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Supplementary Information of

Air pollution: a more serious health problem than COVID-19 in 2020

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Supplementary Text

Text S1. Data Sources

We obtained data from WHO including $PM_{2.5}$ mass concentration (https://www.who.int/data/gho/data/indicators/indicator-details/GHO/concentrations-of-fine-particulate-matter-(pm2-5)), deaths and death rates (deaths per 100000 population) due to indoor (https://www.who.int/data/gho/data/themes/topics/indicator-groups/indicator-group-details/GHO/household-air-pollution-burden-of-disease---deaths) and ambient (https://www.who.int/data/gho/data/themes/topics/indicator-groups/indicator-group-details/GHO/ambient-air-pollution---burden-of-disease---deaths) air pollution in 2016, and prevalence of current tobacco use (https://www.who.int/data/gho/data/themes/theme-details/GHO/tobacco-control). The $PM_{2.5}$ concentration is the annual mean concentration of particulate matter of less than 2.5 microns of diameter ($PM_{2.5}$) in urban areas in 2016. The indoor air pollution reported here is mainly due to solid fuel use for cooking. Taking into account the percentage of people using the solid fuels and the annual mean concentration of PM2.5, WHO determined Population Attributable Fraction (PAF), which is an indicator for increased risk of a disease resulting from the exposure. Applying this fraction to the total deaths provides an estimate for the total number of deaths that results from the use of solid fuels and from the ambient particulate matter pollution. As an additional contributing factor, we obtained prevalence of current tobacco within the population as a percentage of the population aged 15 years and over, who currently use any tobacco product. Here "current" means either daily or non-daily (occasional) use at the time of the survey. The tobacco products included cigarettes, pipes, cigars, cigarillos, waterpipes (hookah, shisha), bidis, kretek, heated tobacco products, and all forms of smokeless (oral and nasal) tobacco.

We obtained the COVID-19 related data including population, population density, population median age, hospital beds per 1000 capita, Gross domestic product (GDP) per capita, human development index (HDI), stringency index (OSI), deaths and death rates (deaths per 100000 population) caused by COVID-19 in 2020 from Our World in Data (https://ourworldindata.org/coronavirus). The HDI was created to emphasize that people and their capabilities should be the ultimate criteria for assessing the development of a country, not economic growth alone (https://ourworldindata.org/human-development-index). The HDI is a summary measure of average achievement in key dimensions of human development: a long and healthy life, being knowledgeable and have a decent standard of living. The HDI is the geometric mean of normalized indices for each of the three dimensions. The health dimension is assessed by life expectancy at birth, the education dimension is measured by mean of years of schooling for adults aged 25 years and more and expected years of schooling for children of school entering age. The standard of living dimension is measured by gross national income (GNI) per capita. The scores for the three HDI dimension indices are then aggregated into a composite index using geometric mean. OSI was calculated by the Oxford Coronavirus Government Response Tracker (OxCGRT) -project by using nine metrics: school closures; workplace closures; cancellation of public events; restrictions on public gatherings; closures of public transport; stay-at-home requirements; public information campaigns; restrictions on internal movements; and international travel controls (Hale *et al.* 2021). The index on any given day is calculated as the mean score of the nine metrics, each taking a value between 0 and 100. A higher score indicates a stricter response (i.e. 100 indicates the strictest response). If policies vary at the subnational level, the index is shown as the response level of the strictest sub-region.

We also obtained deaths due to air pollution from 2015 to 2019 from Health Effects Institute (HEI) to evaluate the change of deaths due to air pollution in recent years (HEI 2020). The Global Burden of Disease (GBD) project of the Institute for Health Metrics and Evaluation (IHME) provides each

pollutant's burden of disease in each country using mathematical functions, derived from epidemiological studies from countries around the world that relate different levels of exposure to the increased risk of death or disability from each cause, by age and sex, where applicable. The calculations include estimates of population exposure to $PM_{2.5}$, ozone, and household air pollution. The data set contains country-specific data on underlying rates of disease and death for each pollution-linked disease and links to a comprehensive set of population data, adjusted to match the UN2015 Population Prospectus and obtained from the Gridded Population of the World (GPW) database for each of the country.

The national changes in fossil CO_2 emissions during 2020 were obtained from Le Quéré, C. et al. (2021). This estimation considers only the effect of the COVID-19 restrictions. The country emissions exclude international transport (aviation and shipping) as in the United Framework Convention on Climate Change (UNFCCC) guidelines. The changes in the emissions are based on the changes in activity for six sectors of the economy as a function of the level of confinement and uses emissions of CO_2 in each sector for 71 countries representing 97% of the emissions and the degree of confinement for each country and each day of 2020. To support the interpretations, we obtained Gross Domestic Product (GDP) and GDP per capita in 2019 and 2020 from World Economic Outlook (https://www.imf.org/external/datamapper/datasets/WEO).

Text S2. Deaths due to air pollution from 2015 to 2019

Figure S1 shows that air pollution attributable deaths in different countries estimated by HEI from 2015 to 2019 correlate very well (r^2>=0.99) with that reported by WHO in 2016. Air pollution attributable deaths estimated by HEI were 80% of that reported by WHO, which could be caused by the different estimation methods (Landrigan *et al.* 2018). The slope remained stable (around 0.8) in recent five years, suggesting that the air pollution is a long-term health problem and overall situation was not improved.

Text S3. Deaths due to COVID-19 and population age structure

Low death rates from COVID-19 were associated with the countries that have a young age population (Fig. S4). This is because risk for severe illness with COVID-19 increases with age, with older adults at the highest risk. COVID-19 mortality is generally high when the median population age is higher than 35. However, there are counties with high median population age showing low COVID-19 mortality, e.g. New Zealand (0.52), Singapore (0.50), China (0.33), Thailand (0.09). At the same time, these countries had relatively stronger government stringency index.

Text S4. Deaths due to COVID-19 and government policy

There is a considerable temporal variability and cycling in the COVID-19 associated deaths in different countries reflecting the dynamical nature of the virus dispersion, which is influenced by human behavior and government control measures. To limit the deaths associated with COVID-19, governments implemented national restriction measures in 2020. As a measure for these, we utilized governmental control index (OSI). Figure S5 shows the scatter plot of the death rates from COVID-19 in 2020 versus OSI in different stages of COVID-19.

In general, the death rates from COVID-19 were low in the countries with higher OSI_{tc1}. However, this correlation is not present between the death rates from COVID-19 and OSI_{d1}, meaning that the death rates from COVID-19 were high even when some countries implemented the strictest policies after the first COVID-19 deaths. In general, the date when the total cases reached 1 per million capita in the country occurred earlier than that when the country has the first COVID-19 associated death. Thus, the earlier and more strict policies seem to be an effective strategy to reduce the number of deaths from COVID-19. We further use the parameter P to evaluate the correlation between COVID-19 deaths and government policies in the early stage of COVID-19. Overall, the countries with low P values, indicating low government stringency index and high dispersion rate of COVID-19 in the early stage, resulted in a high COVID-19 death rate in 2020.

Text S5. Dependency of the deaths associated with air pollution and COVID-19 on tobacco use

The results show that the increased tobacco use is associated with increased the risk of air pollution related death. In the case that the population is exposed to the same $PM_{2.5}$ level, the countries with higher prevalence of tobacco use had higher death rates from the air pollution (Fig. S8). When prevalence of current tobacco use was higher than 30%, the death rates due to air pollution in countries with $PM_{2.5}$ value of 20 μg m^{-3} reached 100 per 100 000 capita, which is comparable to that in countries with $PM_{2.5}$ higher than 40 μg m^{-3}. In addition, a positive correlation was observed between the death rates from air pollution and the tobacco use in the countries with HDI higher than 0.7. An increase of 10% prevalence of the tobacco use seems to increase the death rates due to air pollution by approximately 20 per 100 000 capita. A positive correlation between the COVID-19 mortality and tobacco use was detected when HDI was lower than 0.7. In these countries, an increase of 10% prevalence of the tobacco use elevated the death rates due to COVID-19 by some 2 per 100 000 capita. However, the value of R decreased with the increasing tobacco use.

