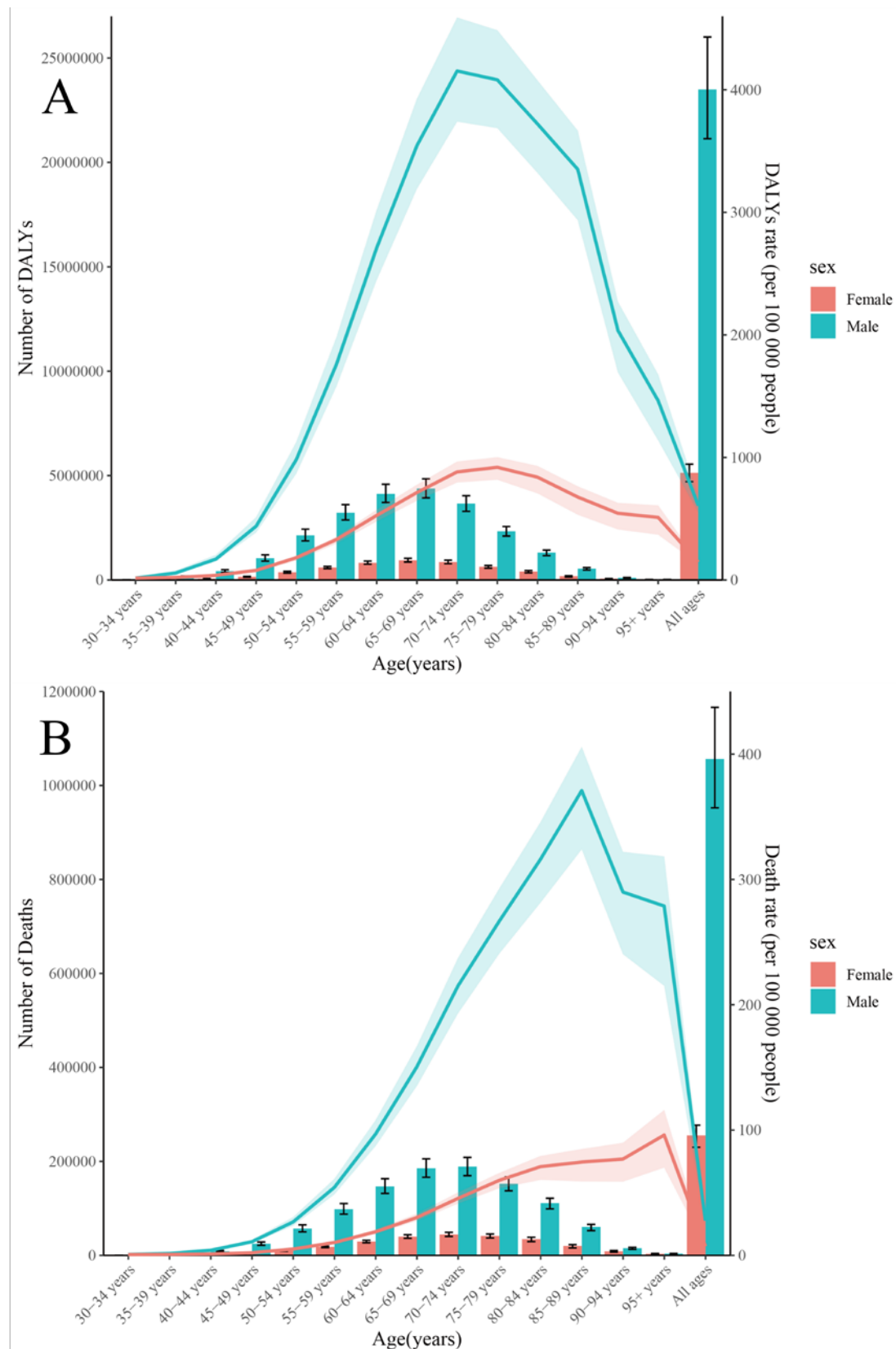
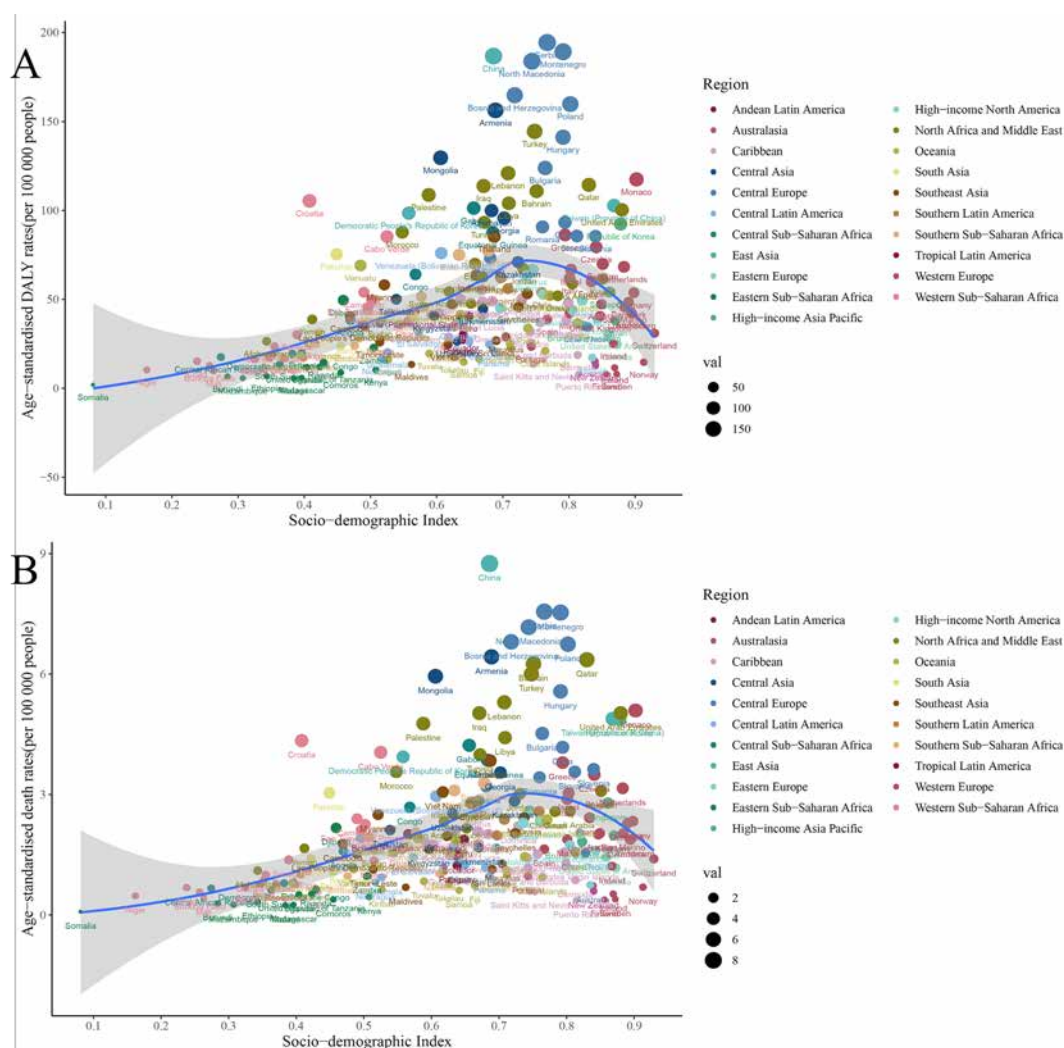


Supplementary Figure S1. The age-standardized rates of TBL cancer attributable to smoking according to country-specific sociodemographic Index. **A** – The age-standardized DALY rate. **B** – The age-standardized death rate
DALY – disability adjusted life-year.

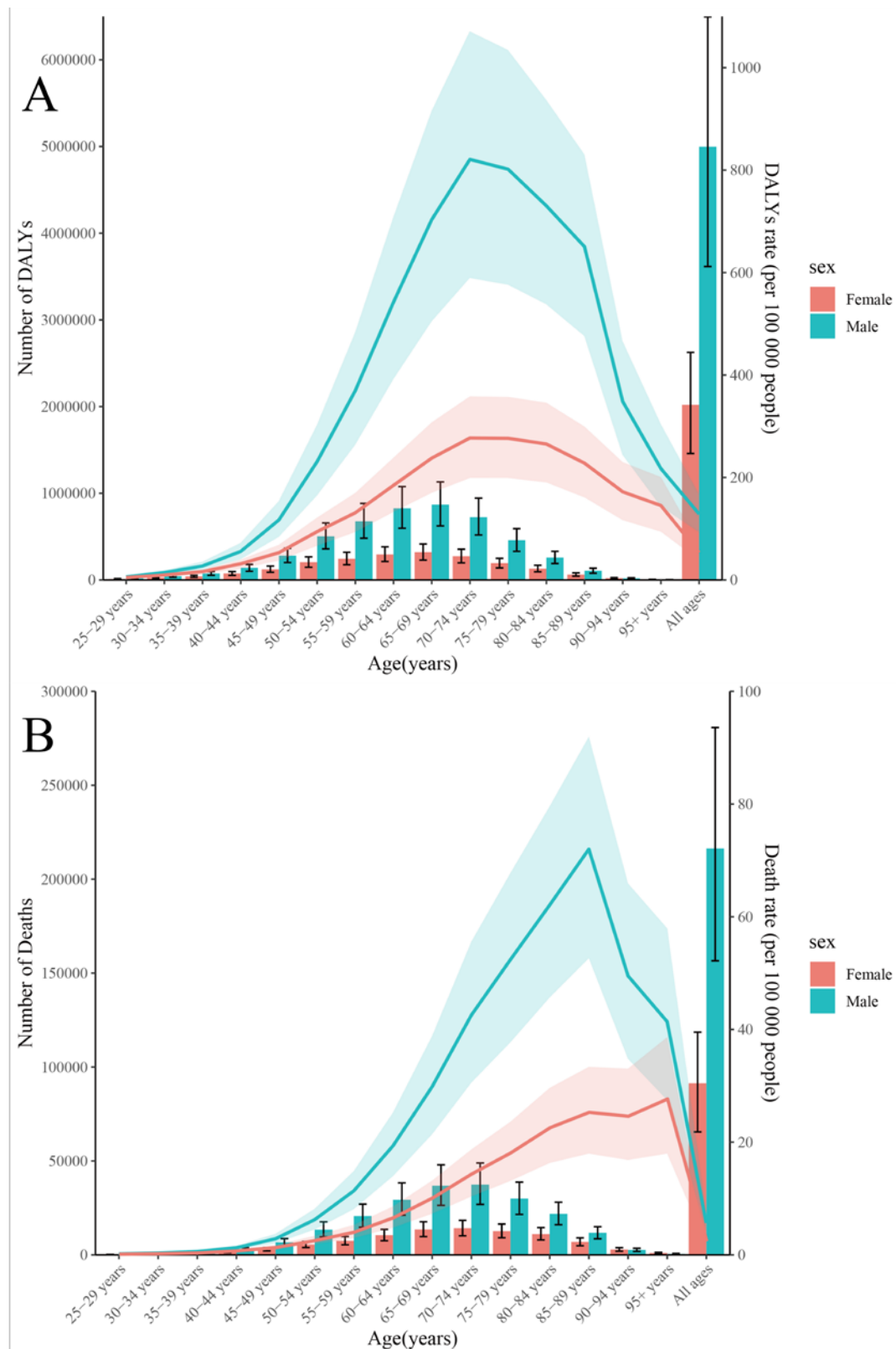


Supplementary Figure S2. Global number of DALYs and death cases, DALY and death estimates of TBL cancer attributable to smoking per 100 000 population by age and sex, 2019. Dotted and dashed lines indicate 95% upper and lower uncertainty intervals, respectively. **A** – DALY cases, and DALY estimates. **B** – Death cases, and death estimates
 DALY == disability-adjusted life-year.



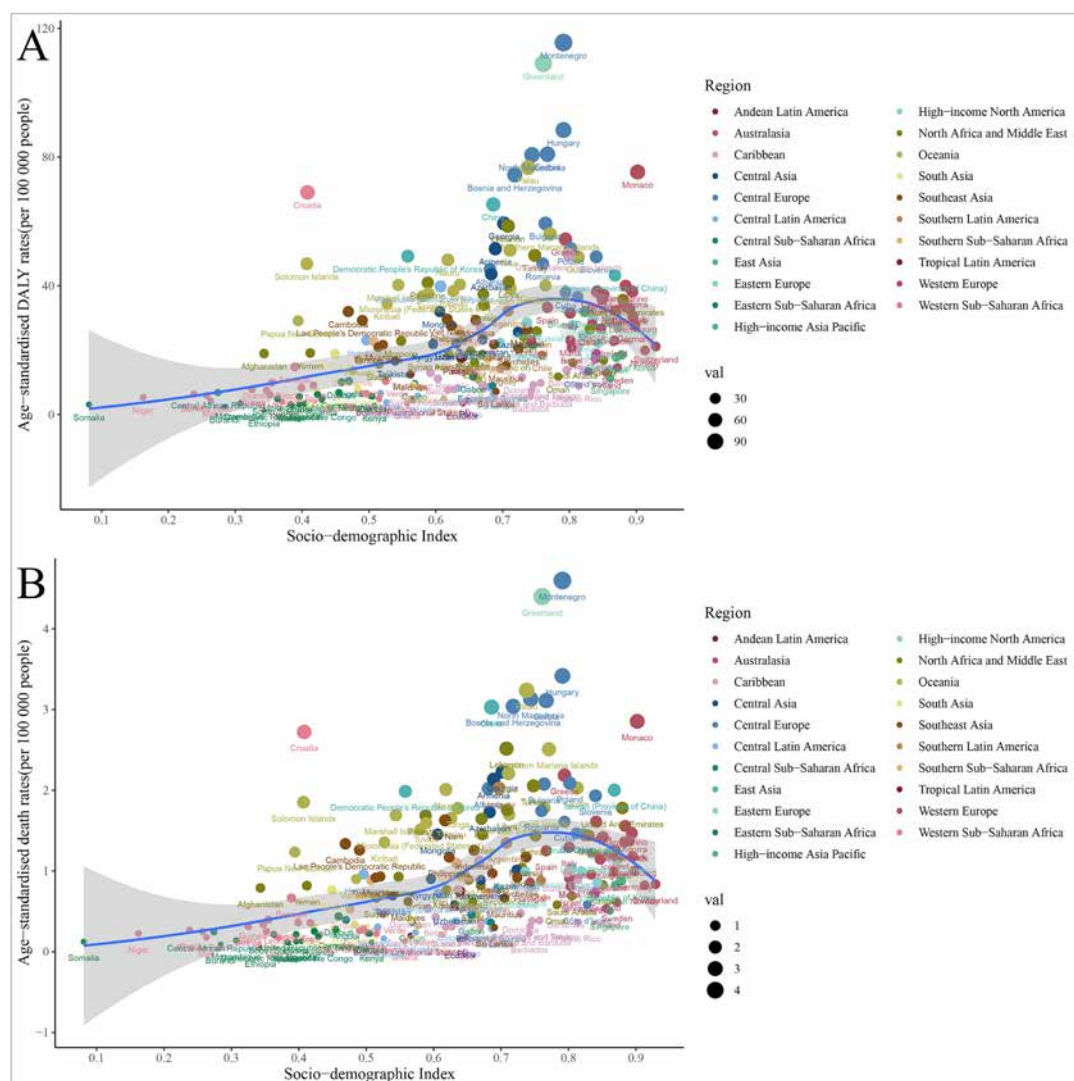
Supplementary Figure S3. The age-standardized rates of TBL cancer attributable to ambient particulate matter pollution according to country-specific sociodemographic Index. **A** – The age-standardized DALY rate. **B** – The age-standardized death rate

DALY – disability adjusted life-year.



