

Table S1. Set of all indicators initially selected for the comparison of cities.

Domain	Indicator	DHS file to use for calculation	Variable (DHS VI)
Environment	Proportion of households with piped water into dwelling or yard/plot (on the premises)	Household Recode (HR)	hv201/hv202
Environment	Proportion of households with access to improved sanitation as defined by WHO/UNICEF JMP	Household Recode (HR)	hv205
Environment	Proportion of households that are not using solid fuel for cooking in the home	Household Recode (HR)	hv226
Environment	Proportion of households that do not have environmental tobacco smoke in the home ever	Household Recode	hv252
Chronic disease risk factors (Smoking (male))	The percentage of males (15-49) who do not smoke cigarettes	Male Recode (MR)	mv463a
Education	Proportion of men (15-49) who can read all of a phrase on a card	Male Recode (MR)	mv155
Education	Proportion of men (15-49) who have completed secondary education	Male Recode (MR)	mv149
Chronic disease risk factors (Smoking (female))	The percentage of females (15-49) who do not smoke cigarettes	Individual Recode	v463a
Infectious disease risk factors (Knowledge of HIV)	The percent of respondents (women 15-49) who, in response to a prompted question, say that people can protect themselves from contracting HIV by having sex only with one faithful, uninfected partner	Individual Recode (IR)	v754dp
Infectious disease risk factors (Knowledge of HIV)	The percent of respondents (women 15-49) who, in response to a prompted question, say that people can protect themselves from contracting HIV by using condoms	Individual Recode (IR)	v754cp
Education	Proportion of women (15-49) who can read all of a phrase on a card	Individual Recode (IR)	v155
Education	Proportion of women (15-49) who have completed secondary education	Individual Recode (IR)	v149
Chronic disease risk factor (Body mass index)	Proportion of non-pregnant women (15-49) who have a BMI < 30	Individual Recode	v213, v445, v447
Child health and health coverage	Proportion of children (1-4 years of age) who have received all three doses of the DPT vaccine.	Child Recode (KR)	b8, h7
Child health and health coverage	Proportion of children (1-4 years of age) who have received all three doses of the polio vaccine.	Child Recode (KR)	b8, h8
Child health and health coverage	Proportion of children (1-4 years of age) who have received the measles vaccine.	Child Recode (KR)	b8, h9

Table S2: Description of Demographic Health Surveys that contributed data

Country	Year	Country Code	Selected City	Household Sample Size	Women Sample Size	Men Sample Size	Children Sample Size	Variables Used to Identify City Sample
Albania	2008	AL	Tirana	1366	1142	520	177	V024=4 & V025=1
Armenia	2010	AM	Yerevan	1149	987	283	176	V024=11 & V025=1
Azerbaijan	2006	AZ	Baku	1166	1312	422	201	V024=1 & V025=1
Bangladesh	2011	BD	Dhaka	1322	1345	138	177	v024=3 & v025=1 & V023=3
Benin	2011-12	BJ	Cotonou	1913	1949	508	861	V024=8 & V025=1
Bolivia	2008	BO	La Paz	2513	2315	798	694	v024=2 & v025=1
Burkina Faso	2010	BF	Ouagadougou	939	1333	624	480	V024=3 & V025=1
Burundi	2010	BU	Bujumbura	912	1212	722	563	V024=1 & V025=1
Cambodia	2010	KH	Phnom Penh	799	1251	534	302	v024=8 & v025=1
Cameroon	2011	CM	Yaounde	1156	1352	570	573	V026=1 & V025=1 & V024=12
Chad	2004	TD	N'Djamena	1169	1324	549	900	V024=9 & V025=1
Colombia	2010	CO	Bogota	3604	3690	x	781	v024=5 & v025=1
Comoros	2012	KM	Moroni	770	865	394	276	V023=7 & V025=1
Congo (Brazzaville)	2011-12	CG	Brazzaville	1173	1180	584	580	V024=11 & V025=1
Congo Democratic Republic	2013	CD	Kinshasa	1214	1804	762	806	V024=1 & V025=1
Cote d'Ivoire	2011-12	CI	Abidjan	1137	1400	641	515	V024=11& V025=1
Dominican Republic	2013	DR	Santo Domingo	434	343	343	103	sprovin=1
Ethiopia	2011	ET	Addis Ababa	1524	1741	1237	315	V024=14 & V025=1