Supplementary Figures

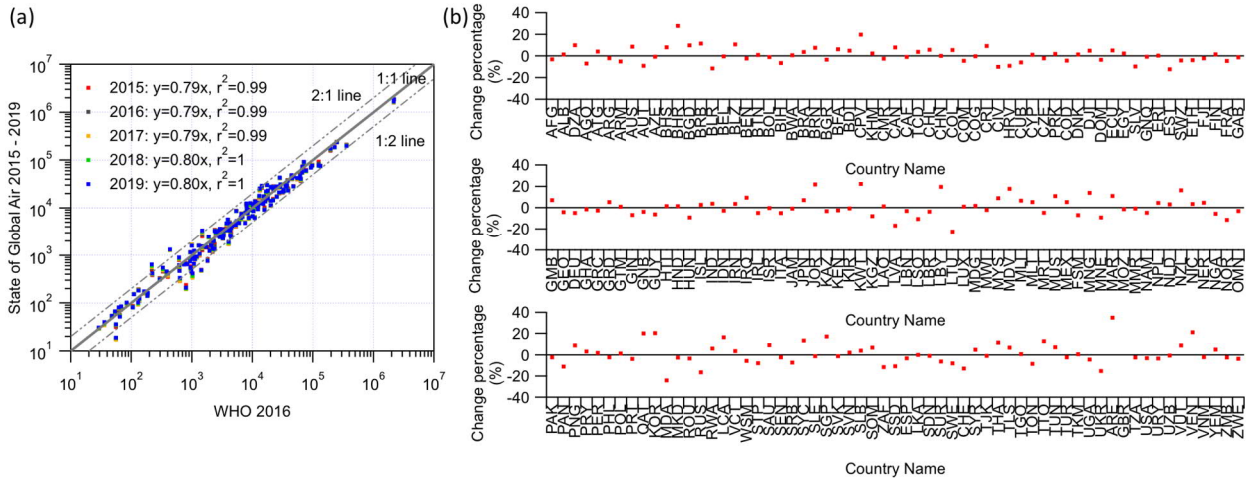

Fig. S1. (**a**) Scatter plot of deaths due to air pollution in 2015, 2016, 2017, 2018, and 2019 from Health Effects Institute versus deaths due to air pollution in 2016 from WHO. (**b**) the change percentage of air pollution attributable deaths from 2015 to 2019 for individual countries.

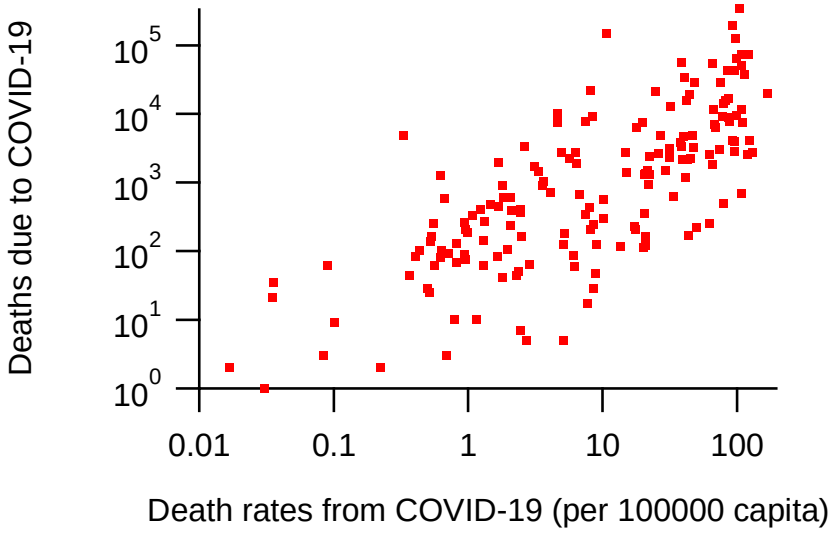

Fig. S2. Scatter plot of deaths from COVID-19 versus death rates from COVID-19.

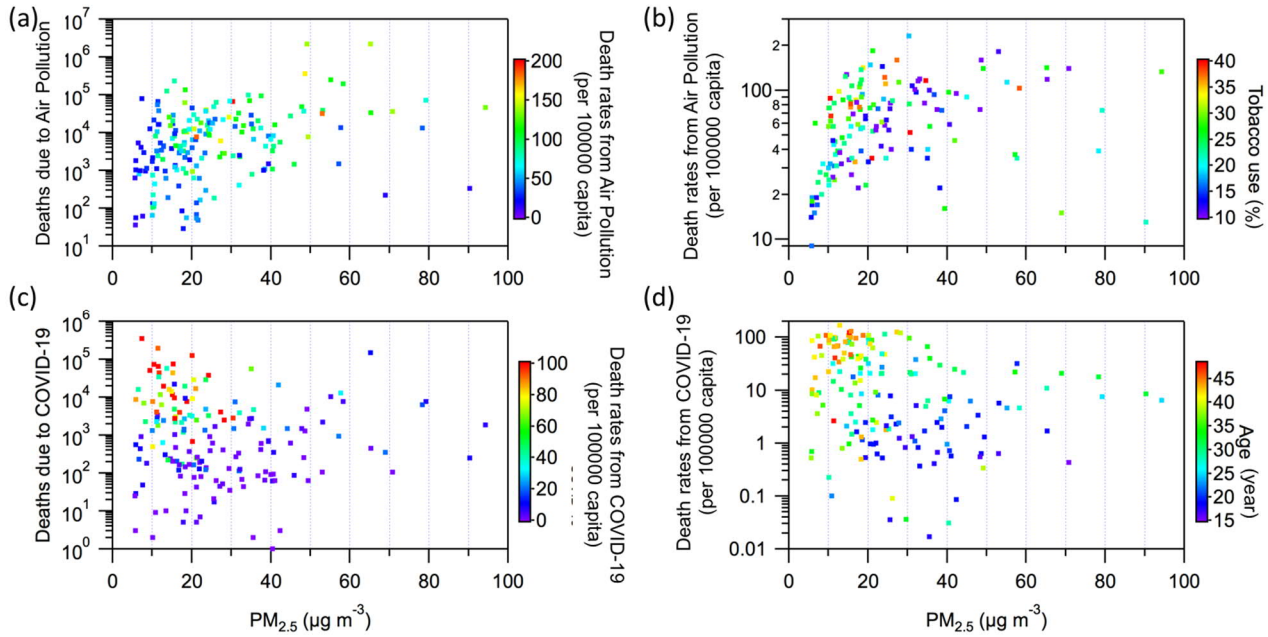

Fig. S3. Scatter plot of (**a**) deaths due to air pollution versus $PM_{2.5}$ colored by death rates from air pollution, (**b**) death rates from air pollution versus $PM_{2.5}$ colored by tobacco use, (**c**) deaths due to COVID-19 versus $PM_{2.5}$ colored by death rates from COVID-19, (**d**) death rates from COVID-19 versus $PM_{2.5}$ colored by median age.