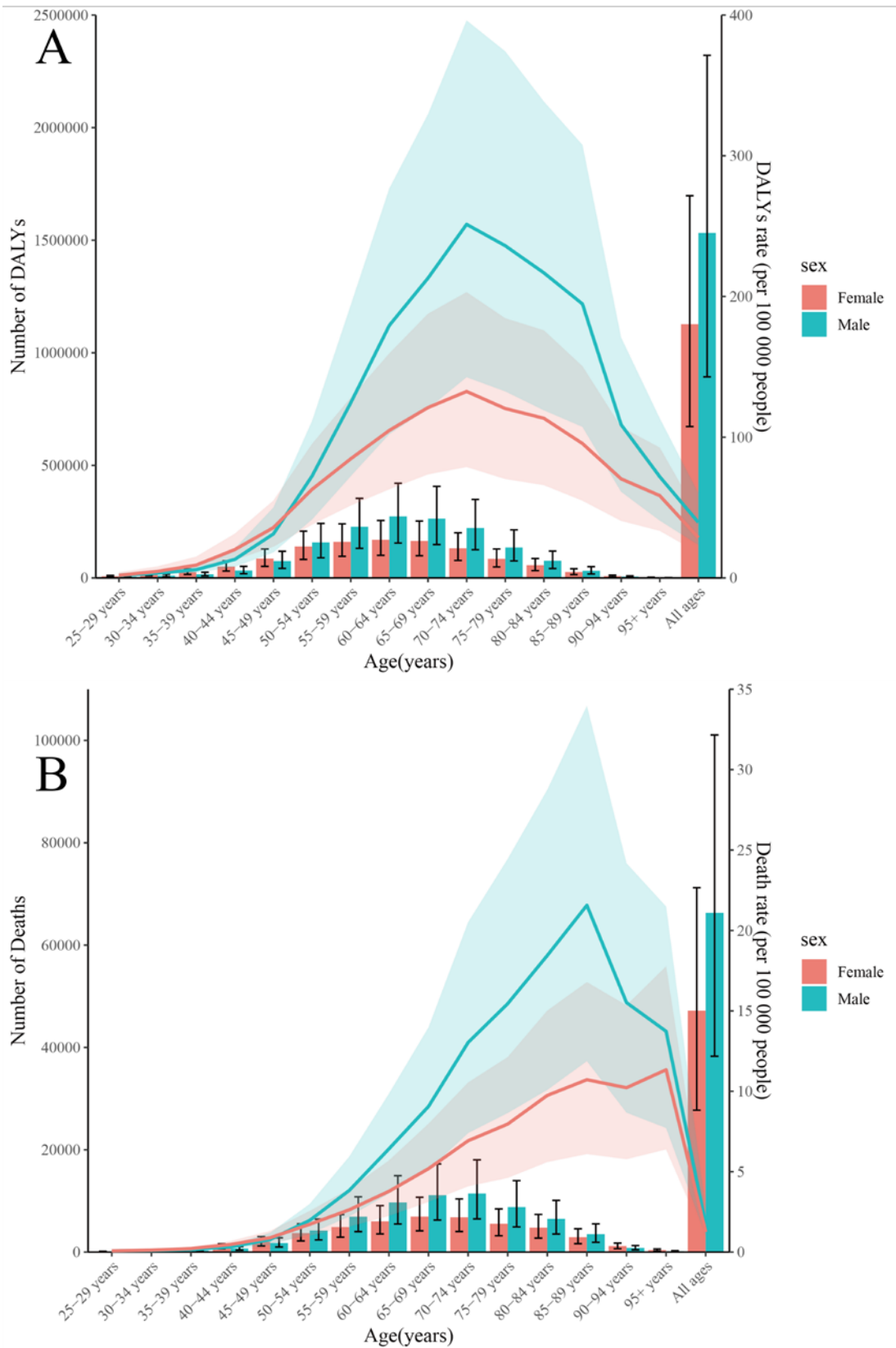
Supplementary Figure S4. Global number of DALYs and death cases, DALY and death estimates of TBL cancer attributable to ambient particulate matter pollution per 100 000 population by age and sex, 2019. Dotted and dashed lines indicate 95% upper and lower uncertainty intervals, respectively. **A** – DALY cases, and DALY estimates. **B** – Death cases, and death estimates

DALY – disability-adjusted life-year.



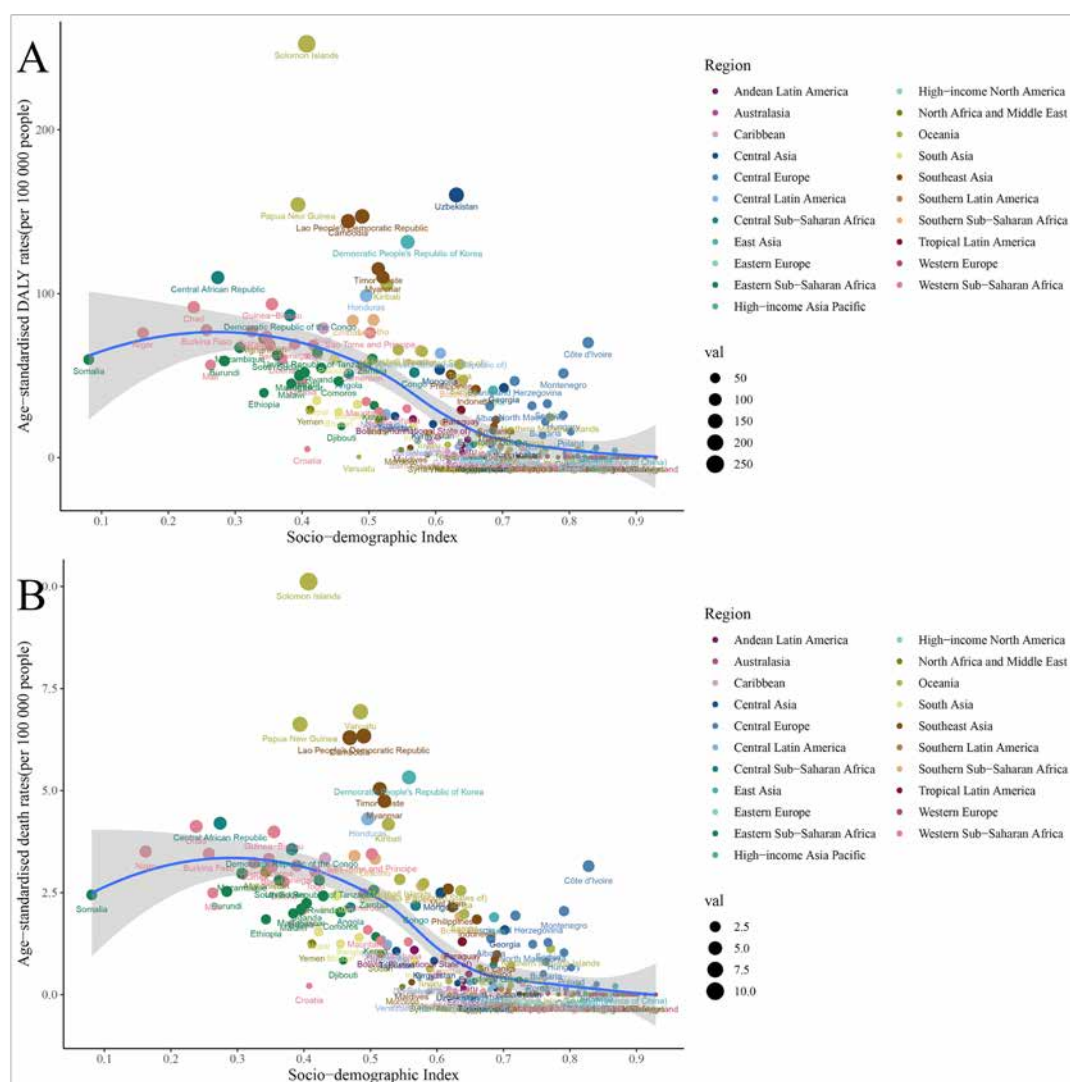
Supplementary Figure S5. The age-standardized rates of TBL cancer attributable to secondhand smoke according to country-specific sociodemographic Index. **A** – The age-standardized DALY rate. **B** – The age-standardized death rate

DALY – disability adjusted life-year.

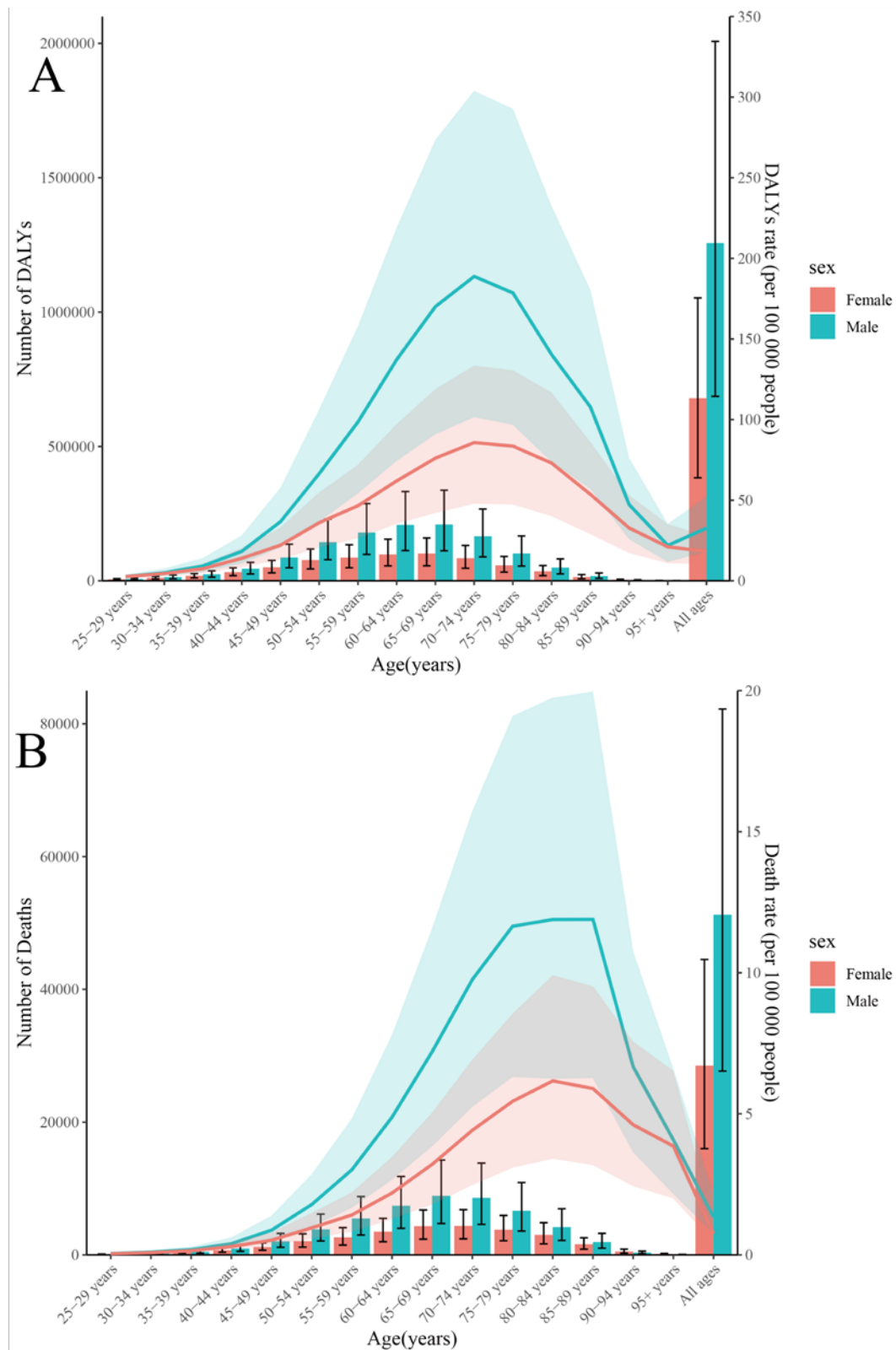


Supplementary Figure S6. Global number of DALYs and death cases, DALY and death estimates of TBL cancer attributable to secondhand smoke per 100 000 population by age and sex, 2019. Dotted and dashed lines indicate 95% upper and lower uncertainty intervals, respectively. **A** – DALY cases, and DALY estimates. **B** – Death cases, and death estimates

DALY – disability-adjusted life-year.



Supplementary Figure S7. The age-standardized rates of TBL cancer attributable to household air pollution from solid fuels according to country-specific sociodemographic Index. **A** – The age-standardized DALY rate. **B** – The age-standardized death rate
DALY – disability adjusted life-year.



Supplementary Figure S8. Global number of DALYs and death cases, DALY and death estimates of TBL cancer attributable to household air pollution from solid fuels per 100 000 population by age and sex, 2019. Dotted and dashed lines indicate 95% upper and lower uncertainty intervals, respectively. **A** – DALY cases, and DALY estimates. **B** – Death cases, and death estimates

DALY – disability-adjusted life-year.