Country	Year	Country Code	Selected City	Household Sample Size	Women Sample Size	Men Sample Size	Children Sample Size	Variables Used to Identify City Sample
Gabon	2012	GA	Libreville	1562	1557	900	650	V024=1 & V025=1
Ghana	2008	GH	Accra	1481	622	528	189	V024=3 & V025=1
Guinea	2012	GN	Conakry	1010	1465	620	609	V024=2 & V025=1 & V026=0
Guyana	2009	GY	Georgetown	598	554	394	116	V024=4 & V026=0 & V025=1
Haiti	2012	HT	Port-au-Prince	1761	2361	1365	665	v026=0
Honduras	2011-12	HN	Tegucigalpa	1276	1351	345	335	hv022=16
India	2005	IA	New Delhi	3109	3105	1336	935	v024=7& v025=1 & V026=0
India	2005	IA	Kolkata	2337	2511	1065	503	v024=19 & v025=1 & V026=0
India	2005	IA	Mumbai	4928	5332	5301	1287	v024=27 & v025=1 & V026=0
Indonesia	2012	ID	Jakarta	2118	2391	466	614	v024==31 & v025==1
Jordan	2012	JO	Amman	1553	1106	x	661	V023=11 & V025=1
Kenya	2008-09	KE	Nairobi	1108	952	399	322	V024=1 & V025=1 & V026=0
Kyrgyz Republic	2012	KY	Bishkek	918	983	234	268	V024=8 & V025=1
Kyrgyz Republic	2012	KY	Osh	737	641	157	198	V024=9 & V025=1

Country	Year	Country Code	Selected City	Household Sample Size	Women Sample Size	Men Sample Size	Children Sample Size	Variables Used to Identify City Sample
Liberia	2013	LB	Monrovia	1062	1293	505	512	hv023=21
Madagascar	2008	MD	Antananarivo	1507	1653	741	547	V024=11 & V025=1
Malawi	2010	MW	Lilongwe	432	480	157	243	v026==0
Maldives	2009	MV	Male	944	1041	274	371	V024=1
Mali	2012-13	ML	Bamako	1579	1970	811	1178	V024=9 & V025=1
Moldova	2005	MB	Chisinau	2922	2031	623	285	V024=4 & V025=1
Morocco	2003-2004	MA	Casablanca	1290	1837	x	370	V024=9 & V025=1 & v026=0
Mozambique	2011	MZ	Maputo	1297	1724	432	679	V024=11 & V025=1
Namibia	2013	NM	Windhoek	888	1005	423	305	V024=6 & V025=1
Nepal	2011	NP	Kathmandu	509	539	232	110	V023=5 & V025=1
Niger	2012	NI	Niamey	1135	1379	562	799	V024=8 & V025=1 & V026=0
Nigeria	2013	NG	Lagos	1729	1482	701	753	HV022=71 & v025=1
Pakistan	2012	PK	Karachi	1290	1184	308	620	v024=2 & v025=1 & V026=0

Country	Year	Country Code	Selected City	Household Sample Size	Women Sample Size	Men Sample Size	Children Sample Size	Variables Used to Identify City Sample
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Pakistan	2012	PK	Islamabad	828	627	193	361	v024=6 & v025=1 & V026=0
Peru	2012	PE	Lima	2179	2176	x	492	v024=15 & v025=1 & V026=0
Philippines	2013	PH	Manila	1683	2249	x	638	v024=1 & v025=1
Rwanda	2010	RW	Kigali	1269	1618	785	648	V024=1 & V025=1
Sao Tome and Principe	2008-2009	ST	Sao Tome	699	635	440	301	V024 =1 & V025=1
Senegal	2012-13	SN	Dakar	395	549	x	749	V024=1 & V025=1
Sierra Leone	2013	SL	Freetown	1584	2337	1069?	892	V024=4 & V025=1
Swaziland	2006-2007	SZ	Mbabane	426	356	308	127	V024=1 & V026=0 & V025=1
Tajikistan	2012	TJ	Dushanbe	1422	1733	x		V024=1 & V025=1
Tanzania	2010	TZ	Dar es Salaam	352	410	100	158	V024=7 & V025=1 & V026=0
Timor-Leste	2009-10	TL	Dili	880	1047	351	580	v024=6 & v025=1
Uganda	2011	UG	Kampala	1062	1039	238	474	V024=1 & V025=1
Ukraine	2007	UA	Kyiv	728	339	180	55	V024=1 & V026=0
Zambia	2007	ZM	Lusaka	527	614	583	302	V024=5 & V026=0 & V025 = 1
Zimbabwe	2010-11	ZW	Harare	1121	1196	894	445	V024=9 & V025=1

