

Global, regional, and national burden of motor neuron diseases, 1990–2021: a systematic analysis for the Global Burden of Disease Study 2021

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Purpose: Healthcare planning and resource allocation require accurate estimates of the burden of motor neuron diseases (MNDs). This study evaluated the global impact of MNDs from 1990 to 2021 as part of the Global Burden of Disease (GBD) Study 2021.

Methods: GBD 2021 data were used to assess the global burden of MNDs from 1990 to 2021 in terms of prevalence, incidence, disability-adjusted life years (DALYs), and deaths. The relationship between MND burden and the Socio-demographic Index (SDI) was also examined.

Results: Globally, MNDs accounted for 272,732 prevalent cases (95% uncertainty interval [UI], 236,195–313,676), 64,178 incident cases (95% UI, 58,506–70,270), 1,040,566 DALYs (95% UI, 963,064–1,123,956), and 39,082 deaths (95% UI, 35,757–42,433) in 2021. The corresponding age-standardized rates per 100,000 people were 3.31 (95% UI, 2.86–3.80) for prevalence, 0.46 (95% UI, 0.42–0.49) for mortality, and 12.17 (95% UI, 11.24–13.15) for DALYs. From 1990 to 2021, the numbers of prevalent and incident cases increased, but their age-standardized rates decreased by 1.36% and 4.69%, respectively. By contrast, the age-standardized mortality rate increased by 19.84%. MND burden was generally higher in regions with a high SDI, although rates in high-income Asia Pacific were relatively low compared with those in regions with similar SDI values.

Conclusion: From 1990 to 2021, the absolute burden of MNDs increased, age-standardized prevalence and incidence rates declined slightly, and mortality-related burden increased. These trends underscore the need for evidence-based national and global healthcare planning. Geographic variation in MND burden may reflect regional differences in the roles of sociodemographic and genetic factors.

Keywords: Disability-adjusted life years; Global Burden of Disease; Global; Incidence; Motor neuron diseases; Prevalence

Introduction

Background/rationale

Motor neuron diseases (MNDs) are rare neurological conditions characterized by progressive motor neuron degeneration that affects the upper and lower extremities [1]. They include hereditary spastic paraplegia, spinal muscular atrophy, amyotrophic lateral sclerosis (ALS), primary lateral sclerosis, progressive pseudobulbar palsy, and muscular atrophy. ALS is the most common; within 2 years of diagnosis, 50% of people with ALS develop respiratory failure [1,2].

Despite numerous epidemiological studies in Europe and the United States, the rarity of MNDs has limited understanding of their prevalence, incidence, and overall impact [3-6]. ALS incidence peaks around age 70; its prevalence is 4.5 per 100,000 individuals and its incidence rate is 1.7 per 100,000 person-years [7,8]. The Global Burden of Disease (GBD) Study 2016 reported an all-age incidence rate of 0.78 per 100,000 person-years and high age-standardized prevalence in economically advanced regions, including Australasia, North America, and Europe, but not Asia Pacific [9]. Previous prediction models suggested that global MND prevalence would decline modestly by 2040, whereas population aging would continue to increase incidence, deaths, and disability-adjusted life years (DALYs) [10]. Nevertheless, recent, detailed epidemiological data at global, regional, and national levels remain limited.

Objectives

This study assessed the global burden of MNDs from 1990 to 2021 using GBD estimates of prevalence, incidence, DALYs, years lived with disability (YLDs), years of life lost (YLLs), and deaths, stratified by sex, age, region, and country. It also examined MND burden in relation to the Socio-demographic Index (SDI), a measure of national development. The manuscript was prepared as part of the GBD Collaborator Network in accordance with the GBD Protocol.

Methods

Ethics statement

The study followed the Declaration of Helsinki and received approval from the Institutional Review Board of Ewha Womans University Seoul Hospital (EUMC 2023-10-040; approved November 3, 2023). Patient consent was waived because the study used secondary, de-identified data.

Study design

MND data were obtained from GBD 2021, which provides epidemiological estimates for 371 diseases and injuries across 21 GBD regions and 204 countries and territories from 1990 to 2021. These data are freely available through the Global Health Data Exchange (GHDx) [11]; previous reports provide detailed descriptions of the data, methods, and statistical modeling [11,12]. The data used in this study were anonymous and publicly accessible.

Setting

MNDs comprise chronic, degenerative, and relentlessly progressive motor-system disorders characterized by selective loss of upper and lower motor neurons and consequent failure of voluntary musculature. To quantify their population burden, the Institute for Health Metrics and Evaluation (IHME) systematically synthesized the evidence and analyzed administrative claims coded using the International Classification of Diseases (ICD), specifically ICD-9 codes 335–335.9 and ICD-10 codes G12–G12.9. GBD reports these data as a single composite MND category [9,13,14].

Variables

Mortality

MND mortality was analyzed with the Cause of Death Ensemble Model (CODEm), which is used across GBD studies. The model incorporated 14,165 site-years, representing specific combinations of locations and years, and several predictive covariates. The covariates used to model MND mortality are available through GHDx (<https://www.healthdata.org/gbd/methods-appendices-2021/motor-neuron-disease>). They included cholesterol concentrations, fruit consumption, asbestos manufacturing, latitude, the proportion of people with access to sanitation and safe drinking water, healthcare availability and efficiency,

educational attainment, disparity-adjusted and log-transformed income, and the SDI [15,16]. CODEm identifies predictive covariates through a comprehensive literature review of disease associations, whether or not those associations are causal. It determines the optimal combination of covariates for predicting mortality rates using sources such as verbal autopsy reports and vital statistics records [15,16]. [Supplement 1](#) also describe MND severity and YLDs in detail.

Disability-adjusted life years

GBD 2021 estimated MND burden primarily with DisMod-MR ver. 2.1 (Institute for Health Metrics and Evaluation), a Bayesian meta-regression platform for disease modeling. The model integrated prevalence, incidence, cause-specific mortality from the GBD cause-of-death ensemble, and excess mortality estimated as cause-specific mortality divided by prevalence. Prespecified structural constraints included no remission at any age and an incidence upper bound of 0.0004. To avoid artificially exaggerating regional heterogeneity, bounds were imposed on the super-region random effects, restricting prevalence to -0.5 and incidence to 0.5 [17]. Preliminary YLDs were calculated by multiplying the prevalence of each long-term outcome by its corresponding composite disability weights. These estimates were then adjusted for comorbidities through a simulation covering all causes in GBD 2021. YLLs were calculated by multiplying deaths in each age group by the corresponding remaining life expectancy from the standard life table used in previous GBD 2021 studies [11,12]. DALYs were calculated as the sum of YLLs and YLDs.

Socio-demographic Index

Introduced by IHME in 2015, the SDI is a composite measure of national or regional development that emphasizes the relationship between social progress and population health. It is calculated as the geometric mean of 3 indicators, each standardized to a scale of 0 to 1: the total fertility rate among people younger than 25 years, mean educational attainment among people aged 15 years or older, and lag-distributed income per capita. In GBD 2021, SDI values ranged from 0 to 1: 0 represented the lowest education and income levels and highest fertility rate, whereas 1 represented the highest education and income levels and lowest fertility rate. The 204 countries and territories were classified into 5 SDI quintiles: low (<0.46), low-middle ($0.46-0.60$), middle ($0.61-0.69$), high-middle ($0.70-0.81$), and high (>0.81). Lower SDI values indicate a

lower level of social development [11,12].

Data sources and measurement

GBD 2021 analyzed systematic reviews of multiple data sources alongside the US National Health and Nutrition Examination Survey, National Health Interview Survey, and additional national claims database data [18,19]. IHME at the University of Washington excluded studies or datasets with small samples (<150), non-population samples, review articles, or unclear subpopulation definitions [18,19]. Earlier research describes the procedures for collecting nonfatal-outcome and mortality data in detail. MND-related DALYs, YLDs, YLLs, and deaths were estimated using health claims data, survey microdata, registries, surveillance systems, and systematic evaluations of reports, regardless of publication status [18]. [Supplement 1](#) provide an overview of MNDs in GBD and the detailed search terms.

Bias

Interpretation of these findings requires consideration of several potential biases, particularly those inherent in GBD. MND case ascertainment is difficult, and under-recognition may have occurred, especially among older adults and ethnic minority populations. Because IHME provides pooled estimates for all MND phenotypes, differences between subtypes could not be assessed. Inputs came primarily from ICD-coded administrative data and systematic reviews rather than cluster-random samples, limiting the robustness of state-level comparisons and potentially introducing selection and information bias.

Statistical methods

Estimates were presented with 95% uncertainty intervals (UIs), obtained by resampling the data 500 times. The lower and upper limits corresponded to the 2.5th and 97.5th percentiles of the resulting uncertainty distribution, respectively [11,12]. The health impact of MNDs was assessed using prevalence, incidence, DALYs, YLDs, YLLs, deaths, and their corresponding rates. Burden estimates were accompanied by 95% UIs to ensure accuracy and reliability [11,12]. The GBD dataset contains populations with diverse age distributions, making adjustment for age structure essential. GBD 2021 therefore calculated age-

standardized rates per 100,000 people to allow comparisons between populations with different age structures. Analyses were performed using R ver. 4.4.2 (The R Foundation for Statistical Computing).

Results

Main results

Global burden of motor neuron diseases in 2021 by region

Table 1 and Supplement 2 (Table S1) present MND burden counts and percentage changes in age-standardized rates for both sexes by region from 1990 to 2021. Fig. 1 shows age-standardized DALY rates in the 21 GBD regions, while Supplement 3 (Figs. S1–S5) present age-standardized prevalence, incidence, DALYs, YLDs, YLLs, and deaths by year, sex, and age group. Over time, incidence rates decreased in females but remained stable in males, whereas YLL rates increased in males but remained stable in females. High-income Commonwealth regions and Australasia had the largest sex differences across all measures (Fig. S6 of Supplement 3).

Table 2 and Supplement 3 (Figs. S7–S11) present counts and age-standardized rates for MND prevalence, incidence, DALYs, YLDs, YLLs, and mortality by GBD region in 1990 and 2021, together with percentage changes in age-standardized rates over this period. In 2021, an estimated 272,732 people (95% UI, 236,195–313,676) were living with MNDs worldwide, a 68.4% increase from 161,926 (95% UI, 137,006–189,263) in 1990. Incident cases increased to 64,178 (95% UI, 58,506–70,270) in 2021, although the age-standardized incidence rate decreased by 4.69% to 0.77 per 100,000 people (95% UI, 0.70–0.84). The global burden was 1,040,566 DALYs (95% UI, 963,064–1,123,956), with an age-standardized rate of 12.17 per 100,000 people (95% UI, 11.24–13.15). YLDs totaled 57,889 (95% UI, 40,687–78,031), and YLLs totaled 982,677 (95% UI, 904,588–1,064,644). MNDs accounted for 39,082 deaths worldwide in 2021 (95% UI, 35,757–42,433), corresponding to an age-standardized mortality rate of 0.46 per 100,000 people (95% UI, 0.42–0.49). Overall, age-standardized prevalence and incidence rates declined slightly, whereas mortality, YLL, and DALY rates increased.

Age-standardized prevalence rates were numerically high in regions such as Western Europe and high-income North America, but low in Central, Eastern, and Western sub-Saharan Africa and Oceania. Age-standardized incidence rates were high in Australasia and high-income North America, but low in Southeast Asia and South Asia. Age-standardized DALY rates were also numerically high in Australasia and high-income North America, and relatively low in Central, Eastern, Western, and Southern sub-Saharan Africa and Oceania. [Fig. 2A](#) and [B](#) show global DALY counts and rates by sex over time and across age groups, respectively. Both counts and rates were generally higher in men than in women, rising mainly from the 50s and peaking in the 70s. YLL rates declined at older ages, whereas the other measures remained similarly high. Death counts and age-standardized mortality rates followed patterns similar to those for DALYs. [Supplement 3 \(Figs. S12–S14\)](#) present regional percentage changes in age-standardized rates from 1990 to 2021, 2000 to 2010, and 2010 to 2021. From 1990 to 2021, age-standardized DALY rates generally increased substantially in Latin America and the Caribbean but decreased in Northern Africa and Central sub-Saharan Africa ([Table 2](#), [Fig. S15 of Supplement 3](#)). [Supplement 3 \(Figs. S16, S17\)](#) also present percentage changes in all-age counts and age-standardized rates by age and sex.