Supplementary Table S1. Trends of age-standardized DALY rates of TBL cancer attributable to respiratory system-related risk factors in each country from 1990 to 2019

Countries	EAPC (95% CI) (1990–2019)				
	All risk factors	Smoking	Ambient particulate matter pollution	Secondhand smoke	Household air pollution from solid fuels
Afghanistan	−0.11 (−0.19, −0.03)	0.85 (0.72, 0.99)	3.42 (2.62, 4.22)	0.04 (−0.11, 0.19)	−1.61 (−1.80, −1.43)
Albania	−0.78 (−1.03, −0.53)	−0.67 (−0.94, −0.39)	0.43 (0.21, 0.64)	−1.35 (−1.64, −1.06)	−5.60 (−6.00, −5.20)
Algeria	−0.73 (−0.95, −0.52)	−0.86 (−1.09, −0.64)	−0.13 (−0.20, −0.05)	−0.52 (−0.76, −0.29)	−14.65 (−14.75, −14.54)
American Samoa	−0.32 (−0.37, −0.28)	−0.46 (−0.51, −0.42)	−0.58 (−0.80, −0.36)	−0.66 (−0.73, −0.59)	−3.57 (−3.90, −3.24)
Andorra	−1.10 (−1.14, −1.07)	−1.23 (−1.26, −1.19)	−2.66 (−2.94, −2.39)	−1.80 (−1.86, −1.74)	−6.53 (−6.86, −6.20)
Angola	−0.71 (−0.82, −0.60)	−0.76 (−0.87, −0.65)	4.70 (4.27, 5.13)	0.11 (−0.10, 0.33)	−3.03 (−3.29, −2.77)
Antigua and Barbuda	−0.33 (−0.59, −0.07)	−0.32 (−0.59, −0.04)	−0.34 (−0.60, −0.08)	−0.92 (−1.16, −0.68)	−6.04 (−6.40, −5.68)
Argentina	−1.31 (−1.38, −1.25)	−1.44 (−1.50, −1.38)	−1.37 (−1.53, −1.21)	−2.14 (−2.27, −2.02)	−7.26 (−7.34, −7.17)
Armenia	−1.32 (−1.47, −1.16)	−1.43 (−1.58, −1.28)	−0.01 (−0.24, 0.22)	−1.10 (−1.24, −0.95)	−11.20 (−12.23, −10.16)
Australia	−2.06 (−2.18, −1.95)	−2.49 (−2.61, −2.38)	−2.73 (−2.92, −2.54)	−2.78 (−2.90, −2.65)	−9.56 (−9.93, −9.20)
Austria	−0.54 (−0.66, −0.42)	−0.52 (−0.64, −0.40)	−2.40 (−2.70, −2.11)	−0.11 (−0.29, 0.07)	−5.47 (−5.53, −5.41)
Azerbaijan	−0.51 (−0.97, −0.05)	−0.53 (−1.00, −0.07)	0.81 (0.25, 1.36)	0.07 (−0.47, 0.61)	−8.74 (−9.03, −8.45)
Bahamas	−0.85 (−0.96, −0.75)	−1.17 (−1.29, −1.05)	−0.79 (−0.87, −0.71)	−0.83 (−0.92, −0.75)	−6.88 (−7.11, −6.66)
Bahrain	−3.53 (−3.87, −3.19)	−4.04 (−4.39, −3.70)	−3.17 (−3.54, −2.81)	−3.49 (−3.81, −3.17)	−14.44 (−14.77, −14.11)
Bangladesh	−1.19 (−1.31, −1.06)	−1.67 (−1.80, −1.53)	3.11 (2.88, 3.34)	−0.83 (−1.05, −0.61)	−2.71 (−2.91, −2.51)
Barbados	−0.75 (−0.88, −0.62)	−1.27 (−1.42, −1.12)	−0.48 (−0.62, −0.34)	−1.36 (−1.58, −1.14)	−5.21 (−5.32, −5.11)
Belarus	−2.57 (−2.87, −2.27)	−2.54 (−2.85, −2.23)	−3.34 (−3.67, −3.01)	−2.54 (−2.82, −2.26)	−10.58 (−11.17, −9.98)
Belgium	−1.50 (−1.66, −1.35)	−1.62 (−1.77, −1.47)	−2.92 (−3.19, −2.65)	−2.08 (−2.20, −1.95)	−7.30 (−7.49, −7.11)
Belize	0.36 (−0.16, 0.88)	0.05 (−0.48, 0.58)	1.85 (1.17, 2.53)	1.17 (0.76, 1.58)	−3.23 (−3.63, −2.83)
Benin	0.02 (−0.07, 0.10)	−0.50 (−0.62, −0.37)	3.00 (2.75, 3.25)	0.20 (0.14, 0.26)	−0.54 (−0.64, −0.45)
Bermuda	−1.96 (−2.13, −1.80)	−1.75 (−1.90, −1.61)	−4.13 (−4.42, −3.85)	−2.11 (−2.33, −1.88)	−8.80 (−8.97, −8.62)
Bhutan	0.28 (0.23, 0.33)	0.00 (−0.04, 0.04)	6.62 (6.23, 7.01)	−0.16 (−0.32, 0.00)	−2.48 (−2.64, −2.32)
Bolivia (Plurinational State of)	−0.73 (−0.90, −0.57)	−1.68 (−1.96, −1.39)	0.12 (−0.21, 0.46)	−1.47 (−1.73, −1.22)	−2.79 (−2.90, −2.68)
Bosnia and Herzegovina	−0.20 (−0.30, −0.09)	−0.05 (−0.14, 0.05)	1.12 (0.74, 1.51)	0.31 (0.14, 0.49)	−5.19 (−5.46, −4.92)

Supplemnetary Table SI. Cont.

Countries	EAPC (95% CI) (1990–2019)				
	All risk factors	Smoking	Ambient particulate matter pollution	Secondhand smoke	Household air pollution from solid fuels
Botswana	−0.38 (−0.83, 0.07)	−0.54 (−1.03, −0.04)	2.73 (2.10, 3.36)	−0.53 (−0.92, −0.14)	−3.73 (−4.14, −3.32)
Brazil	−1.23 (−1.37, −1.08)	−1.53 (−1.72, −1.35)	−0.70 (−1.11, −0.30)	−2.06 (−2.18, −1.93)	−5.76 (−5.94, −5.59)
Brunei Darussalam	−0.53 (−0.71, −0.35)	−0.88 (−1.05, −0.70)	−0.30 (−1.06, 0.45)	−1.49 (−1.68, −1.30)	−11.10 (−11.86, −10.33)
Bulgaria	1.70 (1.19, 2.21)	1.69 (1.18, 2.20)	1.04 (0.56, 1.53)	0.97 (0.45, 1.50)	−0.56 (−1.19, 0.07)
Burkina Faso	0.46 (0.28, 0.64)	0.17 (0.03, 0.32)	3.44 (3.20, 3.68)	0.18 (−0.16, 0.52)	−0.03 (−0.20, 0.15)
Burundi	−1.29 (−1.42, −1.16)	−2.21 (−2.38, −2.03)	0.34 (0.01, 0.66)	−1.75 (−2.05, −1.46)	−1.18 (−1.27, −1.09)
Cabo Verde	0.51 (0.23, 0.80)	0.04 (−0.37, 0.44)	5.31 (4.83, 5.79)	0.57 (0.32, 0.81)	−4.13 (−4.45, −3.82)
Cambodia	−0.27 (−0.36, −0.17)	−0.44 (−0.53, −0.36)	3.13 (2.90, 3.36)	0.94 (0.82, 1.06)	−1.40 (−1.47, −1.34)
Cameroon	0.69 (0.56, 0.82)	0.44 (0.26, 0.61)	3.27 (3.09, 3.45)	−0.35 (−0.39, −0.31)	−0.74 (−1.00, −0.47)
Canada	−2.02 (−2.15, −1.89)	−2.23 (−2.37, −2.09)	−3.89 (−4.21, −3.56)	−3.30 (−3.46, −3.15)	−11.84 (−12.74, −10.93)
Central African Republic	−0.78 (−0.89, −0.67)	−1.22 (−1.41, −1.03)	0.88 (0.70, 1.06)	−1.19 (−1.31, −1.08)	−0.99 (−1.09, −0.89)
Chad	1.36 (1.21, 1.50)	1.31 (1.11, 1.50)	4.07 (3.89, 4.24)	1.57 (1.46, 1.69)	0.78 (0.61, 0.95)
Chile	−0.86 (−0.96, −0.76)	−1.07 (−1.16, −0.97)	0.18 (0.06, 0.29)	−1.53 (−1.69, −1.36)	−7.35 (−7.49, −7.22)
China	0.45 (0.26, 0.65)	0.67 (0.44, 0.90)	3.27 (2.88, 3.65)	0.28 (0.14, 0.42)	−4.70 (−5.10, −4.31)
Colombia	−2.16 (−2.31, −2.02)	−2.86 (−3.00, −2.71)	−0.83 (−1.00, −0.66)	−1.95 (−2.19, −1.71)	−6.50 (−6.77, −6.22)
Comoros	−0.66 (−0.83, −0.49)	−0.98 (−1.12, −0.85)	2.65 (2.48, 2.83)	−0.45 (−0.66, −0.25)	−1.40 (−1.61, −1.20)
Congo	−1.10 (−1.33, −0.87)	−1.24 (−1.53, −0.95)	2.39 (2.03, 2.76)	−0.67 (−0.97, −0.37)	−3.44 (−3.60, −3.28)
Cook Islands	−1.07 (−1.14, −1.00)	−1.26 (−1.32, −1.20)	−1.23 (−1.47, −1.00)	−0.78 (−0.87, −0.68)	−6.20 (−6.76, −5.63)
Costa Rica	−1.52 (−1.70, −1.34)	−1.98 (−2.15, −1.80)	0.35 (0.12, 0.57)	−1.55 (−1.82, −1.27)	−7.72 (−8.09, −7.33)
Croatia	−0.83 (−1.07, −0.59)	−1.03 (−1.26, −0.80)	−1.50 (−1.79, −1.20)	−0.85 (−1.22, −0.47)	−5.76 (−5.99, −5.53)
Cuba	0.04 (−0.06, 0.13)	0.03 (−0.07, 0.13)	0.08 (−0.04, 0.20)	−1.06 (−1.17, −0.94)	−4.77 (−5.05, −4.49)
Cyprus	0.83 (0.59, 1.08)	0.88 (0.64, 1.12)	0.58 (0.17, 1.00)	0.84 (0.57, 1.11)	−8.06 (−8.49, −7.62)
Czechia	−2.15 (−2.32, −1.98)	−2.25 (−2.42, −2.08)	−3.21 (−3.47, −2.94)	−2.42 (−2.63, −2.21)	−5.83 (−6.17, −5.50)
Cote d'Ivoire	0.10 (0.01, 0.18)	0.30 (0.22, 0.38)	2.51 (2.21, 2.82)	−0.10 (−0.41, 0.21)	−0.98 (−1.09, −0.87)

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Countries	EAPC (95% CI) (1990–2019)				
	All risk factors	Smoking	Ambient particulate matter pollution	Secondhand smoke	Household air pollution from solid fuels
Democratic People's Republic of Korea	0.17 (0.11, 0.22)	0.38 (0.29, 0.47)	2.39 (2.22, 2.57)	−0.42 (−0.51, −0.34)	−1.29 (−1.45, −1.14)
Democratic Republic of the Congo	−1.06 (−1.24, −0.87)	−1.77 (−2.02, −1.53)	0.55 (−0.32, 1.44)	−2.04 (−2.22, −1.86)	−1.27 (−1.32, −1.23)
Denmark	−1.76 (−1.88, −1.64)	−1.90 (−2.04, −1.76)	−3.58 (−3.93, −3.23)	−3.33 (−3.42, −3.23)	−6.48 (−6.58, −6.38)
Djibouti	0.43 (0.37, 0.50)	0.54 (0.47, 0.60)	5.05 (4.60, 5.51)	0.28 (0.22, 0.35)	−4.17 (−4.48, −3.86)
Dominica	−0.17 (−0.30, −0.05)	−0.63 (−0.76, −0.50)	0.96 (0.81, 1.11)	−0.07 (−0.22, 0.08)	−7.04 (−7.53, −6.56)
Dominican Republic	1.19 (1.04, 1.34)	1.34 (1.21, 1.48)	4.40 (4.13, 4.67)	0.17 (−0.06, 0.40)	−5.47 (−5.65, −5.30)
Ecuador	−0.14 (−0.36, 0.07)	−0.75 (−0.93, −0.57)	1.55 (1.17, 1.92)	−1.97 (−2.14, −1.80)	−6.12 (−6.32, −5.93)
Egypt	1.22 (1.06, 1.38)	1.25 (1.04, 1.45)	1.47 (1.26, 1.68)	0.63 (0.45, 0.81)	−15.87 (−16.21, −15.53)
El Salvador	−0.26 (−0.39, −0.14)	−0.57 (−0.81, −0.32)	2.83 (2.55, 3.11)	0.73 (0.60, 0.86)	−5.13 (−5.63, −4.64)
Equatorial Guinea	0.07 (−0.14, 0.27)	−0.20 (−0.43, 0.02)	9.02 (8.44, 9.60)	0.65 (0.41, 0.89)	−6.72 (−7.31, −6.13)
Eritrea	−0.01 (−0.21, 0.20)	−0.70 (−0.97, −0.44)	3.29 (2.84, 3.75)	0.73 (0.51, 0.96)	−0.82 (−0.97, −0.67)
Estonia	−2.06 (−2.27, −1.85)	−2.06 (−2.28, −1.85)	−4.47 (−5.11, −3.84)	−2.32 (−2.53, −2.10)	−7.43 (−7.73, −7.13)
Eswatini	0.00 (−0.35, 0.36)	−0.87 (−1.17, −0.56)	2.65 (2.29, 3.02)	−0.14 (−0.37, 0.09)	−1.65 (−2.08, −1.22)
Ethiopia	−1.35 (−1.50, −1.20)	−2.38 (−2.62, −2.14)	3.49 (3.07, 3.92)	−1.73 (−1.94, −1.53)	−1.90 (−1.97, −1.83)
Fiji	−0.66 (−0.80, −0.52)	−1.26 (−1.38, −1.13)	2.25 (1.84, 2.66)	0.12 (−0.17, 0.41)	−3.73 (−3.90, −3.56)
Finland	−1.76 (−1.90, −1.62)	−1.98 (−2.13, −1.84)	−4.97 (−5.55, −4.40)	−2.03 (−2.21, −1.85)	−8.48 (−8.73, −8.24)
France	−0.31 (−0.45, −0.17)	−0.49 (−0.62, −0.36)	−1.70 (−2.07, −1.32)	−1.75 (−2.04, −1.46)	−5.74 (−5.82, −5.65)
Gabon	−0.38 (−0.43, −0.33)	−0.18 (−0.22, −0.13)	2.71 (2.34, 3.08)	−0.50 (−0.61, −0.39)	−8.65 (−9.18, −8.11)
Gambia	0.20 (0.02, 0.38)	−0.46 (−0.65, −0.26)	3.43 (3.23, 3.63)	0.31 (0.10, 0.52)	−0.51 (−0.69, −0.32)
Georgia	0.97 (0.37, 1.58)	0.98 (0.35, 1.61)	1.19 (0.45, 1.94)	1.51 (0.87, 2.15)	−1.48 (−1.95, −1.02)
Germany	−0.51 (−0.69, −0.34)	−0.61 (−0.79, −0.44)	−2.07 (−2.43, −1.71)	−1.32 (−1.47, −1.18)	−3.88 (−4.17, −3.59)
Ghana	−0.36 (−0.51, −0.22)	−0.51 (−0.66, −0.36)	3.05 (2.77, 3.34)	0.67 (0.51, 0.83)	−2.40 (−2.59, −2.21)
Greece	−0.47 (−0.53, −0.41)	−0.43 (−0.49, −0.37)	−1.42 (−1.75, −1.10)	−1.16 (−1.27, −1.04)	−7.55 (−7.90, −7.20)
Greenland	−1.12 (−1.40, −0.83)	−1.21 (−1.49, −0.92)	−1.98 (−2.27, −1.68)	−2.36 (−2.53, −2.18)	−8.57 (−9.29, −7.85)

Supplemnetary Table SI. Cont.