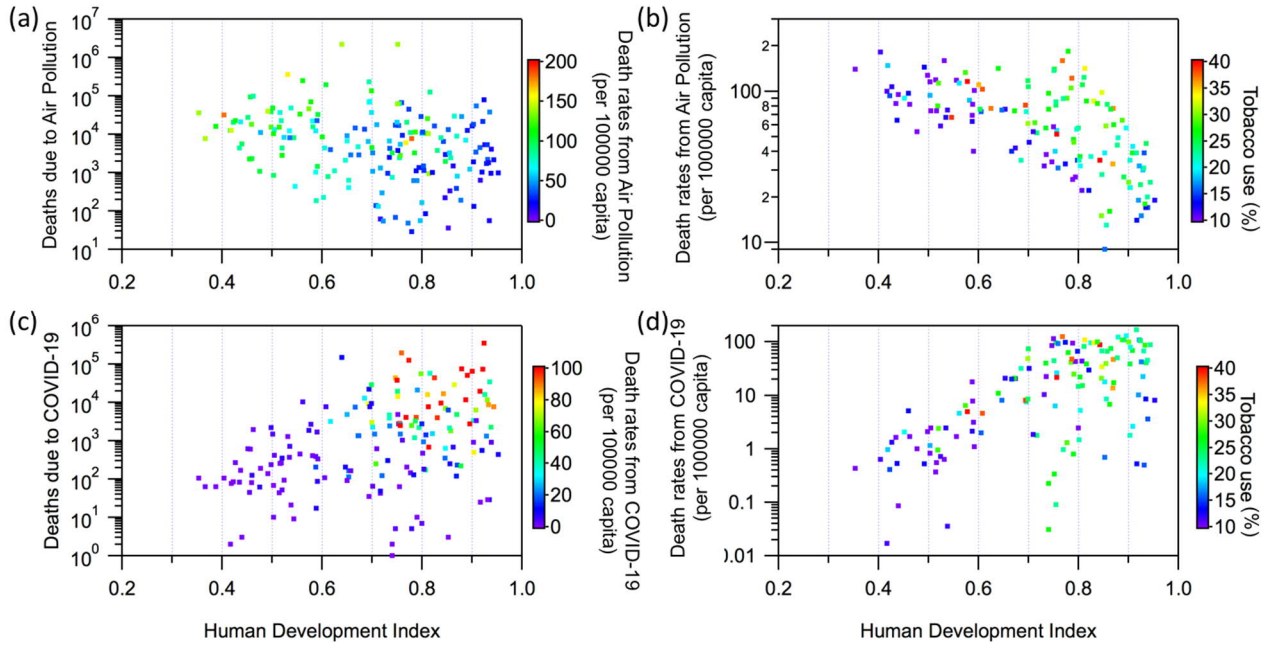

Fig. S4. Scatter plot of (**a**) deaths due to air pollution versus HDI colored by death rates from air pollution, (**b**) death rates from air pollution versus HDI colored by tobacco use, (**c**) deaths due to COVID-19 versus HDI colored by death rates from COVID-19, (**d**) death rates from COVID-19 versus HDI colored by tobacco use.

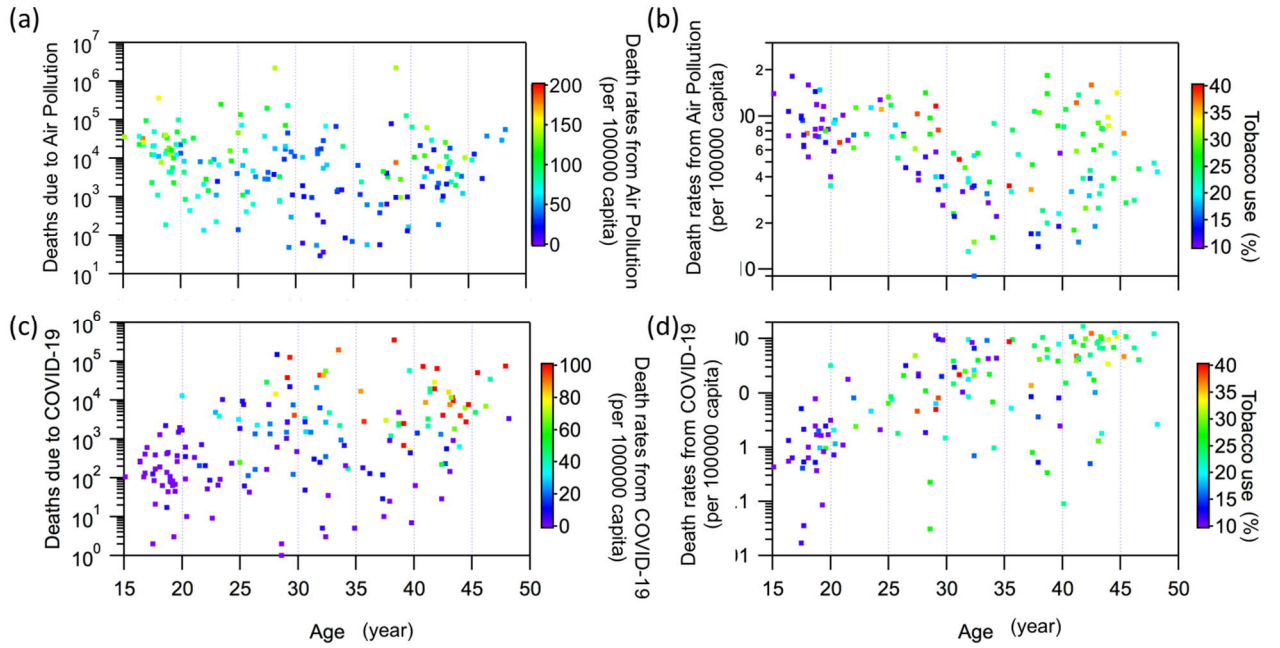

Fig. S5. Scatter plot of (**a**) deaths due to air pollution versus median colored by death rates from air pollution, (**b**) death rates from air pollution versus median age colored by tobacco use, (**c**) deaths due to COVID-19 versus median age colored by death rates from COVID-19, (**d**) death rates from COVID-19 versus median age colored by tobacco use.

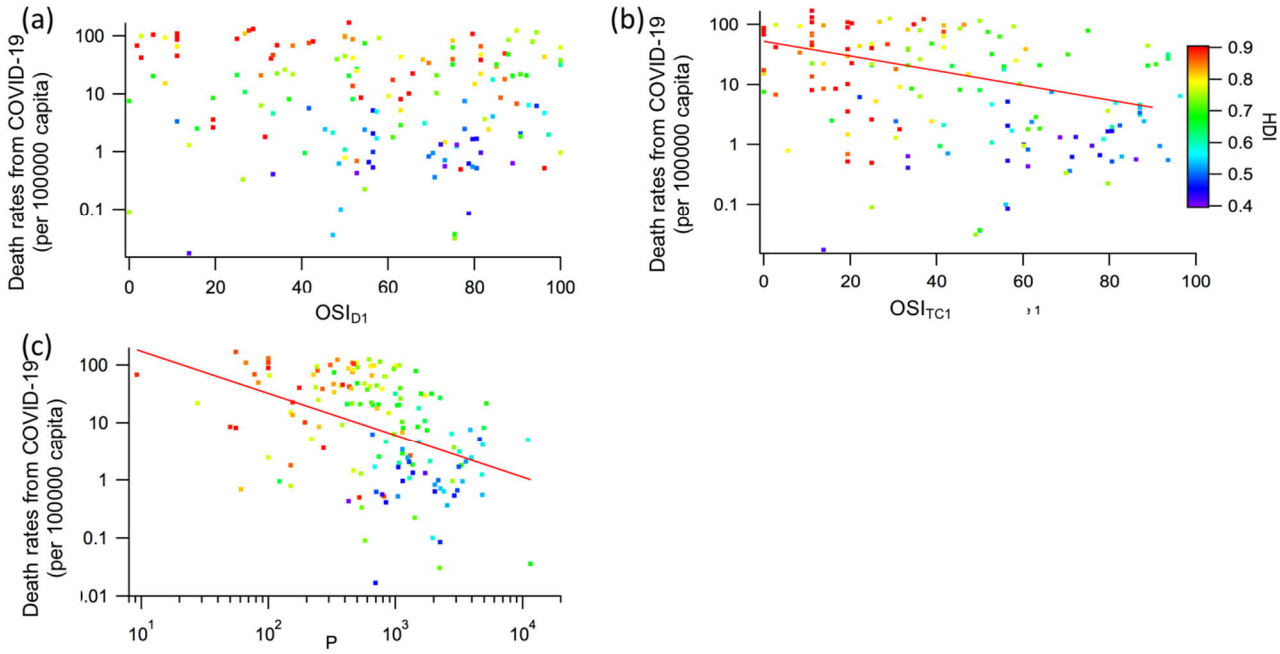

Fig. S6. Scatter plot of death rates from COVID-19 versus (**a**) government stringency index when the given country has the first death due to COVID-19 (OSI_{d1}), (**b**) government stringency index when the total COVID-19 case reached 1 per million capita in the given country (OSI_{tc1}), and (**c**) P value (= OSI_{tc10}*($Date_{tc10}$-$Date_{tc1}$)). $Date_{tc10}$ and $Date_{tc1}$ are the dates, when the total COVID-19 cases reached 10 and 1 per million capita in a given country, respectively. ($Date_{tc10}$-$Date_{tc1}$) indicated the spread speed of COVID-19 in this country in the early stage. OSI_{tc10} was the government stringency index when the total case reached 10 per million capita in the country. The dots are colored by human development index (HDI).

