

Supplemental Online Content

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eAppendix 1. Risk Factor Data Sources

eAppendix 2. GAM Model Fit

eAppendix 3. Regional COPD Prevalence (2020-2050) and 95% CIs

This supplemental material has been provided by the authors to give readers additional information about their work.

eAppendix 1. Risk Factor Data Sources

eTable 1. Data sources of the risk factors included in the models

Risk Factor	Source	Metric	Time period	Geographical distribution
COPD prevalence	Adeloye et al. (2022)	Prevalence (%), GOLD	2019	national, regional, global
Population by age, gender	World Bank	Population numbers	1960-2050	national, regional, global
Human Development Index (HDI)	Frederick S. Pardee Center for International Futures	Index varying between 0 – 100	1990-2050	national
Smoking prevalence	Global Burden of Disease Study 2019 (GBD, 2019)	Smoking tobacco use prevalence	1990-2019	national, regional, global
Ambient particulate matter pollution (PM_{2.5})	Global Burden of Disease Study 2019 (GBD, 2019)	Annual mean PM _{2.5} concentrations (µg/m ³)	1990-2019	national, regional, global
Household air pollution exposure	Global Burden of Disease Study 2019 (GBD, 2019)	% of population exposed to household air pollution from solid fuels	1990-2019	national, regional, global
Ambient ozone pollution	Global Burden of Disease Study 2019 (GBD, 2019)	Annual mean ambient ozone pollution (parts per billion)	1990-2019	national, regional, global

eAppendix 2. GAM Model Fit

Model fit and model performance

Below, a table (eTable2) containing the results from the fitting procedure of the GAMs. The default maximum degrees of freedom for the smoothers used in the model are sufficient for all predictors. The effective degrees of freedom (EDF) for all estimated smoothers are below their maximum possible value (k). The k -index is a measurement of the remaining pattern in the residuals, and the p -value is calculated based on the distribution of the k -index after randomizing the order of the residuals. Ideally, k should have a value that is equal to or greater than 1. However, provided that the k -index value is not restrictively low, k is not critical, because the effective degrees of freedom of a term are primarily controlled by the smoothing penalty, which is a main feature of a GAM.

eTable 2. GAMs estimating COPD prevalence among females/males (25+) from 2020-2050

	Year	Smoking	HDI	PM _{2.5}	Ozone	HAP
Female GAM						
k^*	9.00	9.00	9.00	6.00	6.00	9.00
EDF	3.21	1.00	1.08	3.81	5.01	2.93
k -index, p value	1.00, 0.53	1.14, 0.88	1.03, 0.55	0.79, 0.03	0.87, 0.17	1.10, 0.82
Male GAM						
k^*	9.00	9.00	2.00	9.00	9.00	9.00
EDF	1.91	1.00	1.00	5.29	4.52	3.35
k -index, p value)	1.05, 0.59	0.85, 0.13	0.69, 0.005	0.94, 0.28	1.04, 0.58	0.85, 0.09

Note. HDI = human development index, HAP = household air pollution, PM_{2.5} = particulate matter 2.5, EDF = effective degrees of freedom

eTable 3. Evaluation of GAMs estimating COPD prevalence among females/males (25+) from 2020-2050

	R ²	Deviance	MSE	RMSE	AIC	BIC
Female GAM	0.92	0.88	0.007	0.08	-255.19	-188.25
Male GAM	0.99	0.99	0.07	0.26	55.64	125.05

Note. R² = R squared, MSE = mean squared error, RMSE = root mean squared error, AIC = akaikie information criterion, BIC = bayesian information criterion. R²/Deviance; a value of >0.75 shows satisfactory prediction accuracy, MSE; values closer to zero represent greater prediction accuracy, RMSE; values between 0.2 and 0.5 show satisfactory prediction accuracy.