Table S3: Values of indicators used to calculate the UHI

<u>Country</u>	<u>City</u>	<u>% piped onto premises</u>	<u>% improved sanitation</u>	<u>% not using solid fuels for cooking in the home</u>	<u>% women who completed secondary or higher</u>	<u>% women who believe condom prevents HIV</u>	<u>% women who believe having one partner prevents HIV</u>	<u>% with dpt3 age 1-4</u>	<u>% with polio 3 age 1-4</u>	<u>% with measles vaccine age 1-4</u>
Albania	Tirana	94.80	98.98	97.58	70.67	90.63	92.95	100.00	100.00	99.44
Armenia	Yerevan	99.13	98.26	100.00	94.43	84.50	91.17	94.15	93.57	94.12
Azerbaijan	Baku	90.21	88.45	99.92	53.20	66.25	49.62	86.67	82.35	89.76
Bangladesh	Dhaka	60.59	33.51	75.93	36.41	70.63	77.35	94.67	94.08	89.94
Benin	Cotonou	66.44	35.65	28.54	14.57	82.71	91.36	75.67	50.06	87.29
Bolivia	La Paz	95.90	64.09	98.53	53.61	80.29	78.78	80.47	80.93	78.65
Burkina Faso	Ouagadougou	48.35	56.98	37.38	8.40	80.48	88.67	87.95	88.13	92.27
Burundi	Bujumbura	56.14	33.99	10.99	12.95	93.48	88.64	92.32	85.58	96.81
Cambodia	Phnom Penh	83.35	89.99	75.91	28.22	67.04	94.23	91.64	93.00	90.67
Cameroon	Yaoundé	39.97	42.47	77.99	22.41	80.69	85.83	78.57	64.82	84.27
Chad	N'Djamena	53.94			7.10	52.35	72.12	50.40	47.82	57.62
Colombia	Bogotá	99.86	90.21	99.97	60.22	82.06	75.11	94.05	75.43	92.41
Comoros	Moroni	41.56	24.03	82.08	28.21	79.51	84.46	71.26	69.35	76.15
Congo	Brazzaville	43.99	13.64	42.56	18.47	77.75	84.23	61.29	47.75	86.60
Congo Democratic Republic	Kinshasa	48.93	19.69	24.77	43.46	69.19	85.41	84.54	72.46	93.96
Cote d'Ivoire	Abidjan	87.32	40.99	71.16	14.36	74.22	79.08	78.15	72.67	82.31
Dominican Republic	Santo Domingo	94.83	82.49	98.85	52.77	83.09	90.38	81.71	58.59	91.03
Ethiopia	Addis Ababa	72.24	18.70	45.41	28.20	82.61	65.65	88.63	82.72	94.00
Gabon	Libreville	82.22	40.85	99.42	16.89	85.03	89.18	47.39	30.05	80.20
Ghana	Accra	44.50	25.93	48.95	34.08	77.15	89.77	89.20	84.83	96.07
Guinea	Conakry	56.44	34.36	6.44	15.36	76.65	84.07	52.65	50.09	82.12
Guyana	Georgetown	87.12	92.98	100.00	51.81	94.03	93.84	84.55	63.64	84.55