Burden of motor neuron diseases by country in GBD 2021

[Supplement 2 \(Table S2\)](#) and [Supplement 3 \(Fig. S9\)](#) present country-level counts and age-standardized rates for MND prevalence, incidence, DALYs, YLDs, YLLs, and deaths in 2021. Age-standardized prevalence rates were particularly high in Ireland and Canada and lower in Somalia and the Central African Republic than in other countries. Age-standardized incidence rates were low in Malaysia and Indonesia but high in Ireland and the United Kingdom. Age-standardized DALYs were high in Finland and Ireland but low in Somalia and the Central African Republic. Within Latin America, French Guiana had significantly high prevalence, incidence, YLD, YLL, and mortality rates.

Disability-adjusted life years by Socio-demographic Index

[Supplement 3 \(Fig. S7\)](#) presents age-standardized prevalence, incidence, DALY, YLD, YLL, and mortality rates and their changes from 2000 to 2010 and from 2010 to 2021 by SDI quintile. In GBD 2021, age-standardized DALY rates per 100,000 people were significantly high in high-SDI regions such as

Western Europe and Australasia, but considerably low in sub-Saharan Africa (Fig. 3). These rates were particularly high in high-SDI countries such as the United States and Finland. Incidence was lowest in low-middle-SDI regions; the other rates followed the order of low-, low-middle-, middle-, high-middle-, and high-SDI regions. In high-SDI regions, prevalence and YLD rates declined until 1995 and increased thereafter. DALY, YLL, and mortality rates in high-SDI regions peaked in 2012 (Figs. S18–S24 of Supplement 3).

Discussion

Key results

This study described changes in global MND burden from 1990 to 2021. The numbers of prevalent and incident cases increased substantially, but their age-standardized rates declined slightly. Conversely, age-standardized mortality, YLL, and DALY rates increased. This divergence suggests that population growth and aging contributed substantially to the rise in absolute case numbers, rather than a generalized increase in age-standardized disease occurrence. The increasing burden of mortality and premature death nevertheless underscores the need for healthcare planning at global, regional, and national levels.

Interpretation

Our findings indicate that MND burden may differ across geographic regions. Variation in diagnostic and reporting capacity may contribute to these differences; genetic and environmental explanations remain hypotheses requiring further investigation. Previous studies reported higher ALS incidence among populations of European ancestry than among Asian populations [8,20,21]. A meta-analysis of 45 geographic regions found consistent ALS incidence among populations of European descent in New Zealand, Europe, and North America, at 1.81 (1.66–1.97) per 100,000 person-years. This exceeded rates in South and East Asian populations, at 0.83 (0.42–1.24) and 0.73 (0.58–0.89) per 100,000 person-years, respectively [8]. C9ORF72, the leading genetic contributor to ALS and responsible for 40% of familial and 8% of sporadic cases, may help explain the higher incidence in Europe and North America [22]. However,

the sharp decline in ALS incidence after westernization in Guam and Japan's Kii Peninsula suggests that both environmental and genetic factors likely influence incidence [23].

Across continents, SDI-related patterns in DALYs and MND mortality closely resembled those in prevalence. High-SDI regions and countries generally had higher age-standardized DALYs, except in high-income Asia Pacific, whereas middle- and low-SDI regions had relatively lower counts and rates. Riluzole therapy, noninvasive ventilation, and multidisciplinary care may prolong survival, thereby increasing prevalence and YLDs among diagnosed patients [24-27], but survival gains alone cannot explain the simultaneous rise in mortality rates. More complete case ascertainment, greater access to neurological assessment, established disease registries, and more accurate cause-of-death certification may contribute to the higher recorded burden in high-SDI settings. Conversely, underdiagnosis and incomplete mortality registration may lead to underestimation in lower-SDI settings. Because GBD lacks individual-level diagnostic, treatment, and survival data, these mechanisms are possible explanations rather than causal findings.

In this study, the age-standardized DALY rate increased significantly after age 50, peaked at ages 70–79, and then declined rapidly in both men and women, consistent with the known age distribution of ALS [28,29]. Non-ALS MNDs, such as spinal muscular atrophy and hereditary spastic paraplegia, likely account for the small peak in early childhood. These age patterns should be interpreted as composite findings because GBD does not distinguish MND subtypes.

The study's broad geographic scope is a major strength, permitting standardized comparisons across 204 countries and territories and 21 GBD regions. Whereas a recent MND-specific analysis of GBD 2023 examined China [30], this study compares countries and regions worldwide.

Limitations

This study has several limitations inherent in GBD [31]. First, MND case ascertainment is difficult, and under-recognition is plausible, especially among older adults and ethnic minority populations. Second, differences between subtypes could not be examined because IHME releases only pooled estimates for all MND phenotypes. Third, inputs came from ICD-coded administrative claims and systematic reviews rather than a cluster-random sample, precluding statistically robust state-level comparisons. Fourth, GBD does

not explicitly model time-varying factors that may affect coding and reporting, including the transition from ICD-9 to ICD-10, regulatory approvals of riluzole and edaravone, and healthcare-service conditions; these factors may have introduced secular ascertainment bias. Administrative datasets are also susceptible to miscoding. Previous studies support the use of ICD codes to identify MNDs, reporting positive predictive values of 92% (95% confidence interval [CI], 89–95) for ICD-9 codes in US hospital admissions and 65% (95% CI, 59–70), with 85% sensitivity (95% CI, 80–89), for ICD-10 codes in US death certificates [32,33]. However, cases could not be validated because individual medical records were unavailable. Fifth, although GBD 2021 specifies the El Escorial criteria as the primary ALS diagnostic standard, ICD codes may reflect clinical suspicion without full concordance with these criteria, allowing a mismatch between codes and criteria. Sixth, GBD 2021 modeled severity exclusively using ALS because severity data for other MND subtypes were unavailable; disability estimates may therefore not generalize to the full MND spectrum. Finally, this analysis used GBD 2021 estimates. Because GBD 2023 data have since become available, estimates based on updated sources and modeling procedures may differ.

Suggestions

Our findings suggest that population-based MND registries should be strengthened, especially in low- and middle-SDI regions where underdiagnosis and limited reporting may lead to underestimation of the true burden. Health systems should also prepare for greater demand for multidisciplinary care as populations age.

Conclusion

GBD 2021 provides comprehensive, methodologically consistent estimates of MND epidemiology and societal burden worldwide. The substantial increase in absolute case numbers from 1990 to 2021 occurred alongside slight declines in age-standardized prevalence and incidence rates. Age-standardized mortality, YLL, and DALY rates, by contrast, increased. These divergent trends indicate increasing absolute healthcare needs associated with demographic change alongside a rising mortality-related burden.

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Conceptualization: JIS, TJS. Data curation: JHP, DKY, MSK, YC, SP. Formal analysis: JHP, DKY, MSK, YC, SP. Methodology: JHP, DKY, MSK, YC, SP. Validation: JHP, DKY, MSK, YC, SP. Project administration: JIS, TJS. Funding acquisition: JIS, TJS. Writing—original draft: JHP, DKY, MSK, YC, SP. Writing—review & editing: JHP, DKY, MSK, YC, SP, GBD 2021 Motor Neuron Diseases Collaborators, JIS, TJS. Final approval of the manuscript: all authors.

Conflict of interest

No potential conflict of interest relevant to this article was reported.

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Data availability

The data used in these analyses can be downloaded from the GHDx website at <https://ghdx.healthdata.org>.

Acknowledgments

None.

Supplementary materials

Supplementary files are available from ~~

Supplement 1. Supplementary methods.

Supplement 2. Supplementary tables.

Table S1. Counts, age-standardized rates, and percentage changes in prevalence, incidence, disability-adjusted life years, years lived with disability, years of life lost and mortality for motor neuron diseases over time, both sexes, by Global Burden of Disease regions, 1990–2021.

Table S2. Counts, age-standardized rates, and percentage changes in prevalence, incidence, disability-adjusted life years, years lived with disability, years of life lost and mortality for motor neuron diseases over time, both sexes, by countries and territories, 1990–2021.

Supplement 3. Supplementary figures.

Fig. S1. Age-standardized (A) prevalence, (B) incidence, (C) disability-adjusted life years, (D) years lived with disability, (E) years of life lost, (F) mortality rates and death counts by year for motor neuron diseases, 1990–2021, global.

Fig. S2. Age-standardized (A) prevalence, (B) incidence, (C) years lived with disability, (D) years of life lost, (E) mortality rates and death counts by year and sex for motor neuron diseases, 1990–2021, global.

Fig. S3. (A) Prevalence, (B) incidence, (C) years lived with disability, (D) years of life lost, (E) mortality rates and death counts by age groups for motor neuron diseases, 2021, global.

Fig. S4_1. Change in age-standardized rates of (A) prevalence, (B) incidence, (C) disability-adjusted life years, (D) years lived with disability, (E) years of life lost, (F) deaths for motor neuron diseases, 2000–2010 and 2010–2021, global, Global Burden of Disease regions, and Global Burden of Disease custom region

Fig. S4_2. Change in age-standardized rates of (A) prevalence, (B) incidence, (C) disability-adjusted life years, (D) years lived with disability, (E) years of life lost, (F) deaths for motor neuron diseases, 2000–2010 and 2010–2021, global, Socio-demographic Index quintiles, Global Burden of Disease regions, and Global Burden of Disease custom region.

Fig. S5. Age-standardized (A) prevalence, (B) incidence, (C) years lived with disability, (D) years of life lost, (E) mortality rate for motor neuron diseases, 2021, global.

Fig. S6. Annual percentage change in age-standardized rates of (A) prevalence, (B) incidence, (C) disability-adjusted life years, (D) years lived with disability, (E) years of life lost, (F) deaths for motor neuron diseases, 1990–2021, global.

Fig. S7. Annual percentage change in age-standardized rates of (A) prevalence, (B) incidence, (C) disability-adjusted life years, (D) years lived with disability, (E) years of life lost, (F) deaths for motor neuron diseases, 1990–2021, global.

Fig. S8. Count of (A) prevalence, (B) incidence, (C) disability-adjusted life years, (D) years lived with disability, (E) years of life lost, (F) deaths by year for motor neuron diseases, 1990–2021, global.

Fig. S9. Age-standardized and all-age (A) prevalence, (B) incidence, (C) disability-adjusted life years, (D) years lived with disability, (E) years of life lost, (F) mortality rate by year for motor neuron diseases, 1990–2021, global.

Fig. S10_1. Age-standardized rates of (A) prevalence, (B) incidence, (C) disability-adjusted life years, (D) years lived with disability, (E) years of life lost, (F) deaths for motor neuron diseases by sex, global, Global Burden of Disease regions, and Global Burden of Disease custom region.

Fig. S10_2. Age-standardized rates of (A) prevalence, (B) incidence, (C) disability-adjusted life years, (D) years lived with disability, (E) years of life lost, (F) deaths for motor neuron diseases by sex, global, Socio-demographic Index quintiles, Global Burden of Disease regions, and Global Burden of Disease custom

region.

Fig. S11. Total (A) prevalence, (B) incidence, (C) disability-adjusted life years, (D) years lived with disability, (E) years of life lost, (F) mortality rate by age for motor neuron diseases, 2021, Socio-demographic Index quintiles.

Fig. S12. Percentage change in total (A) prevalence, (B) incidence, (C) disability-adjusted life years, (D) years lived with disability, (E) years of life lost, (F) mortality rate by age for motor neuron diseases, 1990–2021, Socio-demographic Index quintiles.

Fig. S13_1. Percentage change in age-standardized rates of (A) prevalence, (B) incidence, (C) disability-adjusted life years, (D) years lived with disability, (E) years of life lost, (F) deaths for motor neuron diseases, 1990–2021, global, Global Burden of Disease regions, and Global Burden of Disease custom region.

Fig. S13_2. Percentage change in age-standardized rates of (A) prevalence, (B) incidence, (C) disability-adjusted life years, (D) years lived with disability, (E) years of life lost, (F) deaths for motor neuron diseases, 1990–2021, global, Socio-demographic Index quintiles, Global Burden of Disease regions, and Global Burden of Disease custom region.

Fig. S14_1. Percentage change in all-age counts of (A) prevalence, (B) incidence, (C) disability-adjusted life years, (D) years lived with disability, (E) years of life lost, (F) deaths for motor neuron diseases, 1990–2021, global, Global Burden of Disease regions, and Global Burden of Disease custom region.

Fig. S14_2. Percentage change in all-age counts of (A) prevalence, (B) incidence, (C) disability-adjusted life years, (D) years lived with disability, (E) years of life lost, (F) deaths for motor neuron diseases, 1990–2021, global, Socio-demographic Index quintiles, Global Burden of Disease regions, and Global Burden of Disease custom region.