eAppendix 3. Regional COPD Prevalence (2020-2050) and 95% CIs

eTable 4. Regional COPD prevalence (%) from 2020-2050 across females

Year	Region	Prevalence (%)	Upper 95% CI	Lower 95% CI
2020	East Asia & Pacific	5.12	5.14	5.10
2021	East Asia & Pacific	5.06	5.09	5.04
2022	East Asia & Pacific	5.24	5.25	5.22
2023	East Asia & Pacific	5.18	5.19	5.16
2024	East Asia & Pacific	5.12	5.14	5.11
2025	East Asia & Pacific	5.30	5.32	5.29
2026	East Asia & Pacific	5.25	5.26	5.24
2027	East Asia & Pacific	5.19	5.20	5.18
2028	East Asia & Pacific	5.14	5.15	5.12
2029	East Asia & Pacific	5.08	5.09	5.07
2030	East Asia & Pacific	5.27	5.29	5.26
2031	East Asia & Pacific	5.22	5.23	5.21
2032	East Asia & Pacific	5.16	5.17	5.15
2033	East Asia & Pacific	5.11	5.12	5.09
2034	East Asia & Pacific	5.31	5.32	5.30
2035	East Asia & Pacific	5.25	5.26	5.24
2036	East Asia & Pacific	5.20	5.21	5.19
2037	East Asia & Pacific	5.14	5.15	5.13
2038	East Asia & Pacific	5.08	5.10	5.07
2039	East Asia & Pacific	5.29	5.30	5.28

2040	East Asia & Pacific	5.23	5.24	5.22
2041	East Asia & Pacific	5.18	5.19	5.17
2042	East Asia & Pacific	5.12	5.13	5.11
2043	East Asia & Pacific	5.06	5.08	5.05
2044	East Asia & Pacific	5.27	5.28	5.25
2045	East Asia & Pacific	5.21	5.22	5.20
2046	East Asia & Pacific	5.15	5.17	5.14
2047	East Asia & Pacific	5.10	5.11	5.08
2048	East Asia & Pacific	5.04	5.05	5.03
2049	East Asia & Pacific	5.23	5.26	5.21
2050	East Asia & Pacific	5.18	5.20	5.16
2020	Europe & Central Asia	7.55	7.58	7.52
2021	Europe & Central Asia	7.85	7.86	7.83
2022	Europe & Central Asia	7.79	7.81	7.78
2023	Europe & Central Asia	7.74	7.75	7.72
2024	Europe & Central Asia	7.68	7.69	7.67
2025	Europe & Central Asia	7.97	7.98	7.95
2026	Europe & Central Asia	7.91	7.92	7.90
2027	Europe & Central Asia	7.85	7.86	7.84
2028	Europe & Central Asia	7.80	7.81	7.79
2029	Europe & Central Asia	7.74	7.75	7.73
2030	Europe & Central Asia	7.69	7.70	7.67
2031	Europe & Central Asia	7.95	7.96	7.94
2032	Europe & Central Asia	7.89	7.90	7.88

2033	Europe & Central Asia	7.84	7.85	7.83
2034	Europe & Central Asia	7.78	7.79	7.77
2035	Europe & Central Asia	7.72	7.74	7.71
2036	Europe & Central Asia	7.96	7.97	7.95
2037	Europe & Central Asia	7.91	7.92	7.90
2038	Europe & Central Asia	7.85	7.86	7.84
2039	Europe & Central Asia	7.79	7.80	7.78
2040	Europe & Central Asia	7.74	7.75	7.73
2041	Europe & Central Asia	7.68	7.69	7.67
2042	Europe & Central Asia	7.88	7.90	7.87
2043	Europe & Central Asia	7.83	7.84	7.82
2044	Europe & Central Asia	7.77	7.78	7.76
2045	Europe & Central Asia	7.72	7.73	7.70
2046	Europe & Central Asia	7.66	7.67	7.65
2047	Europe & Central Asia	7.60	7.61	7.59
2048	Europe & Central Asia	7.76	7.78	7.75
2049	Europe	7.71	7.73	7.69
2050	Europe	7.66	7.67	7.63
2020	MENA	6.82	6.85	6.80
2021	MENA	6.77	6.79	6.74
2022	MENA	6.87	6.88	6.85
2023	MENA	6.81	6.83	6.79
2024	MENA	6.75	6.77	6.74
2025	MENA	6.98	7.00	6.97