Countries	EAPC (95% CI) (1990–2019)				
	All risk factors	Smoking	Ambient particulate matter pollution	Secondhand smoke	Household air pollution from solid fuels
Grenada	−0.24 (−0.40, −0.08)	−0.31 (−0.46, −0.15)	1.01 (0.80, 1.22)	−0.31 (−0.45, −0.16)	−9.53 (−10.32, −8.72)
Guam	−0.70 (−1.01, −0.39)	−0.83 (−1.14, −0.53)	−0.90 (−1.74, −0.06)	−0.53 (−0.77, −0.28)	−2.00 (−2.85, −1.15)
Guatemala	−1.43 (−1.63, −1.22)	−1.56 (−1.70, −1.41)	1.03 (0.70, 1.35)	−1.60 (−1.83, −1.37)	−3.25 (−3.58, −2.91)
Guinea	0.91 (0.83, 0.99)	1.16 (1.05, 1.28)	3.20 (3.09, 3.32)	0.99 (0.92, 1.07)	0.15 (0.08, 0.22)
Guinea–Bissau	−0.28 (−0.46, −0.10)	−1.04 (−1.41, −0.66)	2.36 (2.18, 2.55)	0.28 (0.02, 0.53)	−0.76 (−0.90, −0.62)
Guyana	−0.02 (−0.14, 0.11)	−0.45 (−0.56, −0.34)	1.10 (0.77, 1.43)	−0.32 (−0.48, −0.16)	−4.93 (−5.39, −4.47)
Haiti	−0.87 (−1.01, −0.73)	−1.78 (−1.83, −1.72)	1.96 (1.81, 2.11)	−1.10 (−1.61, −0.59)	−1.24 (−1.39, −1.08)
Honduras	1.43 (1.30, 1.56)	0.91 (0.78, 1.04)	4.26 (3.86, 4.66)	1.53 (1.40, 1.66)	0.11 (−0.02, 0.23)
Hungary	−0.41 (−0.73, −0.10)	−0.40 (−0.71, −0.09)	−1.33 (−1.72, −0.94)	−0.97 (−1.37, −0.57)	−3.26 (−3.44, −3.07)
Iceland	−1.22 (−1.38, −1.06)	−1.39 (−1.57, −1.21)	−2.82 (−3.25, −2.39)	−2.41 (−2.58, −2.23)	−7.88 (−8.03, −7.74)
India	0.04 (−0.08, 0.16)	−0.55 (−0.67, −0.43)	3.47 (3.29, 3.65)	0.55 (0.35, 0.76)	−2.82 (−3.05, −2.60)
Indonesia	0.74 (0.69, 0.79)	0.98 (0.93, 1.03)	1.97 (1.74, 2.20)	1.24 (1.16, 1.31)	−2.53 (−2.75, −2.31)
Iran (Islamic Republic of)	0.05 (−0.18, 0.28)	−0.27 (−0.53, −0.01)	0.67 (0.55, 0.79)	0.43 (0.23, 0.64)	−14.53 (−14.98, −14.07)
Iraq	0.40 (0.14, 0.66)	0.15 (−0.10, 0.40)	1.53 (1.34, 1.73)	0.61 (0.29, 0.92)	−15.49 (−16.47, −14.49)
Ireland	−1.72 (−1.82, −1.62)	−1.86 (−1.96, −1.75)	−3.78 (−4.17, −3.39)	−3.48 (−3.61, −3.34)	−8.77 (−8.85, −8.68)
Israel	−1.02 (−1.16, −0.88)	−1.22 (−1.36, −1.07)	−1.02 (−1.33, −0.72)	−1.99 (−2.14, −1.84)	−5.87 (−6.03, −5.72)
Italy	−1.98 (−2.05, −1.92)	−2.18 (−2.26, −2.10)	−3.20 (−3.38, −3.02)	−2.67 (−2.71, −2.63)	−7.40 (−7.57, −7.23)
Jamaica	0.46 (−0.09, 1.00)	0.47 (−0.13, 1.08)	2.14 (1.43, 2.86)	−0.07 (−0.56, 0.43)	−5.89 (−6.52, −5.25)
Japan	−1.05 (−1.17, −0.93)	−1.22 (−1.36, −1.08)	−0.81 (−0.99, −0.62)	−1.69 (−1.79, −1.58)	−7.58 (−7.97, −7.20)
Jordan	0.48 (0.23, 0.73)	0.34 (0.08, 0.60)	1.03 (0.66, 1.39)	−0.11 (−0.29, 0.07)	−12.82 (−13.42, −12.22)
Kazakhstan	−3.06 (−3.20, −2.91)	−3.10 (−3.25, −2.95)	−2.27 (−2.53, −2.01)	−2.70 (−2.87, −2.53)	−8.57 (−8.87, −8.28)
Kenya	0.74 (0.51, 0.96)	0.37 (0.03, 0.72)	4.02 (3.66, 4.39)	−0.49 (−0.58, −0.39)	−0.21 (−0.45, 0.03)
Kiribati	−0.24 (−0.27, −0.20)	−0.16 (−0.21, −0.12)	0.25 (−0.04, 0.55)	−0.20 (−0.49, 0.08)	−1.28 (−1.35, −1.21)
Kuwait	−0.79 (−1.16, −0.42)	−0.98 (−1.38, −0.58)	−0.57 (−0.96, −0.19)	−0.77 (−1.09, −0.45)	−13.59 (−14.09, −13.09)
Kyrgyzstan	−3.44 (−3.94, −2.93)	−3.59 (−4.13, −3.04)	−1.99 (−2.51, −1.47)	−2.43 (−2.97, −1.88)	−6.04 (−6.30, −5.78)

Supplementary Table SI. Cont.

Countries	EAPC (95% CI) (1990–2019)				
	All risk factors	Smoking	Ambient particulate matter pollution	Secondhand smoke	Household air pollution from solid fuels
Lao People's Democratic Republic	−1.08 (−1.20, −0.96)	−1.34 (−1.47, −1.21)	1.89 (1.74, 2.05)	−1.17 (−1.33, −1.01)	−1.77 (−1.87, −1.66)
Latvia	−1.93 (−2.24, −1.63)	−2.00 (−2.30, −1.70)	−3.16 (−3.73, −2.59)	−2.01 (−2.30, −1.72)	−5.80 (−6.07, −5.53)
Lebanon	1.40 (1.12, 1.68)	1.42 (1.14, 1.71)	2.02 (1.67, 2.37)	1.95 (1.58, 2.33)	−12.80 (−13.13, −12.46)
Lesotho	1.56 (1.36, 1.76)	1.26 (1.12, 1.39)	4.19 (3.91, 4.46)	2.01 (1.69, 2.33)	0.31 (0.02, 0.60)
Liberia	−0.04 (−0.36, 0.27)	−0.45 (−0.83, −0.08)	3.49 (2.76, 4.22)	−0.12 (−0.40, 0.16)	−0.78 (−0.99, −0.57)
Libya	−0.39 (−0.53, −0.25)	−0.64 (−0.78, −0.51)	0.43 (0.07, 0.79)	0.03 (−0.16, 0.22)	−16.55 (−17.28, −15.81)
Lithuania	−1.81 (−2.05, −1.58)	−1.83 (−2.06, −1.60)	−3.17 (−3.66, −2.67)	−1.66 (−1.89, −1.44)	−7.97 (−8.14, −7.79)
Luxembourg	−1.83 (−1.96, −1.70)	−1.98 (−2.12, −1.83)	−3.39 (−3.75, −3.02)	−2.52 (−2.63, −2.41)	−6.72 (−6.98, −6.47)
Madagascar	−0.89 (−0.99, −0.80)	−2.06 (−2.24, −1.87)	2.51 (2.36, 2.66)	−2.35 (−2.62, −2.09)	−0.92 (−1.01, −0.83)
Malawi	0.04 (−0.15, 0.24)	−0.02 (−0.26, 0.23)	3.42 (3.18, 3.66)	−0.21 (−0.35, −0.06)	−0.50 (−0.71, −0.30)
Malaysia	−0.08 (−0.34, 0.18)	−0.28 (−0.55, −0.01)	−0.80 (−1.05, −0.54)	0.29 (−0.02, 0.60)	−8.57 (−8.85, −8.30)
Maldives	−2.58 (−2.81, −2.36)	−2.55 (−2.76, −2.34)	−0.85 (−1.22, −0.48)	−2.27 (−2.48, −2.06)	−9.26 (−9.67, −8.85)
Mali	0.57 (0.49, 0.65)	1.35 (1.28, 1.42)	3.05 (2.91, 3.20)	1.26 (1.10, 1.42)	−0.21 (−0.27, −0.14)
Malta	−1.13 (−1.19, −1.07)	−1.36 (−1.41, −1.31)	−1.60 (−1.98, −1.23)	−1.75 (−1.80, −1.70)	−8.85 (−9.02, −8.69)
Marshall Islands	0.36 (0.22, 0.49)	0.20 (0.05, 0.35)	2.34 (2.06, 2.61)	0.27 (0.16, 0.37)	−1.58 (−1.86, −1.29)
Mauritania	−0.12 (−0.30, 0.06)	−0.12 (−0.25, 0.01)	2.68 (2.46, 2.90)	−1.09 (−1.28, −0.91)	−2.20 (−2.41, −1.98)
Mauritius	−1.26 (−1.36, −1.15)	−1.74 (−1.86, −1.61)	−0.53 (−0.76, −0.31)	−0.83 (−0.97, −0.69)	−9.72 (−9.80, −9.64)
Mexico	−2.65 (−2.81, −2.48)	−3.38 (−3.54, −3.23)	−2.63 (−2.93, −2.33)	−4.30 (−4.61, −3.99)	−4.99 (−5.13, −4.85)
Micronesia (Federated States of)	0.21 (0.17, 0.25)	0.20 (0.14, 0.25)	2.33 (2.13, 2.53)	0.34 (0.30, 0.38)	−3.09 (−3.17, −3.00)
Monaco	1.24 (0.81, 1.67)	1.09 (0.67, 1.51)	2.71 (1.35, 4.09)	0.57 (0.15, 0.99)	−2.51 (−3.12, −1.90)
Mongolia	−1.80 (−2.08, −1.53)	−1.69 (−1.96, −1.43)	1.12 (0.74, 1.50)	−2.00 (−2.34, −1.65)	−5.52 (−5.94, −5.10)
Montenegro	0.52 (0.30, 0.74)	0.60 (0.38, 0.82)	−0.20 (−0.42, 0.03)	1.54 (1.13, 1.96)	−1.84 (−2.03, −1.64)
Morocco	0.00 (−0.12, 0.12)	−0.27 (−0.38, −0.15)	2.88 (2.73, 3.03)	−0.58 (−0.74, −0.42)	−7.46 (−7.98, −6.94)
Mozambique	1.71 (1.56, 1.85)	1.44 (1.30, 1.58)	5.63 (5.29, 5.98)	1.81 (1.62, 2.00)	1.16 (1.02, 1.30)

Supplemnetary Table SI. Cont.

Countries	EAPC (95% CI) (1990–2019)				
	All risk factors	Smoking	Ambient particulate matter pollution	Secondhand smoke	Household air pollution from solid fuels
Myanmar	–1.04 (–1.09, –0.99)	–1.49 (–1.56, –1.42)	2.79 (2.49, 3.10)	–1.67 (–1.79, –1.54)	–2.34 (–2.47, –2.21)
Namibia	0.20 (0.07, 0.32)	–0.15 (–0.23, –0.07)	2.95 (2.77, 3.14)	–0.75 (–0.91, –0.60)	–2.07 (–2.31, –1.82)
Nauru	–0.38 (–0.49, –0.27)	–0.41 (–0.53, –0.30)	–1.37 (–1.65, –1.08)	–0.67 (–0.77, –0.57)	–6.66 (–7.15, –6.16)
Nepal	–0.02 (–0.20, 0.16)	–0.27 (–0.38, –0.17)	4.82 (4.51, 5.13)	–0.06 (–0.43, 0.30)	–2.04 (–2.12, –1.95)
Netherlands	–1.39 (–1.56, –1.22)	–1.63 (–1.80, –1.46)	–2.62 (–2.93, –2.32)	–2.36 (–2.52, –2.19)	–7.03 (–7.21, –6.84)
New Zealand	–1.97 (–2.08, –1.86)	–2.25 (–2.36, –2.15)	–3.07 (–3.22, –2.92)	–2.48 (–2.73, –2.23)	–7.21 (–7.37, –7.05)
Nicaragua	–0.52 (–0.64, –0.40)	–1.30 (–1.43, –1.18)	3.27 (2.92, 3.61)	0.00 (–0.12, 0.12)	–2.29 (–2.49, –2.09)
Niger	0.39 (0.23, 0.55)	1.16 (1.02, 1.30)	1.97 (1.77, 2.18)	0.74 (0.41, 1.07)	–0.09 (–0.25, 0.07)
Nigeria	0.30 (0.19, 0.42)	–0.13 (–0.30, 0.03)	4.26 (4.01, 4.50)	1.39 (1.27, 1.51)	–1.66 (–1.91, –1.40)
Niue	–0.04 (–0.09, 0.00)	–0.20 (–0.26, –0.13)	–0.02 (–0.23, 0.18)	0.19 (0.13, 0.24)	–8.67 (–8.96, –8.37)
North Macedonia	0.78 (0.54, 1.02)	0.83 (0.58, 1.07)	0.71 (0.40, 1.02)	0.84 (0.62, 1.06)	–3.11 (–3.37, –2.85)
Northern Mariana Islands	–1.24 (–1.34, –1.15)	–1.48 (–1.58, –1.38)	–1.80 (–2.33, –1.26)	–0.78 (–0.90, –0.66)	–2.29 (–3.10, –1.47)
Norway	–0.74 (–1.05, –0.44)	–1.01 (–1.37, –0.64)	–3.88 (–4.32, –3.44)	–2.04 (–2.22, –1.85)	–6.41 (–6.63, –6.19)
Oman	–0.31 (–0.59, –0.03)	–1.24 (–1.50, –0.99)	1.42 (0.82, 2.02)	0.56 (0.30, 0.82)	–16.26 (–16.55, –15.97)
Pakistan	0.23 (–0.05, 0.50)	–0.15 (–0.45, 0.15)	4.60 (4.25, 4.95)	0.07 (–0.24, 0.38)	–2.16 (–2.57, –1.75)
Palau	–0.07 (–0.12, –0.02)	–0.43 (–0.49, –0.37)	0.77 (–0.07, 1.62)	–0.18 (–0.24, –0.12)	–2.47 (–3.21, –1.73)
Palestine	0.33 (0.12, 0.55)	0.21 (0.00, 0.42)	2.15 (1.94, 2.36)	0.46 (0.26, 0.67)	–11.69 (–12.08, –11.29)
Panama	–2.17 (–2.33, –2.02)	–2.88 (–3.01, –2.74)	–0.81 (–1.01, –0.61)	–2.50 (–2.83, –2.16)	–6.63 (–6.87, –6.38)
Papua New Guinea	0.47 (0.42, 0.51)	0.27 (0.20, 0.34)	1.95 (1.73, 2.17)	1.13 (1.04, 1.22)	0.08 (0.02, 0.14)
Paraguay	0.75 (0.42, 1.08)	0.63 (0.27, 0.99)	2.08 (1.55, 2.61)	1.11 (0.99, 1.23)	–2.14 (–2.67, –1.60)
Peru	–2.17 (–2.57, –1.77)	–2.25 (–2.63, –1.86)	–0.33 (–0.85, 0.18)	–3.02 (–3.50, –2.54)	–5.28 (–5.67, –4.88)
Philippines	–1.84 (–2.09, –1.59)	–1.93 (–2.19, –1.67)	–2.52 (–2.94, –2.08)	–2.08 (–2.41, –1.76)	–2.43 (–2.62, –2.24)
Poland	–0.82 (–0.96, –0.68)	–0.97 (–1.12, –0.81)	–1.22 (–1.44, –1.00)	–1.80 (–1.95, –1.64)	–4.95 (–5.04, –4.85)
Portugal	–0.05 (–0.24, 0.14)	–0.14 (–0.33, 0.05)	–1.54 (–2.06, –1.02)	–1.27 (–1.50, –1.05)	–8.83 (–9.03, –8.63)
Puerto Rico	–1.89 (–2.02, –1.76)	–2.00 (–2.13, –1.88)	–2.91 (–3.51, –2.32)	–1.91 (–2.08, –1.73)	–5.91 (–6.18, –5.64)

Supplementary Table SI. Cont.