Haiti	Port-au-Prince	6.94	39.92	16.64	14.99	87.10	94.10	63.40	55.08	67.01
Honduras	Tegucigalpa	93.42	72.65	93.57	40.61	77.67	93.10	94.14	95.05	93.60
India-Delhi	Delhi	70.34	54.91	89.58	33.17	83.14	89.69	74.68	82.08	80.42
India-Kolkata	Kolkata	46.38	41.85	84.04	24.05	66.10	75.11	82.73	86.08	84.02
India - Mumbai	Mumbai	81.29	51.44	88.86	28.24	73.33	80.46	79.03	81.95	88.74
Indonesia	Jakarta	14.73	80.17	99.57	57.01	53.33	68.68	77.03	79.00	84.89
Jordan	Amman	51.86	99.71	100.00	44.22	55.57	75.74	99.38	99.38	97.82
Kenya	Nairobi	82.49	50.00	87.07	58.19	86.85	96.50	83.50	59.60	95.39
Kyrgyz Republic - Bishek	Bishkek	98.04	90.52	99.67	89.32	78.96	88.88	73.54	59.62	95.38
Kyrgyz Republic- Osh	Osh	89.82	98.91	98.24	76.44	58.17	75.04	96.24	88.72	97.42
Liberia	Monrovia	3.20	27.68	4.33	22.51	83.49	86.51	81.34	70.34	84.60
Madagascar	Antananarivo	27.80	19.58	9.10	24.56	88.44	92.52	87.79	78.57	89.15
Malawi	Lilongwe	44.21	23.84	13.69	27.50	69.67	86.19	91.00	73.93	97.62
Maldives	Male	92.05	97.03	100.00	15.85	84.68	95.56	97.77	92.82	94.75
Mali	Bamako	32.68	40.22	5.45	9.04	76.60	82.33	72.96	50.63	84.34
Moldova	Chisinau	89.14	88.81	99.86	56.08	86.45	88.04	93.17	96.40	97.36
Morocco	Casablanca	85.27	86.59	99.69	14.40	60.51	93.29	97.49	97.48	94.96
Mozambique	Maputo	64.69	31.61	33.33	14.04	73.29	80.26	86.18	73.23	94.48
Namibia	Windhoek	67.34	51.13	94.81	51.24	91.42	92.63	65.69	58.36	87.50
Nepal	Kathmandu	57.76	53.24	91.55	51.39	92.44	93.19	95.19	97.12	93.27
Niger	Niamey	51.19	30.57	12.00	7.40	69.84	85.46	82.37	80.74	83.56
Nigeria	Lagos	4.86	27.99	94.22	65.05	77.25	88.65	80.44	61.77	80.95
Pakistan-Karachi	Karachi	75.89	98.06	99.46	51.77	51.96	81.47	63.15	73.31	74.56
Pakistan-Islamabad	Islamabad	21.89	93.36	92.36	64.91	65.70	84.42	83.43	77.52	86.34
Peru	Lima	91.79	83.75	99.22	73.94	79.96	88.12	82.04	84.93	83.40
Philippines	Manila	40.46	67.62	87.27	79.01	55.49	36.30	90.69	89.87	92.10
Rwanada	Kigali	36.33	41.92	5.69	20.33	94.50	92.95	98.53	98.05	97.88
Sao Tome and Principe	São Tomé	47.07	42.35	49.21	2.52	78.64	83.73	88.36	78.70	85.20
Senegal	Dakar	82.23	43.07	74.76	8.20			87.18	70.83	89.44

Sierra Leone	Freetown	19.79	29.10	4.75	23.87	86.08	90.66	72.94	71.43	85.73
Swaziland	Mbabane	67.14	51.17	69.25	43.54	95.77	96.35	93.04	63.79	94.83
Tajikistan	Dushanbe	96.90	93.46	99.44	62.61	57.52	66.43	92.86	88.26	95.17
Tanzania	Dar es Salaam	12.50	19.60	24.22	9.27	80.84	93.90	100.00	96.38	98.54
Timor-Leste	Dili	49.89	73.18	26.93	46.70	61.37	78.08	62.50	26.22	71.53
Uganda	Kampala	33.15	19.30	21.23	26.76	87.56	91.71	76.23	63.53	85.75
Ukraine	Kyiv	99.59	98.90	100.00	83.48	91.77	88.11			
Zambia	Lusaka	29.60	26.00	48.96	21.17	69.33	88.27	58.46	76.25	88.85
Zimbabwe	Harare	67.35	37.02	89.29	11.12	80.99	92.09	79.30	81.55	84.79