2026	MENA	6.93	6.94	6.92
2027	MENA	6.87	6.88	6.86
2028	MENA	6.81	6.83	6.80
2029	MENA	6.76	6.77	6.75
2030	MENA	6.98	7.01	6.99
2031	MENA	6.94	6.95	6.93
2032	MENA	6.88	6.89	6.87
2033	MENA	6.83	6.84	6.82
2034	MENA	6.77	6.78	6.76
2035	MENA	6.99	7.00	6.98
2036	MENA	6.93	6.94	6.92
2037	MENA	6.87	6.89	6.86
2038	MENA	6.82	6.83	6.81
2039	MENA	6.76	6.77	6.75
2040	MENA	6.95	6.97	6.95
2041	MENA	6.90	6.91	6.89
2042	MENA	6.84	6.86	6.83
2043	MENA	6.79	6.80	6.78
2044	MENA	6.97	6.98	6.95
2045	MENA	6.91	6.92	6.90
2046	MENA	6.85	6.87	6.84
2047	MENA	6.80	6.81	6.79
2048	MENA	6.74	6.75	6.73
2049	MENA	6.91	6.93	6.88

2050	MENA	6.85	6.87	6.83
2020	North America	14.95	14.98	14.92
2021	North America	15.01	15.03	15.00
2022	North America	14.96	14.97	14.94
2023	North America	14.90	14.91	14.89
2024	North America	14.84	14.85	14.83
2025	North America	14.79	14.80	14.78
2026	North America	14.73	14.74	14.72
2027	North America	14.67	14.69	14.66
2028	North America	14.62	14.63	14.61
2029	North America	14.56	14.57	14.55
2030	North America	14.58	14.59	14.57
2031	North America	14.52	14.54	14.51
2032	North America	14.47	14.48	14.46
2033	North America	14.41	14.42	14.40
2034	North America	14.36	14.36	14.35
2035	North America	14.30	14.31	14.29
2036	North America	14.24	14.25	14.23
2037	North America	14.19	14.20	14.18
2038	North America	14.13	14.14	14.12
2039	North America	14.12	14.14	14.11
2040	North America	14.07	14.08	14.06
2041	North America	14.01	14.02	14.00
2042	North America	13.95	13.97	13.94

2043	North America	13.90	13.91	13.89
2044	North America	13.84	13.85	13.83
2045	North America	13.79	13.80	13.77
2046	North America	13.73	13.74	13.72
2047	North America	13.67	13.69	13.66
2048	North America	13.66	13.68	13.64
2049	North America	13.60	13.62	13.58
2050	North America	13.52	13.56	13.52
2020	Latin America & Caribbean	10.15	10.17	10.13
2021	Latin America & Caribbean	10.10	10.12	10.08
2022	Latin America & Caribbean	10.04	10.06	10.02
2023	Latin America & Caribbean	10.20	10.21	10.18
2024	Latin America & Caribbean	10.14	10.15	10.13
2025	Latin America & Caribbean	10.08	10.09	10.07
2026	Latin America & Caribbean	10.03	10.04	10.01
2027	Latin America & Caribbean	10.18	10.19	10.17
2028	Latin America & Caribbean	10.12	10.13	10.11
2029	Latin America & Caribbean	10.07	10.08	10.06
2030	Latin America & Caribbean	10.01	10.02	10.00
2031	Latin America & Caribbean	9.95	9.96	9.94
2032	Latin America & Caribbean	10.11	10.12	10.10
2033	Latin America & Caribbean	10.05	10.06	10.04
2034	Latin America & Caribbean	9.99	10.00	9.98
2035	Latin America & Caribbean	9.94	9.95	9.93

