(0.001)		(0.001)		(0.001)		(0.001)	
Wealth: Economic status								
Middle: Wealth[1b]	0.1427	***	0.2490	***	0.0014		0.3410	***
	(0.007)		(0.007)		(0.002)		(0.010)	
Middle: Rich[1b]	0.5837	***	0.6194	***	0.0554	***	0.5426	***
	(0.008)		(0.010)		(0.004)		(0.009)	
Level of education								
Primary level of education[1c]	0.0427	***	0.0160	**	0.0136	**	0.0339	***
	(0.006)		(0.007)		(0.007)		(0.008)	
Secondary level of education[1c]	0.1127	***	0.0580	***	0.0464	***	0.0758	***
	(0.006)		(0.008)		(0.007)		(0.008)	
Tertiary level of education[1c]	0.1513	***	0.1217	***	0.0849	***	0.1367	***
	(0.010)		(0.012)		(0.007)		(0.010)	
Location								
Rural household[1d]	-0.0738	***	-0.0820	***	-0.0020		-0.1377	***
	(0.004)		(0.004)		(0.005)		(0.003)	
Number of obs	21,271		20,833		13,181		25,873	
LR chi2(54)	18,047		16,709		1,434		1,726	
Prob > chi2	0.000		0.000		0.000		0.000	
Pseudo R2	0.6451		0.6119		0.3484		0.6187	
Log likelihood	-4964		-5299		-1341		-6695	

Note: [1]Dummy variable, [a]Basecategory: male headed household; [b]Baseategory: Poor household; [c]Basecategory: Illiterate household head; [d]Basecategory: Urban household

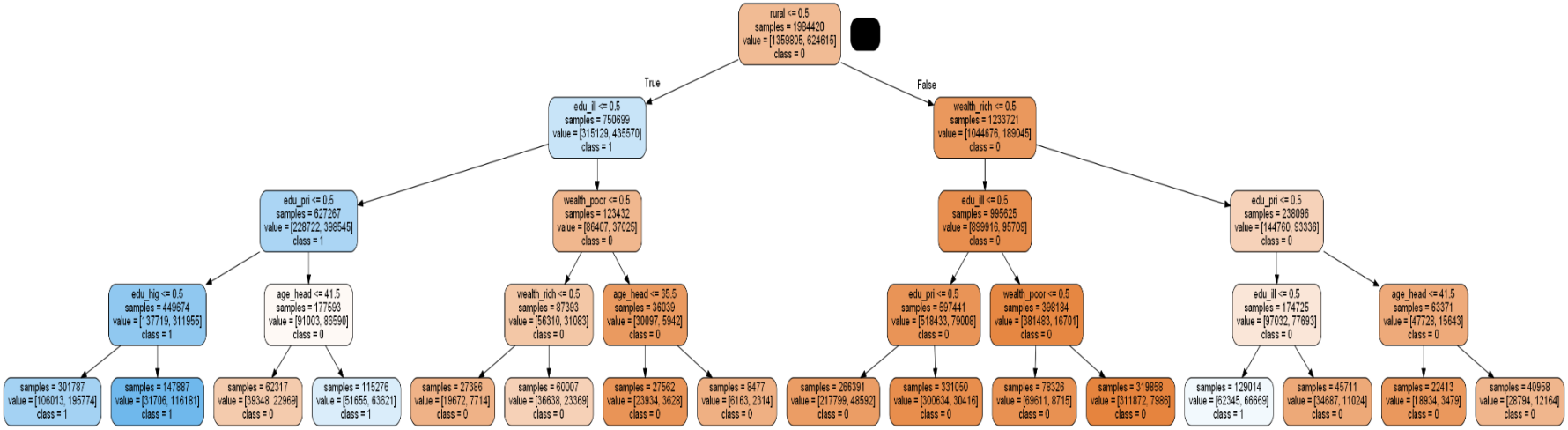
Appendix 6: Result from Decision Tree

Appendix 6 Table 1: Top 5 important features predicting household clean cooking fuel usage by country.

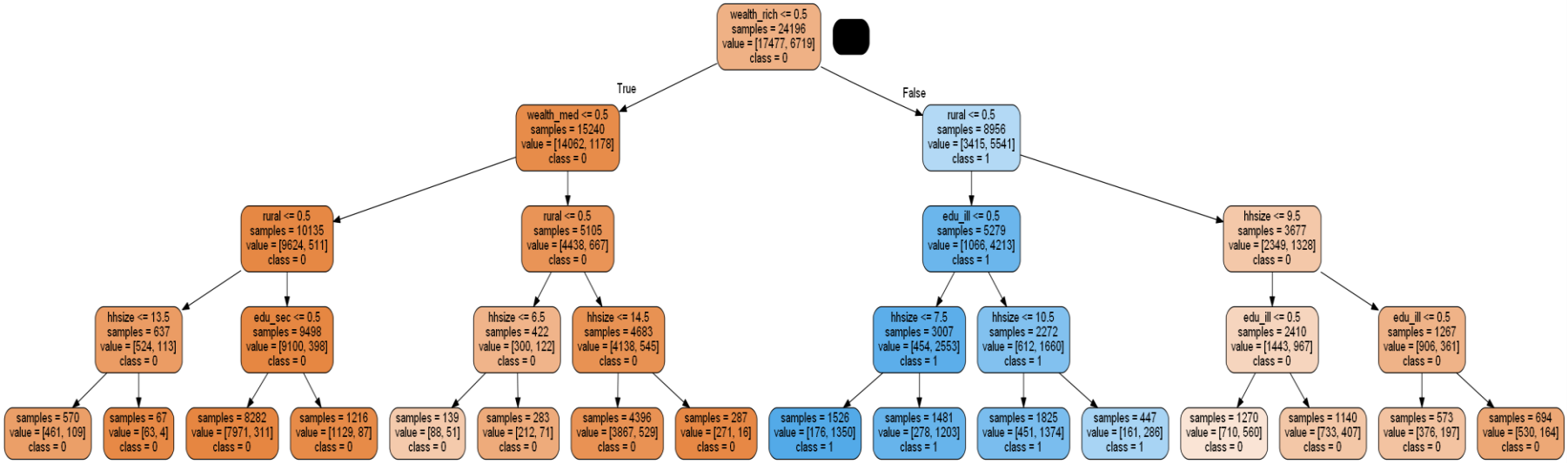
Country	Rural	Rich	HH size	Higher education	Poor	Secondary education	Head age	Medium	Primary education	Illiterate	Female
Global	1	2	-	-	5	-	-	-	4	3	-
Afghanistan	2	1	5	-	-	-	-	3	-	4	-
Armenia	1	-	3	-	2	5	4	-	-	-	-
Angola	3	2	-	-	1	5	-	-	-	4	-
Bangladesh	2	1	-	5	-	-	4	3	-	-	-
Congo DR	1	3	5	2	-	4	-	-	-	-	-
Congo	-	1	5	3	-	-	4	2	-	-	-
Cote de	2	1	4	3	-	-	5	-	-	-	-
Cameroon	-	1	3	2	-	4	-	5	-	-	-
Colombia	1	-	-	4	2	3	-	-	5	-	-
Dominican	2	-	-	-	1	4	5	-	-	3	-
Ethiopia	1	2	-	3	-	4	5	-	-	-	-
Gabon	2	-	5	-	1	-	3	-	4	-	-
Ghana	-	1	5	2	-	4	-	3	-	-	-
Gambia	5	2	1	4	3	-	-	-	-	-	-
Guinea	2	-	5	-	1	-	3	-	4	-	-
Guatemala	2	1	4	-	-	-	-	3	5	-	-
Honduras	3	1	-	-	-	-	4	2	5	-	-
Haiti	5	1	-	2	-	4	3	-	-	-	-
India	3	1	4	5	-	-	-	2	-	-	-
Indonesia	2	3	5	-	1	-	4	-	-	-	-
Kenya	3	1	5	2	-	4	-	-	-	-	-
Cambodia	2	1	-	5	-	-	3	4	-	-	-
Comoros	5	1	3	2	-	-	4	-	-	-	-
Kyrgyz	4	1	2	3	-	-	5	-	-	-	-

Country	Rural	Rich	HH size	Higher education	Poor	Secondary education	Head age	Medium	Primary education	Illiterate	Female
Liberia	-	1	3	-	-	-	2	5	4	-	-
Lesotho	2	1	5	4	-	-	-	3	-	-	-
Mali	3	1	2	-	-	-	4	5	-	-	-
Malawi	3	2	5	1	-	4	-	-	-	-	-
Nigeria	3	1	5	2	-	4	-	-	-	-	-
Namibia	2	1	4	-	-	-	5	3	-	-	-
Nepal	3	1	4	-	-	-	-	2	-	5	-
Peru	2	3	5	-	1	-	4	-	-	-	-
Philippines	3	2	5	-	1	-	4	-	-	-	-
Pakistan	3	2	4	-	1	-	5	-	-	-	-
Rwanda	4	2	5	1	-	3	-	-	-	-	-
Sierra Leone	-	1	2	3	-	-	4	5	-	-	-
Senegal	-	1	2	-	-	5	-	3	-	4	-
Chad	1	3	-	2	-	4	5	-	-	-	-
Tajikistan	2	1	3	-	-	-	5	4	-	-	-
Timor	4	1	2	-	-	-	5	3	-	-	-
Uganda	4	1	3	2	-	5	-	-	-	-	-
Zambia	5	1	4	2	-	3	-	-	-	-	-
Zimbabwe	2	1	5	3	-	-	4	-	-	-	-

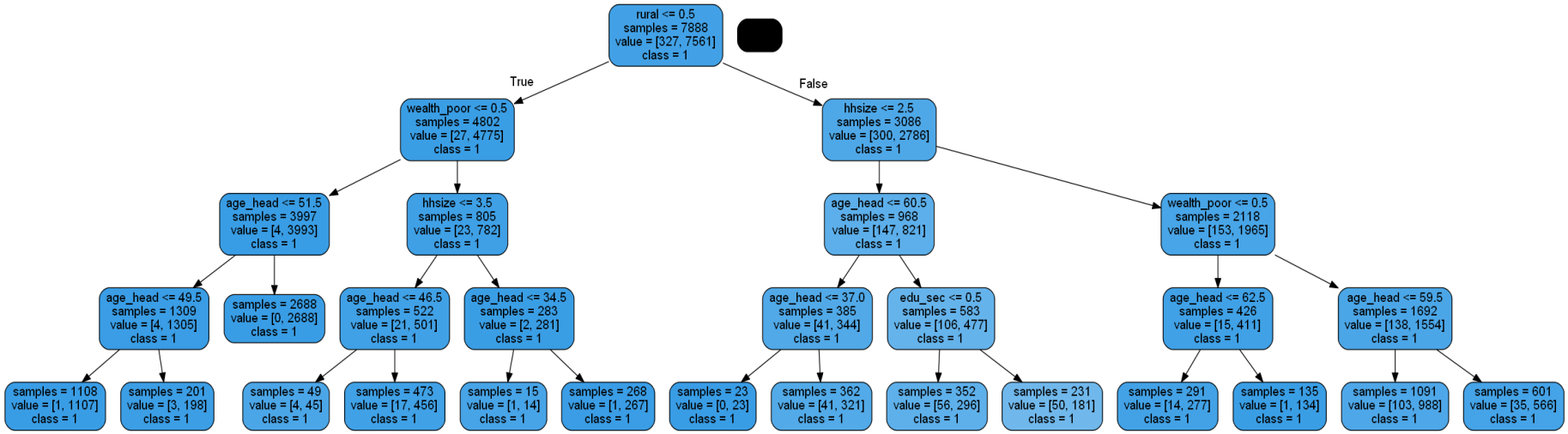
Appendix 6 Figure 1: Decision tree predicting household clean fuel usage at the global Level.



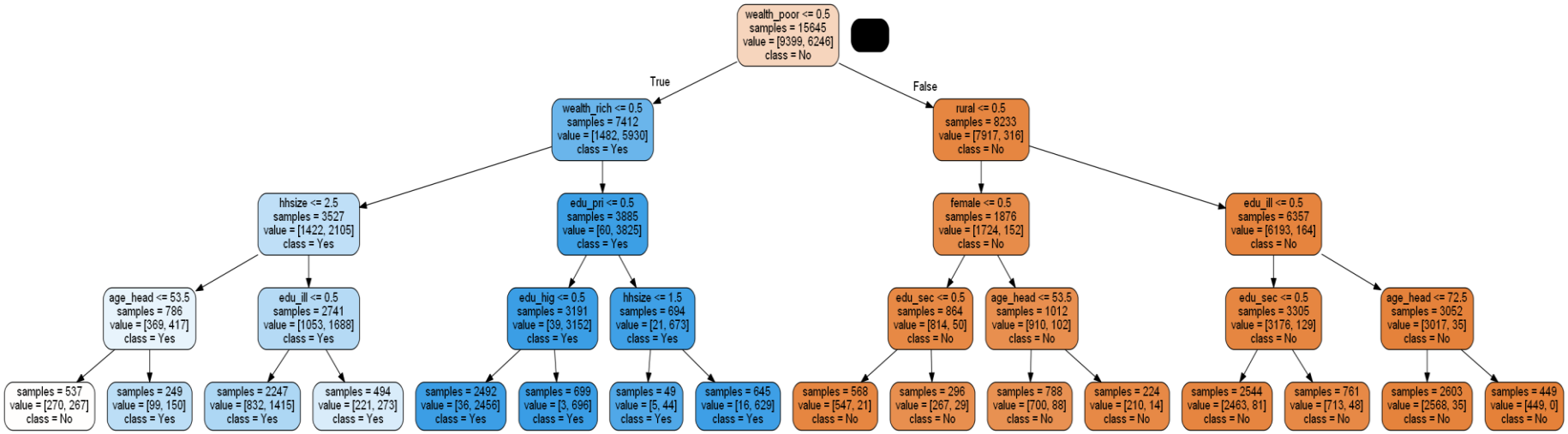
Appendix 6 Figure 2: Decision tree predicting household clean fuel usage for Afghanistan.