Fig. S15. Percentage change in age-standardized rates of (A) prevalence, (B) incidence, (C) disability-adjusted life years, (D) years lived with disability, (E) years of life lost, (F) deaths for motor neuron diseases, 2021, global, Africa, Asia, and Europe.

Fig. S16. Age-standardized rates of (A) prevalence, (B) incidence, (C) disability-adjusted life years, (D) years lived with disability, (E) years of life lost, (F) deaths for motor neuron diseases by year, 1990–2021, Global Burden of Disease region.

Fig. S17. Total rates of (A) prevalence, (B) incidence, (C) disability-adjusted life years, (D) years lived with

disability, (E) years of life lost, (F) deaths for motor neuron diseases by age groups, 2021, Socio-demographic Index quintiles.

Fig. S18. Total rates of (A) prevalence, (B) incidence, (C) disability-adjusted life years, (D) years lived with disability, (E) years of life lost, (F) deaths for motor neuron diseases for both sexes at the World Bank income level, by age group, 2021.

Fig. S19. Age-standardized rates of (A) prevalence, (B) incidence, (C) disability-adjusted life years, (D) years lived with disability, (E) years of life lost, (F) deaths for motor neuron diseases by year, 1990–2021, Global Burden of Disease region.

Fig. S20. Age-standardized rates and counts of (A) incidence, (B) disability-adjusted life years, (C) deaths for motor neuron diseases by sex and years, 1990–2021, Socio-demographic Index quintiles.

Fig. S21. Age-standardized (A) disability-adjusted life years, (B) death, (C) incidence, (D) prevalence, (E) years lived with disability, (F) years of life lost rate for motor neuron diseases by Socio-demographic Index quintiles, both sexes, 2021.

Fig. S22. Percentage change in age-standardized rates and counts of (A) prevalence, (B) incidence, (C) disability-adjusted life years, (D) years lived with disability, (E) years of life lost, (F) deaths for motor neuron diseases by age and sex, 1990–2021, global.

Fig. S23. Percentage change in age-standardized rates and counts of (A) prevalence, (B) incidence, (C) disability-adjusted life years, (D) years lived with disability, (E) years of life lost, (F) deaths for motor neuron diseases by age and sex, 1990–2021, Socio-demographic Index quintiles.

Fig. S24. Percent contribution of years of life lost and years lived with disability in all-age disability-adjusted life years of motor neuron diseases, 1990–2021, global.

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Table 1. Global counts, age-standardized rates, and percentage changes in prevalence, incidence, DALYs, YLDs, YLLs, and mortality for motor neuron diseases in both sexes, 1990–2021

Motor neuron disease	Age-standardized rate 1990	Age-standardized rate 2019	Age-standardized rate 2020	Age-standardized rate 2021	Change from 1990 to 2021 (%)	Total, 1990	Total, 2019	Total, 2020	Total, 2021	Change from 1990 to 2021 (%)
Incidence	0.81 (0.72 to 0.9)	0.78 (0.71 to 0.85)	0.77 (0.70 to 0.84)	0.77 (0.7 to 0.84)	−4.69 (−6.53 to −2.86)	36,769.25 (33,067.78 to 41,299.83)	62,369.32 (56,986.93 to 68,228.92)	63,305.35 (57,741.11 to 69,237.58)	64,177.73 (58,506.16 to 70,270.30)	74.54 (69.32 to 79.22)
Prevalence	3.36 (2.87 to 3.92)	3.34 (2.89 to 3.83)	3.32 (2.88 to 3.82)	3.31 (2.86 to 3.80)	−1.36 (−3.28 to 0.87)	161,926.07 (137,005.78 to 189,262.55)	266,423.27 (230,321.68 to 306,134.58)	269,745.40 (233,062.22 to 310,601.97)	272,732.25 (236,194.50 to 313,676.27)	68.43 (61.82 to 76.16)
Deaths	0.38 (0.36 to 0.4)	0.46 (0.43 to 0.49)	0.45 (0.41 to 0.48)	0.46 (0.42 to 0.49)	19.84 (10.79 to 30.39)	15,260.07 (14,366.61 to 16,042.60)	37,597.36 (34,931.4 to 39,641.17)	37,970.60 (34,766.10 to 40,469.18)	39,081.64 (35,756.51 to 42,432.82)	156.10 (135.92 to 179.39)
DALYs	11.22 (10.39 to 11.98)	12.37 (11.55 to 13.14)	12.14 (11.25 to 13.05)	12.17 (11.24 to 13.15)	8.42 (−0.78 to 18.64)	506,146.42 (462,034.99 to 545,049.77)	1,013,712.88 (948,249.20 to 1,075,784.85)	1,017,006.24 (943,075.42 to 1,092,175.94)	1,040,565.98 (963,064.26 to 1,123,956.29)	105.59 (86.69 to 126.09)
YLDs	0.71 (0.5 to 0.97)	0.71 (0.5 to 0.96)	0.71 (0.50 to 0.96)	0.70 (0.49 to 0.96)	−1.49 (−3.45 to 0.70)	34,425.85 (23,884.86 to 47,211.93)	56,556.62 (39,699.29 to 76,267.04)	57,254.43 (40,229.05 to 77,249.01)	57,889.10 (40,686.61 to 78,030.59)	68.16 (61.65 to 75.90)
YLLs	10.51 (9.70 to 11.2)	11.66 (10.84 to 12.36)	11.43 (10.57 to 12.26)	11.46 (10.52 to 12.43)	9.10 (−0.70 to 19.99)	471,720.57 (427,708.75 to 507,715.98)	957,156.26 (890,565.78 to 1,015,265.18)	959,751.80 (887,828.67 to 1,028,242.44)	982,676.88 (904,588.13 to 1,064,643.84)	108.32 (88.16 to 129.79)

DALYs, disability-adjusted life years; YLDs, years lived with disability; YLLs, years of life lost.

Table 2. Counts and age-standardized rates of prevalence, incidence, DALYs, YLDs, YLLs, and mortality for motor neuron diseases by GBD region in 1990 and 2021, and percentage changes in age-standardized rates from 1990 to 2021

Variable	1990		2021		Percentage change in age-standardized rates between 1990 and 2021 (%)
	Counts (95% UI)	Age-standardized rate (per 100,000 people)	Counts (95% UI)	Age-standardized rate (per 100,000 people)	
Prevalence					
Global	161,926.07 (137,005.78 to 189,262.55)	3.36 (2.87 to 3.92)	272,732.25 (236,194.5 to 313,676.27)	3.31 (2.86 to 3.8)	−1.36 (−3.28 to 0.87)
Central Asia	1,755.59 (1,407.59 to 2,135.86)	2.56 (2.07 to 3.09)	2,374.94 (1,902.48 to 2,882.65)	2.49 (2.02 to 3.02)	−2.76 (−4.51 to −0.71)
Central Europe	4,511.81 (3,777.3 to 5,319.05)	3.56 (2.97 to 4.18)	5,063.36 (4,299.31 to 5,905.75)	4.00 (3.37 to 4.68)	12.35 (9.04 to 16.08)
Eastern Europe	7,712.76 (6,200.66 to 9,319.20)	3.44 (2.76 to 4.12)	7,587.71 (6,308.91 to 8,977.59)	3.58 (2.91 to 4.21)	3.87 (0.23 to 7.50)
Australasia	1,520.06 (1,314.86 to 1,743.66)	6.83 (5.95 to 7.80)	3,933.24 (3,379.46 to 4,535.55)	9.00 (7.78 to 10.12)	31.77 (24.31 to 40.06)
High-income Asia Pacific	8,352.38 (7,037.57 to 9,720.94)	4.45 (3.75 to 5.16)	14,361.01 (12,291.31 to 16,739.72)	5.05 (4.33 to 5.83)	13.67 (9.77 to 18.28)
High-income North America	25,479.85 (22,209.76 to 29,152.55)	8.13 (7.1 to 9.25)	47,430.54 (43,862.13 to 51,536.67)	9.23 (8.59 to 10.02)	13.59 (5.03 to 23.07)
Southern Latin America	1,888.64 (1,574.94 to 2,219.39)	3.86 (3.23 to 4.53)	3,706.52 (3,158.23 to 4,276.99)	5.00 (4.25 to 5.77)	29.61 (21.87 to 38.90)
Western Europe	37,571.6 (32,709.8 to 43,081.89)	7.74 (6.73 to 8.88)	67,562.67 (58,235.3 to 78,364.58)	9.66 (8.43 to 11.03)	24.69 (20.87 to 28.55)
Andean Latin America	605.13 (478.97 to 748.98)	1.70 (1.37 to 2.07)	1,228.55 (999.39 to 1,476.19)	1.87 (1.53 to 2.24)	9.89 (5.48 to 14.74)
Caribbean	862.87 (690.89 to 1041.49)	2.49 (2.02 to 2.97)	1,306.32 (1,100.2 to 1,527.24)	2.66 (2.24 to 3.12)	7.14 (2.59 to 12.42)
Central Latin America	3,603.83 (2,822.58 to 4,426.76)	2.25 (1.8 to 2.72)	6,311.84 (5,168.17 to 7,525.2)	2.46 (2.04 to 2.93)	9.59 (5.58 to 14.12)
Tropical Latin America	3,787.41 (2,999.25 to 4,644.3)	2.53 (2.03 to 3.04)	6,819.51 (5,688.40 to 7,989.78)	2.89 (2.40 to 3.39)	14.40 (9.72 to 19.35)
North Africa and Middle East	8,541.97 (6,908.81 to 10,298.74)	2.64 (2.16 to 3.15)	16,229.93 (13,098.91 to 19,540.16)	2.63 (2.15 to 3.14)	−0.41 (−2.54 to 1.74)
South Asia	16,033.69 (12,216.41 to 20,376.71)	1.49 (1.15 to 1.86)	29,895.69 (23,273.64 to 37,805.76)	1.58 (1.24 to 1.97)	6.02 (3.34 to 9.20)
East Asia	26,778.15 (21,281.79 to 33,189.21)	2.15 (1.74 to 2.62)	34,808.95 (28,296.16 to 42,072.18)	2.31 (1.85 to 2.81)	7.60 (2.70 to 13.92)
Oceania	90.52 (71.34 to 113.57)	1.44 (1.16 to 1.75)	180.08 (140.43 to 224.66)	1.33 (1.07 to 1.64)	−7.27 (−10.10 to −3.94)
Southeast Asia	7,012.52 (5,447.87 to 8,777.4)	1.51 (1.2 to 1.87)	10,765.09 (8,470.95 to 13,330.79)	1.53 (1.21 to 1.89)	1.24 (−0.98 to 3.63)
Central Sub-Saharan Africa	557.54 (428.33 to 705.34)	1.17 (0.91 to 1.45)	1,380.53 (1,047.1 to 1,761.91)	1.11 (0.87 to 1.39)	−4.90 (−7.53 to −2.25)
Eastern Sub-Saharan Africa	2,105.77 (1,594.59 to 2,674.56)	1.27 (0.98 to 1.58)	4,807.08 (3,618 to 6,141.77)	1.23 (0.95 to 1.53)	−3.25 (−4.54 to −2.01)