2036	Latin America & Caribbean	9.88	9.89	9.87
2037	Latin America & Caribbean	10.03	10.04	10.02
2038	Latin America & Caribbean	9.98	9.99	9.97
2039	Latin America & Caribbean	9.92	9.93	9.91
2040	Latin America & Caribbean	9.86	9.87	9.85
2041	Latin America & Caribbean	9.81	9.82	9.80
2042	Latin America & Caribbean	9.96	9.97	9.95
2043	Latin America & Caribbean	9.90	9.91	9.89
2044	Latin America & Caribbean	9.85	9.86	9.83
2045	Latin America & Caribbean	9.79	9.80	9.78
2046	Latin America & Caribbean	9.73	9.74	9.72
2047	Latin America & Caribbean	9.68	9.69	9.66
2048	Latin America & Caribbean	9.83	9.85	9.81
2049	Latin America & Caribbean	9.77	9.79	9.75
2050	Latin America & Caribbean	9.72	9.73	9.70
2020	South Asia	6.82	6.85	6.79
2021	South Asia	6.93	6.95	6.92
2022	South Asia	6.88	6.89	6.86
2023	South Asia	6.82	6.84	6.80
2024	South Asia	6.94	6.95	6.92
2025	South Asia	6.88	6.90	6.87
2026	South Asia	7.00	7.01	6.98
2027	South Asia	6.94	6.95	6.92
2028	South Asia	6.88	6.90	6.87

2029	South Asia	6.98	7.00	6.97
2030	South Asia	6.93	6.94	6.91
2031	South Asia	7.01	7.03	7.00
2032	South Asia	6.96	6.97	6.94
2033	South Asia	6.90	6.92	6.89
2034	South Asia	6.97	6.99	6.96
2035	South Asia	6.92	6.93	6.90
2036	South Asia	6.86	6.87	6.85
2037	South Asia	6.91	6.93	6.90
2038	South Asia	6.86	6.87	6.84
2039	South Asia	6.80	6.81	6.79
2040	South Asia	6.83	6.85	6.82
2041	South Asia	6.78	6.79	6.76
2042	South Asia	6.72	6.74	6.71
2043	South Asia	6.74	6.75	6.72
2044	South Asia	6.68	6.69	6.67
2045	South Asia	6.62	6.64	6.61
2046	South Asia	6.63	6.65	6.61
2047	South Asia	6.57	6.59	6.56
2048	South Asia	6.52	6.53	6.50
2049	South Asia	6.46	6.48	6.44
2050	South Asia	6.50	6.53	6.48
2020	SSA	13.74	13.76	13.71
2021	SSA	13.68	13.71	13.66

2022	SSA	14.13	14.14	14.11
2023	SSA	14.07	14.09	14.05
2024	SSA	14.50	14.52	14.49
2025	SSA	14.45	14.46	14.43
2026	SSA	14.39	14.40	14.37
2027	SSA	14.80	14.82	14.78
2028	SSA	14.74	14.76	14.73
2029	SSA	15.13	15.14	15.11
2030	SSA	15.07	15.09	15.05
2031	SSA	15.43	15.44	15.41
2032	SSA	15.37	15.39	15.36
2033	SSA	15.32	15.33	15.30
2034	SSA	15.63	15.64	15.61
2035	SSA	15.57	15.59	15.55
2036	SSA	15.79	15.80	15.77
2037	SSA	15.73	15.75	15.71
2038	SSA	15.81	15.82	15.79
2039	SSA	15.75	15.77	15.74
2040	SSA	15.69	15.71	15.68
2041	SSA	15.69	15.70	15.67
2042	SSA	15.63	15.65	15.61
2043	SSA	15.57	15.59	15.55
2044	SSA	15.51	15.53	15.50
2045	SSA	15.41	15.42	15.39

2046	SSA	15.35	15.37	15.33
2047	SSA	15.20	15.22	15.19
2048	SSA	15.15	15.17	15.13
2049	SSA	15.09	15.11	15.07
2050	SSA	14.92	14.95	14.88