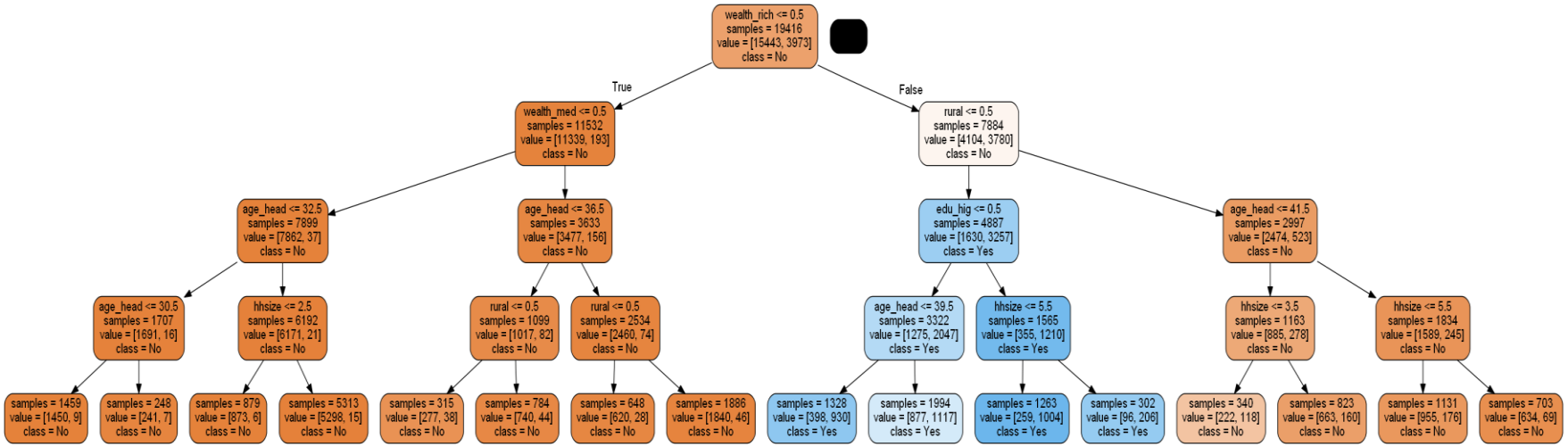
Appendix 6 Figure 3: Decision tree predicting household clean fuel usage for Armenia.



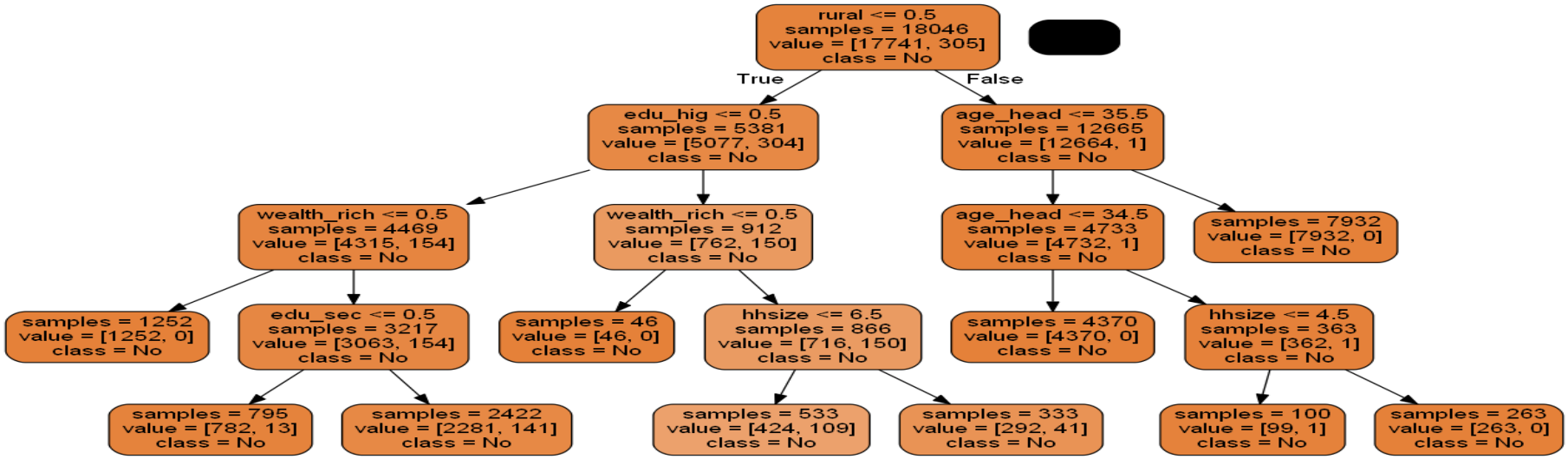
Appendix 6 Figure 4: Decision tree predicting household clean fuel usage for Angola.



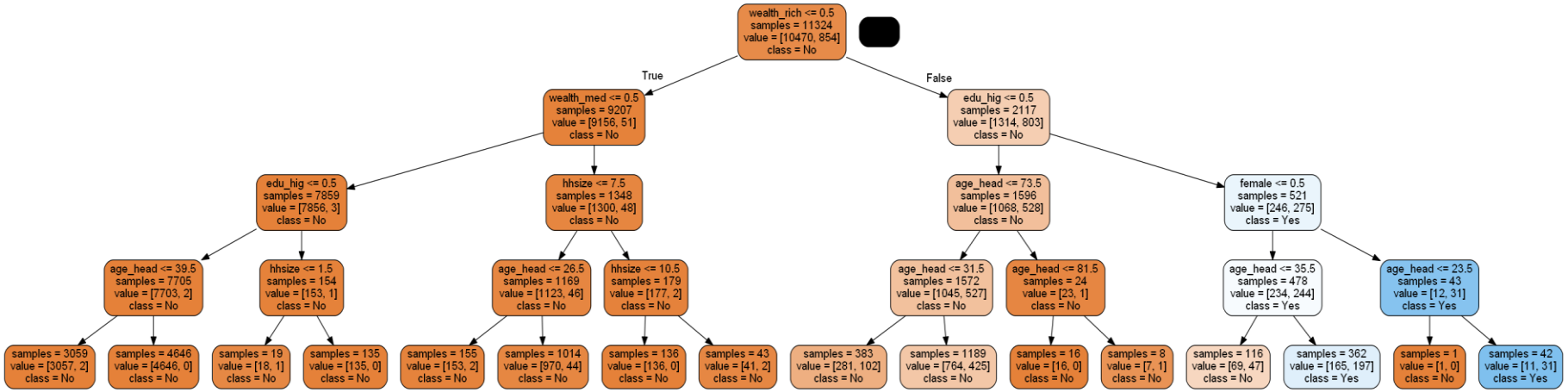
Appendix 6 Figure 5: Decision tree predicting household clean fuel usage for Bangladesh.



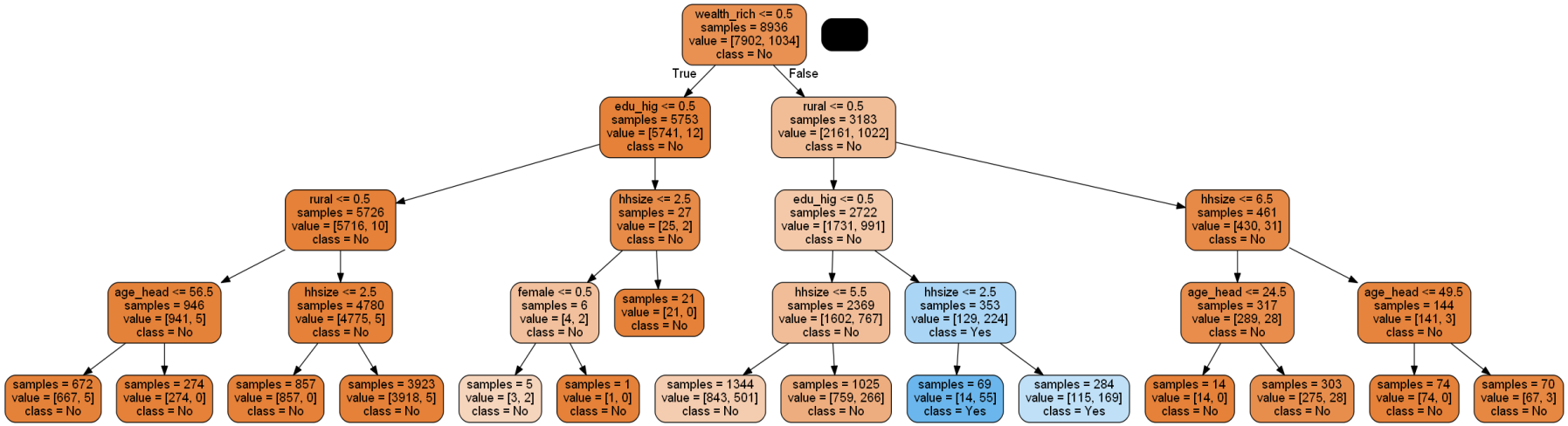
Appendix 6 Figure 6: Decision tree predicting household clean fuel usage for Democratic Republic of the Congo.



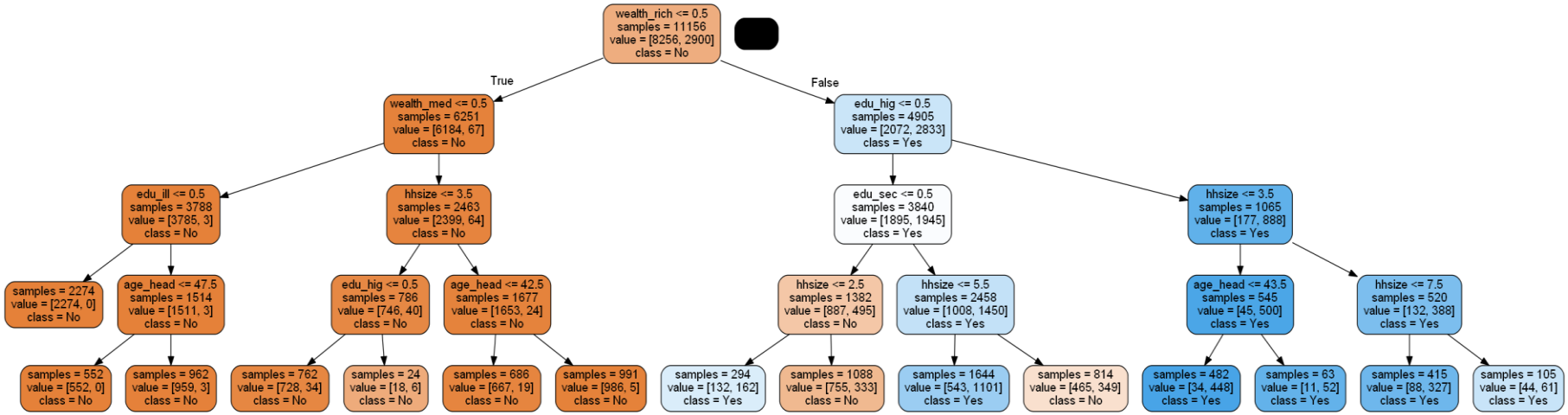
Appendix 6 Figure 7: Decision tree predicting household clean fuel usage for Congo.



Appendix 6 Figure 8: Decision tree predicting household clean fuel usage for Cote d'Ivoire.



Appendix 6 Figure 9: Decision tree predicting household clean fuel usage for Cameroon.



Appendix 6 Figure 11: Decision tree predicting household clean fuel usage for Columbia.