Southern Sub-Saharan Africa	902.59 (693.55 to 1,131.42)	1.78 (1.39 to 2.21)	1,368.09 (1,061.68 to 1,728.99)	1.70 (1.33 to 2.11)	-4.67 (-6.36 to -2.48)
Western Sub-Saharan Africa	2251.41 (1,711.65 to 2,851.35)	1.31 (1.01 to 1.63)	5,610.62 (4,226.99 to 7,139.41)	1.26 (0.98 to 1.57)	-4.06 (-5.52 to -2.58)
Africa	8,834.68 (6,896.89 to 10,991.83)	1.54 (1.20 to 1.89)	18,601.43 (14,361.36 to 23,312)	1.44 (1.13 to 1.78)	-6.20 (-7.50 to -4.57)
African region	6,373.94 (4,894.06 to 7,996.95)	1.40 (1.09 to 1.73)	14,067.86 (10,671.8 to 17,825.8)	1.32 (1.03 to 1.64)	-5.59 (-6.64 to -4.22)
America	36,073.53 (31,424.79 to 41,338.72)	5.39 (4.68 to 6.18)	66,592.19 (60,691.38 to 73,159.26)	5.60 (5.09 to 6.18)	3.85 (-2.35 to 10)
Asia	64,900.43 (52,068.74 to 79,426.79)	2.13 (1.74 to 2.56)	103,790.47 (84,253.56 to 125,081.68)	2.19 (1.78 to 2.64)	2.49 (-0.05 to 5.51)
Central Africa	665.16 (510.78 to 841.90)	1.14 (0.88 to 1.42)	1,644.12 (1,251.41 to 2,104.27)	1.08 (0.84 to 1.34)	-5.49 (-7.83 to -3.44)
Commonwealth high income	11,568.23 (10,136.14 to 13,187.97)	8.75 (7.66 to 9.93)	23,231.41 (19,878.74 to 26,858.38)	10.65 (9.23 to 12.1)	21.71 (17.78 to 25.52)
Commonwealth low income	2,631.3 (2,043.24 to 3,325.34)	1.38 (1.09 to 1.70)	5,121.27 (3,948.10 to 6,422.49)	1.36 (1.08 to 1.69)	-1.07 (-3.59 to 1.78)
Commonwealth middle income	17,156.99 (13,041.25 to 21,808.77)	1.49 (1.15 to 1.86)	32,754.05 (25,421.51 to 41,517.23)	1.53 (1.21 to 1.92)	3.07 (0.74 to 5.67)
East Asia & Pacific–World Bank	43,482.36 (35,369.52 to 52,598.14)	2.39 (1.98 to 2.86)	63,684.96 (52,881.94 to 76,009.95)	2.48 (2.03 to 2.94)	3.56 (0.24 to 7.48)
Eastern Africa	2,009.47 (1,528.20 to 2,535.85)	1.30 (1.00 to 1.61)	4,537.30 (3,426.08 to 5,778.75)	1.26 (0.98 to 1.56)	-3.23 (-4.56 to -1.69)
Eastern Mediterranean region	7,766.69 (6,164.06 to 9,540.87)	2.15 (1.71 to 2.61)	15,676.76 (12,294.16 to 19,249.62)	2.09 (1.66 to 2.54)	-2.87 (-4.86 to -0.72)
Europe	51,836.95 (45,108.23 to 59,778.31)	5.74 (4.98 to 6.61)	83,361.94 (72,590.68 to 96,071.27)	6.97 (6.07 to 7.98)	21.33 (17.80 to 24.87)
Europe & Central Asia–World Bank	53,023.05 (46,155.04 to 61,139.88)	5.62 (4.87 to 6.47)	85,087.70 (74,082.27 to 98,009.07)	6.74 (5.88 to 7.71)	19.93 (16.44 to 23.34)
European region	53,397.02 (46,481.30 to 61,567.85)	5.62 (4.87 to 6.46)	85,919.87 (74,822.05 to 98,960.43)	6.73 (5.87 to 7.70)	19.83 (16.32 to 23.22)
Latin America & Caribbean–World Bank	10,715.39 (8,515.99 to 12,955.31)	2.55 (2.07 to 3.05)	19,323.99 (16,183.25 to 22,654.92)	2.85 (2.39 to 3.34)	11.98 (7.51 to 16.88)
Middle East & North Africa–World Bank	6,373.15 (5,090.55 to 7,759.90)	2.63 (2.13 to 3.14)	12,217.42 (9,769.99 to 14,803.07)	2.58 (2.10 to 3.10)	-1.60 (-3.51 to 0.41)
North America	25,478.10 (22,207.95 to 29,150.68)	8.13 (7.10 to 9.25)	47,428.45 (43,860.30 to 51,534.17)	9.23 (8.58 to 10.02)	13.59 (5.03 to 23.07)
Northern Africa	2,721.15 (2,171.35 to 3,336.37)	2.31 (1.88 to 2.80)	4,789.73 (3,817.19 to 5,835.38)	2.28 (1.84 to 2.77)	-1.29 (-3.89 to 1.58)
Region of the Americas	36,073.53 (31,424.79 to 41,338.72)	5.39 (4.68 to 6.18)	66,592.19 (60,691.38 to 73,159.26)	5.60 (5.09 to 6.18)	3.85 (-2.35 to 10.00)
South Asia–World Bank	16,494.14 (12,575.46 to 20,948.56)	1.49 (1.16 to 1.87)	30,841.33 (24,061.73 to 38,920.24)	1.58 (1.25 to 1.97)	6.02 (3.43 to 9.09)
South-East Asia region	19,194.47 (14,669.19 to 24,348.66)	1.49 (1.16 to 1.85)	32,960.20 (25,804.18 to 41,513.77)	1.56 (1.24 to 1.94)	4.81 (2.47 to 7.41)
Southern Africa	1,393.02 (1,077.19 to 1,745.96)	1.61 (1.26 to 1.99)	2,611.28 (2,010.46 to 3,285.70)	1.50 (1.17 to 1.87)	-6.32 (-7.77 to -4.39)
Sub-Saharan Africa–World Bank	6,137.43	1.34	13,857.74	1.28	-5.06

Western Africa	(4,673.92 to 7,732.62) 2,045.89	(1.04 to 1.67) 1.32	(10,483.87 to 17,608.96) 5,019.00	(0.99 to 1.59) 1.26	(-6.11 to -3.68) -4.00
Western Pacific region	(1,553.72 to 2,596.47) 38,270.39	(1.01 to 1.64) 2.53	(3,778.63 to 6,387.10) 56,289.41	(0.98 to 1.58) 2.66	(-5.36 to -2.42) 5.12
World Bank high income	(31,250.08 to 46,178.20) 78,739.13	(2.11 to 3.03) 6.71	(46,937.50 to 66,980.31) 141,970.45	(2.19 to 3.16) 7.90	(1.35 to 9.52) 17.66
World Bank low income	(68,312.74 to 90,435.45) 4,046.31	(5.87 to 7.66) 1.48	(125,872.21 to 160,342.78) 8,655.81	(7.06 to 8.81) 1.38	(13.52 to 22.22) -6.81
World Bank lower middle income	(3,198.77 to 5,005.81) 31,505.54	(1.17 to 1.81) 1.62	(6,713.71 to 10,845.69) 55,840.07	(1.08 to 1.69) 1.62	(-8.15 to -5.31) -0.23
World Bank upper middle income	(24,269.03 to 39,461.96) 47,479.48	(1.27 to 2.01) 2.37	(43,925.42 to 69,782.02) 66,044.63	(1.28 to 2.00) 2.52	(-2.26 to 2.05) 6.32
	(38,424.91 to 57,689.39)	(1.93 to 2.83)	(54,179.12 to 78,428.62)	(2.04 to 3.02)	(3.17 to 10.25)
Incidence					
Global	36,769.25 (33,067.78 to 41,299.83)	0.81 (0.72 to 0.90)	64,177.73 (58,506.16 to 70,270.30)	0.77 (0.70 to 0.84)	-4.69 (-6.53 to -2.86)
Central Asia	298.75 (247.86 to 357.21)	0.48 (0.39 to 0.59)	410.93 (338.87 to 503.34)	0.44 (0.36 to 0.53)	-8.09 (-10.35 to -6.15)
Central Europe	853.95 (735.84 to 983.85)	0.67 (0.58 to 0.76)	1,164.10 (1,046.26 to 1,280.75)	0.75 (0.67 to 0.82)	11.99 (7.46 to 16.96)
Eastern Europe	1,318.60 (1,096.92 to 1,578.02)	0.56 (0.47 to 0.67)	1,726.53 (1,520.87 to 1,936.90)	0.66 (0.57 to 0.73)	17.48 (9.20 to 25.11)
Australasia	477.77 (453.09 to 502.23)	2.11 (2.00 to 2.22)	1,274.47 (1,224.52 to 1,329.11)	2.60 (2.49 to 2.72)	23.23 (19.81 to 26.74)
High-income Asia Pacific	1,644.71 (1,469.82 to 1,808.26)	0.88 (0.79 to 0.96)	3,268.31 (3,041.88 to 3,491.13)	0.91 (0.84 to 0.99)	4.15 (2.04 to 6.95)
High-income North America	5,926.27 (5,606.01 to 6,287.52)	1.82 (1.71 to 1.93)	12,656.59 (12,143.54 to 13,195.28)	2.10 (2.02 to 2.19)	15.51 (12.02 to 19.37)
Southern Latin America	380.88 (330.61 to 431.43)	0.80 (0.69 to 0.90)	815.08 (753.94 to 881.01)	1.05 (0.96 to 1.13)	31.30 (21.03 to 42.52)
Western Europe	8298.92 (7795.58 to 8819.91)	1.64 (1.54 to 1.75)	15,472.08 (14,696.82 to 16,253.81)	2.00 (1.90 to 2.12)	21.86 (19.46 to 24.34)
Andean Latin America	127.83 (107.62 to 148.78)	0.43 (0.36 to 0.50)	305.23 (265.27 to 343.1)	0.49 (0.43 to 0.55)	15.03 (7.92 to 22.96)
Caribbean	182.16 (155.20 to 207.39)	0.59 (0.50 to 0.67)	376.67 (340.24 to 411.87)	0.75 (0.68 to 0.82)	27.25 (19.04 to 36.82)
Central Latin America	697.39 (597.33 to 806.51)	0.51 (0.44 to 0.59)	1,575.25 (1,392.61 to 1,746.00)	0.63 (0.56 to 0.70)	23.41 (16.18 to 31.66)
Tropical Latin America	803.50 (691.73 to 915.90)	0.65 (0.56 to 0.74)	2,113.50 (1,920.63 to 2,293.72)	0.86 (0.79 to 0.93)	32.58 (24.94 to 41.49)
North Africa and Middle East	1,687.14 (1,447.14 to 1,940.02)	0.57 (0.48 to 0.67)	3,110.80 (2,644.63 to 3,631.76)	0.55 (0.47 to 0.63)	-3.29 (-6.42 to -0.55)
South Asia	3,754.41 (3,086.41 to 4,607.41)	0.40 (0.32 to 0.49)	6,310.71 (5,187.62 to 7,623.12)	0.37 (0.31 to 0.44)	-6.84 (-11.88 to -3.36)
East Asia	7,088.61 (6,127.17 to 8,224.44)	0.65 (0.57 to 0.75)	7,700.10 (6,320.39 to 9,120.27)	0.47 (0.40 to 0.54)	-28.27 (-31.72 to -24.00)
Oceania	23.09 (19.36 to 27.10)	0.44 (0.37 to 0.52)	46.81 (38.89 to 55.26)	0.39 (0.32 to 0.46)	-12.00 (-14.15 to -9.88)
Southeast Asia	1,531.75	0.40	2,380.55	0.35	-12.29