Note. MENA = Middle East & North Africa, SSA = Sub-Saharan Africa, CI = confidence interval

eTable 5. Regional COPD prevalence (%) from 2020-2050 across males

Year	Region	Prevalence (%)	Upper 95% CI	Lower 95% CI
2020	East Asia & Pacific	12.03	12.42	11.64
2021	East Asia & Pacific	11.89	12.36	11.42
2022	East Asia & Pacific	11.85	12.48	11.23
2023	East Asia & Pacific	11.72	12.42	11.01
2024	East Asia & Pacific	11.58	12.38	10.77
2025	East Asia & Pacific	11.53	12.51	10.55
2026	East Asia & Pacific	11.39	12.47	10.32
2027	East Asia & Pacific	11.25	12.43	10.08
2028	East Asia & Pacific	11.11	12.39	9.84
2029	East Asia & Pacific	10.97	12.35	9.60
2030	East Asia & Pacific	10.94	12.49	9.38
2031	East Asia & Pacific	10.80	12.45	9.14
2032	East Asia & Pacific	10.66	12.42	8.90
2033	East Asia & Pacific	10.52	12.38	8.66
2034	East Asia & Pacific	10.49	12.53	8.45
2035	East Asia & Pacific	10.35	12.49	8.21

2036	East Asia & Pacific	10.21	12.46	7.97
2037	East Asia & Pacific	10.08	12.42	7.73
2038	East Asia & Pacific	9.94	12.39	7.48
2039	East Asia & Pacific	9.92	12.55	7.29
2040	East Asia & Pacific	9.78	12.52	7.05
2041	East Asia & Pacific	9.64	12.48	6.80
2042	East Asia & Pacific	9.50	12.45	6.56
2043	East Asia & Pacific	9.36	12.42	6.31
2044	East Asia & Pacific	9.36	12.59	6.14
2045	East Asia & Pacific	9.23	12.55	5.90
2046	East Asia & Pacific	9.09	12.52	5.65
2047	East Asia & Pacific	8.95	12.49	5.41
2048	East Asia & Pacific	8.81	12.45	5.16
2049	East Asia & Pacific	8.82	12.63	5.01
2050	East Asia & Pacific	8.68	12.60	4.77
2020	Europe & Central Asia	13.18	13.53	12.82
2021	Europe & Central Asia	13.44	13.89	12.99
2022	Europe & Central Asia	13.30	13.84	12.75
2023	Europe & Central Asia	13.16	13.80	12.51
2024	Europe & Central Asia	13.02	13.77	12.27
2025	Europe & Central Asia	13.28	14.16	12.40
2026	Europe & Central Asia	13.14	14.12	12.16
2027	Europe & Central Asia	13.00	14.09	11.91
2028	Europe & Central Asia	12.86	14.05	11.67

2029	Europe & Central Asia	12.72	14.02	11.42
2030	Europe & Central Asia	12.58	13.99	11.17
2031	Europe & Central Asia	12.84	14.38	11.30
2032	Europe & Central Asia	12.70	14.35	11.05
2033	Europe & Central Asia	12.56	14.32	10.81
2034	Europe & Central Asia	12.42	14.29	10.56
2035	Europe & Central Asia	12.29	14.26	10.31
2036	Europe & Central Asia	12.55	14.66	10.44
2037	Europe & Central Asia	12.41	14.63	10.19
2038	Europe & Central Asia	12.27	14.60	9.94
2039	Europe & Central Asia	12.13	14.57	9.69
2040	Europe & Central Asia	11.99	14.54	9.45
2041	Europe & Central Asia	11.85	14.51	9.20
2042	Europe & Central Asia	12.12	14.92	9.33
2043	Europe & Central Asia	11.98	14.89	9.08
2044	Europe & Central Asia	11.85	14.86	8.83
2045	Europe & Central Asia	11.71	14.83	8.58
2046	Europe & Central Asia	11.57	14.80	8.34
2047	Europe & Central Asia	11.43	14.77	8.09
2048	Europe & Central Asia	11.70	15.18	8.22
2049	Europe & Central Asia	11.56	15.15	7.97
2050	Europe & Central Asia	11.42	15.12	7.72
2020	MENA	11.82	12.18	11.45
2021	MENA	11.68	12.13	11.23