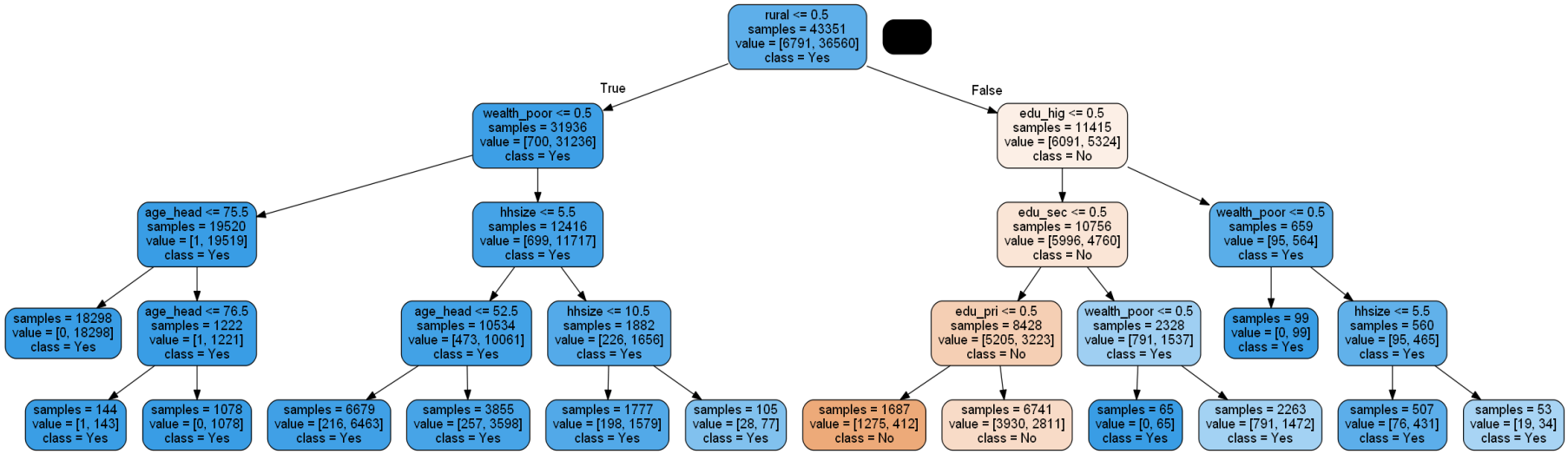
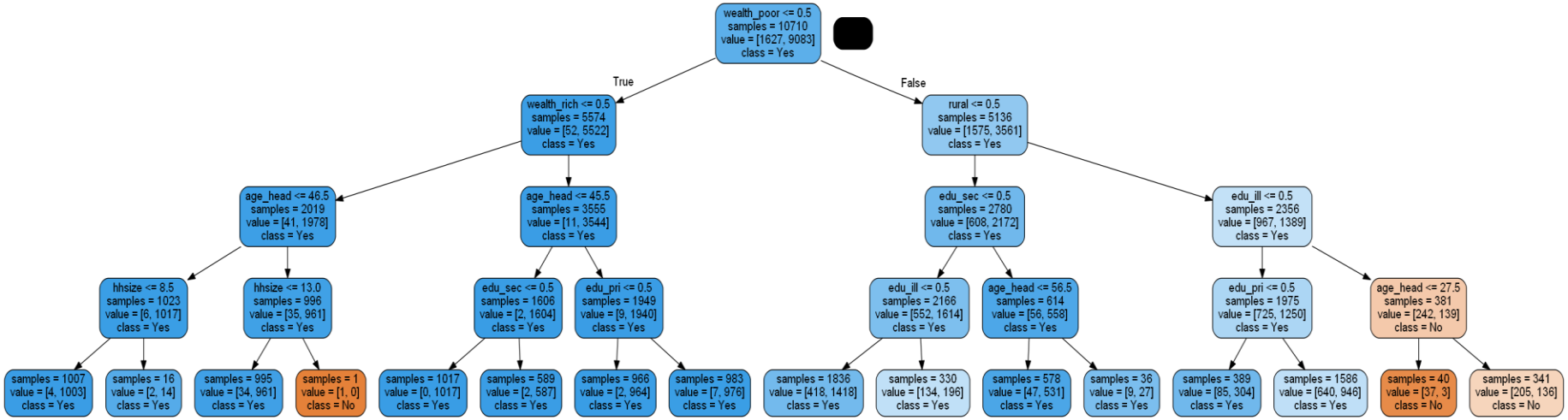
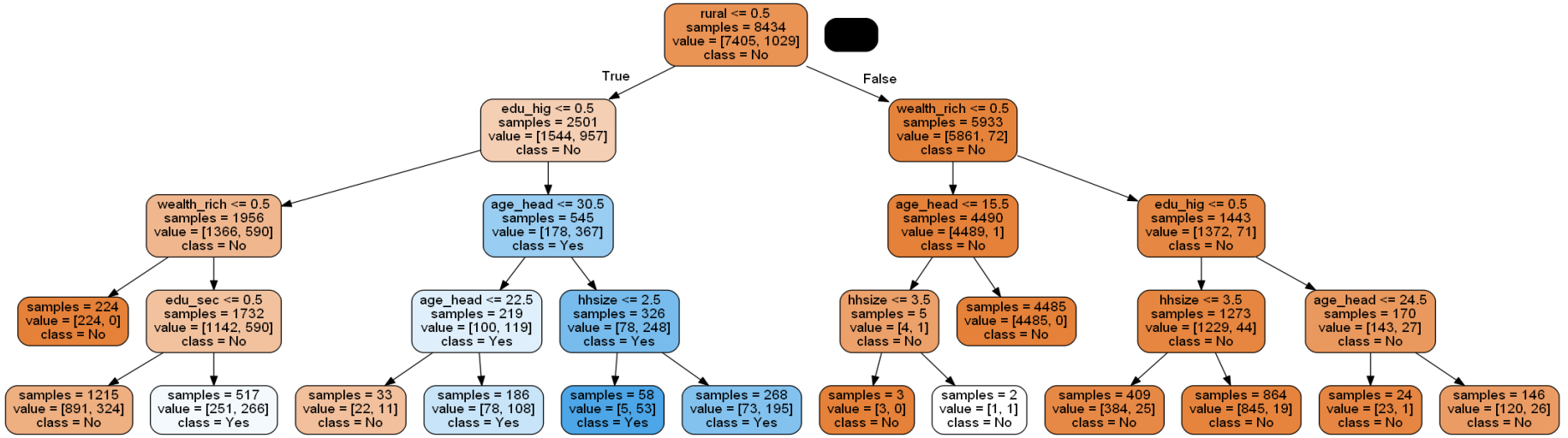


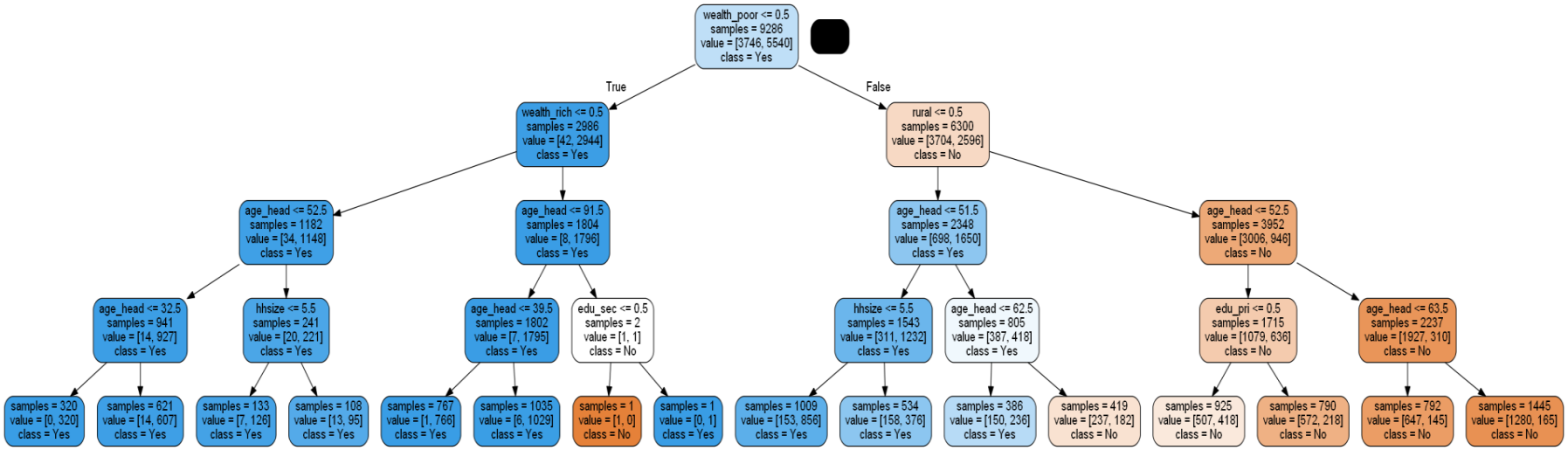
Figure 12: Decision tree predicting household clean fuel usage for Dominican Republic.



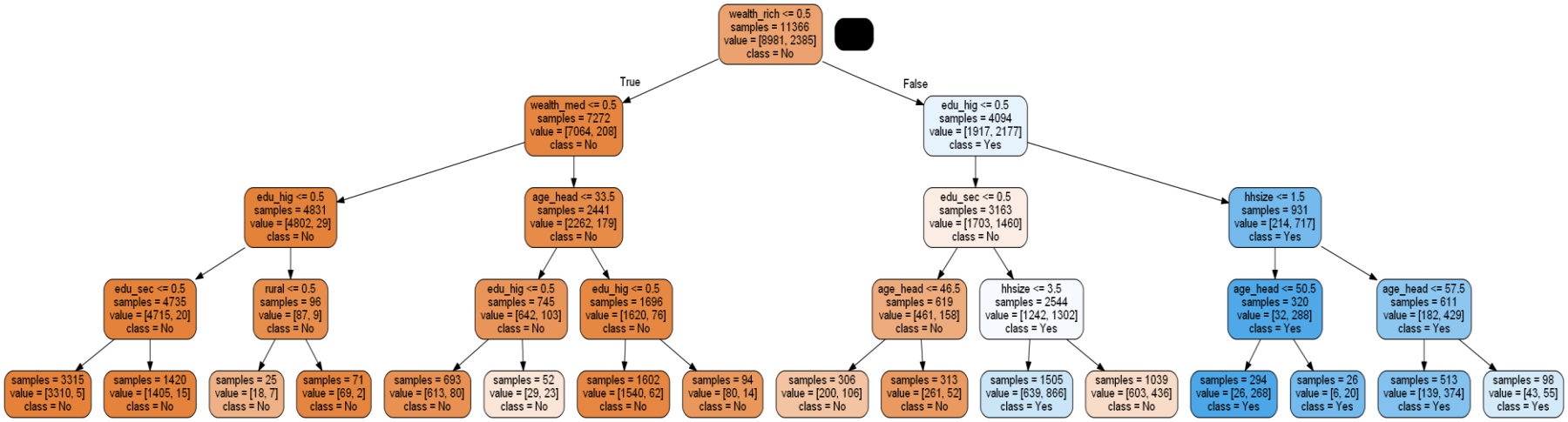
Appendix 6 Figure 13: Decision tree predicting household clean fuel usage for Ethiopia.



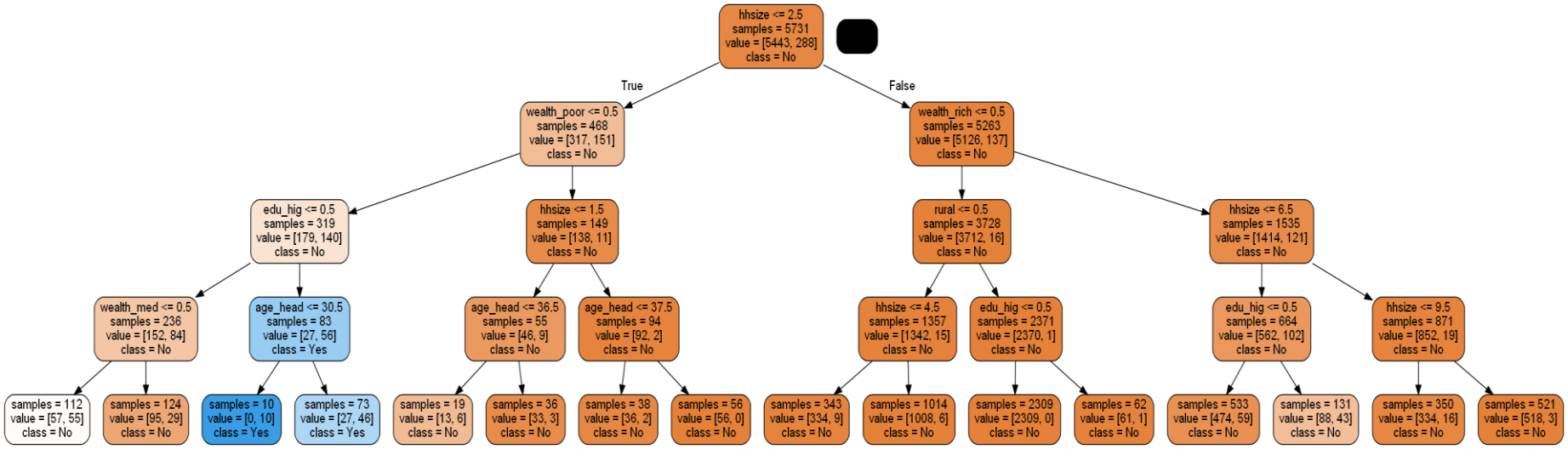
Appendix 6 Figure 14: Decision tree predicting household clean fuel usage for Gabon.