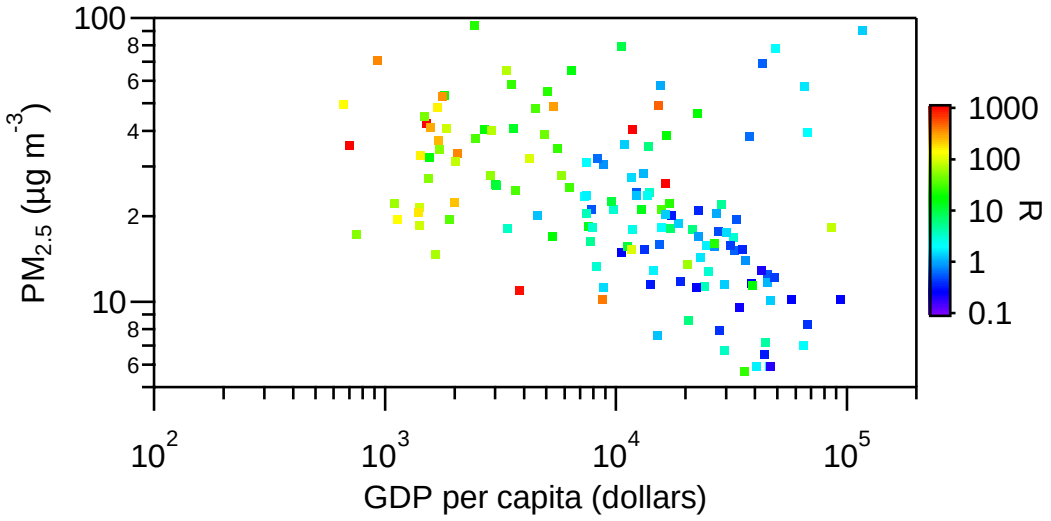

Fig. S7. The scatter plot of $PM_{2.5}$ exposure versus GDP per capita colored by rates between deaths from air pollution and COVID-19 (*R*).

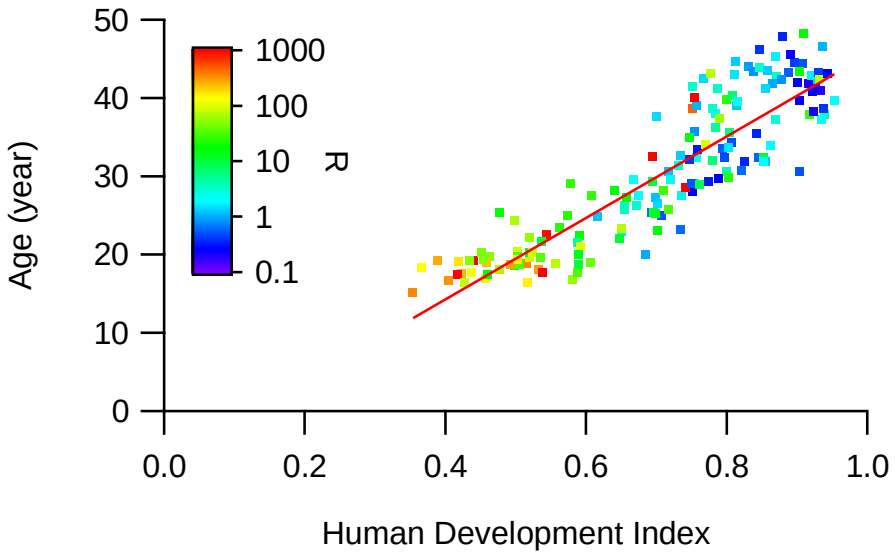

Fig. S8. The scatter plot of median population age versus human development index colored by rates between deaths from air pollution and COVID-19 (*R*).

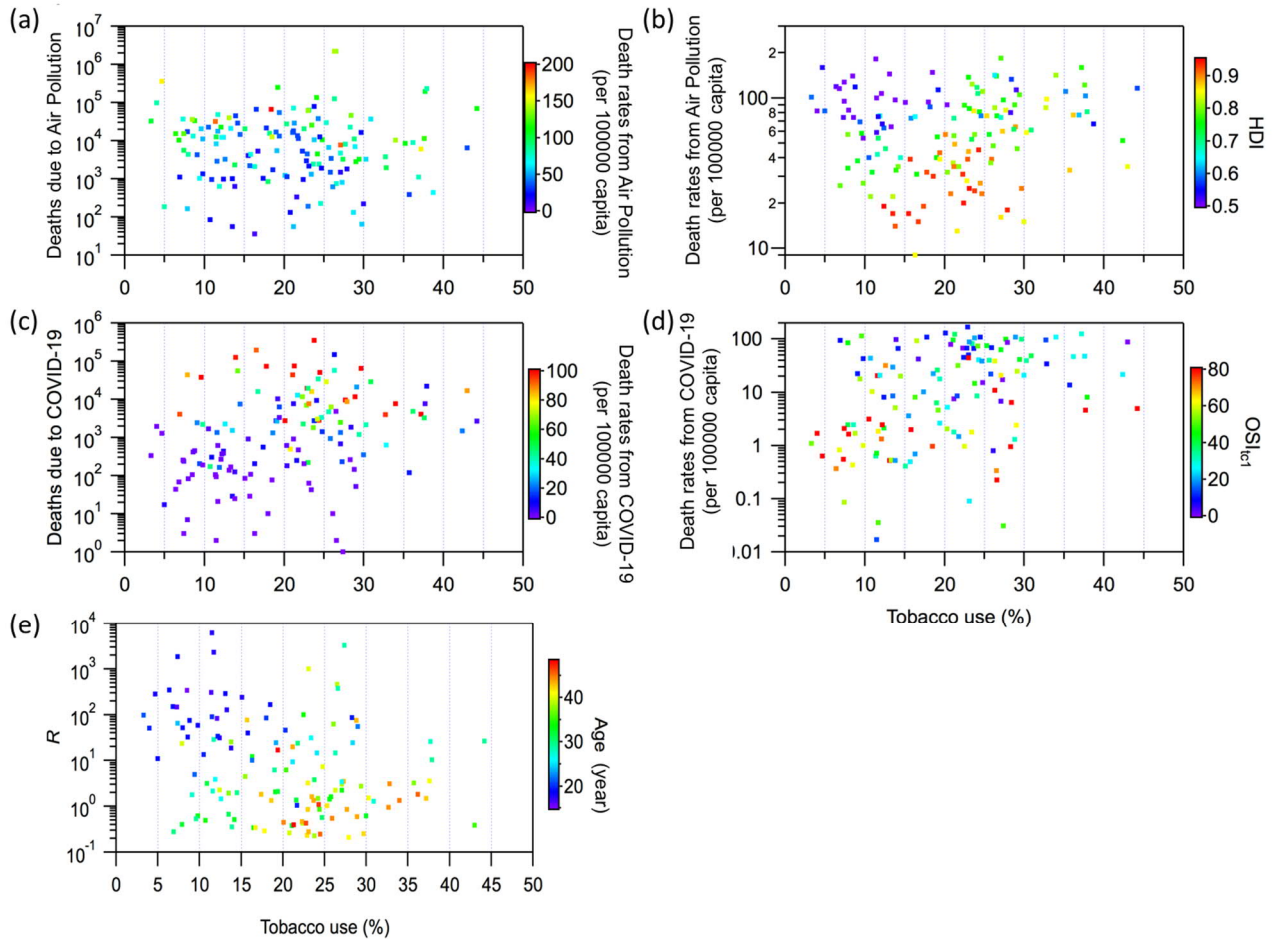

Fig. S9. Scatter plot of (**a**) deaths due to air pollution versus Tobacco use colored by death rates from air pollution, (**b**) death rates from air pollution versus Tobacco use colored by HDI, (**c**) deaths due to COVID-19 versus Tobacco use colored by death rates from COVID-19, (**d**) death rates from COVID-19 versus Tobacco use colored by government stringency index when the total COVID-19 case reached 1 per million capita in the given country (OSI$_{tc1}$), (**e**) rates between deaths due to air pollution and COVID-19 (*R*) versus Tobacco use colored by median age.