2022	MENA	11.67	12.21	11.12
2023	MENA	11.53	12.17	10.88
2024	MENA	11.39	12.13	10.64
2025	MENA	11.45	12.32	10.58
2026	MENA	11.31	12.28	10.34
2027	MENA	11.17	12.25	10.09
2028	MENA	11.03	12.22	9.84
2029	MENA	10.89	12.19	9.59
2030	MENA	10.97	12.40	9.54
2031	MENA	10.83	12.37	9.29
2032	MENA	10.69	12.34	9.04
2033	MENA	10.55	12.31	8.80
2034	MENA	10.41	12.28	8.55
2035	MENA	10.50	12.50	8.50
2036	MENA	10.36	12.47	8.25
2037	MENA	10.22	12.44	8.00
2038	MENA	10.08	12.41	7.75
2039	MENA	9.94	12.38	7.50
2040	MENA	10.04	12.61	7.46
2041	MENA	9.90	12.58	7.21
2042	MENA	9.76	12.55	6.96
2043	MENA	9.62	12.53	6.71
2044	MENA	9.73	12.77	6.68
2045	MENA	9.59	12.74	6.44

2046	MENA	9.45	12.71	6.19
2047	MENA	9.31	12.68	5.94
2048	MENA	9.17	12.65	5.69
2049	MENA	9.30	12.92	5.68
2050	MENA	9.16	12.89	5.43
2020	North America	18.84	19.24	18.44
2021	North America	19.08	19.54	18.63
2022	North America	18.95	19.50	18.39
2023	North America	18.81	19.46	18.15
2024	North America	18.67	19.43	17.90
2025	North America	18.53	19.40	17.66
2026	North America	18.39	19.37	17.41
2027	North America	18.25	19.34	17.16
2028	North America	18.11	19.31	16.91
2029	North America	17.97	19.28	16.66
2030	North America	18.20	19.64	16.75
2031	North America	18.06	19.62	16.50
2032	North America	17.92	19.59	16.25
2033	North America	17.78	19.56	16.00
2034	North America	17.64	19.53	15.75
2035	North America	17.50	19.50	15.50
2036	North America	17.36	19.48	15.25
2037	North America	17.22	19.45	15.00
2038	North America	17.09	19.42	14.75

2039	North America	17.30	19.78	14.82
2040	North America	17.16	19.75	14.57
2041	North America	17.02	19.72	14.32
2042	North America	16.88	19.69	14.07
2043	North America	16.74	19.67	13.82
2044	North America	16.60	19.64	13.57
2045	North America	16.46	19.61	13.32
2046	North America	16.32	19.58	13.07
2047	North America	16.19	19.56	12.81
2048	North America	16.37	19.89	12.85
2049	North America	16.23	19.86	12.60
2050	North America	16.09	19.83	12.35
2020	Latin America & Caribbean	16.72	17.09	16.36
2021	Latin America & Caribbean	16.58	17.04	16.13
2022	Latin America & Caribbean	16.45	17.00	15.89
2023	Latin America & Caribbean	16.23	16.89	15.57
2024	Latin America & Caribbean	16.09	16.85	15.33
2025	Latin America & Caribbean	15.95	16.82	15.09
2026	Latin America & Caribbean	15.81	16.79	14.84
2027	Latin America & Caribbean	15.65	16.74	14.55
2028	Latin America & Caribbean	15.51	16.71	14.31
2029	Latin America & Caribbean	15.37	16.68	14.06