Countries	EAPC (95% CI) (1990–2019)				
	All risk factors	Smoking	Ambient particulate matter pollution	Secondhand smoke	Household air pollution from solid fuels
Qatar	−0.16 (−0.48, 0.16)	−0.52 (−0.82, −0.21)	−0.04 (−0.37, 0.29)	−0.76 (−1.02, −0.50)	−12.97 (−13.31, −12.64)
Republic of Korea	−1.38 (−1.74, −1.02)	−1.49 (−1.88, −1.11)	−0.91 (−1.23, −0.59)	−2.89 (−3.23, −2.56)	−13.08 (−13.66, −12.50)
Republic of Moldova	−1.48 (−1.93, −1.02)	−1.33 (−1.80, −0.86)	−1.54 (−2.15, −0.93)	−1.71 (−2.13, −1.29)	−10.63 (−11.13, −10.13)
Romania	−0.03 (−0.21, 0.15)	0.00 (−0.19, 0.19)	−0.36 (−0.61, −0.11)	−0.20 (−0.40, 0.00)	−5.57 (−5.84, −5.30)
Russian Federation	−1.97 (−2.28, −1.66)	−1.93 (−2.25, −1.62)	−3.27 (−3.64, −2.90)	−0.94 (−1.24, −0.63)	−7.71 (−8.10, −7.31)
Rwanda	−0.99 (−1.26, −0.72)	−0.70 (−0.96, −0.45)	1.77 (1.36, 2.17)	−1.17 (−1.53, −0.81)	−1.86 (−2.10, −1.62)
Saint Kitts and Nevis	−1.00 (−1.23, −0.78)	−0.73 (−0.94, −0.51)	−1.01 (−1.33, −0.68)	−1.96 (−2.24, −1.68)	−8.18 (−8.43, −7.92)
Saint Lucia	−0.88 (−1.12, −0.64)	−0.96 (−1.17, −0.76)	0.40 (0.17, 0.63)	−1.73 (−2.01, −1.45)	−9.84 (−10.17, −9.51)
Saint Vincent and the Grenadines	−0.13 (−0.32, 0.05)	−0.31 (−0.48, −0.14)	1.22 (0.98, 1.47)	0.36 (0.20, 0.52)	−8.16 (−8.78, −7.52)
Samoa	−0.16 (−0.18, −0.14)	−0.18 (−0.20, −0.16)	0.36 (0.24, 0.47)	−0.23 (−0.26, −0.21)	−0.68 (−0.84, −0.52)
San Marino	−0.29 (−0.38, −0.21)	−0.52 (−0.60, −0.44)	−1.36 (−1.64, −1.07)	−0.48 (−0.54, −0.41)	−5.19 (−5.48, −4.90)
Sao Tome and Principe	0.92 (0.85, 0.98)	1.76 (1.69, 1.84)	5.04 (4.78, 5.30)	0.18 (−0.03, 0.40)	−1.12 (−1.33, −0.91)
Saudi Arabia	−0.07 (−0.18, 0.05)	−0.06 (−0.15, 0.03)	1.50 (0.96, 2.06)	−0.53 (−0.67, −0.39)	−17.98 (−18.27, −17.69)
Senegal	0.38 (0.14, 0.63)	−0.05 (−0.30, 0.20)	2.53 (2.33, 2.72)	−0.03 (−0.29, 0.22)	−0.27 (−0.57, 0.03)
Serbia	0.59 (0.40, 0.77)	0.69 (0.51, 0.88)	0.70 (0.40, 1.01)	0.36 (0.03, 0.69)	−4.30 (−4.52, −4.07)
Seychelles	−0.80 (−0.96, −0.65)	−0.98 (−1.15, −0.82)	−0.66 (−0.91, −0.42)	−0.86 (−1.03, −0.70)	−10.32 (−10.68, −9.95)
Sierra Leone	0.22 (−0.01, 0.45)	−0.31 (−0.58, −0.04)	2.85 (2.35, 3.36)	0.22 (0.01, 0.43)	−0.12 (−0.29, 0.06)
Singapore	−3.25 (−3.34, −3.15)	−3.52 (−3.61, −3.43)	−3.05 (−3.39, −2.70)	−3.72 (−3.86, −3.58)	−14.85 (−15.41, −14.29)
Slovakia	−1.91 (−2.18, −1.64)	−2.07 (−2.34, −1.81)	−2.70 (−2.98, −2.41)	−1.92 (−2.26, −1.58)	−6.45 (−6.87, −6.02)
Slovenia	−1.13 (−1.31, −0.94)	−1.24 (−1.40, −1.07)	−2.24 (−2.47, −2.00)	−1.37 (−1.52, −1.23)	−4.99 (−5.07, −4.92)
Solomon Islands	0.24 (0.16, 0.31)	−0.04 (−0.12, 0.05)	3.02 (2.83, 3.21)	0.18 (0.07, 0.28)	−0.14 (−0.20, −0.09)
Somalia	−0.63 (−0.68, −0.59)	−0.90 (−0.94, −0.87)	0.76 (0.48, 1.05)	−1.12 (−1.25, −0.98)	−0.72 (−0.77, −0.67)
South Africa	−1.36 (−1.74, −0.99)	−1.74 (−2.14, −1.35)	−0.35 (−0.67, −0.03)	−2.85 (−3.13, −2.56)	−6.31 (−7.16, −5.46)
South Sudan	−0.71 (−0.77, −0.66)	−1.01 (−1.07, −0.95)	1.68 (1.55, 1.80)	−0.56 (−0.63, −0.49)	−1.14 (−1.21, −1.08)
Spain	−0.68 (−0.78, −0.59)	−0.73 (−0.83, −0.63)	−1.94 (−2.19, −1.68)	−1.62 (−1.72, −1.52)	−7.42 (−7.69, −7.14)

Supplemnetary Table SI. Cont.

Countries	EAPC (95% CI) (1990–2019)				
	All risk factors	Smoking	Ambient particulate matter pollution	Secondhand smoke	Household air pollution from solid fuels
Sri Lanka	0.81 (0.54, 1.09)	0.38 (0.05, 0.71)	2.70 (2.19, 3.20)	0.34 (0.20, 0.47)	–1.70 (–1.98, –1.42)
Sudan	–0.02 (–0.07, 0.03)	–0.11 (–0.17, –0.04)	5.51 (5.34, 5.68)	–0.64 (–0.83, –0.45)	–3.15 (–3.50, –2.81)
Suriname	0.28 (0.04, 0.53)	0.26 (0.01, 0.52)	0.86 (0.53, 1.18)	–0.27 (–0.52, –0.02)	–5.19 (–5.40, –4.97)
Sweden	–0.75 (–0.89, –0.61)	–0.82 (–0.96, –0.68)	–4.25 (–4.79, –3.71)	–1.70 (–1.80, –1.60)	–7.13 (–7.44, –6.82)
Switzerland	–2.02 (–2.18, –1.86)	–2.12 (–2.28, –1.95)	–3.96 (–4.29, –3.63)	–3.71 (–3.84, –3.58)	–5.57 (–5.74, –5.40)
Syrian Arab Republic	0.03 (–0.16, 0.21)	–0.16 (–0.34, 0.02)	0.54 (0.26, 0.83)	0.09 (–0.16, 0.35)	–14.71 (–15.23, –14.18)
Taiwan (Province of China)	–0.34 (–0.55, –0.14)	–0.62 (–0.85, –0.39)	0.77 (0.47, 1.08)	–1.11 (–1.32, –0.91)	–7.83 (–8.22, –7.44)
Tajikistan	–1.90 (–2.36, –1.44)	–2.26 (–2.71, –1.82)	0.71 (0.17, 1.27)	–2.13 (–2.71, –1.54)	–4.95 (–5.21, –4.69)
Thailand	–2.30 (–2.51, –2.10)	–2.50 (–2.70, –2.30)	–0.93 (–1.31, –0.55)	–2.60 (–2.87, –2.33)	–6.76 (–6.96, –6.56)
Timor–Leste	0.39 (0.16, 0.62)	0.22 (0.00, 0.44)	5.47 (4.74, 6.20)	0.57 (0.30, 0.83)	–0.84 (–0.97, –0.70)
Togo	0.09 (0.02, 0.17)	–0.26 (–0.40, –0.12)	2.53 (2.28, 2.78)	–0.19 (–0.34, –0.05)	–0.48 (–0.62, –0.34)
Tokelau	0.31 (0.26, 0.35)	0.15 (0.10, 0.20)	–0.74 (–1.12, –0.36)	0.35 (0.30, 0.41)	–8.80 (–9.07, –8.52)
Tonga	–0.17 (–0.34, –0.01)	–0.29 (–0.48, –0.10)	1.29 (1.01, 1.57)	–0.02 (–0.17, 0.13)	–2.71 (–2.86, –2.55)
Trinidad and Tobago	–0.91 (–1.02, –0.79)	–1.30 (–1.42, –1.18)	–0.51 (–0.68, –0.35)	–0.60 (–0.73, –0.48)	–8.98 (–9.28, –8.69)
Tunisia	–0.29 (–0.41, –0.17)	–0.40 (–0.52, –0.27)	0.42 (0.08, 0.76)	–0.85 (–0.98, –0.72)	–15.48 (–15.96, –15.01)
Turkey	–0.18 (–0.96, 0.60)	–0.25 (–1.02, 0.53)	0.52 (–0.22, 1.25)	–1.10 (–1.81, –0.38)	–12.74 (–13.51, –11.97)
Turkmeni- stan	–2.74 (–3.38, –2.09)	–3.07 (–3.72, –2.43)	–2.28 (–3.03, –1.52)	–2.08 (–2.77, –1.37)	–10.88 (–11.31, –10.45)
Tuvalu	–0.19 (–0.22, –0.16)	–0.19 (–0.21, –0.16)	1.40 (1.14, 1.67)	–0.36 (–0.43, –0.30)	–6.77 (–7.02, –6.53)
Uganda	0.30 (0.21, 0.40)	0.08 (–0.04, 0.21)	4.97 (4.74, 5.21)	0.30 (0.00, 0.60)	–0.63 (–0.78, –0.48)
Ukraine	–3.09 (–3.59, –2.58)	–3.06 (–3.57, –2.56)	–4.02 (–4.38, –3.67)	–2.83 (–3.35, –2.31)	–7.27 (–7.77, –6.76)
United Arab Emirates	–0.22 (–0.58, 0.15)	–0.42 (–0.74, –0.11)	–0.21 (–0.57, 0.15)	0.36 (0.01, 0.71)	–16.47 (–17.19, –15.74)
United Kingdom	–1.87 (–1.97, –1.77)	–2.06 (–2.16, –1.96)	–4.02 (–4.15, –3.90)	–3.56 (–3.77, –3.35)	–6.36 (–6.51, –6.21)
United Republic of Tanzania	0.05 (0.00, 0.10)	–0.15 (–0.19, –0.11)	3.72 (3.58, 3.86)	0.66 (0.37, 0.95)	–0.52 (–0.58, –0.47)
United States of America	–2.08 (–2.19, –1.97)	–2.20 (–2.31, –2.09)	–4.84 (–5.20, –4.47)	–4.13 (–4.37, –3.89)	–5.14 (–5.49, –4.80)

Supplementary Table SI. Cont.

Countries	EAPC (95% CI) (1990–2019)				
	All risk factors	Smoking	Ambient particulate matter pollution	Secondhand smoke	Household air pollution from solid fuels
United States Virgin Islands	1.39 (1.09, 1.69)	1.19 (0.87, 1.52)	0.62 (0.15, 1.08)	1.17 (0.92, 1.43)	–5.39 (–5.59, –5.18)
Uruguay	–1.23 (–1.35, –1.11)	–1.30 (–1.40, –1.19)	–1.54 (–1.85, –1.24)	–1.53 (–1.60, –1.47)	–6.90 (–7.28, –6.51)
Uzbekistan	–2.26 (–2.59, –1.92)	–2.22 (–2.57, –1.87)	–1.17 (–1.60, –0.73)	–1.97 (–2.21, –1.74)	–7.35 (–7.55, –7.14)
Vanuatu	0.33 (0.18, 0.49)	–0.09 (–0.24, 0.06)	2.09 (1.85, 2.34)	0.18 (–0.03, 0.39)	–0.08 (–0.24, 0.08)
Venezuela (Bolivarian Republic of)	–0.50 (–0.74, –0.25)	–1.15 (–1.41, –0.89)	0.51 (0.23, 0.79)	–0.63 (–0.86, –0.41)	–7.59 (–8.08, –7.10)
Viet Nam	0.38 (0.35, 0.42)	0.26 (0.21, 0.31)	3.66 (3.22, 4.10)	0.98 (0.89, 1.06)	–3.23 (–3.40, –3.06)
Yemen	0.07 (0.02, 0.13)	–0.01 (–0.06, 0.05)	5.42 (5.05, 5.79)	0.59 (0.50, 0.68)	–3.17 (–3.27, –3.08)
Zambia	–0.09 (–0.20, 0.03)	–0.17 (–0.28, –0.05)	3.62 (3.40, 3.84)	–0.41 (–0.61, –0.21)	–1.16 (–1.34, –0.98)
Zimbabwe	0.01 (–0.09, 0.10)	–0.81 (–0.89, –0.74)	0.84 (0.52, 1.15)	0.99 (0.72, 1.25)	0.21 (0.00, 0.43)

DALY – disability adjusted life-year, CI – confidence interval, EAPC – estimated annual percentage change, SDI – socio-demographic index.