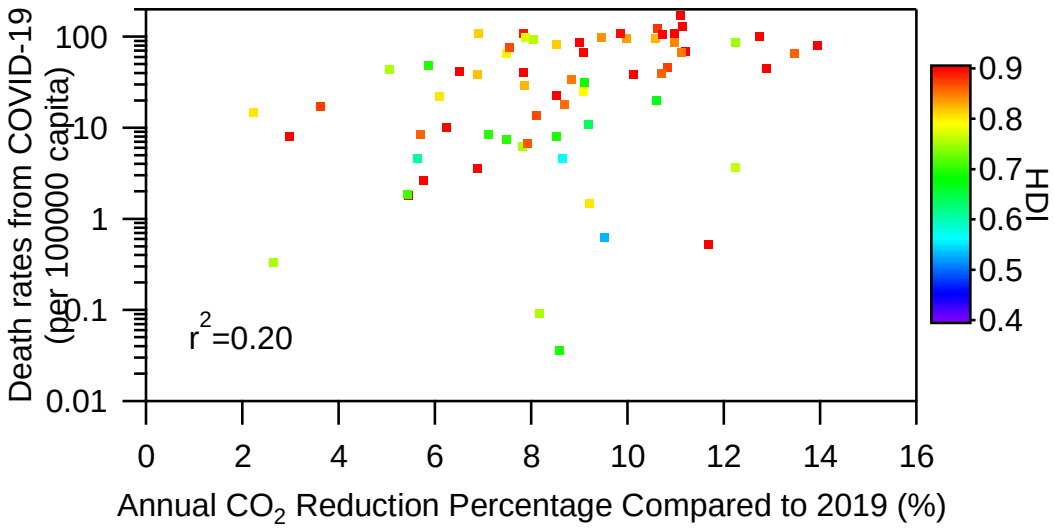

Fig. S10. The scatter plot of death rates from COVID-19 versus annual CO_2 reduction percentage in 2020 compared to 2019. The dots are colored by HDI.

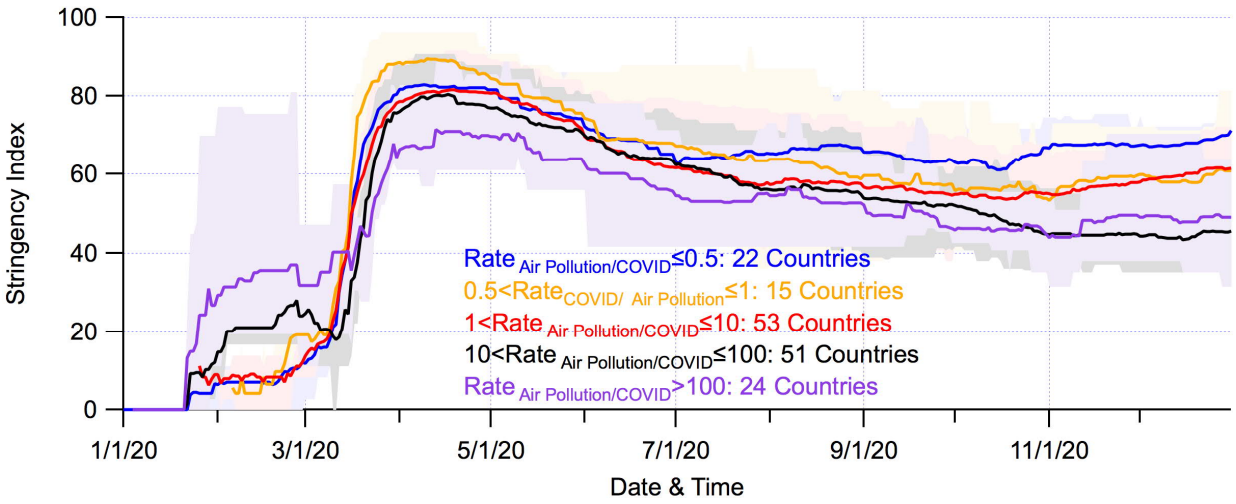

Fig. S11. The variation of government stringency index for five categories. The full lines are the mean government stringency index, and the dash areas are the 25th and 75th percentiles.

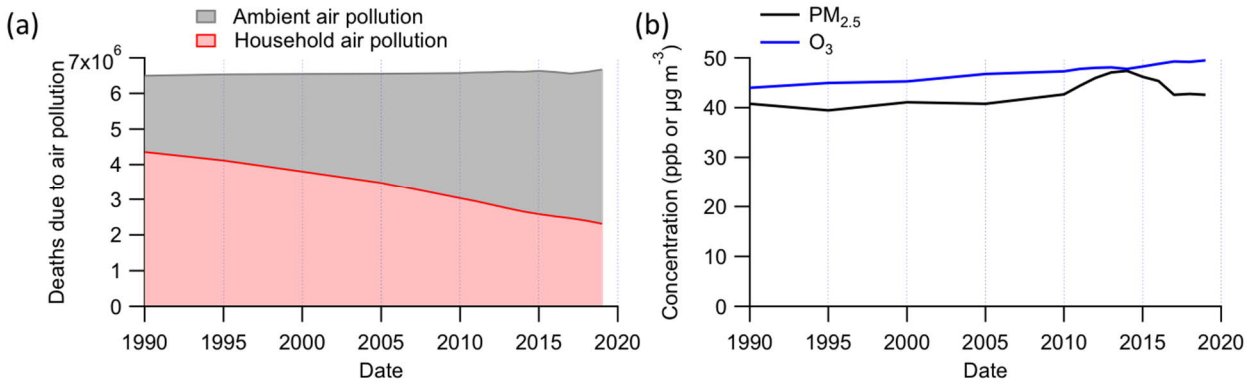

Fig. S12. (**a**) shows the variation of deaths due to ambient and household air pollution. (**b**) is the concentration of $PM_{2.5}$ and O_3.

Supplementary Tables

Table S1. Overview of the data used in this study and data sources.

Data	Year	Sources and references
$PM_{2.5}$	2016	WHO (https://www.who.int/data/gho/data/indicators/indicator-details/GHO/concentrations-of-fine-particulate-matter-(pm2-5))
Deaths and Death Rates due to Air pollution	2016	WHO (https://www.who.int/data/gho/data/themes/topics/indicator-groups/indicator-group-details/GHO/ambient-air-pollution---burden-of-disease---deaths; https://www.who.int/data/gho/data/themes/topics/indicator-groups/indicator-group-details/GHO/household-air-pollution-burden-of-disease---deaths)
Prevalence of current tobacco use	2018	WHO (https://www.who.int/data/gho/data/themes/theme-details/GHO/tobacco-control)
Population and Population Density	2020	
Deaths and Death Rates caused by COVID-19	2020	
Hospital Beds per 1000 capita	2018	Our World in Data (https://ourworldindata.org/coronavirus)
Gross Domestic Product (GDP) per capita	2016	
Human Development Index	2017	
Stringency Index	2020	
Deaths due to air pollution	2015 – 2019	HEI (2020)
Fossil CO_2 emissions	2019, 2020	Le Quéré, C. et al. (2021)
Gross Domestic Product (GDP)	2019, 2020	World Economic Outlook (https://www.imf.org/external/datamapper/datasets/WEO)
Gross Domestic Product (GDP) per capita		

Table S2. Overview of 183 countries. GDP means Gross domestic product (GDP) per capita; Beds is the hospital beds per thousand capita; PopDen is the population density of the country; Median Age is the population median age of the country; HDI is the human development index of the country; P value is equal to OSI_{tc10}*($Date_{tc10}$-$Date_{tc1}$)). $Date_{tc10}$ and $Date_{tc1}$ are the dates, when the total COVID-19 cases reached 10 and 1 per million capita in a given country, respectively. ($Date_{tc10}$-$Date_{tc1}$) indicated the spread speed of COVID-19 in this country in the early stage. OSI_{tc1} and OSI_{tc10} was the government stringency index when the total case reached 1 and 10 per million capita in the country, respectively; $PM_{2.5}$ is the $PM_{2.5}$ exposure of the country; COVID-19 Deaths is the total deaths due to COVID-19; Air Pollution Deaths is the total deaths associated with air pollution; Ambient Pollution Deaths is the deaths due to ambient air pollution; *R* is the ratio between deaths due to air pollution and COVID-19; GDP RP is the reduction percentage of GDP from 2019 to 2020; CO_2 RP is the reduction percentage of CO_2 from 2019 to 2020. Cate. means the categories based on *R*.