2030	Latin America & Caribbean	15.23	16.65	13.81
2031	Latin America & Caribbean	15.09	16.62	13.56
2032	Latin America & Caribbean	14.97	16.62	13.32
2033	Latin America & Caribbean	14.83	16.59	13.07
2034	Latin America & Caribbean	14.69	16.56	12.82
2035	Latin America & Caribbean	14.55	16.53	12.57
2036	Latin America & Caribbean	14.41	16.50	12.32
2037	Latin America & Caribbean	14.33	16.55	12.12
2038	Latin America & Caribbean	14.19	16.52	11.87
2039	Latin America & Caribbean	14.05	16.49	11.62
2040	Latin America & Caribbean	13.92	16.46	11.37
2041	Latin America & Caribbean	13.78	16.43	11.12
2042	Latin America & Caribbean	13.73	16.51	10.95
2043	Latin America & Caribbean	13.59	16.48	10.70
2044	Latin America & Caribbean	13.45	16.45	10.45
2045	Latin America & Caribbean	13.31	16.43	10.20
2046	Latin America & Caribbean	13.17	16.40	9.95
2047	Latin America & Caribbean	13.03	16.37	9.70
2048	Latin America & Caribbean	13.02	16.48	9.55
2049	Latin America &	12.88	16.45	9.30

	Caribbean			
2050	Latin America & Caribbean	12.74	16.42	9.05
2020	South Asia	11.70	12.07	11.32
2021	South Asia	11.71	12.23	11.19
2022	South Asia	11.57	12.16	10.98
2023	South Asia	11.43	12.11	10.76
2024	South Asia	11.43	12.28	10.58
2025	South Asia	11.29	12.23	10.36
2026	South Asia	11.27	12.40	10.14
2027	South Asia	11.13	12.34	9.92
2028	South Asia	10.99	12.29	9.69
2029	South Asia	10.94	12.45	9.44
2030	South Asia	10.80	12.40	9.21
2031	South Asia	10.72	12.54	8.91
2032	South Asia	10.59	12.48	8.69
2033	South Asia	10.45	12.43	8.46
2034	South Asia	10.33	12.54	8.13
2035	South Asia	10.19	12.49	7.90
2036	South Asia	10.06	12.44	7.67
2037	South Asia	9.91	12.50	7.31
2038	South Asia	9.77	12.45	7.08
2039	South Asia	9.63	12.40	6.85
2040	South Asia	9.44	12.42	6.45

2041	South Asia	9.30	12.37	6.23
2042	South Asia	9.16	12.32	6.00
2043	South Asia	8.93	12.30	5.56
2044	South Asia	8.79	12.25	5.34
2045	South Asia	8.65	12.20	5.11
2046	South Asia	8.41	12.15	4.66
2047	South Asia	8.27	12.10	4.43
2048	South Asia	8.13	12.05	4.20
2049	South Asia	7.99	12.00	3.97
2050	South Asia	7.82	12.00	3.63
2020	SSA	17.36	17.77	16.95
2021	SSA	17.22	17.71	16.74
2022	SSA	17.20	17.83	16.57
2023	SSA	17.06	17.77	16.35
2024	SSA	17.04	17.94	16.14
2025	SSA	16.90	17.89	15.92
2026	SSA	16.76	17.84	15.69
2027	SSA	16.78	18.07	15.49
2028	SSA	16.64	18.02	15.26
2029	SSA	16.70	18.30	15.09
2030	SSA	16.56	18.25	14.87
2031	SSA	16.63	18.55	14.72
2032	SSA	16.49	18.49	14.49
2033	SSA	16.35	18.44	14.26

2034	SSA	16.42	18.74	14.11
2035	SSA	16.28	18.69	13.88
2036	SSA	16.33	18.98	13.69
2037	SSA	16.19	18.92	13.46
2038	SSA	16.23	19.21	13.24
2039	SSA	16.09	19.15	13.02
2040	SSA	15.95	19.10	12.79
2041	SSA	15.99	19.36	12.61
2042	SSA	15.85	19.31	12.39
2043	SSA	15.89	19.55	12.24
2044	SSA	15.75	19.49	12.01
2045	SSA	15.79	19.70	11.87
2046	SSA	15.65	19.65	11.65
2047	SSA	15.66	19.82	11.49
2048	SSA	15.52	19.77	11.27
2049	SSA	15.38	19.72	11.04
2050	SSA	15.35	19.85	10.86

Note. MENA = Middle East & North Africa, SSA = Sub-Saharan Africa, CI = confidence interval