Central Sub-Saharan Africa	(1,261.74 to 1,839.53) 175.03	(0.33 to 0.48) 0.45	(1,949.12 to 2,904.51) 412.58	(0.29 to 0.42) 0.42	(-14.74 to -9.90) -5.86
Eastern Sub-Saharan Africa	(143.49 to 211.64) 659.85	(0.36 to 0.56) 0.50	(336.87 to 500.07) 1,323.97	(0.34 to 0.52) 0.44	(-8.46 to -3.15) -12.25
Southern Sub-Saharan Africa	(540.43 to 805.21) 188.75	(0.40 to 0.63) 0.45	(1,078.67 to 1,640.5) 289.63	(0.35 to 0.56) 0.40	(-13.49 to -11.13) -11.40
Western Sub-Saharan Africa	(155.41 to 231.04) 649.91	(0.37 to 0.57) 0.44	(233.5 to 358.91) 1,443.85	(0.33 to 0.50) 0.39	(-12.81 to -9.76) -10.08
Africa	(541.33 to 779.34) 2,280.34	(0.36 to 0.54) 0.46	(1,203.82 to 1,732.06) 4,505.35	(0.32 to 0.47) 0.41	(-11.6 to -8.61) -11.08
African region	(1,895.60 to 2,728.69) 1,747.55	(0.38 to 0.58) 0.46	(3724.08 to 5446.59) 3,582.50	(0.34 to 0.51) 0.41	(-12.80 to -9.75) -10.91
America	(1,450.20 to 2,105.33) 8,089.38	(0.37 to 0.57) 1.26	(2,951.93 to 4,357.92) 17,781.34	(0.33 to 0.51) 1.40	(-12.23 to -9.74) 10.61
Asia	(7,504.18 to 8,719.41) 15,462.51	(1.18 to 1.36) 0.56	(16,869.71 to 18,685.03) 22,711.92	(1.33 to 1.48) 0.48	(7.49 to 13.71) -14.85
Central Africa	(13,357.02 to 18,059.19) 210.27	(0.48 to 0.65) 0.43	(19,411.40 to 26,490.45) 492.65	(0.41 to 0.55) 0.41	(-16.66 to -12.85) -5.34
Commonwealth high income	(172.95 to 252.41) 2,810.02	(0.35 to 0.54) 2.02	(404.04 to 595.14) 6,057.69	(0.33 to 0.50) 2.48	(-7.58 to -3.05) 22.51
Commonwealth low income	(2,665.67 to 2,968.50) 679.18	(1.91 to 2.14) 0.43	(5,764.92 to 6,349.05) 1,209.93	(2.36 to 2.61) 0.37	(20.21 to 24.70) -12.03
Commonwealth middle income	(559.99 to 822.73) 4,017.42	(0.34 to 0.53) 0.40	(988.69 to 1,468.64) 6,978.39	(0.30 to 0.46) 0.36	(-14.87 to -9.96) -8.40
East Asia & Pacific–World Bank	(3,301.67 to 4,920.64) 10,713.72	(0.33 to 0.49) 0.66	(5,726.09 to 8,417.6) 14,591.13	(0.30 to 0.44) 0.53	(-12.71 to -5.18) -20.03
Eastern Africa	(9,407.20 to 12,275.52) 608.81	(0.58 to 0.75) 0.48	(12,654.4 to 16,691.46) 1,206.79	(0.46 to 0.6) 0.42	(-21.83 to -17.31) -11.99
Eastern Mediterranean region	(499.89 to 737.60) 1602.99	(0.38 to 0.61) 0.49	(985.42 to 1,487.17) 2,979.5	(0.34 to 0.54) 0.44	(-13.38 to -10.76) -9.34
Europe	(1340.36 to 1894.46) 10,882.38	(0.4 to 0.59) 1.17	(2,457.99 to 3,554.74) 19,078.07	(0.37 to 0.53) 1.43	(-12.71 to -6.84) 22.97
Europe & Central Asia–World Bank	(10,068.60 to 11,723.34) 11,086.84	(1.08 to 1.26) 1.14	(17,992.21 to 20,111.73) 19,374.79	(1.35 to 1.53) 1.39	(19.82 to 26.14) 21.75
European region	(10,239.27 to 11,974.81) 11,161.57	(1.05 to 1.24) 1.14	(18,257.57 to 20,470.29) 19,541.74	(1.31 to 1.48) 1.38	(18.67 to 24.90) 21.56
Latin America & Caribbean–World Bank	(10,307.25 to 12,055.24) 2,184.93	(1.05 to 1.23) 0.60	(18,413.66 to 20,651.9) 5,171.69	(1.30 to 1.48) 0.76	(18.50 to 24.69) 25.43
Middle East & North Africa–World Bank	(1,879.53 to 2,491.23) 1,182.49	(0.52 to 0.69) 0.54	(4,667.53 to 5,650.14) 2,140.03	(0.69 to 0.83) 0.49	(18.03 to 33.93) -8.47
North America	(999.23 to 1,384.26) 5,926.07	(0.45 to 0.64) 1.82	(1,777.88 to 2,551.72) 12,656.63	(0.42 to 0.58) 2.10	(-11.60 to -6.06) 15.51
Northern Africa	(5,605.86 to 6,287.26) 525.11	(1.71 to 1.93) 0.49	(12,143.66 to 13,195.30) 889.11	(2.02 to 2.19) 0.45	(12.02 to 19.37) -9.31
Region of the Americas	(439.15 to 620.72) 8,089.38	(0.41 to 0.6) 1.26	(736.01 to 1,057.28) 17,781.34	(0.37 to 0.53) 1.40	(-12.85 to -6.33) 10.61
South Asia–World Bank	(7,504.18 to 8,719.41) 3870.60	(1.18 to 1.36) 0.40	(16,869.71 to 18,685.03) 6,552.16	(1.33 to 1.48) 0.37	(7.49 to 13.71) -6.40
	(3,184.66 to 4,744.52)	(0.33 to 0.49)	(5,394.60 to 7,890.74)	(0.31 to 0.44)	(-11.35 to -2.95)

South-East Asia region	4,464.60 (3,680.65 to 5,462.32)	0.40 (0.33 to 0.49)	7,156.57 (5,860.12 to 8,706.37)	0.36 (0.30 to 0.44)	-8.45 (-12.55 to -5.49)
Southern Africa	346.41 (286.33 to 422.98)	0.49 (0.39 to 0.62)	626.94 (510.05 to 769.43)	0.43 (0.35 to 0.53)	-11.85 (-13.37 to -10.54)
Sub-Saharan Africa–World Bank	1,761.19 (1,459.67 to 2,120.49)	0.46 (0.37 to 0.58)	3,625.88 (2,990.57 to 4,408.13)	0.41 (0.33 to 0.51)	-10.61 (-11.88 to -9.46)
Western Africa	589.75 (491.63 to 707.16)	0.44 (0.36 to 0.54)	1,289.87 (1,076.11 to 1,548.21)	0.39 (0.33 to 0.47)	-10.21 (-11.86 to -8.71)
Western Pacific region	9,555.30 (8,420.88 to 10,891.18)	0.71 (0.62 to 0.80)	12,835.80 (11,198.34 to 14,542.77)	0.56 (0.49 to 0.63)	-21.27 (-23.32 to -18.21)
World Bank high income	17,410.54 (16,346.90 to 18,547.83)	1.44 (1.35 to 1.54)	34,567.74 (32,860.75 to 36,206.25)	1.68 (1.60 to 1.76)	16.29 (13.97 to 19.03)
World Bank low income	1,252.71 (1,049.85 to 1,486.01)	0.53 (0.43 to 0.65)	2,462.48 (2,044.49 to 2,952.61)	0.48 (0.39 to 0.58)	-9.39 (-10.52 to -8.10)
World Bank lower middle income	7,089.59 (5,858.02 to 8,573.06)	0.41 (0.34 to 0.51)	11,823.22 (9,777.40 to 14,267.43)	0.37 (0.31 to 0.45)	-9.53 (-12.91 to -6.82)
World Bank upper middle income	10,984.41 (9,506.66 to 12,739.65)	0.61 (0.53 to 0.71)	15,271.14 (13,175.08 to 17,519.43)	0.54 (0.46 to 0.61)	-12.24 (-14.79 to -9.00)
DALYs					
Global	506,146.42 (462,034.99 to 545,049.77)	11.22 (10.39 to 11.98)	1,040,565.98 (963,064.26 to 1,123,956.29)	12.17 (11.24 to 13.15)	8.42 (-0.78 to 18.64)
Central Asia	572.26 (430.87 to 745.26)	0.82 (0.62 to 1.05)	1,491.59 (1,283.82 to 1,745.33)	1.56 (1.35 to 1.82)	91.23 (55.58 to 138.25)
Central Europe	13,398.18 (12,873.50 to 14,034.02)	11.09 (10.64 to 11.63)	32,148.46 (29,468.16 to 35,149.74)	19.82 (18.27 to 21.71)	78.71 (63.03 to 96.26)
Eastern Europe	10,039.01 (7,604.27 to 12,851.58)	4.16 (3.20 to 5.31)	64,275.53 (59,370.93 to 69,493.62)	21.06 (19.54 to 22.69)	406.39 (289.41 to 576.09)
Australasia	10,280.94 (9,851.36 to 10,701.05)	46.81 (44.95 to 48.65)	22,757.76 (20,520.39 to 24,987.42)	49.54 (45.12 to 54.17)	5.83 (-3.18 to 16.34)
High-income Asia Pacific	31,936.40 (30,421.59 to 33,170.79)	16.35 (15.46 to 17.01)	68,294.82 (61,565.92 to 73,931.76)	18.11 (16.76 to 19.47)	10.78 (4.57 to 18.60)
High-income North America	123,874 (119,504.16 to 127,252.34)	39.82 (38.60 to 40.85)	237,211.58 (224,878.68 to 247,050.97)	41.58 (39.69 to 43.26)	4.44 (0.60 to 8.08)
Southern Latin America	1,542.72 (1,417.19 to 1,687.68)	3.21 (2.96 to 3.51)	18,154.21 (16,602.27 to 19,791.95)	22.7 (20.73 to 24.72)	606.72 (527.74 to 700.43)
Western Europe	179,754.93 (174,002.21 to 183,650.46)	38.34 (37.36 to 39.13)	305,400.11 (278,825.27 to 334,427.62)	41.57 (38.30 to 45.31)	8.44 (0.17 to 17.69)
Andean Latin America	161.48 (116.05 to 224.68)	0.49 (0.36 to 0.67)	4,963.05 (3,822.64 to 6,019.39)	8.00 (6.17 to 9.71)	1,524.93 (955.98 to 2,265.76)
Caribbean	304.68 (244.59 to 382.69)	0.92 (0.74 to 1.13)	6,637.11 (5,610.79 to 7,755.56)	12.75 (10.76 to 14.89)	1,287.23 (983.11 to 1,706.63)
Central Latin America	8,504.22 (8,163.32 to 8,891.82)	6.76 (6.55 to 7.00)	35,995.34 (31,563.75 to 40,871.48)	13.92 (12.20 to 15.83)	105.88 (79.28 to 133.65)
Tropical Latin America	13,175.86 (12,688.37 to 13,824.77)	10.87 (10.50 to 11.31)	56,816.30 (53,278.94 to 60,714.17)	22.24 (20.86 to 23.76)	104.65 (87.27 to 118.29)
North Africa and Middle East	13,111.47 (8,420.76 to 21,978.26)	3.57 (2.33 to 5.66)	28,916.62 (21,767.86 to 38,490.68)	5.27 (3.93 to 7.02)	47.63 (-12.12 to 144.70)
South Asia	4,800.63 (3,429.16 to 6,567.80)	0.47 (0.33 to 0.67)	18,449.55 (12,113.21 to 24,784.22)	1.08 (0.69 to 1.45)	127.54 (73.46 to 223.55)

East Asia	90,417.69 (52,777.60 to 114,962.79)	7.96 (4.73 to 10.09)	128,689.12 (86,938.50 to 173,235.30)	7.73 (5.03 to 10.02)	-2.95 (-41.21 to 75.89)
Oceania	26.23 (19.39 to 34.56)	0.46 (0.35 to 0.59)	47.43 (34.84 to 63.90)	0.37 (0.28 to 0.50)	-19.31 (-28.35 to -6.64)
Southeast Asia	2,543.41 (1,871.77 to 3,284.60)	0.61 (0.44 to 0.80)	6,738.84 (4,964.22 to 8,644.26)	0.95 (0.70 to 1.21)	54.6 (20.10 to 95.72)
Central Sub-Saharan Africa	153.40 (110.75 to 212.27)	0.31 (0.22 to 0.42)	316.06 (211.32 to 455.64)	0.26 (0.18 to 0.36)	-16.48 (-24.45 to -7.45)
Eastern Sub-Saharan Africa	521.59 (368.24 to 733.51)	0.30 (0.22 to 0.42)	1,070.88 (694.99 to 1,555.15)	0.28 (0.19 to 0.39)	-9.45 (-13.98 to -5.16)
Southern Sub-Saharan Africa	423.11 (265.74 to 671.05)	0.89 (0.53 to 1.40)	557.12 (345.85 to 803.46)	0.68 (0.44 to 0.97)	-23.75 (-46.46 to 15.35)
Western Sub-Saharan Africa	604.22 (437.31 to 826.73)	0.34 (0.25 to 0.45)	1,634.51 (1,202.51 to 2,205.01)	0.37 (0.28 to 0.49)	9.15 (1.01 to 21.72)
Africa	2,676.07 (1,998.34 to 3,519.97)	0.45 (0.34 to 0.59)	5,171.83 (3,795.45 to 7,080.42)	0.42 (0.32 to 0.57)	-5.80 (-13.00 to 6.75)
African region	1,841.55 (1,341.32 to 2,505.62)	0.41 (0.30 to 0.54)	4,156.49 (3,104.61 to 5,646.22)	0.42 (0.32 to 0.56)	4.10 (-5.38 to 16.82)
America	147,492.20 (142,781.03 to 151,409.28)	23.08 (22.34 to 23.69)	358,497.33 (339,730.12 to 376,883.31)	28.25 (26.76 to 29.69)	22.39 (16.90 to 28.55)
Asia	143,029.69 (102,839.52 to 169,391.83)	5.18 (3.89 to 6.05)	252,770.72 (201,243.16 to 301,064)	5.12 (4.06 to 6.04)	-1.29 (-23.29 to 33.49)
Central Africa	184.18 (136.19 to 251.41)	0.30 (0.22 to 0.41)	410.88 (287.72 to 573.13)	0.27 (0.19 to 0.37)	-10.27 (-18.18 to -1.08)
Commonwealth high income	57,309.39 (55,850.94 to 58,628.71)	43.21 (42.19 to 44.18)	107,221.95 (100,036.84 to 114,281.92)	46.62 (43.82 to 49.52)	7.89 (2.50 to 14.54)
Commonwealth low income	682.79 (495.56 to 933.70)	0.35 (0.25 to 0.48)	1,848.68 (1,171.43 to 2,649.60)	0.55 (0.33 to 0.82)	55.28 (15.28 to 108)
Commonwealth middle income	5,384.37 (3,911.99 to 7,148.67)	0.50 (0.36 to 0.68)	20,701.93 (14,316.67 to 27,057.19)	1.09 (0.74 to 1.43)	118.99 (73.13 to 204.55)
East Asia & Pacific–World Bank	135,157.27 (96,346.56 to 160,221.39)	8.18 (6.03 to 9.59)	225,528.84 (179,885.17 to 271,918.67)	7.75 (6.03 to 9.31)	-5.26 (-29.69 to 34.75)
Eastern Africa	502.87 (353.88 to 706.58)	0.32 (0.23 to 0.44)	1,376.92 (1,025.7 to 1,835.79)	0.48 (0.39 to 0.60)	46.71 (32.38 to 69.40)
Eastern Mediterranean region	2,755.97 (2,110.36 to 3,532.60)	0.74 (0.57 to 0.96)	7,753.33 (6,269.99 to 9,668.84)	1.17 (0.95 to 1.43)	57.14 (36.45 to 92.35)
Europe	212,503.73 (203,833.69 to 224,394.46)	23.74 (22.67 to 25.56)	422,075.93 (390,517.62 to 456,792.65)	33.06 (30.76 to 35.81)	39.24 (28.01 to 53.73)
Europe & Central Asia–World Bank	212,500.69 (203,822.81 to 224,421.34)	22.52 (21.51 to 24.17)	422,360.76 (390,754.03 to 457,074.94)	31.07 (28.90 to 33.63)	37.97 (26.87 to 52.14)
European region	214,049.05 (205,331.26 to 225,996.67)	22.52 (21.52 to 24.16)	425,656.02 (393,759.59 to 460,610.58)	30.95 (28.79 to 33.50)	37.46 (26.45 to 51.51)
Latin America & Caribbean–World Bank	23,677.27 (22,739.37 to 24,767.79)	6.61 (6.39 to 6.85)	122,325.17 (112,710.72 to 132,838.82)	17.32 (15.94 to 18.82)	162.1 (139.97 to 186.5)
Middle East & North Africa–World Bank	3,640.47 (3,145.77 to 4,270.13)	1.78 (1.57 to 2.03)	8,516.23 (7,448.83 to 9,768.75)	2.12 (1.89 to 2.4)	19.11 (9.02 to 33.09)
North America	123,867.47 (119,497.52 to 127,245.72)	39.81 (38.6 to 40.85)	237,215.5 (224,881.02 to 247,053.13)	41.58 (39.69 to 43.26)	4.44 (0.6 to 8.09)
Northern Africa	893.21	0.71	1,086.62	0.52	-26.29