Country	GDP (dollars)	Beds (per 1000 capita)	Population density (capita km^{-2})	Age (year)	HDI	*P*	$PM_{2.5}$ ($\mu g\ m^{-3}$)	COVID-19 deaths	Air pollution death	Ambient pollution death	*R*	GDP RP	CO_2 RP	Cate.
Sweden	46949.3	2.22	24.718	41	0.933	0	5.9	8727	1819	1819	0.21	-0.69		I
United States of America	54225.4	2.77	35.608	38.3	0.924	20.37	7.4	345955	77550	77550	0.22	8.13		
Belgium	42658.6	5.64	375.564	41.8	0.916	11.11	12.9	19528	4471	4471	0.23	12.96	7.81	
Spain	34272.4	2.97	93.105	45.5	0.891	11.11	9.5	50837	12574	12574	0.25	29.85		
France	38605.7	5.98	122.578	42	0.901	34.72	11.6	64759	16294	16294	0.25	16.43		
Luxembourg	94278	4.51	231.447	39.7	0.904	0	10.2	495	130	130	0.26	13.88	10.59	
Ecuador	10581.9	1.5	66.939	28.1	0.752	36.11	14.9	14034	3759	3030	0.27	6.29		
Panama	22267	2.3	55.133	29.7	0.789	8.33	11.2	4022	1108	688	0.28	3.78	6.88	
Switzerland	57410.2	4.53	214.243	43.1	0.944	19.44	10.2	7645	2121	2121	0.28	3.01	11.21	
United Kingdom of Great Britain and Northern Ireland	39753.2	2.54	272.898	40.8	0.922	11.11	10.5	73622	21135	21135	0.29	13.28		
Brazil	14103.5	2.2	25.04	33.5	0.759	57.87	11.5	194949	65951	51821	0.34	14.87		
Canada	44017.6	2.5	4.037	41.4	0.926	2.78	6.5	15762	5335	5335	0.34	10.24		
Mexico	17336.5	1.38	66.444	29.3	0.774	2.78	20.1	125807	44419	28739	0.35	-5.04	5.64	
Argentina	18933.9	5	16.177	31.9	0.825	41.67	11.8	43245	16380	14820	0.38	11.12		
Chile	22767	2.11	24.282	35.4	0.843	0	21	16608	6453	4856	0.39	8.52		

Italy	35220.1	3.18	205.859	47.9	0.88	37.04	15.3	74159	28924	28924	0.39	4.96	11.09	
Colombia	13254.9	1.71	44.223	32.2	0.747	45.37	15.2	43213	17340	12668	0.40	15.30		
Portugal	27936.9	3.39	112.371	46.2	0.847	11.11	7.9	6906	2936	2936	0.43	-6.25		
Ireland	67335.3	2.96	69.874	38.7	0.938	11.11	8.3	2237	956	956	0.43	-3.48		
Slovenia	31400.8	4.5	102.619	44.5	0.896	11.11	15.8	2697	1204	994	0.45			
Netherlands	48472.5	3.32	508.544	43.2	0.931	0	12.1	11525	5320	5320	0.46	4.85		
Bahamas	27717.8	2.9	39.497	34.3	0.807	22.22	17.6	170	84	84	0.49	14.08		
Iran (Islamic Republic of)	19082.6	1.5	49.831	32.4	0.798	11.11	35.1	55223	28325	27178	0.51	25.85	8.04	II
Peru	12236.7	1.6	25.129	29.1	0.75	50	24.3	37680	20215	10499	0.54	20.96		
Austria	45436.7	7.37	106.749	44.4	0.908	11.11	12.4	6222	3375	3375	0.54	0.02	6.91	
Belize	7824.36	1.3	16.426	25	0.708	54.63	21.2	248	137	88	0.55	-2.13		
Israel	33132.3	2.99	402.606	30.6	0.903	19.44	19.5	3325	1904	1904	0.57	-0.64		
Czechia	32605.9	6.63	137.176	43.3	0.888	19.44	15.1	11580	6898	6263	0.60	5.65		
Costa Rica	15525	1.13	96.079	33.6	0.794	11.11	15.9	2185	1347	1040	0.62	1.54		
Bahrain	43290.7	2	1935.91	32.4	0.846	25	69	352	218	218	0.62	-0.45		
Jordan	8337.49	1.4	109.285	23.2	0.735	33.33	32.1	3834	2490	2422	0.65	7.84	6.52	
Oman	37960.7	1.6	14.98	30.7	0.821	19.44	38.2	1499	1001	890	0.67	-1.93		
Bolivia (Plurinational State of)	6885.83	1.1	10.202	25.4	0.693	75	20.2	9165	6456	3632	0.70	3.88		
Armenia	8787.58	4.2	102.931	35.7	0.755		30.5	2823	2386	2192	0.85	13.05	10.97	
Hungary	26777.6	7.02	108.043	43.4	0.838	46.3	15.6	9537	8065	8065	0.85	-3.19	2.64	
Malta	36513.3	4.485	1454.04	42.4	0.878	11.11	14	219	187	187	0.85	18.12	12.25	
Croatia	22669.8	5.54	73.726	44	0.831	13.89	17	3920	3738	2937	0.95	-0.84		
Poland	27216.4	6.62	124.027	41.8	0.865	41.67	20.5	28554	29165	29165	1.02	20.55		III
Iraq	15664	1.4	88.125	20	0.685	52.78	57.7	12813	13317	12575	1.04	4.02		
Germany	45229.2	8	237.016	46.6	0.936	25	11.7	33791	37085	37085	1.10	-4.99		
North Macedonia	13111.2	4.28	82.6	39.1	0.757		28.3	2503	2807	1451	1.12	6.05	9.97	
Honduras	4541.79	0.7	82.805	24.9	0.617	93.52	20.1	3130	3940	1671	1.26			