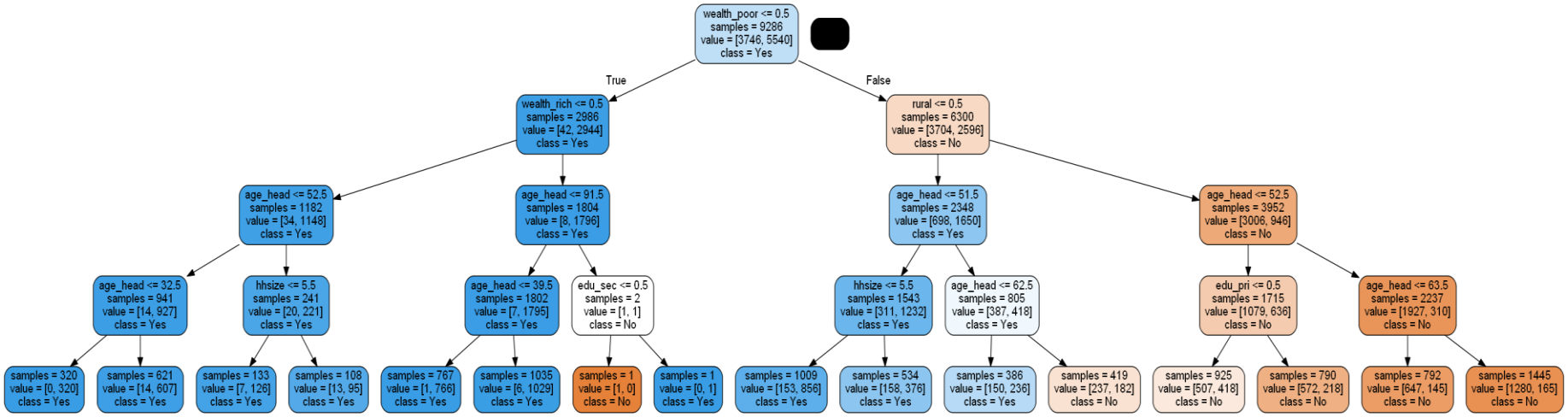
Appendix 6 Figure 15: Decision tree predicting household clean fuel usage for Ghana.



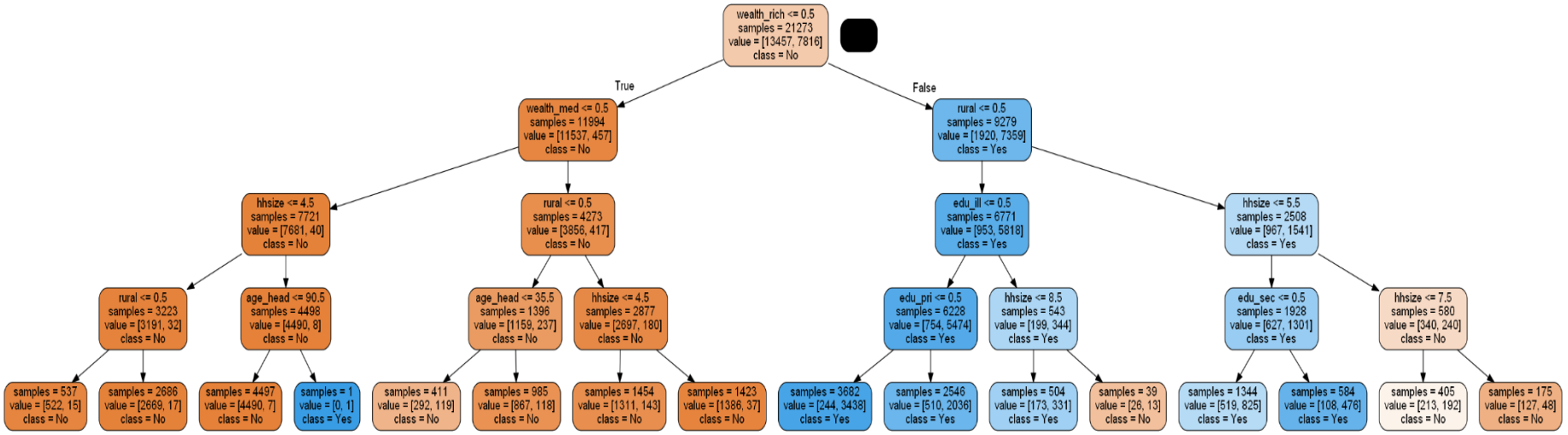
Appendix 6 Figure 16: Decision tree predicting household clean fuel usage for Gambia.



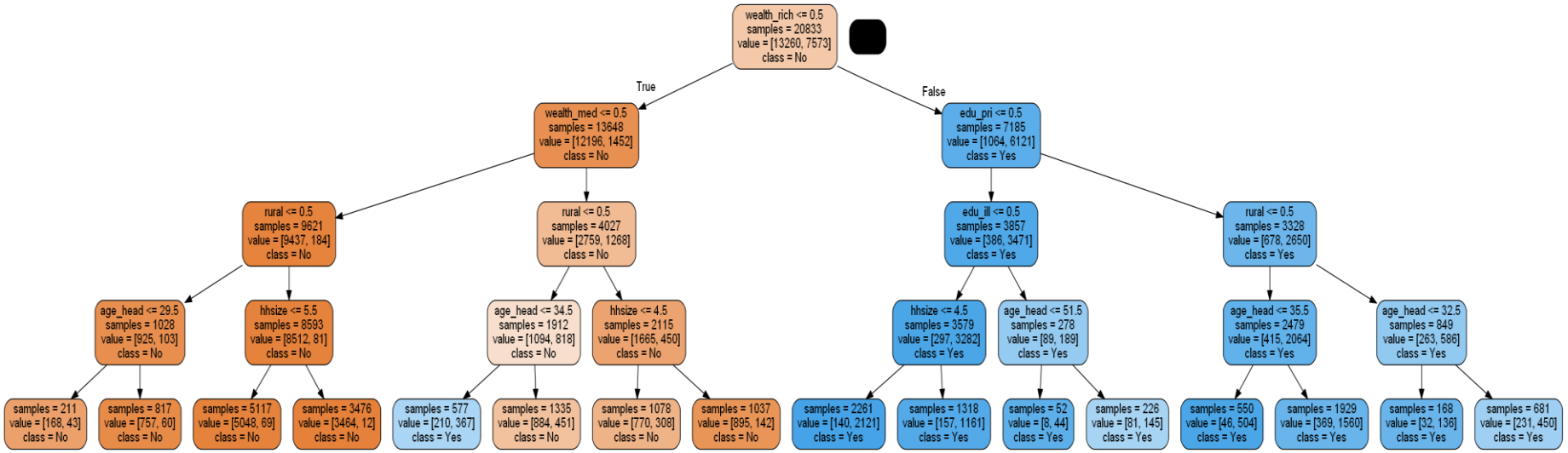
Appendix 6 Figure 17: Decision tree predicting household clean fuel usage for Guinea.



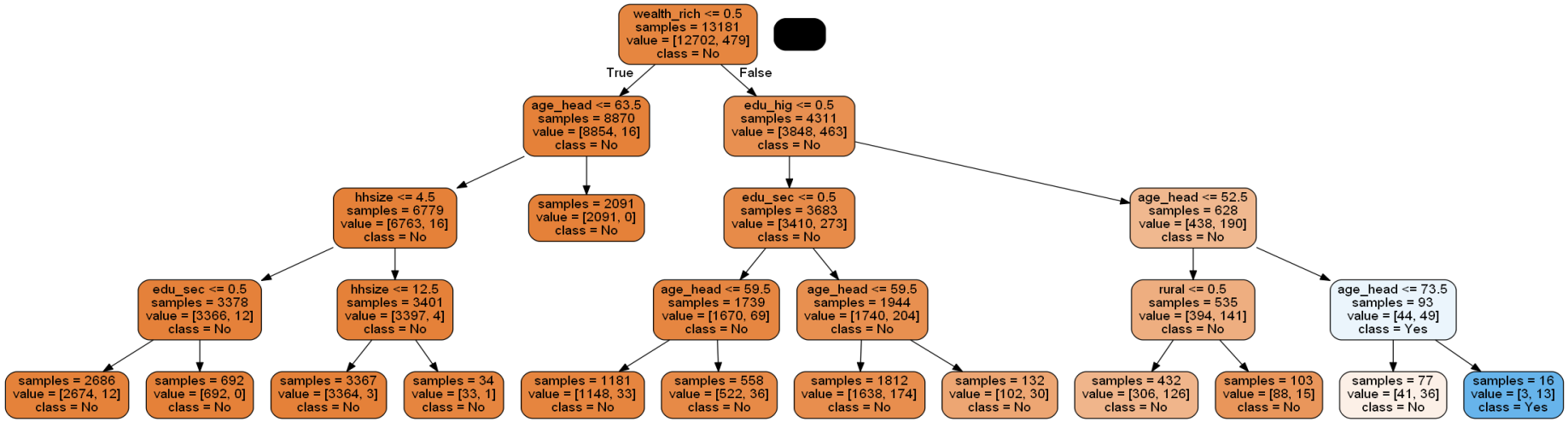
Appendix 6 Figure 18: Decision tree predicting household clean fuel usage for Guatemala.



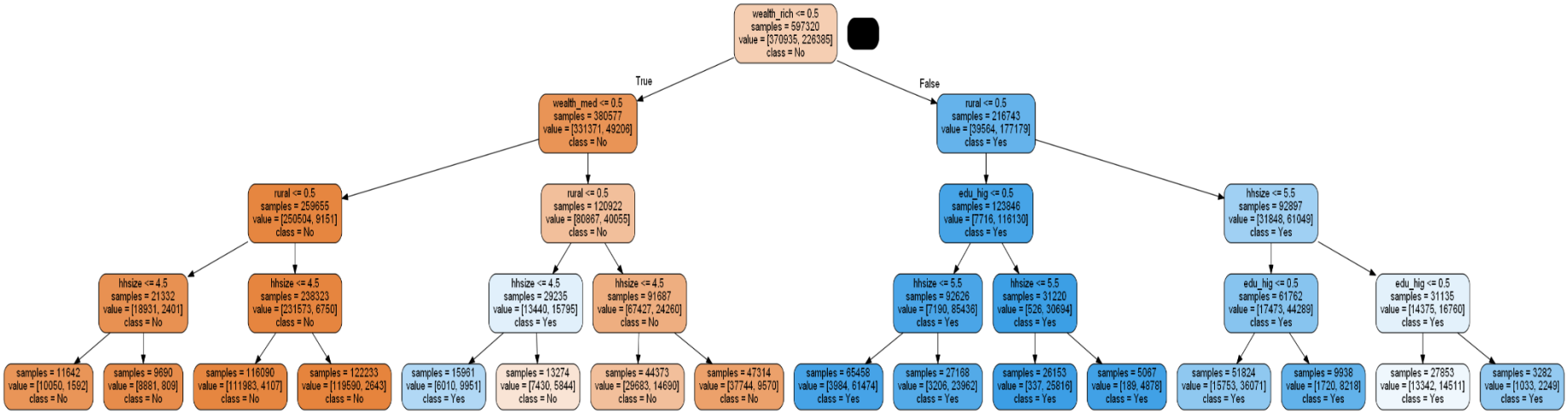
Appendix 6 Figure 19: Decision tree predicting household clean fuel usage for Honduras.



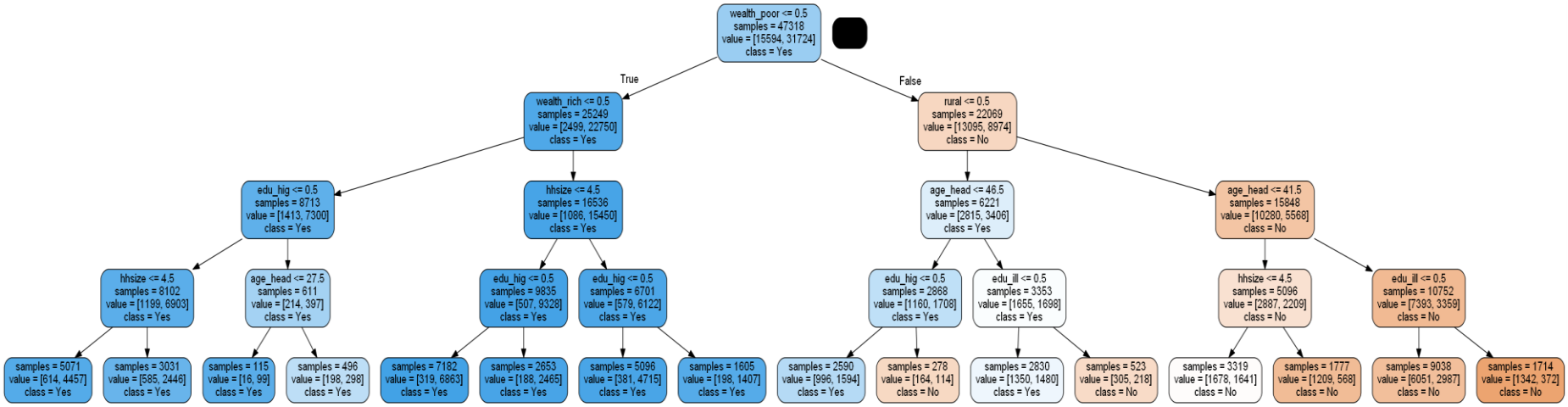
Appendix 6 Figure 20: Decision tree predicting household clean fuel usage for Haiti.