Region of the Americas	(686.49 to 1182.03) 147,492.2	(0.54 to 0.91) 23.08	(737.82 to 1,533.3) 358,497.33	(0.36 to 0.73) 28.25	(−37.05 to −9.61) 22.39
South Asia–World Bank	(142,781.03 to 151,409.28) 4,955.46	(22.34 to 23.69) 0.48	(339,730.12 to 376,883.31) 19,314.53	(26.76 to 29.69) 1.1	(16.9 to 28.55) 130.02
South-East Asia region	(3,540.44 to 6,756.84) 6,645.58	(0.34 to 0.67) 0.55	(12,670.69 to 25,887.5) 21,162.98	(0.7 to 1.47) 1.06	(74.66 to 224.55) 91.72
Southern Africa	(4,845.13 to 8,916.88) 548.34	(0.39 to 0.77) 0.67	(14,203.09 to 28,284.52) 836.82	(0.7 to 1.42) 0.49	(51.02 to 162.79) −26.32
Sub-Saharan Africa–World Bank	(371.07 to 793.38) 1,789.35	(0.44 to 0.96) 0.39	(551.69 to 1,178.67) 4,098.63	(0.33 to 0.69) 0.41	(−44.95 to 3.98) 4.66
Western Africa	(1,304.45 to 2,432.47) 547.48	(0.29 to 0.52) 0.34	(3,061.06 to 5,569.88) 1,460.59	(0.31 to 0.54) 0.37	(−5.05 to 17.36) 9.41
Western Pacific region	(394.49 to 750.70) 130,918.40	(0.25 to 0.46) 9.51	(1,074.17 to 1,967.99) 216,168.10	(0.27 to 0.49) 9.00	(1.15 to 22.61) −5.41
World Bank high income	(92,779.70 to 155,560.2) 361,573.92	(6.95 to 11.18) 31.91	(171,223.97 to 262,325.51) 683,227.25	(6.90 to 10.87) 35.27	(−31.31 to 36.71) 10.52
World Bank low income	(351,537.96 to 369,561.04) 1,768.38	(31.10 to 32.59) 0.61	(635,035.00 to 732,604.69) 2,853.71	(33.10 to 37.59) 0.48	(4.42 to 17.02) −20.18
World Bank lower middle income	(1,273.72 to 2,447.55) 12,431.33	(0.43 to 0.83) 0.72	(2,022.97 to 4,117.85) 35,536.73	(0.34 to 0.71) 1.17	(−38.82 to 3.43) 61.29
World Bank upper middle income	(9,513.74 to 16,046.75) 129,775.04	(0.55 to 0.95) 6.67	(26,864.80 to 44,615.46) 317,645.82	(0.89 to 1.47) 10.17	(29.93 to 107.75) 52.44
	(88,809.21 to 162,041.63)	(4.64 to 8.27)	(267,020.27 to 369,680.48)	(8.42 to 11.79)	(12.03 to 119.15)
YLDs					
Global	34,425.85	0.71	57,889.10	0.70	−1.49
	(23,884.86 to 47,211.93)	(0.50 to 0.97)	(40,686.61 to 78,030.59)	(0.49 to 0.96)	(−3.45 to 0.70)
Central Asia	373.43	0.54	505.22	0.53	−2.75
	(252.39 to 531.08)	(0.37 to 0.76)	(337.08 to 714.30)	(0.36 to 0.75)	(−4.51 to −0.71)
Central Europe	959.60	0.76	1,076.31	0.85	12.33
	(643.24 to 1323.02)	(0.51 to 1.05)	(738.23 to 1,442.31)	(0.58 to 1.17)	(9.04 to 16.08)
Eastern Europe	1,640.38	0.73	1,613.03	0.76	3.84
	(1,097.12 to 2,274.79)	(0.49 to 1.03)	(1,105.47 to 2,175.16)	(0.52 to 1.06)	(0.23 to 7.50)
Australasia	323.02	1.45	834.67	1.91	31.65
	(229.48 to 434.08)	(1.03 to 1.95)	(595.88 to 1,125.01)	(1.36 to 2.56)	(24.17 to 39.84)
High-income Asia Pacific	1,775.42	0.94	3,050.66	1.07	13.66
	(1,239.49 to 2,387.67)	(0.66 to 1.28)	(2,143.82 to 4,107.10)	(0.75 to 1.47)	(9.77 to 18.28)
High-income North America	5,414.57	1.73	10,067.48	1.96	13.49
	(3,851.80 to 7,341.58)	(1.23 to 2.32)	(7,305.14 to 13,261.06)	(1.42 to 2.59)	(4.93 to 22.96)
Southern Latin America	401.60	0.82	787.67	1.06	29.55
	(269.65 to 550.46)	(0.55 to 1.12)	(547.58 to 1,056.42)	(0.74 to 1.43)	(21.87 to 38.9)
Western Europe	7,979.49	1.65	14,277.5	2.05	24.29
	(5,690.76 to 10,789)	(1.16 to 2.24)	(10,182.51 to 19,057.92)	(1.47 to 2.74)	(20.63 to 28.09)
Andean Latin America	128.70	0.36	261.24	0.40	9.87
	(85.98 to 186.73)	(0.25 to 0.51)	(177.99 to 368.47)	(0.27 to 0.56)	(5.48 to 14.74)
Caribbean	183.49	0.53	277.69	0.57	7.12
	(125.38 to 260.12)	(0.36 to 0.74)	(193.15 to 378.36)	(0.39 to 0.78)	(2.59 to 12.42)
Central Latin America	766.49	0.48	1342.02	0.52	9.55
	(514.22 to 1,090.77)	(0.33 to 0.67)	(922.43 to 1871.34)	(0.36 to 0.73)	(5.58 to 14.12)
Tropical Latin America	805.67	0.54	1,449.77	0.61	14.35

North Africa and Middle East	(538.85 to 1149.23) 1817.12	(0.36 to 0.75) 0.56	(993.23 to 1,990.56) 3,452.41	(0.42 to 0.85) 0.56	(9.72 to 19.35) -0.42
South Asia	(1229.26 to 2592.27) 3,411.10	(0.38 to 0.78) 0.32	(2314.95 to 4,837.32) 6,360.46	(0.38 to 0.78) 0.34	(-2.54 to 1.74) 6.02
East Asia	(2,155.44 to 4,981.31) 5,697.36	(0.21 to 0.45) 0.46	(4,134.12 to 9,175.24) 7,403.74	(0.22 to 0.48) 0.49	(3.34 to 9.20) 7.60
Oceania	(3,738.23 to 8,077.29) 19.25	(0.30 to 0.64) 0.31	(4,983.73 to 10,221.69) 38.31	(0.33 to 0.70) 0.28	(2.70 to 13.92) -7.26
Southeast Asia	(12.79 to 27.34) 1,491.65	(0.21 to 0.43) 0.32	(25.31 to 55.16) 2,289.86	(0.19 to 0.40) 0.33	(-10.10 to -3.94) 1.24
Central Sub-Saharan Africa	(976.79 to 2,167.92) 118.60	(0.21 to 0.46) 0.25	(1,487.07 to 3,271.89) 293.67	(0.21 to 0.47) 0.24	(-0.98 to 3.63) -4.91
Eastern Sub-Saharan Africa	(77.18 to 173.31) 447.96	(0.16 to 0.35) 0.27	(190.55 to 426.45) 1,022.71	(0.16 to 0.34) 0.26	(-7.53 to -2.25) -3.24
Southern Sub-Saharan Africa	(288.58 to 655.71) 191.99	(0.18 to 0.39) 0.38	(654.76 to 1,498.95) 291.03	(0.17 to 0.37) 0.36	(-4.54 to -2.01) -4.67
Western Sub-Saharan Africa	(125.33 to 278.82) 478.96	(0.25 to 0.54) 0.28	(191.32 to 420.45) 1,193.65	(0.24 to 0.52) 0.27	(-6.36 to -2.48) -4.05
Africa	(308.71 to 698.37) 1,879.32	(0.18 to 0.40) 0.33	(759.63 to 1,743.71) 3,957.32	(0.18 to 0.38) 0.31	(-5.52 to -2.58) -6.19
African region	(1,237.56 to 2,702.53) 1,355.91	(0.22 to 0.46) 0.30	(2,584.74 to 5,705.97) 2,992.85	(0.20 to 0.44) 0.28	(-7.50 to -4.57) -5.58
America	(881.67 to 1,967.64) 7,667.74	(0.20 to 0.42) 1.15	(1,922.6 to 4,360.39) 14,141.02	(0.18 to 0.40) 1.19	(-6.64 to -4.22) 3.77
Asia	(5,404.07 to 10,339.44) 13,805.45	(0.81 to 1.54) 0.45	(10,138.65 to 18,782.62) 22,072.20	(0.86 to 1.59) 0.47	(-2.40 to 9.91) 2.48
Central Africa	(9,133.88 to 19,495.70) 141.49	(0.30 to 0.63) 0.24	(14,839.01 to 30,703.82) 349.75	(0.31 to 0.65) 0.23	(-0.06 to 5.50) -5.49
Commonwealth high income	(92.04 to 206.89) 2,457.08	(0.16 to 0.35) 1.86	(226.77 to 508.64) 4,896.87	(0.15 to 0.33) 2.25	(-7.83 to -3.44) 21.06
Commonwealth low income	(1,755.42 to 3,341.18) 559.69	(1.33 to 2.50) 0.29	(3,513.81 to 6,577.7) 1,089.49	(1.61 to 3.03) 0.29	(17.20 to 24.9) -1.06
Commonwealth middle income	(366.71 to 813.85) 3,650.1	(0.19 to 0.42) 0.32	(712.54 to 1,577.02) 6,968.58	(0.19 to 0.41) 0.33	(-3.59 to 1.78) 3.07
East Asia & Pacific–World Bank	(2,304.31 to 5,342.74) 9,249.02	(0.21 to 0.45) 0.51	(4,525.61 to 10,089.18) 13,539.96	(0.21 to 0.47) 0.53	(0.74 to 5.67) 3.55
Eastern Africa	(6,189.27 to 13,008.93) 427.47	(0.34 to 0.70) 0.28	(9,322.87 to 18,504.23) 965.34	(0.36 to 0.74) 0.27	(0.24 to 7.47) -3.22
Eastern Mediterranean region	(275.52 to 623.26) 1,652.21	(0.18 to 0.40) 0.46	(615.49 to 1,409.92) 3,335.17	(0.18 to 0.38) 0.44	(-4.56 to -1.69) -2.87
Europe	(1,105.59 to 2,363.66) 11,013.71	(0.30 to 0.65) 1.22	(2,209.15 to 4,797.28) 17,636.54	(0.29 to 0.63) 1.48	(-4.86 to -0.72) 21.00
Europe & Central Asia–World Bank	(7,819.57 to 14,862.50) 11,266.01	(0.86 to 1.65) 1.19	(12,575.11 to 23,634.31) 18,003.68	(1.06 to 2.00) 1.43	(17.50 to 24.40) 19.59
European region	(7,983.23 to 15,197.26) 11,345.49	(0.84 to 1.62) 1.19	(12,851.53 to 24,053.14) 18,180.50	(1.03 to 1.94) 1.43	(16.16 to 22.89) 19.5
Latin America & Caribbean–World Bank	(8,039.09 to 15,305.62) 2,279.04	(0.84 to 1.62) 0.54	(12,982.34 to 24,289.37) 4,108.03	(1.02 to 1.94) 0.61	(16.05 to 22.79) 11.93
	(1,544.00 to 3,249.16)	(0.37 to 0.75)	(2,828.90 to 5622.11)	(0.42 to 0.83)	(7.51 to 16.88)