Supplementary Table SII. Trends of age-standardized death rates of TBL cancer attributable to respiratory system-related risk factors in each country from 1990 to 2019

Countries	EAPC (95% CI) (1990–2019)				
	All risk factors	Smoking	Ambient particulate matter pollution	Secondhand smoke	Household air pollution from solid fuels
Afghanistan	−0.08 (−0.17, 0.00)	0.78 (0.64, 0.92)	3.43 (2.63, 4.23)	0.09 (−0.07, 0.25)	−1.60 (−1.79, −1.42)
Albania	−0.59 (−0.84, −0.34)	−0.46 (−0.73, −0.20)	0.59 (0.37, 0.81)	−1.22 (−1.52, −0.93)	−5.46 (−5.88, −5.03)
Algeria	−0.64 (−0.88, −0.40)	−0.78 (−1.03, −0.52)	−0.04 (−0.11, 0.04)	−0.40 (−0.66, −0.14)	−14.56 (−14.66, −14.47)
American Samoa	−0.31 (−0.36, −0.25)	−0.45 (−0.50, −0.40)	−0.57 (−0.79, −0.34)	−0.70 (−0.76, −0.63)	−3.56 (−3.89, −3.22)
Andorra	−1.03 (−1.07, −0.98)	−1.18 (−1.22, −1.13)	−2.61 (−2.87, −2.34)	−1.79 (−1.84, −1.74)	−6.48 (−6.83, −6.14)
Angola	−0.51 (−0.60, −0.42)	−0.60 (−0.69, −0.51)	4.90 (4.49, 5.32)	0.30 (0.09, 0.51)	−2.83 (−3.10, −2.57)
Antigua and Barbuda	−0.06 (−0.35, 0.23)	−0.05 (−0.35, 0.25)	−0.06 (−0.33, 0.21)	−0.67 (−0.94, −0.41)	−5.79 (−6.16, −5.42)
Argentina	−0.95 (−1.00, −0.90)	−1.10 (−1.15, −1.05)	−0.99 (−1.16, −0.83)	−1.83 (−1.95, −1.72)	−6.93 (−7.01, −6.85)
Armenia	−0.68 (−0.84, −0.52)	−0.80 (−0.96, −0.64)	0.64 (0.38, 0.91)	−0.55 (−0.70, −0.40)	−10.62 (−11.64, −9.59)
Australia	−1.69 (−1.79, −1.59)	−2.25 (−2.35, −2.15)	−2.38 (−2.55, −2.20)	−2.56 (−2.68, −2.44)	−9.25 (−9.58, −8.91)
Austria	−0.33 (−0.44, −0.23)	−0.32 (−0.43, −0.22)	−2.20 (−2.48, −1.92)	0.19 (0.02, 0.36)	−5.31 (−5.39, −5.23)
Azerbaijan	−0.05 (−0.50, 0.41)	−0.07 (−0.53, 0.38)	1.29 (0.75, 1.84)	0.47 (−0.08, 1.02)	−8.29 (−8.56, −8.01)
Bahamas	−0.71 (−0.80, −0.62)	−0.99 (−1.09, −0.88)	−0.66 (−0.75, −0.58)	−0.73 (−0.82, −0.65)	−6.76 (−6.96, −6.56)
Bahrain	−3.04 (−3.38, −2.70)	−3.54 (−3.88, −3.21)	−2.71 (−3.08, −2.33)	−3.05 (−3.37, −2.72)	−14.02 (−14.32, −13.72)
Bangladesh	−1.02 (−1.16, −0.87)	−1.44 (−1.60, −1.28)	3.27 (3.07, 3.47)	−0.72 (−0.92, −0.52)	−2.57 (−2.81, −2.34)
Barbados	−0.67 (−0.83, −0.51)	−1.19 (−1.38, −1.00)	−0.39 (−0.53, −0.25)	−1.36 (−1.60, −1.11)	−5.11 (−5.24, −4.98)
Belarus	−2.25 (−2.54, −1.96)	−2.21 (−2.51, −1.91)	−3.01 (−3.33, −2.69)	−2.25 (−2.52, −1.98)	−10.29 (−10.88, −9.69)
Belgium	−1.34 (−1.55, −1.14)	−1.49 (−1.69, −1.30)	−2.77 (−3.06, −2.49)	−1.95 (−2.12, −1.78)	−7.18 (−7.43, −6.93)
Belize	0.24 (−0.30, 0.79)	−0.02 (−0.56, 0.53)	1.72 (1.02, 2.42)	1.08 (0.64, 1.52)	−3.36 (−3.78, −2.94)
Benin	0.15 (0.05, 0.24)	−0.36 (−0.50, −0.23)	3.13 (2.88, 3.37)	0.25 (0.18, 0.32)	−0.41 (−0.52, −0.30)
Bermuda	−1.75 (−1.89, −1.61)	−1.56 (−1.69, −1.42)	−3.93 (−4.20, −3.66)	−1.93 (−2.13, −1.72)	−8.60 (−8.77, −8.43)
Bhutan	0.70 (0.66, 0.74)	0.45 (0.41, 0.50)	7.04 (6.64, 7.44)	0.13 (−0.02, 0.28)	−2.12 (−2.30, −1.95)
Bolivia (Plurinational State of)	−0.41 (−0.56, −0.26)	−1.38 (−1.65, −1.12)	0.44 (0.11, 0.77)	−1.26 (−1.52, −0.99)	−2.48 (−2.60, −2.37)
Bosnia and Herzegovina	0.10 (−0.02, 0.21)	0.24 (0.13, 0.34)	1.44 (1.03, 1.84)	0.66 (0.47, 0.85)	−4.91 (−5.16, −4.66)
Botswana	−0.16 (−0.53, 0.21)	−0.33 (−0.73, 0.08)	2.95 (2.39, 3.50)	−0.37 (−0.70, −0.04)	−3.51 (−3.85, −3.17)

Supplementary Table SII. Cont.

Countries	EAPC (95% CI) (1990–2019)				
	All risk factors	Smoking	Ambient particulate matter pollution	Secondhand smoke	Household air pollution from solid fuels
Brazil	−0.96 (−1.09, −0.84)	−1.28 (−1.45, −1.11)	−0.44 (−0.83, −0.04)	−1.86 (−1.99, −1.73)	−5.61 (−5.77, −5.45)
Brunei Darussalam	−0.18 (−0.37, 0.00)	−0.52 (−0.71, −0.34)	−0.02 (−0.73, 0.70)	−1.32 (−1.47, −1.16)	−10.88 (−11.60, −10.14)
Bulgaria	1.91 (1.37, 2.44)	1.90 (1.37, 2.44)	1.25 (0.74, 1.76)	1.12 (0.58, 1.66)	−0.39 (−1.03, 0.26)
Burkina Faso	0.57 (0.40, 0.73)	0.25 (0.11, 0.39)	3.55 (3.31, 3.78)	0.30 (−0.01, 0.60)	0.08 (−0.08, 0.23)
Burundi	−1.10 (−1.21, −0.99)	−2.02 (−2.18, −1.87)	0.54 (0.23, 0.85)	−1.58 (−1.88, −1.28)	−0.98 (−1.04, −0.91)
Cabo Verde	0.71 (0.36, 1.06)	0.08 (−0.39, 0.55)	5.54 (5.00, 6.09)	0.82 (0.55, 1.10)	−3.87 (−4.23, −3.51)
Cambodia	−0.05 (−0.13, 0.03)	−0.21 (−0.28, −0.14)	3.33 (3.09, 3.58)	1.10 (0.98, 1.21)	−1.20 (−1.25, −1.14)
Cameroon	0.80 (0.67, 0.93)	0.53 (0.37, 0.69)	3.39 (3.20, 3.58)	−0.36 (−0.41, −0.31)	−0.61 (−0.87, −0.35)
Canada	−1.50 (−1.62, −1.38)	−1.76 (−1.89, −1.62)	−3.39 (−3.69, −3.09)	−2.87 (−3.01, −2.72)	−11.38 (−12.27, −10.48)
Central African Republic	−0.75 (−0.85, −0.65)	−1.22 (−1.39, −1.04)	0.91 (0.73, 1.08)	−1.15 (−1.26, −1.05)	−0.95 (−1.04, −0.86)
Chad	1.49 (1.35, 1.63)	1.44 (1.26, 1.63)	4.20 (4.01, 4.39)	1.74 (1.61, 1.87)	0.91 (0.75, 1.08)
Chile	−0.48 (−0.56, −0.39)	−0.72 (−0.81, −0.63)	0.58 (0.46, 0.70)	−1.17 (−1.32, −1.01)	−6.98 (−7.10, −6.86)
China	0.95 (0.73, 1.17)	1.13 (0.88, 1.38)	3.77 (3.37, 4.18)	0.76 (0.60, 0.92)	−4.22 (−4.64, −3.81)
Colombia	−1.89 (−2.02, −1.76)	−2.57 (−2.71, −2.44)	−0.55 (−0.72, −0.38)	−1.67 (−1.87, −1.46)	−6.23 (−6.52, −5.94)
Comoros	−0.55 (−0.68, −0.42)	−0.83 (−0.94, −0.73)	2.75 (2.61, 2.89)	−0.39 (−0.55, −0.23)	−1.32 (−1.48, −1.15)
Congo	−0.84 (−1.05, −0.62)	−0.99 (−1.27, −0.71)	2.67 (2.31, 3.02)	−0.45 (−0.75, −0.15)	−3.19 (−3.34, −3.04)
Cook Islands	−1.05 (−1.11, −0.99)	−1.23 (−1.29, −1.17)	−1.22 (−1.44, −1.00)	−0.78 (−0.87, −0.70)	−6.17 (−6.71, −5.64)
Costa Rica	−1.28 (−1.44, −1.12)	−1.67 (−1.83, −1.52)	0.55 (0.28, 0.81)	−1.48 (−1.73, −1.22)	−7.53 (−7.87, −7.18)
Croatia	−0.46 (−0.71, −0.22)	−0.70 (−0.92, −0.47)	−1.14 (−1.43, −0.84)	−0.50 (−0.89, −0.12)	−5.44 (−5.67, −5.21)
Cuba	0.15 (0.03, 0.27)	0.11 (−0.01, 0.23)	0.23 (0.10, 0.36)	−0.90 (−1.01, −0.79)	−4.62 (−4.89, −4.35)
Cyprus	0.90 (0.64, 1.15)	0.94 (0.69, 1.20)	0.68 (0.26, 1.10)	1.00 (0.72, 1.28)	−7.95 (−8.41, −7.50)
Czechia	−1.57 (−1.75, −1.40)	−1.69 (−1.87, −1.52)	−2.63 (−2.91, −2.35)	−1.84 (−2.06, −1.62)	−5.29 (−5.63, −4.94)
Cote d'Ivoire	0.30 (0.23, 0.36)	0.51 (0.43, 0.58)	2.72 (2.44, 3.00)	0.11 (−0.20, 0.42)	−0.78 (−0.89, −0.68)
Democratic People's Republic of Korea	0.29 (0.23, 0.35)	0.47 (0.39, 0.56)	2.54 (2.35, 2.73)	−0.33 (−0.41, −0.24)	−1.15 (−1.31, −0.99)

Supplementary Table SII. Cont.

Countries	EAPC (95% CI) (1990–2019)				
	All risk factors	Smoking	Ambient particulate matter pollution	Secondhand smoke	Household air pollution from solid fuels
Democratic Republic of the Congo	–1.14 (–1.35, –0.94)	–1.91 (–2.18, –1.64)	0.45 (–0.44, 1.35)	–2.18 (–2.37, –1.99)	–1.34 (–1.39, –1.29)
Denmark	–1.17 (–1.32, –1.03)	–1.32 (–1.49, –1.16)	–3.04 (–3.41, –2.67)	–2.94 (–3.02, –2.86)	–5.94 (–6.04, –5.83)
Djibouti	0.58 (0.52, 0.64)	0.67 (0.61, 0.73)	5.19 (4.74, 5.64)	0.42 (0.35, 0.49)	–4.05 (–4.35, –3.74)
Dominica	–0.01 (–0.13, 0.12)	–0.46 (–0.59, –0.33)	1.12 (0.98, 1.25)	0.06 (–0.10, 0.21)	–6.89 (–7.37, –6.41)
Dominican Republic	1.40 (1.24, 1.55)	1.53 (1.37, 1.69)	4.56 (4.26, 4.87)	0.34 (0.16, 0.52)	–5.31 (–5.45, –5.17)
Ecuador	0.33 (0.08, 0.57)	–0.30 (–0.53, –0.07)	2.01 (1.61, 2.41)	–1.59 (–1.74, –1.43)	–5.70 (–5.93, –5.47)
Egypt	1.31 (1.13, 1.48)	1.33 (1.11, 1.54)	1.56 (1.33, 1.79)	0.59 (0.38, 0.81)	–15.80 (–16.14, –15.46)
El Salvador	0.02 (–0.09, 0.12)	–0.29 (–0.50, –0.07)	3.13 (2.83, 3.44)	1.00 (0.86, 1.14)	–4.86 (–5.37, –4.34)
Equatorial Guinea	0.55 (0.39, 0.72)	0.23 (0.05, 0.41)	9.55 (8.92, 10.18)	1.06 (0.85, 1.27)	–6.28 (–6.91, –5.64)
Eritrea	0.20 (–0.01, 0.41)	–0.53 (–0.80, –0.27)	3.50 (3.05, 3.96)	0.93 (0.69, 1.17)	–0.61 (–0.76, –0.46)
Estonia	–1.47 (–1.67, –1.27)	–1.49 (–1.69, –1.29)	–3.87 (–4.53, –3.22)	–1.74 (–1.94, –1.55)	–6.86 (–7.16, –6.55)
Eswatini	0.03 (–0.26, 0.32)	–0.77 (–1.01, –0.52)	2.63 (2.33, 2.93)	–0.23 (–0.40, –0.05)	–1.65 (–2.02, –1.27)
Ethiopia	–1.00 (–1.12, –0.88)	–1.97 (–2.17, –1.76)	3.86 (3.45, 4.27)	–1.48 (–1.65, –1.30)	–1.54 (–1.60, –1.49)
Fiji	–0.62 (–0.76, –0.49)	–1.23 (–1.36, –1.10)	2.27 (1.84, 2.70)	0.15 (–0.12, 0.43)	–3.69 (–3.84, –3.54)
Finland	–1.39 (–1.51, –1.27)	–1.64 (–1.77, –1.51)	–4.64 (–5.22, –4.07)	–1.75 (–1.92, –1.57)	–8.18 (–8.42, –7.95)
France	–0.16 (–0.27, –0.04)	–0.38 (–0.49, –0.27)	–1.55 (–1.90, –1.19)	–1.64 (–1.90, –1.37)	–5.62 (–5.69, –5.55)
Gabon	–0.22 (–0.27, –0.18)	–0.08 (–0.12, –0.04)	2.90 (2.55, 3.26)	–0.39 (–0.48, –0.30)	–8.45 (–8.97, –7.94)
Gambia	0.30 (0.14, 0.46)	–0.35 (–0.54, –0.16)	3.54 (3.37, 3.72)	0.36 (0.17, 0.55)	–0.40 (–0.57, –0.24)
Georgia	1.30 (0.69, 1.92)	1.31 (0.67, 1.94)	1.53 (0.76, 2.29)	1.80 (1.14, 2.47)	–1.17 (–1.65, –0.69)
Germany	–0.23 (–0.44, –0.01)	–0.37 (–0.58, –0.16)	–1.79 (–2.17, –1.40)	–1.10 (–1.24, –0.96)	–3.63 (–3.97, –3.30)
Ghana	–0.21 (–0.34, –0.09)	–0.44 (–0.59, –0.29)	3.20 (2.93, 3.47)	0.82 (0.70, 0.95)	–2.24 (–2.44, –2.05)
Greece	–0.50 (–0.57, –0.42)	–0.46 (–0.54, –0.39)	–1.44 (–1.77, –1.11)	–1.18 (–1.29, –1.06)	–7.60 (–7.93, –7.27)
Greenland	–0.82 (–1.14, –0.49)	–0.92 (–1.23, –0.60)	–1.71 (–2.03, –1.38)	–2.15 (–2.35, –1.94)	–8.34 (–9.10, –7.58)
Grenada	–0.26 (–0.49, –0.03)	–0.33 (–0.57, –0.09)	1.06 (0.78, 1.34)	–0.27 (–0.40, –0.14)	–9.45 (–10.18, –8.70)
Guam	–0.91 (–1.22, –0.61)	–0.98 (–1.28, –0.69)	–1.18 (–2.01, –0.35)	–0.88 (–1.13, –0.62)	–2.30 (–3.14, –1.45)

Supplementary Table SII. Cont.