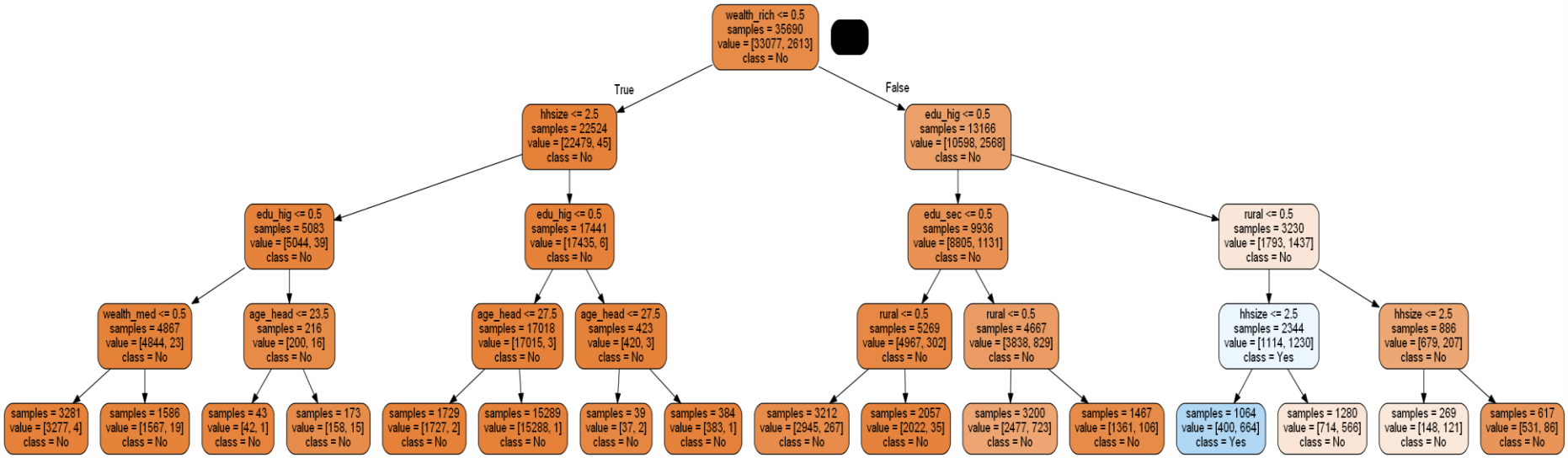
Appendix 6 Figure 21: Decision tree predicting household clean fuel usage for India.



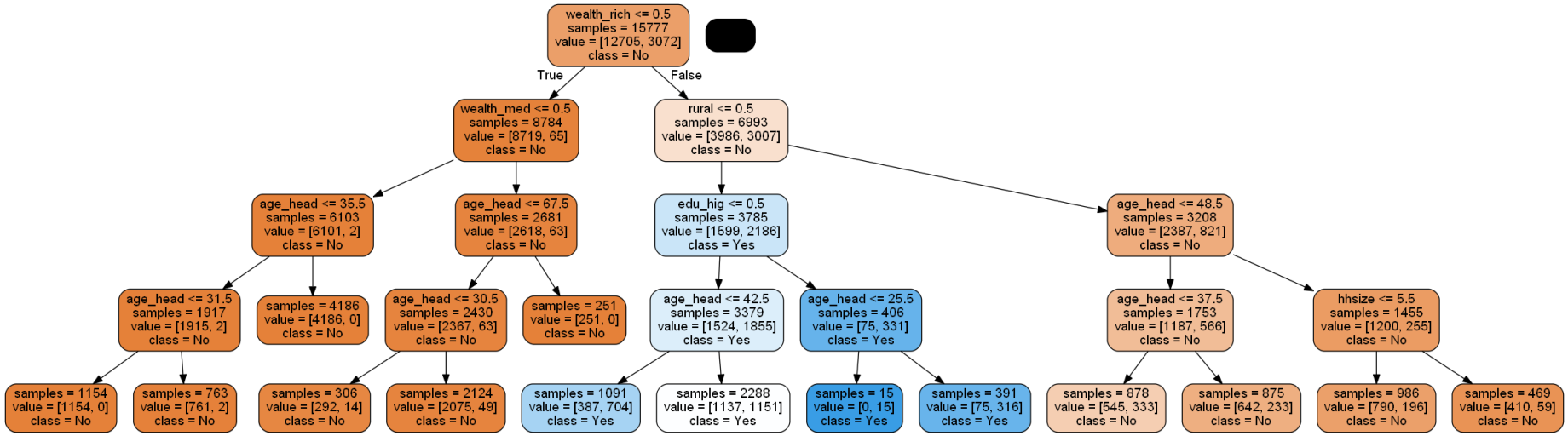
Appendix 6 Figure 22: Decision tree predicting household clean fuel usage for Indonesia.



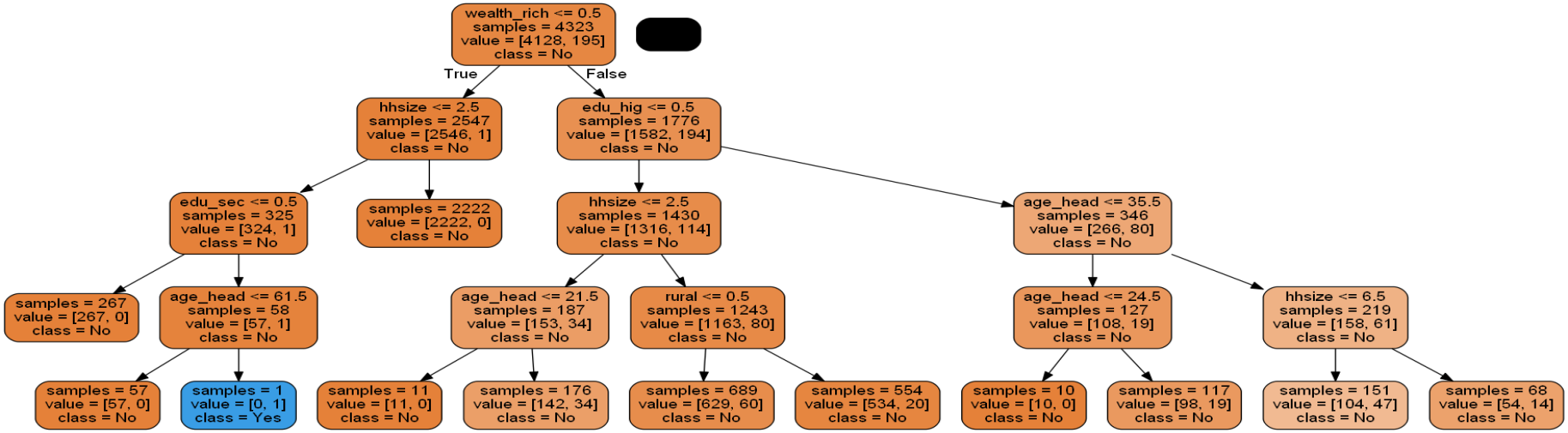
Appendix 6 Figure 23: Decision tree predicting household clean fuel usage for Kenya.



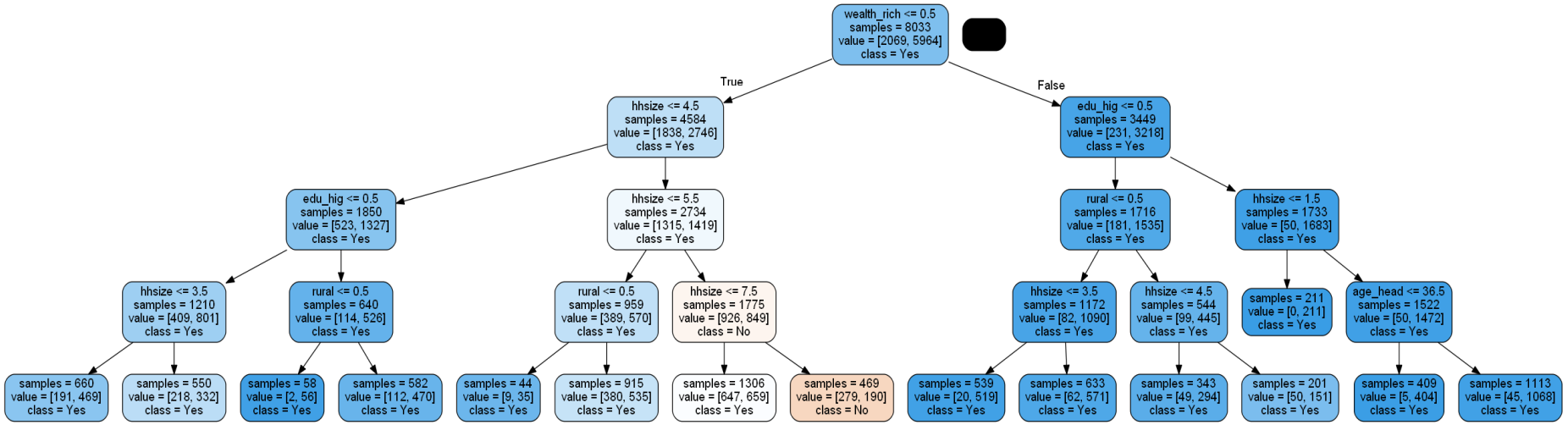
Appendix 6 Figure 24: Decision tree predicting household clean fuel usage for Cambodia.



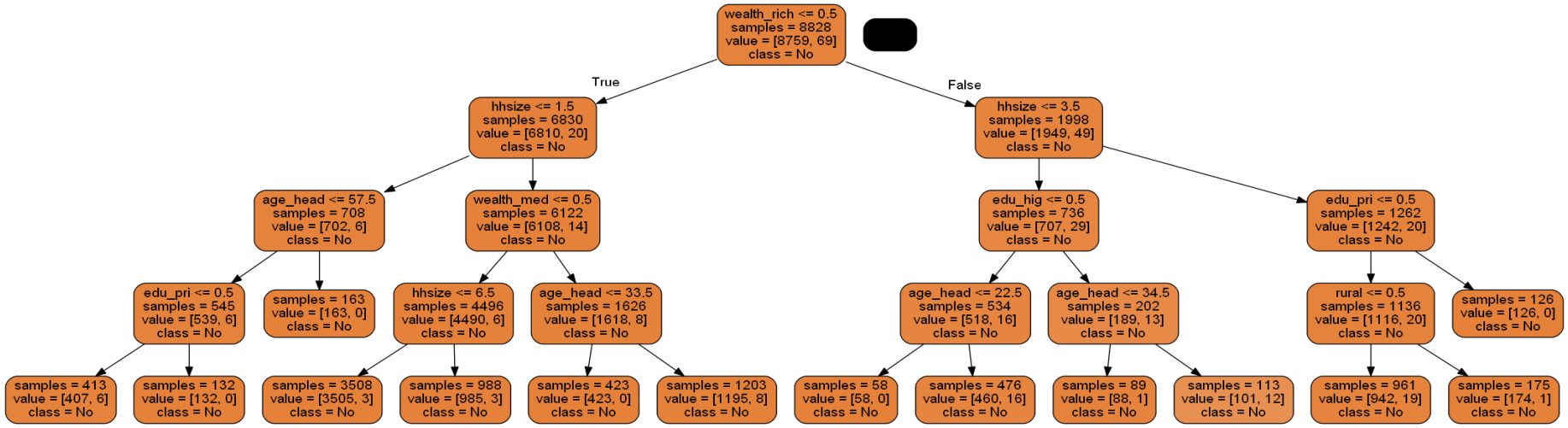
Appendix 6 Figure 25: Decision tree predicting household clean fuel usage for Comoros.