Middle East & North Africa–World Bank	1,355.65 (911.51 to 1,936.11)	0.56 (0.37 to 0.78)	2,598.88 (1,734.69 to 3,673.83)	0.55 (0.37 to 0.77)	–1.60 (–3.51 to 0.41)
North America	5414.20 (3,851.51 to 7,341.12)	1.73 (1.23 to 2.32)	10,067.04 (7,304.85 to 13,260.40)	1.96 (1.42 to 2.59)	13.49 (4.92 to 22.96)
Northern Africa	578.80 (389.21 to 828.01)	0.49 (0.33 to 0.69)	1,018.95 (677.71 to 1,454.97)	0.49 (0.32 to 0.69)	–1.28 (–3.89 to 1.58)
Region of the Americas	7,667.74 (5,404.07 to 10,339.44)	1.15 (0.81 to 1.54)	14,141.02 (10,138.65 to 18,782.62)	1.19 (0.86 to 1.59)	3.77 (–2.40 to 9.91)
South Asia–World Bank	3,509.03 (2,223.12 to 5,122.79)	0.32 (0.21 to 0.45)	6,561.62 (4,271.42 to 9,468.68)	0.34 (0.22 to 0.48)	6.02 (3.43 to 9.09)
South-East Asia region	4,083.45 (2,610.86 to 5,965.07)	0.32 (0.21 to 0.45)	7,012.12 (4,566.23 to 10,071.02)	0.33 (0.22 to 0.48)	4.80 (2.47 to 7.41)
Southern Africa	296.32 (193.39 to 432.25)	0.34 (0.22 to 0.49)	555.51 (363.14 to 807.75)	0.32 (0.21 to 0.46)	–6.32 (–7.77 to –4.39)
Sub-Saharan Africa–World Bank	1,305.60 (847.11 to 1,902.25)	0.29 (0.19 to 0.41)	2,948.17 (1,889.30 to 4,301.74)	0.27 (0.18 to 0.39)	–5.06 (–6.11 to –3.68)
Western Africa	435.24 (280.48 to 636.60)	0.28 (0.18 to 0.40)	1,067.78 (678.34 to 1,561.98)	0.27 (0.18 to 0.38)	–4.00 (–5.36 to –2.42)
Western Pacific region	8,140.29 (5,443.43 to 11,425.74)	0.54 (0.37 to 0.75)	11,966.95 (8,269.12 to 16,320.98)	0.57 (0.39 to 0.79)	5.10 (1.33 to 9.52)
World Bank high income	16,729.25 (11,832.22 to 22,651.24)	1.43 (1.01 to 1.93)	30,076.19 (21,727.09 to 39,988.49)	1.67 (1.21 to 2.23)	17.44 (13.28 to 21.99)
World Bank low income	860.70 (570.57 to 1,242.45)	0.31 (0.21 to 0.44)	1,841.37 (1,198.64 to 2,661.58)	0.29 (0.20 to 0.41)	–6.81 (–8.15 to –5.31)
World Bank lower middle income	6,702.25 (4,343.84 to 9,733.65)	0.35 (0.23 to 0.49)	11,879.66 (7,788.61 to 17,030.30)	0.34 (0.23 to 0.49)	–0.23 (–2.26 to 2.05)
World Bank upper middle income	10,100.56 (6,677.82 to 14,326.58)	0.50 (0.33 to 0.71)	14,044.91 (9,401.91 to 19,240.65)	0.54 (0.36 to 0.75)	6.30 (3.17 to 10.25)
YLLs					
Global	471,720.57 (427,708.75 to 507,715.98)	10.51 (9.70 to 11.20)	982,676.88 (904,588.13 to 1,064,643.84)	11.46 (10.52 to 12.43)	9.10 (–0.70 to 19.99)
Central Asia	198.82 (138.76 to 311.94)	0.27 (0.20 to 0.42)	986.37 (847.82 to 1,135.03)	1.03 (0.89 to 1.19)	280.01 (139.13 to 444.12)
Central Europe	12,438.59 (11,995.65 to 12,993.91)	10.33 (9.94 to 10.78)	31,072.15 (28,267.61 to 34,129.44)	18.97 (17.31 to 20.83)	83.57 (66.69 to 102.76)
Eastern Europe	8,398.63 (6,212.12 to 11,127.83)	3.43 (2.58 to 4.46)	62,662.5 (57,842.75 to 67,614.07)	20.3 (18.78 to 21.79)	492.4 (340.85 to 715.42)
Australasia	9,957.93 (9,544.89 to 10,345.23)	45.36 (43.57 to 47.05)	21,923.09 (19,692.14 to 24,213.83)	47.63 (43.19 to 52.29)	5.01 (–4.36 to 15.88)
High-income Asia Pacific	30,160.98 (28,702.64 to 31,091.76)	15.4 (14.57 to 15.95)	65,244.16 (58,315.31 to 70,652.65)	17.04 (15.63 to 18.25)	10.61 (3.95 to 18.88)
High-income North America	118,459.43 (114,613.38 to 121,073.19)	38.09 (37.03 to 38.86)	227,144.09 (214,476.30 to 236,497.91)	39.62 (37.84 to 41.12)	4.02 (0.02 to 7.72)
Southern Latin America	1,141.13 (1,102.15 to 1,177.85)	2.39 (2.31 to 2.47)	17,366.54 (15,771.00 to 19,036.85)	21.64 (19.63 to 23.68)	804.74 (720.15 to 895.00)
Western Europe	171,775.43 (167,040.70 to 175,100.87)	36.69 (35.72 to 37.34)	291,122.61 (264,527.26 to 319,733.25)	39.53 (36.24 to 43.25)	7.72 (–0.91 to 17.44)
Andean Latin America	32.78 (20.92 to 56.95)	0.13 (0.08 to 0.23)	4,701.81 (3,552.79 to 5,795.28)	7.61 (5.76 to 9.39)	5,732.04 (2,445.98 to 9,416.54)

Caribbean	121.19 (104.88 to 153.92)	0.39 (0.34 to 0.49)	6,359.41 (5,340.58 to 7,484.54)	12.18 (10.21 to 14.34)	3,020.61 (2,230.40 to 3,733.06)
Central Latin America	7,737.72 (7,508.24 to 8,006.09)	6.28 (6.13 to 6.45)	34,653.33 (30,275.49 to 39,337.37)	13.4 (11.68 to 15.20)	113.21 (84.95 to 142.91)
Tropical Latin America	12,370.19 (11,918.37 to 12,903.55)	10.33 (10.01 to 10.71)	55,366.53 (51,768.62 to 59,045.07)	21.62 (20.21 to 23.06)	109.35 (91.10 to 123.81)
North Africa and Middle East	11,294.35 (6,666.02 to 20,201.51)	3.01 (1.77 to 5.12)	25,464.21 (18,252.29 to 35,418.02)	4.71 (3.39 to 6.53)	56.59 (-13.53 to 182.49)
South Asia	1,389.53 (750.86 to 2,689.55)	0.16 (0.08 to 0.33)	12,089.10 (5,975.18 to 18,056.43)	0.74 (0.37 to 1.10)	374.08 (178.72 to 618.03)
East Asia	84,720.33 (46,916.77 to 108,818.09)	7.51 (4.25 to 9.59)	121,285.39 (79,601.85 to 164,490.78)	7.24 (4.54 to 9.48)	-3.59 (-43.67 to 81.97)
Oceania	6.98 (4.41 to 10.12)	0.16 (0.09 to 0.22)	9.13 (6.73 to 13.20)	0.09 (0.07 to 0.12)	-42.97 (-59.39 to -5.78)
Southeast Asia	1,051.75 (534.97 to 1,564.15)	0.29 (0.15 to 0.44)	4,448.97 (2,898.08 to 6,429.13)	0.62 (0.41 to 0.90)	113.49 (36.78 to 221.23)
Central Sub-Saharan Africa	34.8 (21.49 to 51.44)	0.06 (0.04 to 0.09)	22.39 (13.54 to 52.45)	0.02 (0.01 to 0.06)	-63.30 (-78.06 to -21.04)
Eastern Sub-Saharan Africa	73.64 (53.71 to 96.65)	0.04 (0.02 to 0.05)	48.17 (28.25 to 99.47)	0.02 (0.01 to 0.03)	-56.7 (-69.74 to -17.27)
Southern Sub-Saharan Africa	231.11 (77.34 to 481.85)	0.51 (0.15 to 1.01)	266.09 (101.48 to 483.15)	0.32 (0.13 to 0.56)	-37.79 (-68.62 to 38.32)
Western Sub-Saharan Africa	125.26 (83.99 to 156.02)	0.06 (0.04 to 0.08)	440.86 (306.01 to 611.02)	0.10 (0.07 to 0.15)	70.36 (24.16 to 125.25)
Africa	796.75 (501.68 to 1,039.59)	0.12 (0.07 to 0.16)	1,214.51 (903.21 to 1,593.56)	0.12 (0.09 to 0.15)	-4.77 (-26.25 to 55.54)
African region	485.64 (289.83 to 724.94)	0.11 (0.06 to 0.16)	1,163.64 (864.76 to 1,502.95)	0.14 (0.11 to 0.18)	30.66 (-5.29 to 119.41)
America	139,824.47 (135,723.82 to 142,498.13)	21.93 (21.27 to 22.36)	344,356.31 (325,531.03 to 362,156.69)	27.06 (25.58 to 28.47)	23.36 (17.57 to 29.83)
Asia	129,224.24 (89,297.89 to 155,196.80)	4.73 (3.47 to 5.56)	230,698.52 (179,178.95 to 276,855.11)	4.65 (3.60 to 5.58)	-1.65 (-25.59 to 36.96)
Central Africa	42.69 (29.74 to 58.03)	0.06 (0.04 to 0.09)	61.14 (40.35 to 96.06)	0.04 (0.03 to 0.07)	-29.06 (-54.89 to 17.89)
Commonwealth high income	54,852.31 (53,506.84 to 55,745.95)	41.35 (40.45 to 41.99)	102,325.08 (94,974.75 to 109,233.13)	44.37 (41.66 to 47.21)	7.30 (1.57 to 14.27)
Commonwealth low income	123.10 (78.68 to 190.26)	0.06 (0.03 to 0.12)	759.19 (271.38 to 1,399.81)	0.26 (0.08 to 0.49)	327.55 (151.81 to 585.21)
Commonwealth middle income	1,734.27 (964.66 to 2,912.05)	0.18 (0.09 to 0.33)	13,733.35 (7,657.55 to 19,307.06)	0.76 (0.42 to 1.07)	323.17 (168.42 to 505.10)
East Asia & Pacific–World Bank	125,908.25 (86,743.84 to 150,753.31)	7.67 (5.52 to 9.06)	211,988.88 (165,428.47 to 256,662.30)	7.23 (5.52 to 8.83)	-5.84 (-31.47 to 37.21)
Eastern Africa	75.40 (60.46 to 94.16)	0.05 (0.04 to 0.06)	411.59 (368.19 to 462.32)	0.21 (0.19 to 0.23)	330.26 (243.64 to 449.1)
Eastern Mediterranean region	1,103.77 (796.27 to 1,533.41)	0.28 (0.20 to 0.41)	4,418.16 (3,301.23 to 5,574.83)	0.72 (0.54 to 0.91)	153.58 (90.36 to 234.14)
Europe	201,490.02 (193,687.20 to 213,145.62)	22.52 (21.59 to 24.17)	404,439.38 (373,856.47 to 438,649.23)	31.58 (29.28 to 34.29)	40.23 (28.43 to 55.68)
Europe & Central Asia–World Bank	201,234.68	21.32	404,357.07	29.64	39.00