South Africa	12294.9	2.32	46.754	27.3	0.699	38.89	23.6	28469	36559	22917	1.28	5.38	8.11	
Maldives	15183.6		1454.43	30.6	0.717		7.6	48	62	45	1.29	3.47	7.84	
Lithuania	29524.3	6.56	45.135	43.5	0.858	11.11	11.5	1796	2388	2388	1.33			
Denmark	46682.5	2.5	136.52	42.3	0.929	20.37	10.1	1298	1734	1734	1.34	7.54		
Bulgaria	18563.3	7.454	65.18	44.7	0.813	26.85	18.8	7576	10225	8613	1.35	2.13	8.53	
Qatar	116936	1.2	227.322	31.9	0.856	13.89	90.3	245	333	323	1.36	-1.85		
Montenegro	16409.3	3.861	46.28	39.1	0.814		20.2	682	935	486	1.37	12.52		
Tunisia	10849.3	2.3	74.228	32.7	0.735	33.33	35.7	4676	6577	6397	1.41	13.36		
Paraguay	8827.01	1.3	17.144	26.5	0.702	70.37	11.2	2262	3279	1314	1.45	-19.69	7.49	
Bosnia and Herzegovina	11713.9	3.5	68.496	42.5	0.768	29.17	27.3	4050	6036	3051	1.49	8.29		
Republic of Moldova	5189.97	5.8	123.655	37.6	0.7	51.85	16	2985	4449	3494	1.49	15.15		
Slovakia	30155.2	5.82	113.128	41.2	0.855	33.33	17.5	2138	3250	2974	1.52	-4.69		
Kuwait	65530.5	2	232.128	33.7	0.803	13.89	57.2	934	1491	1491	1.60	3.20	3.63	
Romania	23313.2	6.892	85.129	43	0.811	33.33	14.3	15767	25372	16644	1.61	16.11		
Dominican Republic	14600.9	1.6	222.873	27.6	0.736	11.11	12.9	2414	4253	2989	1.76	-3.01		
Greece	24574.4	4.21	83.479	45.3	0.87	28.7	15.7	4838	8794	6956	1.82	27.28		
Finland	40585.7	3.28	18.136	42.8	0.92	19.44	5.9	561	1028	1028	1.83	0.55	6.24	
Guatemala	7423.81	0.6	157.834	22.9	0.65	93.52	23.6	4813	9156	3444	1.90	6.05	12.75	
Iceland	46483	2.91	3.404	37.3	0.935	16.67	5.9	29	56	56	1.93	10.25		
Morocco	7485.01	1.1	80.08	29.6	0.667	55.56	31	7388	14425	13088	1.95	0.66		
Azerbaijan	15847.4	4.7	119.309	32.4	0.757	36.11	18.2	2641	5445	4699	2.06	8.04		
Saudi Arabia	49045.4	2.7	15.322	31.9	0.853	30.56	78.4	6223	13012	11915	2.09	2.10	7.84	
El Salvador	7292.46	1.3	307.811	27.6	0.674	88.89	23.4	1327	2846	1905	2.14	-0.51		
Russian Federation	24766	8.05	8.823	39.6	0.816	60.65	13.7	56271	124685	115915	2.22	7.38	10.82	
United Arab Emirates	67293.5	1.2	112.442	34	0.863	2.78	39.4	669	1490	1432	2.23	11.82		
Norway	64800.1	3.6	14.462	39.7	0.953	11.11	7	436	981	981	2.25	0.66		

Suriname	13767.1	3.1	3.612	29.6	0.72	33.33	23.6	122	295	217	2.42	-3.20		
Albania	11803.4	2.89	104.871	38	0.785	41.67	17.9	1181	3236	1855	2.74	3.33		
Georgia	9745.08	2.6	65.032	38.7	0.78	41.67	21.2	2505	7619	4665	3.04	-31.54		
Latvia	25063.8	5.57	31.212	43.9	0.847	8.33	12.7	635	1961	1640	3.09	4.11		
Jamaica	8193.57	1.7	266.879	31.4	0.732	59.26	13.3	302	946	654	3.13	3.76		
Ukraine	7894.39	8.8	77.39	41.4	0.751	88.89	18.3	19281	61552	54932	3.19	6.85	9.45	
Cyprus	32415.1	3.4	127.657	37.3	0.869	11.11	16.8	119	382	382	3.21	14.11		
Kyrgyzstan	3393.47	4.5	32.333	26.3	0.672	63.89	18.1	1355	4651	2917	3.43	9.63	9.20	
Estonia	29481.3	4.69	31.033	42.7	0.871	0	6.7	229	803	565	3.51	2.80	8.53	
Serbia	14048.9	5.609	80.291	41.2	0.787	25	24.3	3211	11415	6592	3.55	-4.62	7.49	
Cabo Verde	6222.55	2.1	135.58	25.7	0.654	43.52	32	113	402	222	3.56	22.61	9.10	
Kazakhstan	24055.6	6.7	6.681	30.6	0.8	47.22	11.3	2761	10407	8636	3.77	-0.15	12.88	
Guyana	7435.05	1.6	3.952	26.3	0.654	25	20.5	164	628	347	3.83	2.84	10.13	
Australia	44648.7	3.84	3.202	37.9	0.939	19.44	7.2	909	4061	4061	4.47	7.66	10.63	
Trinidad and Tobago	28763.1	3	266.886	36.2	0.784	31.48	22	127	614	598	4.83	10.43		
Eswatini	7738.98	2.1	79.492	21.5	0.588	55.56	16.3	205	1017	349	4.96	3.33	5.76	
Antigua and Barbuda	21490.9	3.8	231.845	32.1	0.78		17.9	5	29	27	5.80	4.39		
Algeria	13913.8	1.9	17.348	29.1	0.754	36.11	35.2	2756	16880	14192	6.12	8.77	2.23	
Uruguay	20551.4	2.8	19.751	35.6	0.804	25.93	8.6	181	1125	972	6.22	-5.91		
Belarus	17168	11	46.858	40.3	0.808	0	18.1	1424	10461	9902	7.35	0.51		
Venezuela (Bolivarian Republic of)	16745	0.8	36.253	29	0.761	79.63	15.8	1028	9268	8297	9.02	19.74	6.09	
Egypt	10550.2	1.6	97.999	25.3	0.696	0	79.3	7631	71012	67434	9.31			
Namibia	9541.81		3.078	22	0.647	50	22.6	205	2073	758	10.11	2.13		IV
Indonesia	11188.7	1.04	145.725	29.3	0.694	45.37	15.6	22138	228763	95156	10.33	3.24	8.82	
Sao Tome and Principe	3052.71	2.9	212.841	18.7	0.589		25.7	17	185	58	10.88	64.33		

Syrian Arab Republic		1.5		21.7	0.536	87.04	39.4	711	8068	7874	11.35	21.50		
Brunei Darussalam	71809.2	2.7	81.347	32.4	0.853	19.44	5.8	3	36	36	12.00	3.40		
Mauritania	3597.63		4.289	20.3	0.52	66.67	40.8	347	4321	1910	12.45	45.26		
Kenya	2993.03	1.4	87.324	20	0.59	87.04	25.9	1670	22275	7135	13.34	-1.55	13.47	
Saint Lucia	12951.8	1.3	293.187	34.9	0.747		21.2	5	68	61	13.60	3.52	13.94	
Philippines	7599.19	1	351.873	25.2	0.699	34.26	18.4	9244	133494	46816	14.44	-0.53		
India	6426.67	0.53	450.419	28.2	0.64	100	65.2	148738	2.17E+06	1.09E+06	14.61	-8.70		
Japan	39002.2	13.05	347.778	48.2	0.909	25	11.4	3292	54780	54780	16.64	7.77	9.21	
Equatorial Guinea	22604.9	2.1	45.194	22.4	0.591		45.9	86	1435	624	16.69	18.25		
Gabon	16562.4	6.3	7.859	23.1	0.702	62.96	38.5	64	1087	675	16.98	-2.08		
Nicaragua	5321.44	0.9	51.667	27.3	0.658	15.74	16.9	165	2874	1122	17.42	4.68		
Afghanistan	1803.99	0.5	54.422	18.6	0.498		53.2	2191	38284	17143	17.47	2.26		
Djibouti	2705.41	1.4	41.285	25.4	0.476	22.22	40.4	61	1089	407	17.85	19.27		
Gambia	1561.77	1.1	207.566	17.5	0.46	56.48	32.2	124	2300	760	18.55	17.31	7.89	
Republic of Korea	35938.4	12.27	527.967	43.4	0.903	31.48	24.6	917	18104	15825	19.74	4.59		
Barbados	16978.1	5.8	664.463	39.8	0.8	38.89	22.2	7	163	159	23.29	3.38		
Malaysia	26808.2	1.9	96.254	29.9	0.802	19.44	16	471	11203	9495	23.79	10.05		
Nepal	2442.8	0.3	204.43	25	0.574	96.3	94.3	1856	45305	21908	24.41	5.35	10.59	
Pakistan	5034.71	0.6	255.573	23.5	0.562	52.78	55.2	10176	248551	121301	24.43	4.20		
New Zealand	36085.8	2.61	18.206	37.9	0.917	19.44	5.7	25	634	634	25.36	-3.28		
Bangladesh	3523.98	0.8	1265.04	27.5	0.608	87.04	58.3	7559	195598	82396	25.88	17.81		
Myanmar	5591.6	0.9	81.721	29.1	0.578	81.48	34.7	2682	70056	25483	26.12	-4.78		
Uzbekistan	6253.1	4	76.134	28.2	0.71	63.89	25.3	614	17505	14414	28.51	2.29	9.09	
Zambia	3689.25	2	22.995	17.7	0.588	41.67	24.7	388	12045	3768	31.04	5.69	11.67	
Botswana	15807.4	1.8	4.044	25.8	0.717	61.11	21.2	42	1307	601	31.12	5.03		
Senegal	2470.58		82.328	18.7	0.505	30.56	37.5	410	13143	5239	32.06	-0.46		
Sudan	4466.51	0.8	23.258	19.7	0.502	87.04	47.9	1468	47596	22083	32.42	1.15	9.51	