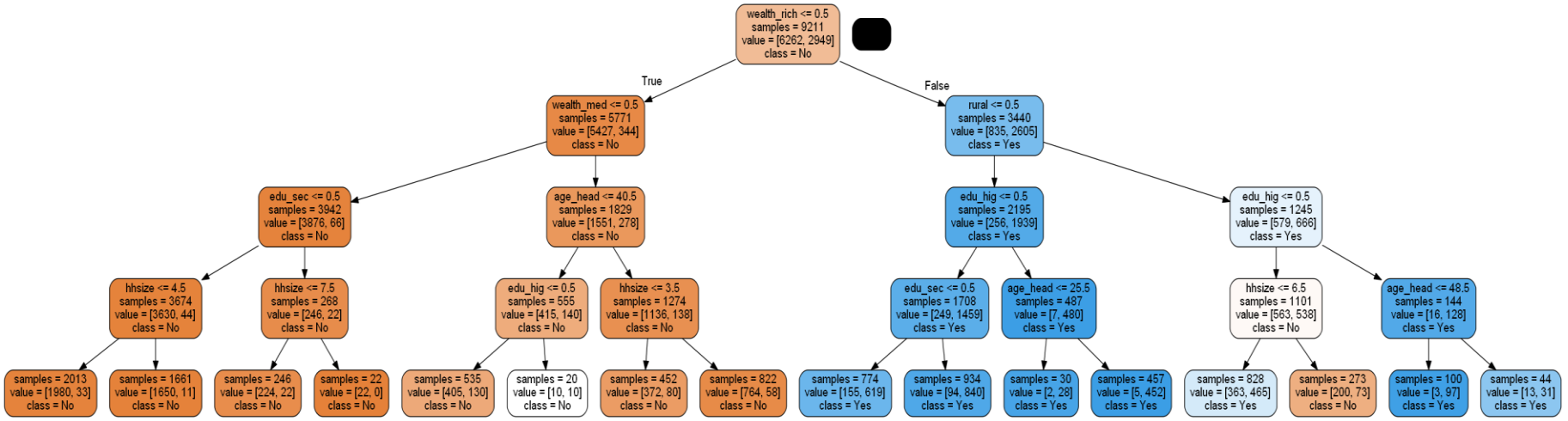
Appendix 6 Figure 26: Decision tree predicting household clean fuel usage for Kyrgyz.



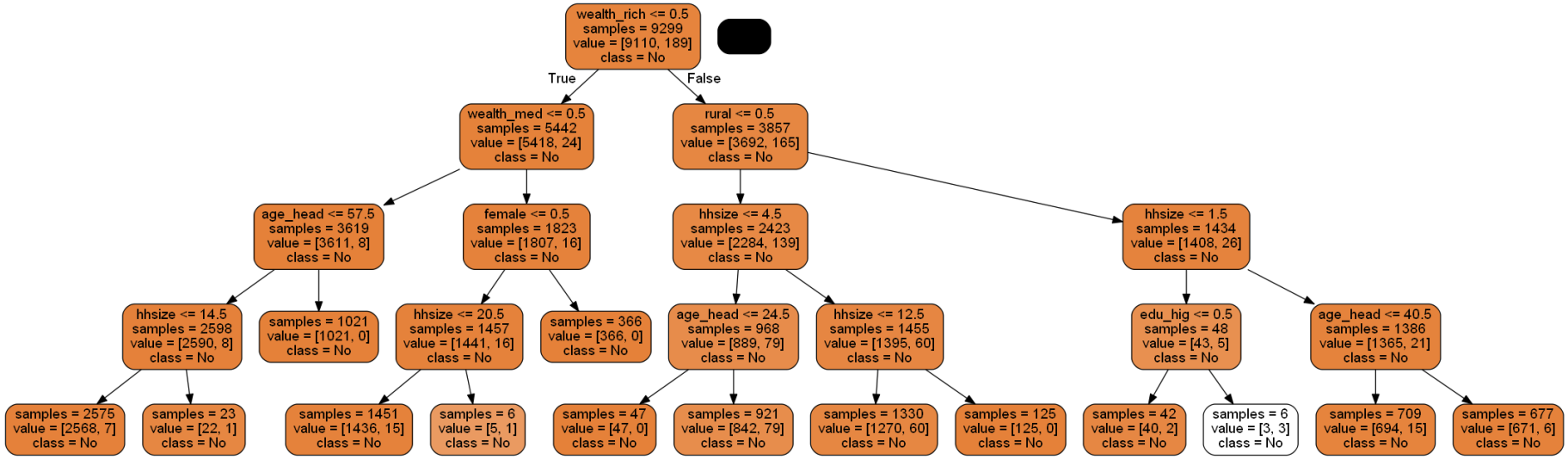
Appendix 6 Figure 27: Decision tree predicting household clean fuel usage for Liberia.



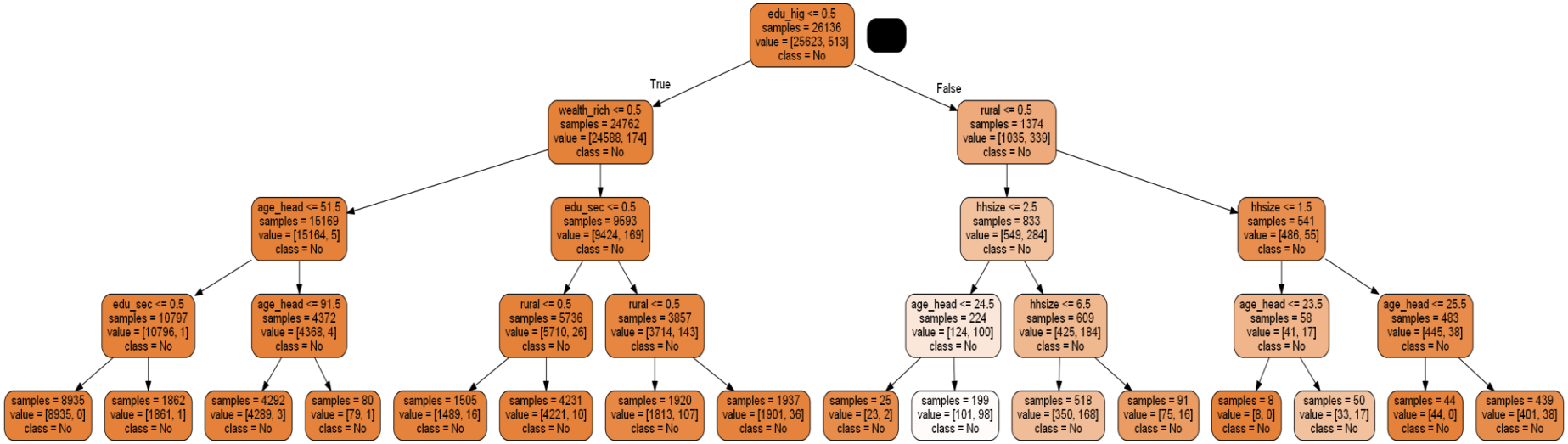
Appendix 6 Figure 28: Decision tree predicting household clean fuel usage for Lesotho.



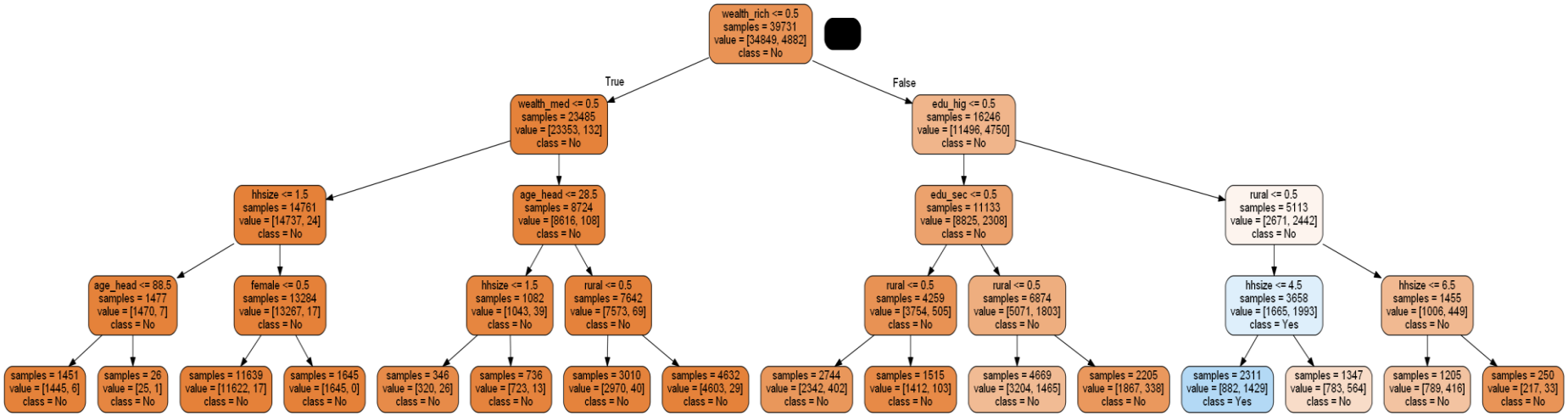
Appendix 6 Figure 29: Decision tree predicting household clean fuel usage for Mali.



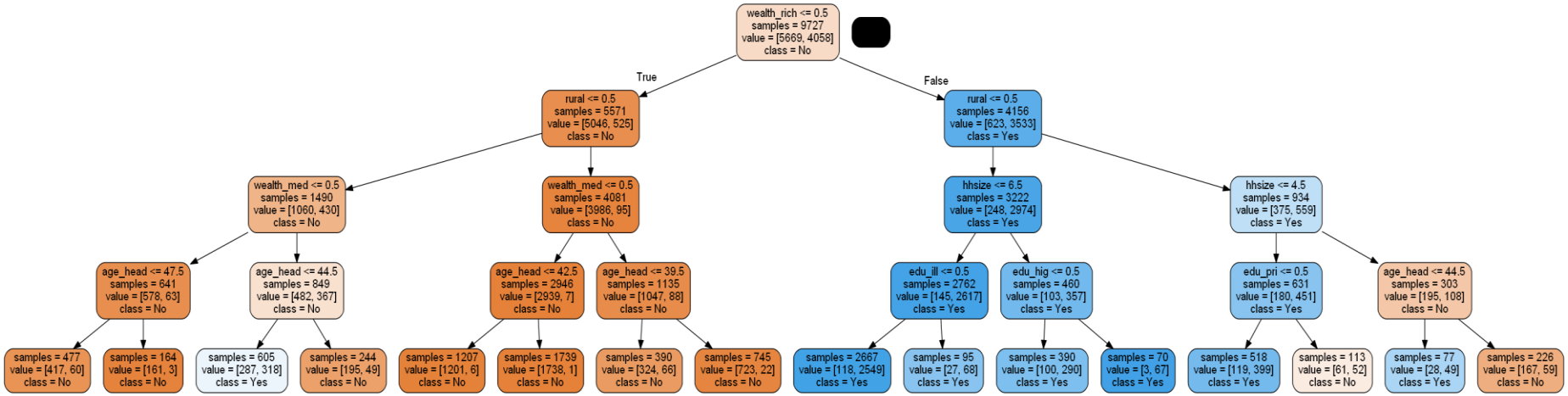
Appendix 6 Figure 30: Decision tree predicting household clean fuel usage for Malawi.



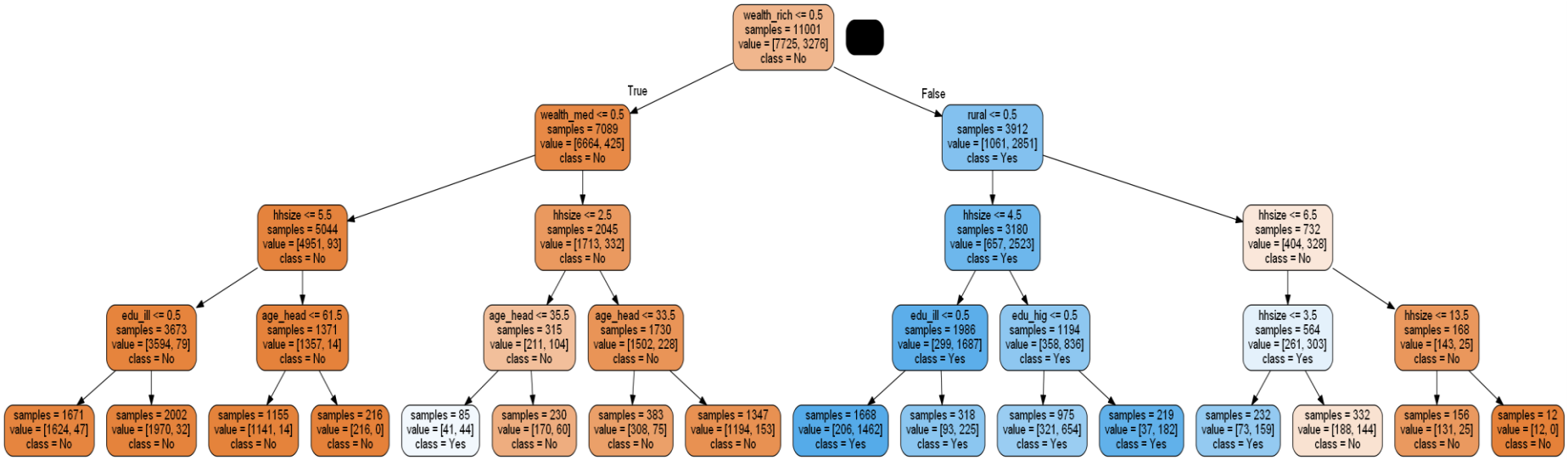
Appendix 6 Figure 31: Decision tree predicting household clean fuel usage for Nigeria.