Countries	EAPC (95% CI) (1990–2019)				
	All risk factors	Smoking	Ambient particulate matter pollution	Secondhand smoke	Household air pollution from solid fuels
Guatemala	−1.32 (−1.57, −1.06)	−1.46 (−1.65, −1.27)	1.15 (0.79, 1.50)	−1.49 (−1.74, −1.24)	−3.14 (−3.52, −2.75)
Guinea	0.86 (0.79, 0.92)	1.07 (0.98, 1.17)	3.15 (3.04, 3.26)	0.95 (0.88, 1.02)	0.11 (0.05, 0.17)
Guinea-Bissau	−0.19 (−0.37, 0.00)	−0.97 (−1.36, −0.58)	2.46 (2.27, 2.65)	0.35 (0.09, 0.62)	−0.66 (−0.80, −0.51)
Guyana	0.00 (−0.10, 0.10)	−0.40 (−0.49, −0.31)	1.09 (0.78, 1.39)	−0.37 (−0.53, −0.22)	−4.95 (−5.40, −4.50)
Haiti	−0.66 (−0.77, −0.54)	−1.57 (−1.62, −1.53)	2.17 (2.04, 2.31)	−0.96 (−1.43, −0.48)	−1.05 (−1.17, −0.93)
Honduras	1.68 (1.54, 1.83)	1.17 (1.02, 1.32)	4.54 (4.13, 4.95)	1.78 (1.64, 1.92)	0.36 (0.21, 0.51)
Hungary	−0.14 (−0.40, 0.13)	−0.15 (−0.41, 0.10)	−1.02 (−1.37, −0.68)	−0.69 (−1.03, −0.34)	−2.97 (−3.13, −2.81)
Iceland	−0.96 (−1.16, −0.76)	−1.14 (−1.36, −0.92)	−2.61 (−3.09, −2.13)	−2.34 (−2.49, −2.18)	−7.68 (−7.85, −7.51)
India	0.03 (−0.08, 0.14)	−0.51 (−0.63, −0.39)	3.48 (3.31, 3.64)	0.44 (0.24, 0.64)	−2.85 (−3.10, −2.60)
Indonesia	0.97 (0.92, 1.02)	1.16 (1.11, 1.22)	2.21 (1.98, 2.43)	1.52 (1.44, 1.61)	−2.29 (−2.50, −2.07)
Iran (Islamic Republic of)	0.21 (0.00, 0.41)	−0.11 (−0.34, 0.11)	0.81 (0.71, 0.92)	0.54 (0.35, 0.73)	−14.50 (−14.94, −14.06)
Iraq	0.65 (0.33, 0.97)	0.41 (0.11, 0.72)	1.77 (1.53, 2.02)	0.83 (0.46, 1.20)	−15.29 (−16.23, −14.33)
Ireland	−1.38 (−1.49, −1.27)	−1.54 (−1.66, −1.42)	−3.46 (−3.86, −3.06)	−3.24 (−3.36, −3.11)	−8.48 (−8.57, −8.39)
Israel	−0.81 (−0.95, −0.68)	−1.03 (−1.16, −0.90)	−0.83 (−1.13, −0.53)	−1.83 (−1.98, −1.69)	−5.69 (−5.85, −5.53)
Italy	−1.52 (−1.60, −1.43)	−1.75 (−1.85, −1.66)	−2.74 (−2.95, −2.52)	−2.34 (−2.39, −2.30)	−7.05 (−7.20, −6.90)
Jamaica	0.64 (0.12, 1.15)	0.67 (0.10, 1.25)	2.31 (1.63, 2.99)	0.05 (−0.42, 0.51)	−5.75 (−6.38, −5.11)
Japan	−0.82 (−0.93, −0.72)	−1.05 (−1.17, −0.92)	−0.53 (−0.73, −0.34)	−1.45 (−1.54, −1.37)	−7.35 (−7.73, −6.96)
Jordan	0.83 (0.54, 1.12)	0.71 (0.41, 1.01)	1.36 (0.96, 1.77)	0.06 (−0.13, 0.26)	−12.54 (−13.16, −11.92)
Kazakhstan	−2.60 (−2.73, −2.46)	−2.64 (−2.77, −2.50)	−1.80 (−2.07, −1.54)	−2.34 (−2.52, −2.16)	−8.15 (−8.42, −7.87)
Kenya	0.64 (0.46, 0.81)	0.28 (−0.01, 0.56)	3.95 (3.63, 4.28)	−0.68 (−0.79, −0.57)	−0.29 (−0.49, −0.09)
Kiribati	−0.09 (−0.13, −0.06)	−0.02 (−0.06, 0.02)	0.38 (0.08, 0.67)	−0.08 (−0.37, 0.20)	−1.15 (−1.22, −1.07)
Kuwait	−0.27 (−0.63, 0.09)	−0.43 (−0.82, −0.04)	−0.09 (−0.46, 0.29)	−0.33 (−0.64, −0.03)	−13.20 (−13.69, −12.70)
Kyrgyzstan	−2.93 (−3.42, −2.42)	−3.07 (−3.62, −2.52)	−1.47 (−1.98, −0.95)	−1.95 (−2.48, −1.41)	−5.54 (−5.78, −5.29)
Lao People's Democratic Republic	−0.80 (−0.91, −0.69)	−1.03 (−1.15, −0.91)	2.16 (2.00, 2.32)	−0.95 (−1.10, −0.79)	−1.51 (−1.61, −1.41)
Latvia	−1.48 (−1.77, −1.19)	−1.56 (−1.84, −1.27)	−2.71 (−3.28, −2.13)	−1.63 (−1.90, −1.35)	−5.37 (−5.63, −5.11)

Supplemnetary Table SII. Cont.

Countries	EAPC (95% CI) (1990–2019)				
	All risk factors	Smoking	Ambient particulate matter pollution	Secondhand smoke	Household air pollution from solid fuels
Lebanon	1.60 (1.30, 1.90)	1.63 (1.32, 1.93)	2.22 (1.84, 2.61)	2.13 (1.72, 2.54)	−12.62 (−12.99, −12.25)
Lesotho	1.46 (1.30, 1.62)	1.16 (1.05, 1.26)	4.07 (3.82, 4.33)	1.90 (1.62, 2.19)	0.22 (−0.03, 0.46)
Liberia	0.10 (−0.20, 0.41)	−0.35 (−0.71, 0.01)	3.64 (2.92, 4.37)	0.07 (−0.21, 0.35)	−0.62 (−0.83, −0.42)
Libya	−0.31 (−0.44, −0.17)	−0.55 (−0.69, −0.42)	0.50 (0.14, 0.86)	0.07 (−0.12, 0.26)	−16.49 (−17.23, −15.75)
Lithuania	−1.47 (−1.67, −1.26)	−1.48 (−1.68, −1.28)	−2.81 (−3.29, −2.33)	−1.37 (−1.56, −1.17)	−7.64 (−7.80, −7.47)
Luxembourg	−1.47 (−1.59, −1.34)	−1.61 (−1.75, −1.47)	−3.07 (−3.44, −2.69)	−2.27 (−2.38, −2.17)	−6.42 (−6.68, −6.17)
Madagascar	−0.88 (−0.98, −0.78)	−2.08 (−2.26, −1.89)	2.55 (2.40, 2.70)	−2.44 (−2.71, −2.17)	−0.87 (−0.97, −0.78)
Malawi	0.08 (−0.08, 0.24)	−0.04 (−0.24, 0.16)	3.45 (3.21, 3.69)	−0.19 (−0.30, −0.08)	−0.45 (−0.62, −0.28)
Malaysia	−0.01 (−0.34, 0.33)	−0.22 (−0.56, 0.13)	−0.74 (−1.06, −0.41)	0.37 (−0.02, 0.76)	−8.50 (−8.72, −8.28)
Maldives	−2.22 (−2.39, −2.05)	−2.23 (−2.39, −2.06)	−0.52 (−0.89, −0.14)	−1.95 (−2.13, −1.77)	−8.94 (−9.35, −8.52)
Mali	0.71 (0.65, 0.77)	1.50 (1.44, 1.56)	3.18 (3.06, 3.32)	1.45 (1.30, 1.61)	−0.08 (−0.13, −0.03)
Malta	−0.96 (−1.04, −0.88)	−1.22 (−1.29, −1.15)	−1.47 (−1.87, −1.06)	−1.70 (−1.76, −1.63)	−8.74 (−8.87, −8.60)
Marshall Islands	0.57 (0.41, 0.72)	0.43 (0.26, 0.60)	2.53 (2.26, 2.81)	0.38 (0.26, 0.51)	−1.41 (−1.71, −1.11)
Mauritania	0.18 (0.01, 0.35)	0.20 (0.08, 0.32)	3.00 (2.79, 3.21)	−0.84 (−1.01, −0.67)	−1.92 (−2.13, −1.71)
Mauritius	−1.08 (−1.19, −0.97)	−1.51 (−1.64, −1.39)	−0.39 (−0.62, −0.16)	−0.73 (−0.87, −0.60)	−9.61 (−9.68, −9.53)
Mexico	−2.51 (−2.66, −2.36)	−3.12 (−3.26, −2.98)	−2.55 (−2.85, −2.25)	−4.33 (−4.63, −4.02)	−4.89 (−5.02, −4.75)
Micronesia (Federated States of)	0.28 (0.25, 0.31)	0.24 (0.20, 0.28)	2.41 (2.20, 2.63)	0.38 (0.35, 0.41)	−3.00 (−3.10, −2.90)
Monaco	1.50 (1.04, 1.96)	1.33 (0.88, 1.79)	2.96 (1.56, 4.38)	0.75 (0.29, 1.20)	−2.29 (−2.93, −1.64)
Mongolia	−1.62 (−1.89, −1.34)	−1.54 (−1.81, −1.26)	1.34 (0.97, 1.70)	−1.82 (−2.15, −1.49)	−5.28 (−5.70, −4.86)
Montenegro	0.69 (0.51, 0.88)	0.75 (0.57, 0.94)	−0.02 (−0.21, 0.18)	1.72 (1.34, 2.10)	−1.67 (−1.84, −1.50)
Morocco	0.10 (−0.06, 0.26)	−0.18 (−0.33, −0.04)	2.99 (2.86, 3.13)	−0.55 (−0.74, −0.36)	−7.35 (−7.85, −6.85)
Mozambique	1.57 (1.44, 1.69)	1.26 (1.14, 1.38)	5.46 (5.14, 5.79)	1.74 (1.57, 1.92)	1.03 (0.91, 1.15)
Myanmar	−0.74 (−0.77, −0.70)	−1.13 (−1.18, −1.07)	3.05 (2.74, 3.36)	−1.47 (−1.59, −1.34)	−2.09 (−2.20, −1.97)
Namibia	0.43 (0.34, 0.51)	0.12 (0.06, 0.17)	3.12 (2.97, 3.27)	−0.61 (−0.74, −0.48)	−1.89 (−2.09, −1.68)
Nauru	−0.19 (−0.26, −0.12)	−0.22 (−0.30, −0.15)	−1.19 (−1.47, −0.91)	−0.55 (−0.63, −0.47)	−6.53 (−6.99, −6.06)

Supplementary Table SII. Cont.

Countries	EAPC (95% CI) (1990–2019)				
	All risk factors	Smoking	Ambient particulate matter pollution	Secondhand smoke	Household air pollution from solid fuels
Nepal	0.22 (0.07, 0.38)	0.01 (−0.08, 0.10)	5.05 (4.77, 5.34)	0.09 (−0.24, 0.42)	−1.82 (−1.89, −1.76)
Netherlands	−1.03 (−1.23, −0.83)	−1.27 (−1.48, −1.07)	−2.31 (−2.63, −1.99)	−2.18 (−2.38, −1.97)	−6.74 (−6.97, −6.51)
New Zealand	−1.69 (−1.80, −1.58)	−2.02 (−2.13, −1.91)	−2.82 (−2.97, −2.67)	−2.37 (−2.62, −2.12)	−6.98 (−7.15, −6.81)
Nicaragua	−0.23 (−0.39, −0.07)	−1.00 (−1.14, −0.87)	3.58 (3.17, 4.00)	0.27 (0.14, 0.39)	−1.99 (−2.25, −1.73)
Niger	0.70 (0.56, 0.85)	1.58 (1.41, 1.75)	2.28 (2.09, 2.47)	0.91 (0.61, 1.22)	0.20 (0.05, 0.35)
Nigeria	0.57 (0.44, 0.70)	0.10 (−0.09, 0.29)	4.54 (4.28, 4.80)	1.65 (1.52, 1.78)	−1.44 (−1.73, −1.15)
Niue	0.17 (0.10, 0.23)	0.04 (−0.05, 0.13)	0.18 (−0.01, 0.38)	0.33 (0.26, 0.40)	−8.49 (−8.78, −8.19)
North Macedonia	1.05 (0.81, 1.28)	1.07 (0.83, 1.32)	0.99 (0.68, 1.30)	1.15 (0.93, 1.37)	−2.85 (−3.10, −2.60)
Northern Mariana Islands	−1.10 (−1.19, −1.01)	−1.33 (−1.42, −1.24)	−1.65 (−2.18, −1.12)	−0.68 (−0.81, −0.56)	−2.15 (−2.96, −1.34)
Norway	−0.26 (−0.56, 0.05)	−0.60 (−0.97, −0.22)	−3.42 (−3.84, −2.99)	−1.70 (−1.86, −1.54)	−5.95 (−6.17, −5.74)
Oman	0.29 (0.06, 0.52)	−0.63 (−0.83, −0.42)	1.98 (1.45, 2.51)	1.08 (0.86, 1.30)	−15.81 (−16.17, −15.46)
Pakistan	0.20 (−0.05, 0.45)	−0.15 (−0.42, 0.13)	4.56 (4.24, 4.88)	−0.01 (−0.30, 0.28)	−2.19 (−2.58, −1.79)
Palau	−0.02 (−0.06, 0.03)	−0.38 (−0.43, −0.33)	0.82 (−0.02, 1.66)	−0.17 (−0.23, −0.11)	−2.41 (−3.14, −1.67)
Palestine	0.35 (0.13, 0.57)	0.20 (−0.01, 0.42)	2.17 (1.97, 2.38)	0.38 (0.17, 0.59)	−11.64 (−12.04, −11.25)
Panama	−1.79 (−1.90, −1.69)	−2.42 (−2.52, −2.32)	−0.46 (−0.69, −0.23)	−2.24 (−2.52, −1.97)	−6.31 (−6.58, −6.03)
Papua New Guinea	0.52 (0.47, 0.56)	0.31 (0.24, 0.37)	2.00 (1.78, 2.23)	1.15 (1.07, 1.24)	0.13 (0.08, 0.19)
Paraguay	1.06 (0.75, 1.37)	0.95 (0.62, 1.29)	2.37 (1.86, 2.88)	1.39 (1.29, 1.50)	−1.87 (−2.39, −1.34)
Peru	−1.91 (−2.27, −1.56)	−1.95 (−2.31, −1.60)	−0.03 (−0.50, 0.45)	−2.84 (−3.28, −2.40)	−4.99 (−5.39, −4.58)
Philippines	−1.73 (−1.98, −1.47)	−1.78 (−2.03, −1.53)	−2.38 (−2.80, −1.95)	−2.12 (−2.45, −1.79)	−2.39 (−2.59, −2.20)
Poland	−0.38 (−0.52, −0.25)	−0.54 (−0.69, −0.39)	−0.78 (−1.00, −0.56)	−1.37 (−1.51, −1.23)	−4.55 (−4.64, −4.47)
Portugal	−0.01 (−0.17, 0.15)	−0.15 (−0.31, 0.01)	−1.49 (−1.96, −1.01)	−1.23 (−1.42, −1.04)	−8.80 (−8.96, −8.64)
Puerto Rico	−1.73 (−1.86, −1.61)	−1.83 (−1.96, −1.70)	−2.78 (−3.36, −2.20)	−1.78 (−1.94, −1.62)	−5.79 (−6.04, −5.53)
Qatar	0.59 (0.27, 0.92)	0.29 (−0.02, 0.60)	0.69 (0.36, 1.02)	−0.06 (−0.33, 0.21)	−12.38 (−12.77, −11.98)
Republic of Korea	−0.52 (−0.97, −0.07)	−0.63 (−1.10, −0.16)	−0.08 (−0.49, 0.34)	−2.29 (−2.72, −1.85)	−12.37 (−12.93, −11.80)
Republic of Moldova	−1.23 (−1.70, −0.75)	−1.08 (−1.56, −0.59)	−1.27 (−1.89, −0.65)	−1.55 (−1.98, −1.11)	−10.38 (−10.86, −9.90)