Zimbabwe	1899.78	1.7	42.729	19.6	0.535	87.96	19.4	363	12103	3686	33.34	9.16	2.99	
Congo	4881.41		15.405	19	0.606	80.56	38.7	108	4316	1671	39.96	18.38	7.86	
Yemen	1479.15	0.7	53.508	20.3	0.452	56.48	45	610	27625	15291	45.29		8.66	
Guinea-Bissau	1548.68		66.191	19.4	0.455		27.1	45	2265	692	50.33	9.75		
Ethiopia	1729.93	0.3	104.957	19.8	0.463	80.56	34.4	1923	97640	32905	50.77	6.15		
Liberia	752.788	0.8	49.127	19.2	0.435	79.63	17.2	83	4298	1088	51.78	4.88		
Angola	5819.5		23.89	16.8	0.581	78.7	27.9	405	22090	8706	54.54	15.16		
Lesotho	2851.15		73.562	22.2	0.52	62.04	27.8	51	2825	1051	55.39	2.50	7.11	
Malawi	1095.04	1.3	197.519	18.1	0.477	60.19	22.1	189	11080	3139	58.62	1.94	7.55	
Mauritius	20292.7	3.4	622.962	37.4	0.79	5.56	13.5	10	619	478	61.90	6.73	11.12	
Haiti	1653.17	0.7	398.448	24.3	0.498	82.41	14.6	236	15336	4132	64.98	15.95	5.69	
Tajikistan	2896.91	4.8	64.281	23.3	0.65	40.74	40	90	6579	4379	73.10	3.64	5.45	
Cameroon	3364.93	1.3	50.885	18.8	0.556	57.41	65.3	448	33096	14430	73.88	5.98		
Cuba		5.2	110.408	43.1	0.777	30.56	18.4	146	10940	6246	74.93	1.48		
Singapore	85535.4	2.4	7915.73	42.4	0.932	25	18.3	29	2211	2211	76.24	0.58	8.52	
Mali	2014.31	0.1	15.196	16.4	0.427	72.22	31.2	269	22337	7366	83.04	14.00	6.88	
Comoros	1413.89	2.2	437.352	20.4	0.503		18.6	10	842	236	84.20	-3.01		
Madagascar	1416.44	0.2	43.951	19.6	0.519	91.67	21.4	261	22520	6349	86.28	16.59		
Rwanda	1854.21		494.869	20.3	0.524	42.59	40.7	92	8243	2811	89.60	5.70		
Ghana	4227.63	0.9	126.719	21.1	0.592	52.78	31.9	335	32727	11739	97.69	2.59		
Sri Lanka	11669.1	3.6	341.955	34.1	0.77	60.19	15.2	204	20176	5669	98.90			
Central African Republic	661.24	1	7.479	18.3	0.367	68.52	49.5	63	7717	2826	122.49	14.13	8.69	V
Mozambique	1136.1	0.7	37.728	17.7	0.437	56.48	19.4	166	20908	5670	125.95	-3.52		
Uganda	1697.71	0.5	213.759	16.4	0.516	93.52	48.4	251	36780	13416	146.53	-1.15		
Togo	1429.81	0.7	143.366	19.4	0.503	61.11	32.7	68	10145	3448	149.19	27.44		
Democratic Republic of the Congo	808.133		35.879	17	0.457	77.78	37.6	591	93152	31554	157.62	1.73		
Sierra Leone	1390.3		104.7	19.1	0.419	75.93	20.6	76	12441	3405	163.70	9.30		

Somalia		0.9	23.5	16.8		52.78	29.5	130	25582	8071	196.79		10.70	
Guinea	1998.93	0.3	51.755	19	0.459	71.3	22.4	81	17964	5065	221.78	3.62	11.13	
Burkina Faso	1703.1	0.4	70.151	17.6	0.423	33.33	36.8	85	20313	7182	238.98	2.94		
South Sudan	1569.89			19.2	0.388	86.11	41.1	63	15867	5551	251.86	0.49		
Nigeria	5338.45		209.588	18.1	0.532	82.87	48.7	1289	358917	140555	278.45	19.57	5.86	
Côte d'Ivoire	3601.01		76.399	18.7	0.492	80.56	23.7	137	38978	12614	284.51	15.34		
Chad	1768.15		11.833	16.7	0.404	33.33	53	104	31844	12033	306.19	10.53	9.85	
Niger	926	0.3	16.955	15.1	0.354	61.11	70.8	104	35405	14327	340.43	3.42		
Benin	2064.24	0.5	99.11	18.8	0.515	70.83	33.1	44	15170	5217	344.77	2.35		
Fiji	8702.97	2.3	49.562	28.6	0.741	79.63	10.2	2	747	246	373.50	31.35		
China	15308.7	4.34	147.674	38.7	0.752	69.91	49.2	4782	2.18E+06	1.15E+06	456.76	0.34	9.00	
Papua New Guinea	3823.19		18.22	22.6	0.544	56.02	10.9	9	7946	1944	882.89	-0.43		
Thailand	16277.7	2.1	135.132	40.1	0.755	25	26.2	63	63348	33546	1005.52			
Eritrea	1510.46	0.7	44.304	19.3	0.44	56.48	42.4	3	5531	2129	1843.67	2.70		
Viet Nam	6171.88	2.6	308.127	32.6	0.694	50	29.7	35	66962	34232	1913.20	6.32	8.17	
United Republic of Tanzania	2683.3	0.7	64.699	17.7	0.538	50	25.6	21	48046	14831	2287.90	-18.52		
Mongolia	11840.8	7	1.98	28.6	0.741	49.07	40.4	1	3276	1477	3276.00	-4.76		
Burundi	702.225	0.8	423.062	17.5	0.417	13.89	35.6	2	12360	4036	6180.00	2.71		
Cambodia	3645.07	0.8	90.672	25.6	0.582	46.3	24		15525	5113		5.73		
Micronesia (Federated States of)		0	0				10.2		106	26		-1.11		
Libya	17881.5	3.7	3.623	29	0.706	90.74	44.2	1478		2725		14.65	9.08	
Lebanon	13367.6	2.9	594.561	31.1	0.757	25	30.7	1468		3124		-6.09	10.26	
Lao People's Democratic Republic	6397.36	1.5	29.715	24.4	0.601	28.7	24.5		8392	2635		-3.42		
Democratic People's Republic of Korea		0	0				30.4		66402	22606		8.04	5.06	

Vanuatu	2921.91		22.662	23.1	0.603	22.22	10.3		223	55		15.97	7.92	
Kiribati		0	0				10.5		111	26		6.80	10.96	
Turkmenistan		0	0				19		2918	2844		-5.45		
Turkey	25129.3	2.81	104.914	31.6	0.791	58.33	42	20881		36698		2.92	10.72	
Tonga		0	0				10.1		65	22		4.50		
Timor-Leste	6570.1	5.9	87.176	18	0.625	75	17.9		1091	304		-3.19	5.43	
Bhutan	8708.6	1.7	21.188	28.6	0.612	31.48	35.3		790	375		7.40		
Solomon Islands	2205.92	1.4	21.841	20.8	0.546	43.52	10.7		437	104		24.00	12.25	
Seychelles	26382.3	3.6	208.354	36.2	0.797	19.44	18.7		56	41		-3.36	8.59	
Samoa	6021.56		69.413	22	0.713		10.6		132	38		7.18		
Saint Vincent and the Grenadines	10727.1	2.6	281.787	31.8	0.723		21.2		54	47		21.72		
Grenada	13593.9	3.7	317.132	29.4	0.772	0	21.6		48	42		25.12		

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