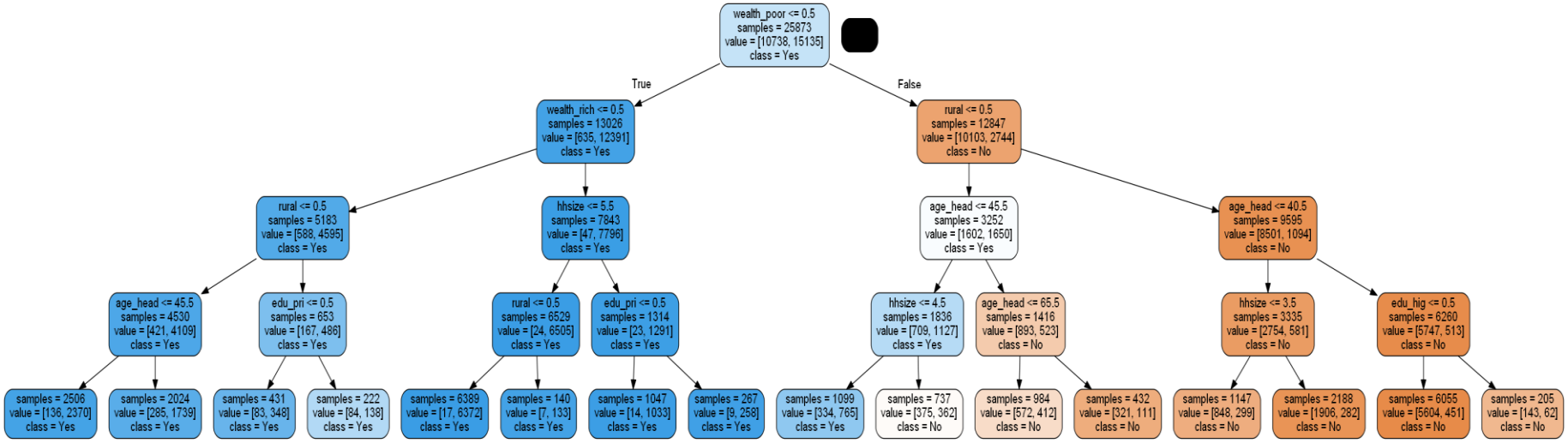
Appendix 6 Figure 32: Decision tree predicting household clean fuel usage for Namibia.



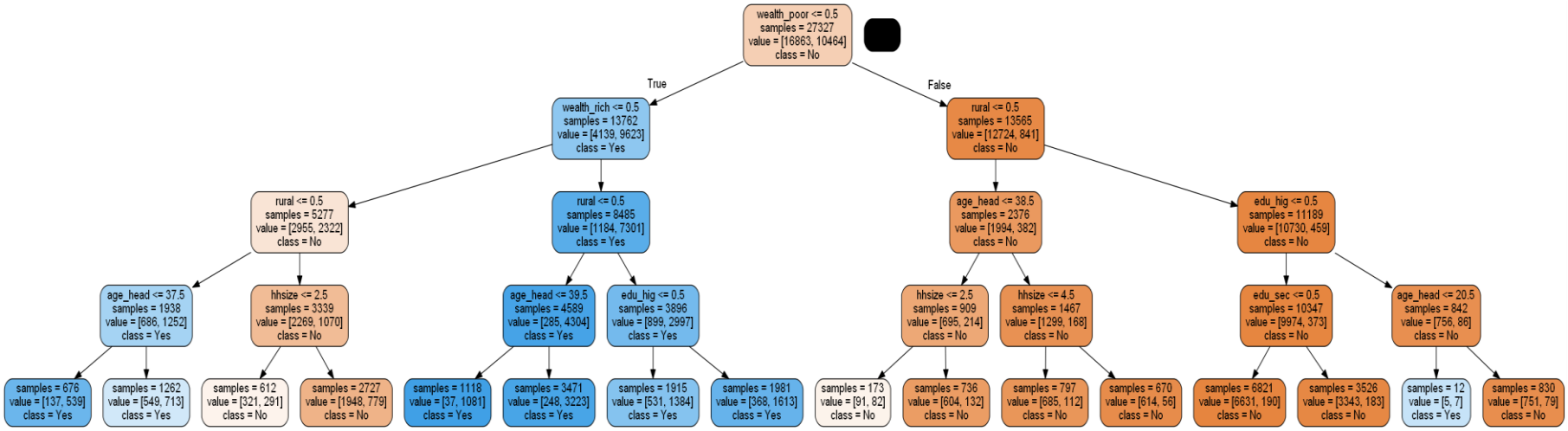
Appendix 6 Figure 33: Decision tree predicting household clean fuel usage for Nepal.



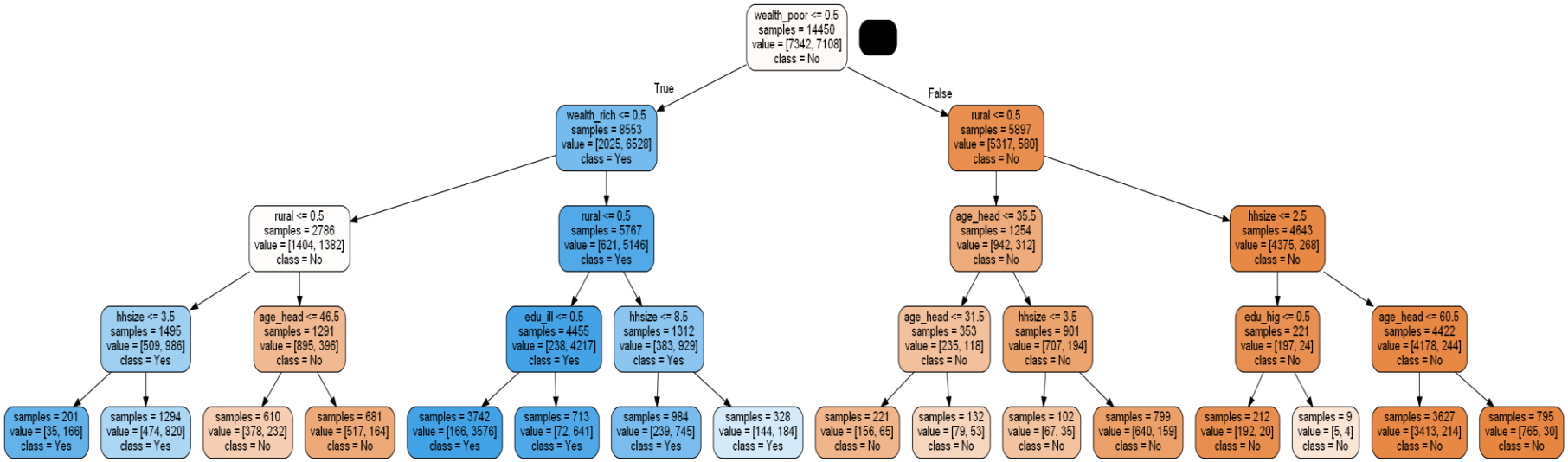
Appendix 6 Figure 34: Decision tree predicting household clean fuel usage for Peru.



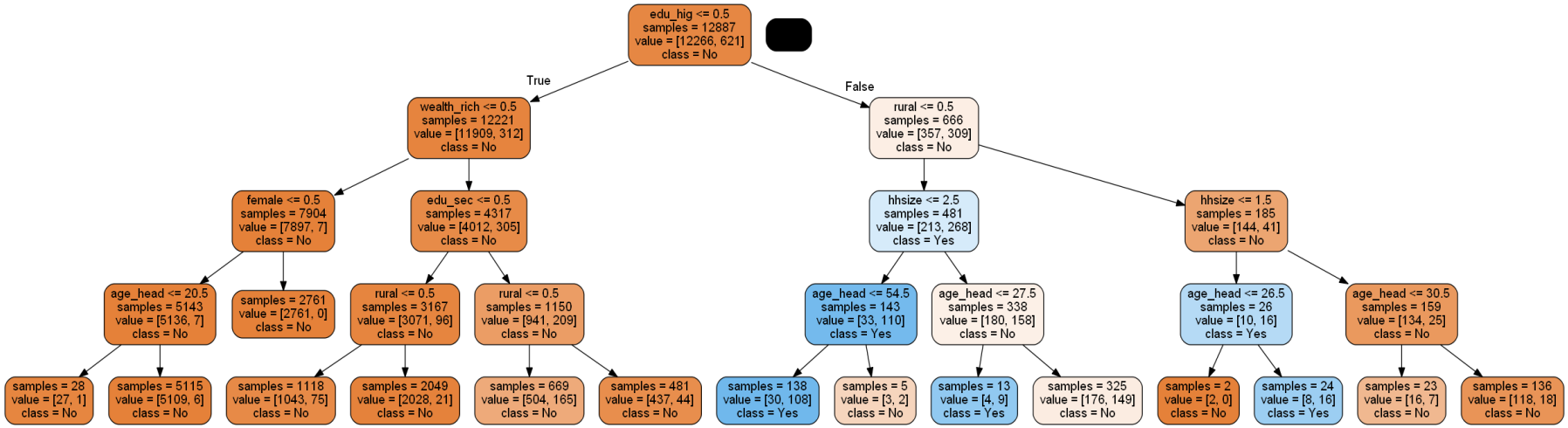
Appendix 6 Figure 35: Decision tree predicting household clean fuel usage for Philippines.



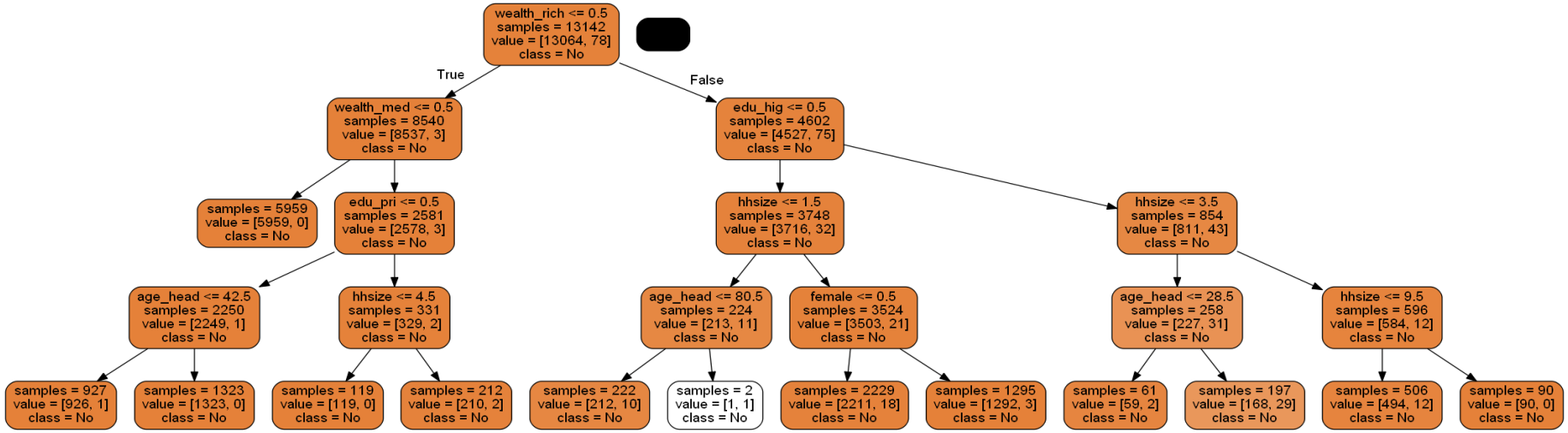
Appendix 6 Figure 36: Decision tree predicting household clean fuel usage for Pakistan.



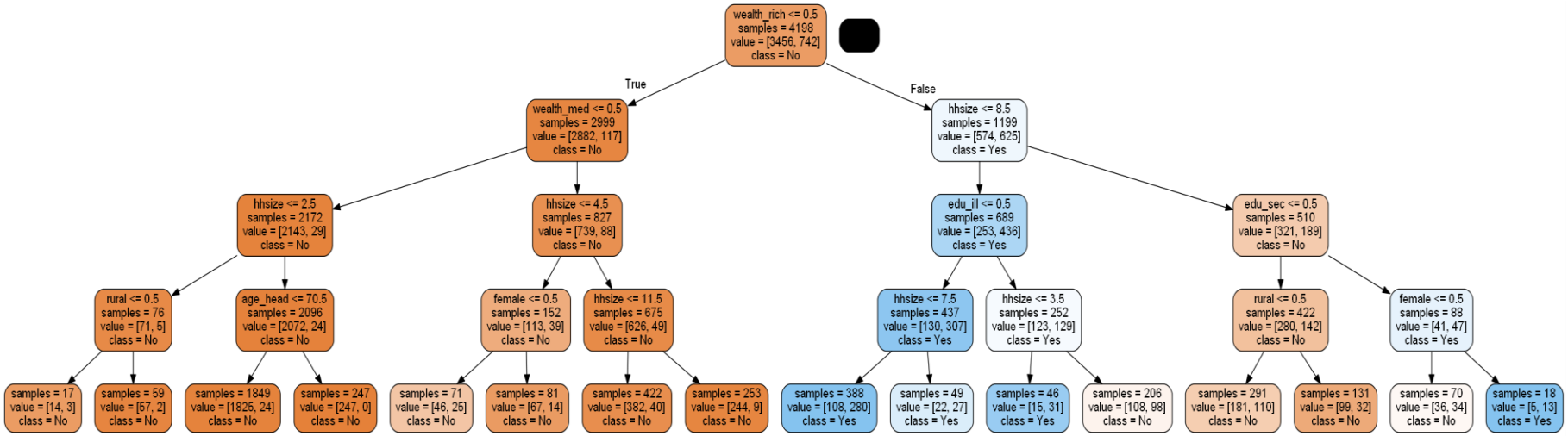
Appendix 6 Figure 37: Decision tree predicting household clean fuel usage for Rwanda.