Supplemnetary Table SII. Cont.

Countries	EAPC (95% CI) (1990–2019)				
	All risk factors	Smoking	Ambient particulate matter pollution	Secondhand smoke	Household air pollution from solid fuels
Romania	0.41 (0.23, 0.59)	0.42 (0.24, 0.61)	0.10 (−0.15, 0.36)	0.22 (0.02, 0.43)	−5.14 (−5.41, −4.87)
Russian Federation	−1.61 (−1.89, −1.33)	−1.56 (−1.85, −1.28)	−2.93 (−3.28, −2.58)	−0.73 (−1.01, −0.45)	−7.42 (−7.79, −7.04)
Rwanda	−0.65 (−0.88, −0.42)	−0.38 (−0.60, −0.16)	2.09 (1.71, 2.47)	−0.87 (−1.21, −0.53)	−1.53 (−1.72, −1.33)
Saint Kitts and Nevis	−0.72 (−0.91, −0.53)	−0.49 (−0.66, −0.31)	−0.67 (−0.97, −0.37)	−1.64 (−1.89, −1.39)	−7.84 (−8.07, −7.61)
Saint Lucia	−0.91 (−1.17, −0.64)	−0.96 (−1.19, −0.74)	0.37 (0.12, 0.62)	−1.82 (−2.14, −1.51)	−9.87 (−10.23, −9.51)
Saint Vincent and the Grenadines	−0.08 (−0.28, 0.12)	−0.23 (−0.41, −0.05)	1.26 (1.02, 1.50)	0.37 (0.19, 0.55)	−8.11 (−8.76, −7.45)
Samoa	−0.10 (−0.12, −0.07)	−0.11 (−0.13, −0.09)	0.41 (0.29, 0.53)	−0.23 (−0.25, −0.20)	−0.63 (−0.79, −0.47)
San Marino	−0.16 (−0.25, −0.06)	−0.42 (−0.50, −0.33)	−1.25 (−1.51, −0.98)	−0.44 (−0.51, −0.38)	−5.12 (−5.40, −4.83)
Sao Tome and Principe	1.01 (0.95, 1.06)	1.79 (1.71, 1.86)	5.12 (4.85, 5.38)	0.18 (0.00, 0.37)	−1.05 (−1.24, −0.85)
Saudi Arabia	−0.01 (−0.14, 0.12)	−0.01 (−0.11, 0.09)	1.54 (0.97, 2.11)	−0.52 (−0.66, −0.38)	−17.95 (−18.24, −17.66)
Senegal	0.56 (0.33, 0.80)	0.11 (−0.13, 0.35)	2.70 (2.53, 2.87)	0.02 (−0.20, 0.25)	−0.10 (−0.38, 0.19)
Serbia	0.82 (0.65, 0.99)	0.91 (0.73, 1.08)	0.96 (0.67, 1.26)	0.59 (0.28, 0.90)	−4.07 (−4.26, −3.88)
Seychelles	−0.58 (−0.73, −0.43)	−0.77 (−0.94, −0.61)	−0.44 (−0.67, −0.20)	−0.68 (−0.85, −0.50)	−10.09 (−10.44, −9.74)
Sierra Leone	0.30 (0.08, 0.51)	−0.25 (−0.51, 0.01)	2.93 (2.44, 3.42)	0.31 (0.11, 0.50)	−0.04 (−0.21, 0.13)
Singapore	−2.83 (−2.94, −2.73)	−3.12 (−3.23, −3.02)	−2.64 (−2.98, −2.29)	−3.39 (−3.54, −3.25)	−14.50 (−15.05, −13.95)
Slovakia	−1.51 (−1.77, −1.25)	−1.69 (−1.95, −1.43)	−2.29 (−2.57, −2.01)	−1.51 (−1.86, −1.17)	−6.07 (−6.48, −5.65)
Slovenia	−0.73 (−0.90, −0.55)	−0.87 (−1.02, −0.71)	−1.84 (−2.06, −1.62)	−0.99 (−1.12, −0.85)	−4.63 (−4.71, −4.54)
Solomon Islands	0.28 (0.21, 0.35)	0.03 (−0.05, 0.11)	3.06 (2.87, 3.25)	0.19 (0.09, 0.30)	−0.10 (−0.15, −0.04)
Somalia	−0.62 (−0.68, −0.57)	−0.91 (−0.96, −0.86)	0.77 (0.49, 1.05)	−1.06 (−1.21, −0.92)	−0.70 (−0.76, −0.64)
South Africa	−1.04 (−1.39, −0.69)	−1.48 (−1.85, −1.11)	−0.02 (−0.32, 0.29)	−2.60 (−2.87, −2.32)	−5.96 (−6.76, −5.15)
South Sudan	−0.48 (−0.52, −0.43)	−0.72 (−0.79, −0.66)	1.92 (1.80, 2.04)	−0.28 (−0.36, −0.20)	−0.93 (−0.99, −0.87)
Spain	−0.48 (−0.59, −0.38)	−0.57 (−0.68, −0.47)	−1.72 (−1.96, −1.48)	−1.44 (−1.56, −1.33)	−7.26 (−7.56, −6.95)
Sri Lanka	0.99 (0.72, 1.26)	0.53 (0.20, 0.85)	2.87 (2.37, 3.37)	0.50 (0.36, 0.64)	−1.52 (−1.80, −1.23)
Sudan	0.10 (0.05, 0.16)	0.03 (−0.03, 0.09)	5.62 (5.45, 5.79)	−0.62 (−0.81, −0.42)	−3.07 (−3.41, −2.73)
Suriname	0.35 (0.10, 0.61)	0.32 (0.05, 0.58)	0.93 (0.59, 1.27)	−0.24 (−0.50, 0.03)	−5.10 (−5.33, −4.87)

Supplementary Table SII. Cont.

Countries	EAPC (95% CI) (1990–2019)				
	All risk factors	Smoking	Ambient particulate matter pollution	Secondhand smoke	Household air pollution from solid fuels
Sweden	−0.22 (−0.33, −0.11)	−0.30 (−0.41, −0.19)	−3.77 (−4.29, −3.24)	−1.28 (−1.35, −1.21)	−6.65 (−6.94, −6.36)
Switzerland	−1.61 (−1.77, −1.44)	−1.72 (−1.88, −1.55)	−3.58 (−3.91, −3.24)	−3.42 (−3.57, −3.28)	−5.20 (−5.37, −5.03)
Syrian Arab Republic	0.16 (−0.03, 0.35)	−0.04 (−0.23, 0.14)	0.70 (0.40, 0.99)	0.18 (−0.05, 0.42)	−14.57 (−15.07, −14.06)
Taiwan (Province of China)	0.02 (−0.25, 0.29)	−0.26 (−0.56, 0.05)	1.14 (0.76, 1.51)	−0.82 (−1.07, −0.58)	−7.50 (−7.85, −7.15)
Tajikistan	−1.07 (−1.58, −0.56)	−1.40 (−1.89, −0.91)	1.56 (0.97, 2.17)	−1.39 (−2.02, −0.76)	−4.18 (−4.47, −3.89)
Thailand	−1.78 (−1.97, −1.60)	−1.95 (−2.14, −1.75)	−0.44 (−0.82, −0.05)	−2.20 (−2.44, −1.97)	−6.30 (−6.48, −6.11)
Timor-Leste	0.56 (0.38, 0.75)	0.38 (0.21, 0.55)	5.63 (4.92, 6.35)	0.76 (0.53, 0.99)	−0.68 (−0.79, −0.58)
Togo	0.14 (0.06, 0.21)	−0.24 (−0.38, −0.10)	2.57 (2.32, 2.82)	−0.24 (−0.38, −0.10)	−0.41 (−0.55, −0.27)
Tokelau	0.38 (0.33, 0.43)	0.21 (0.15, 0.26)	−0.66 (−1.05, −0.27)	0.42 (0.37, 0.48)	−8.70 (−8.97, −8.43)
Tonga	−0.19 (−0.38, −0.01)	−0.31 (−0.51, −0.10)	1.25 (0.95, 1.54)	−0.06 (−0.23, 0.10)	−2.73 (−2.89, −2.57)
Trinidad and Tobago	−0.90 (−1.01, −0.79)	−1.28 (−1.39, −1.16)	−0.51 (−0.68, −0.34)	−0.59 (−0.71, −0.46)	−8.97 (−9.27, −8.68)
Tunisia	−0.37 (−0.49, −0.25)	−0.48 (−0.60, −0.35)	0.34 (0.01, 0.66)	−0.99 (−1.13, −0.85)	−15.55 (−16.03, −15.06)
Turkey	0.08 (−0.68, 0.84)	−0.02 (−0.77, 0.74)	0.80 (0.08, 1.52)	−0.95 (−1.66, −0.23)	−12.48 (−13.24, −11.72)
Turkmenistan	−2.38 (−3.00, −1.76)	−2.70 (−3.32, −2.08)	−1.94 (−2.65, −1.22)	−1.78 (−2.44, −1.11)	−10.59 (−11.01, −10.17)
Tuvalu	0.01 (−0.02, 0.04)	0.01 (−0.01, 0.04)	1.58 (1.29, 1.86)	−0.22 (−0.30, −0.14)	−6.62 (−6.88, −6.35)
Uganda	0.46 (0.40, 0.52)	0.28 (0.18, 0.39)	5.11 (4.85, 5.36)	0.32 (0.02, 0.61)	−0.50 (−0.61, −0.39)
Ukraine	−2.88 (−3.33, −2.43)	−2.83 (−3.29, −2.38)	−3.85 (−4.15, −3.54)	−2.74 (−3.22, −2.27)	−7.12 (−7.58, −6.67)
United Arab Emirates	−0.10 (−0.50, 0.29)	−0.27 (−0.61, 0.06)	−0.12 (−0.52, 0.28)	0.43 (0.05, 0.81)	−16.42 (−17.11, −15.73)
United Kingdom	−1.46 (−1.55, −1.37)	−1.70 (−1.79, −1.62)	−3.65 (−3.77, −3.53)	−3.29 (−3.49, −3.08)	−5.97 (−6.12, −5.82)
United Republic of Tanzania	0.12 (0.07, 0.17)	−0.09 (−0.12, −0.06)	3.79 (3.65, 3.93)	0.68 (0.39, 0.97)	−0.45 (−0.51, −0.40)
United States of America	−1.57 (−1.69, −1.45)	−1.73 (−1.85, −1.60)	−4.36 (−4.75, −3.97)	−3.70 (−3.92, −3.48)	−4.68 (−5.05, −4.31)
United States Virgin Islands	1.47 (1.18, 1.76)	1.30 (0.99, 1.61)	0.69 (0.24, 1.15)	1.25 (1.00, 1.49)	−5.30 (−5.49, −5.10)
Uruguay	−1.00 (−1.11, −0.90)	−1.10 (−1.19, −1.00)	−1.30 (−1.59, −1.00)	−1.34 (−1.41, −1.28)	−6.68 (−7.06, −6.30)
Uzbekistan	−1.60 (−1.90, −1.30)	−1.57 (−1.89, −1.24)	−0.51 (−0.89, −0.12)	−1.38 (−1.55, −1.20)	−6.74 (−6.90, −6.58)

Supplemnetary Table SII. Cont.

Countries	EAPC (95% CI) (1990–2019)				
	All risk factors	Smoking	Ambient particulate matter pollution	Secondhand smoke	Household air pollution from solid fuels
Vanuatu	0.38 (0.25, 0.51)	−0.01 (−0.14, 0.11)	2.14 (1.92, 2.36)	0.19 (0.00, 0.38)	−0.03 (−0.17, 0.11)
Venezuela (Bolivarian Republic of)	−0.27 (−0.53, −0.01)	−0.89 (−1.16, −0.62)	0.74 (0.44, 1.04)	−0.42 (−0.66, −0.18)	−7.38 (−7.87, −6.88)
Viet Nam	0.39 (0.35, 0.43)	0.26 (0.18, 0.33)	3.67 (3.23, 4.10)	0.95 (0.85, 1.04)	−3.21 (−3.39, −3.02)
Yemen	0.31 (0.24, 0.38)	0.25 (0.19, 0.32)	5.65 (5.26, 6.04)	0.73 (0.63, 0.84)	−2.99 (−3.10, −2.87)
Zambia	−0.07 (−0.16, 0.03)	−0.14 (−0.23, −0.04)	3.60 (3.37, 3.83)	−0.40 (−0.59, −0.22)	−1.16 (−1.33, −0.99)
Zimbabwe	−0.07 (−0.14, 0.00)	−0.77 (−0.84, −0.70)	0.71 (0.40, 1.02)	0.74 (0.52, 0.96)	0.07 (−0.12, 0.26)

DALY – disability adjusted life-year, CI – confidence interval, EAPC – estimated annual percentage change, SDI – socio-demographic index.