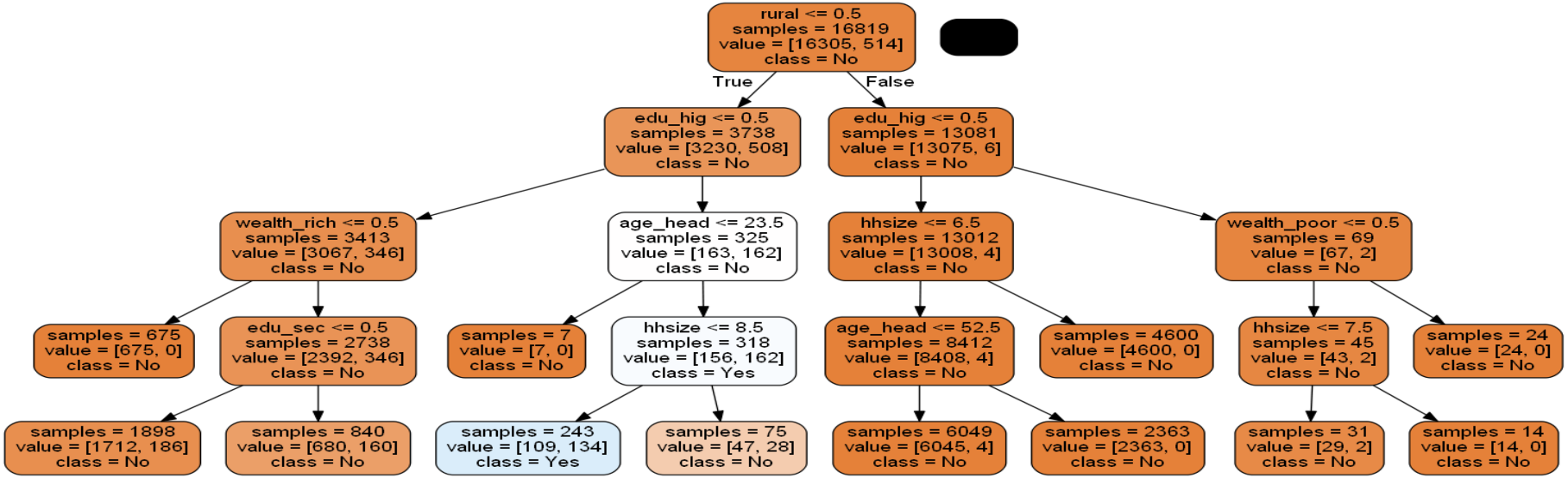
Appendix 6 Figure 38: Decision tree predicting household clean fuel usage for Sierra Leone.



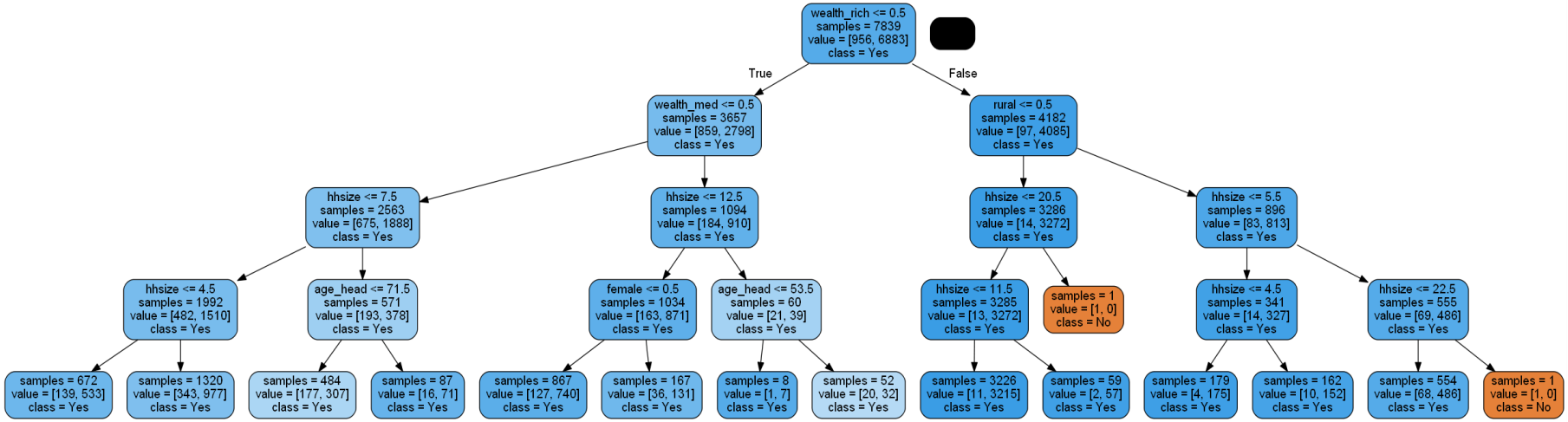
Appendix 6 Figure 39: Decision tree predicting household clean fuel usage for Senegal.



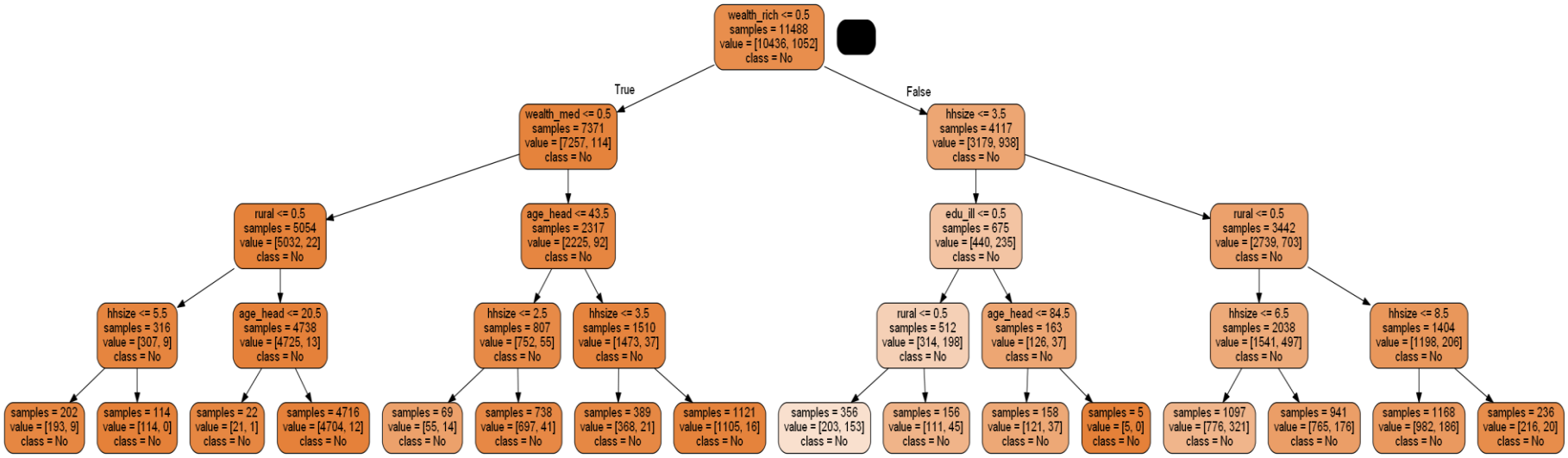
Appendix 6 Figure 40: Decision tree predicting household clean fuel usage for Chad.



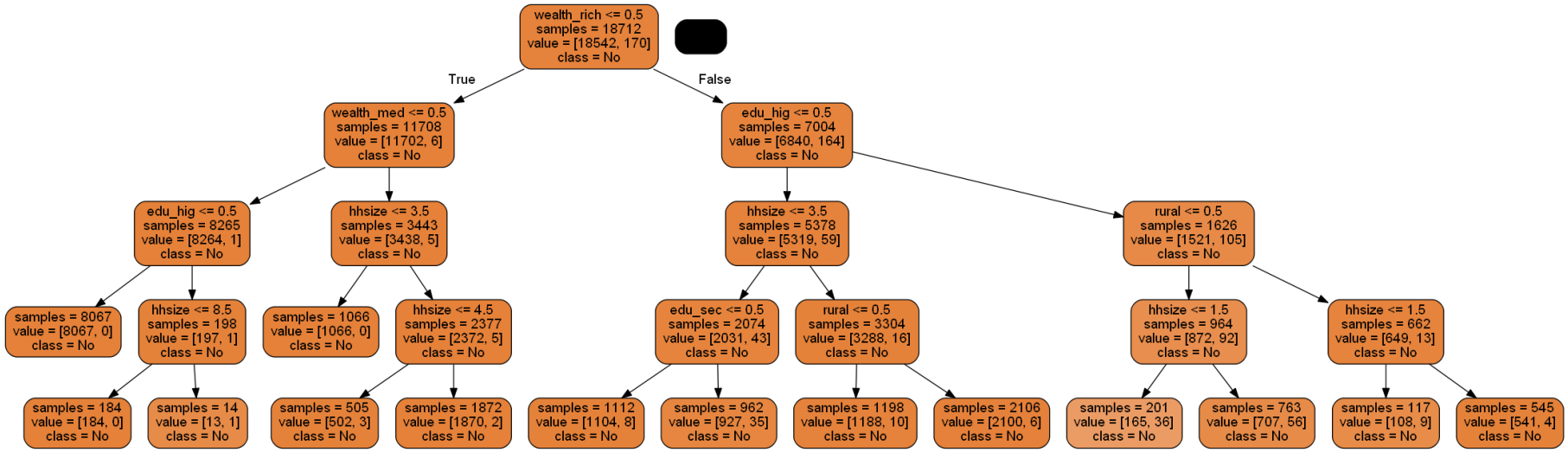
Appendix 6 Figure 41: Decision tree predicting household clean fuel usage for Tajikistan.



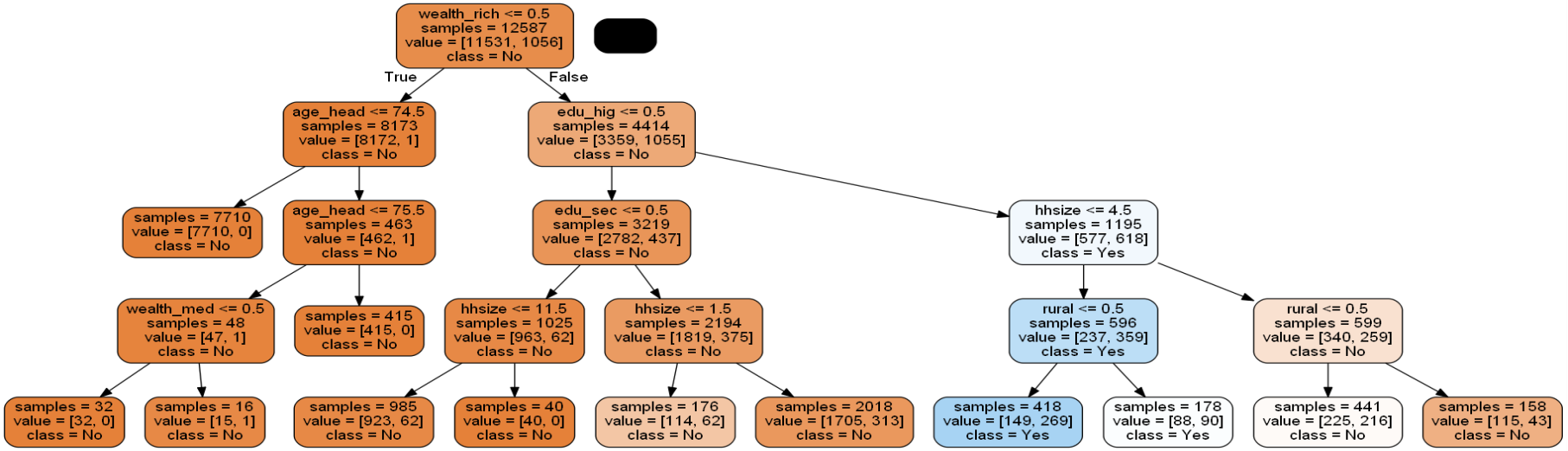
Appendix 6 Figure 42: Decision tree predicting household clean fuel usage for Timor.



Appendix 6 Figure 43: Decision tree predicting household clean fuel usage for Uganda.



Appendix 6 Figure 44: Decision tree predicting household clean fuel usage for Zambia.



Appendix 6 Figure 45: Decision tree predicting household clean fuel usage for Zimbabwe.