European region	(193,428.36 to 212,844.43) 202,703.56	(20.44 to 22.81) 21.32	(373,844.74 to 438,516.43) 407,475.52	(27.49 to 32.15) 29.53	(27.25 to 54.09) 38.46
Latin America & Caribbean–World Bank	(194,875.59 to 214,347.95) 21,398.24	(20.45 to 22.82) 6.07	(376,659.79 to 441,837.91) 118,217.14	(27.39 to 32.03) 16.72	(26.81 to 53.43) 175.50
Middle East & North Africa–World Bank	(20,881.11 to 22,086.22) 2,284.82	(5.93 to 6.23) 1.22	(108,552.05 to 128,327.41) 5,917.35	(15.33 to 18.17) 1.57	(151.74 to 201.31) 28.61
North America	(2,018.07 to 2,647.48) 118,453.27	(1.11 to 1.36) 38.09	(5,238.3 to 6,613.56) 227,148.47	(1.40 to 1.74) 39.62	(12.74 to 47.04) 4.03
Northern Africa	(114,607.02 to 121,067.97) 314.41	(37.02 to 38.86) 0.21	(214,480.11 to 236,501.64) 67.67	(37.84 to 41.12) 0.04	(0.03 to 7.73) –83.58
Region of the Americas	(202.73 to 456.71) 139,824.47	(0.13 to 0.30) 21.93	(40.81 to 212.69) 344,356.31	(0.02 to 0.11) 27.06	(–90.28 to –34.84) 23.36
South Asia–World Bank	(135,723.82 to 142,498.13) 1,446.43	(21.27 to 22.36) 0.16	(325,531.03 to 362,156.69) 12,752.91	(25.58 to 28.47) 0.76	(17.57 to 29.83) 378.42
South-East Asia region	(799.33 to 2,763.78) 2,562.13	(0.08 to 0.33) 0.24	(6,327.09 to 18,821.93) 14,150.87	(0.38 to 1.12) 0.73	(180.14 to 624.4) 208.04
Southern Africa	(1,380.45 to 4,261.10) 252.02	(0.12 to 0.41) 0.33	(7,106.03 to 21,228.78) 281.31	(0.37 to 1.09) 0.17	(96.16 to 350.19) –47.25
Sub-Saharan Africa–World Bank	(95.96 to 504) 483.75	(0.10 to 0.62) 0.11	(111.88 to 506.68) 1,150.46	(0.07 to 0.30) 0.14	(–74.19 to 19.84) 30.48
Western Africa	(289.24 to 724.72) 112.23	(0.06 to 0.16) 0.06	(852.74 to 1,477.50) 392.80	(0.11 to 0.18) 0.10	(–5.13 to 118.51) 72.76
Western Pacific region	(75.65 to 139.50) 122,778.11	(0.04 to 0.07) 8.97	(270.53 to 551.31) 204,201.15	(0.07 to 0.15) 8.43	(26.04 to 133.81) –6.04
World Bank high income	(84,182.66 to 147,256.01) 345,243.1	(6.39 to 10.64) 30.48	(158,588.36 to 248,046.34) 653,693.09	(6.36 to 10.34) 33.59	(–33.03 to 38.99) 10.20
World Bank low income	(335,526.57 to 350,941.38) 845.95	(29.73 to 30.96) 0.29	(604,984.75 to 701,012.81) 902.75	(31.48 to 35.83) 0.19	(3.88 to 16.93) –34.56
World Bank lower middle income	(439.21 to 1,435.91) 5,955.37	(0.15 to 0.50) 0.38	(454.87 to 1,910.01) 24,038.84	(0.10 to 0.39) 0.82	(–62.26 to 17.08) 117.35
World Bank upper middle income	(4,194.38 to 8,540.97) 119,320.93	(0.25 to 0.56) 6.17	(15,910.25 to 31,412.37) 303,083.42	(0.55 to 1.07) 9.63	(51.36 to 207.88) 56.21
	(78,206.85 to 150,418.33) Death	(4.13 to 7.74)	(250,975.94 to 353,547.85)	(7.87 to 11.26)	(12.57 to 131.10)
Global	15,260.07	0.38	39,081.64	0.46	19.84
Central Asia	(14,366.61 to 16,042.60) 3.44	(0.36 to 0.40) 0.01	(35,756.51 to 42,432.82) 25.93	(0.42 to 0.49) 0.03	(10.79 to 30.39) 429.46
Central Europe	(2.53 to 5.21) 310.22	(0.00 to 0.01) 0.23	(22.52 to 29.98) 1,125.06	(0.02 to 0.03) 0.57	(231.44 to 627.85) 150.58
Eastern Europe	(298.56 to 325.03) 226.39	(0.22 to 0.24) 0.09	(1,025.82 to 1,237.80) 2,174.77	(0.52 to 0.63) 0.64	(126.24 to 177.58) 652.78
Australasia	(163.44 to 311.51) 374.92	(0.06 to 0.12) 1.60	(1,996.69 to 2,365.57) 959.91	(0.59 to 0.70) 1.84	(447.20 to 977.34) 14.53
High-income Asia Pacific	(354.19 to 391.42) 1,095.25	(1.52 to 1.67) 0.54	(845.61 to 1,068.1) 3,289.81	(1.64 to 2.03) 0.72	(3.92 to 27.00) 32.17
High-income North America	(1,046.06 to 1,130.28) 4,327.85	(0.52 to 0.56) 1.27	(2,881.94 to 3,613.6) 9,570.87	(0.64 to 0.78) 1.50	(22.46 to 42.29) 18.23
Southern Latin America	(4,109.63 to 4,454.87) 35.07	(1.21 to 1.30) 0.07	(8,808.62 to 10,050.59) 636.82	(1.39 to 1.57) 0.75	(13.56 to 22.72) 909.01

Western Europe	(33.86 to 36.36) 6,548.69	(0.07 to 0.08) 1.20	(578.51 to 704.09) 13,100.07	(0.68 to 0.83) 1.49	(813.56 to 1,010.73) 24.33
Andean Latin America	(6,289.31 to 6,711.32) 0.94	(1.16 to 1.23) 0.00	(11,684.80 to 14,514.26) 159.69	(1.35 to 1.64) 0.27	(14.49 to 36.22) 6,195.47
Caribbean	(0.59 to 1.64) 3.19	(0.00 to 0.01) 0.01	(122.85 to 195.55) 222.99	(0.21 to 0.32) 0.42	(2,688.82 to 10,110.73) 3,572.45
Central Latin America	(2.84 to 3.84) 185.73	(0.01 to 0.01) 0.19	(187.92 to 261.73) 1,109.34	(0.35 to 0.49) 0.43	(2,658.33 to 4,424.48) 133.76
Tropical Latin America	(181.44 to 190.44) 313.75	(0.18 to 0.19) 0.30	(972.92 to 1,261.12) 1,876.55	(0.38 to 0.49) 0.73	(103.84 to 166.03) 140.21
North Africa and Middle East	(303.59 to 324.77) 179.48	(0.29 to 0.31) 0.06	(1,748.35 to 2,009.62) 698.85	(0.68 to 0.78) 0.14	(122.64 to 155.64) 125.83
South Asia	(105.70 to 301.97) 32.10	(0.03 to 0.10) 0.00	(482.33 to 980.86) 347.67	(0.10 to 0.20) 0.02	(28.11 to 319.20) 392.98
East Asia	(15.96 to 69.31) 1588.58	(0.00 to 0.01) 0.15	(168.30 to 522.09) 3,630.95	(0.01 to 0.03) 0.18	(176.45 to 705.33) 20.85
Oceania	(900.19 to 2016.74) 0.17	(0.09 to 0.19) 0.01	(2,395.89 to 4,966.82) 0.24	(0.12 to 0.25) 0.00	(-24.51 to 116.11) -44.99
Southeast Asia	(0.11 to 0.24) 25.63	(0.00 to 0.01) 0.01	(0.18 to 0.32) 137.32	(0.00 to 0.00) 0.02	(-60.93 to 0.14) 136.57
Central Sub-Saharan Africa	(12.77 to 39.22) 0.62	(0.00 to 0.01) 0.00	(91.46 to 195.19) 0.49	(0.01 to 0.03) 0.00	(47.96 to 259.8) -62.08
Eastern Sub-Saharan Africa	(0.42 to 0.86) 1.22	(0.00 to 0.00) 0.00	(0.29 to 1.21) 1.01	(0.00 to 0.00) 0.00	(-76.85 to -12.00) -54.02
Southern Sub-Saharan Africa	(0.83 to 1.64) 4.88	(0.00 to 0.00) 0.01	(0.61 to 2.21) 5.44	(0.00 to 0.00) 0.01	(-67.63 to -12.91) -43.54
Western Sub-Saharan Africa	(1.4 to 8.9) 1.97	(0.00 to 0.02) 0.00	(2.20 to 9.46) 7.89	(0 to 0.01) 0.00	(-66.63 to 38) 81.48
Africa	(1.28 to 2.48) 13.70	(0.00 to 0.00) 0.00	(5.53 to 11.18) 28.59	(0.00 to 0.00) 0.00	(28.45 to 146.97) 17.93
African region	(7.90 to 17.42) 9.22	(0.00 to 0.00) 0.00	(22.79 to 36.45) 27.36	(0.00 to 0.00) 0.00	(-4.49 to 110.35) 51.87
America	(4.87 to 12.94) 4,865.38	(0.00 to 0.00) 0.78	(21.62 to 33.83) 13,529.81	(0.00 to 0.01) 1.02	(21.39 to 188.03) 29.83
Asia	(4,635.17 to 4,998.02) 3,167.78	(0.74 to 0.80) 0.14	(12,547.10 to 14,297.48) 8,553.49	(0.94 to 1.07) 0.17	(24.00 to 36.21) 23.37
Central Africa	(2,409.81 to 3,665.06) 0.74	(0.11 to 0.16) 0.00	(7,010.38 to 10,160.32) 1.16	(0.14 to 0.20) 0.00	(0.12 to 51.51) -34.50
Commonwealth high income	(0.49 to 1.00) 2,148.24	(0.00 to 0.00) 1.45	(0.77 to 1.89) 4,605.26	(0.00 to 0.00) 1.74	(-60.18 to 18.54) 19.63
Commonwealth low income	(2,071.31 to 2,191.32) 2.20	(1.41 to 1.48) 0.00	(4,181.22 to 4,959.37) 21.45	(1.59 to 1.87) 0.01	(12.67 to 27.86) 434.69
Commonwealth middle income	(1.19 to 4.06) 39.60	(0.00 to 0.00) 0.01	(6.62 to 41.22) 397.02	(0.00 to 0.02) 0.02	(200.06 to 833.67) 364.36
East Asia & Pacific–World Bank	(20.03 to 73.95) 3,083.85	(0.00 to 0.01) 0.21	(222.49 to 562.04) 7,986.51	(0.01 to 0.03) 0.25	(178.98 to 583.5) 18.25
Eastern Africa	(2,346.02 to 3,541.39) 1.45	(0.17 to 0.24) 0.00	(6,604.33 to 9,536.38) 12.93	(0.21 to 0.30) 0.01	(-5.70 to 49.70) 456.91
	(1.14 to 1.79)	(0.00 to 0.00)	(11.61 to 14.23)	(0.01 to 0.01)	(309.71 to 660.39)

Eastern Mediterranean region	19.12 (13.45 to 27.51)	0.01 (0.00 to 0.01)	113.80 (85.85 to 143.36)	0.02 (0.02 to 0.03)	228.02 (129.45 to 350.99)
Europe	7,201.6 (6,880.05 to 7,482.99)	0.72 (0.69 to 0.75)	16,894.76 (15,348.35 to 18,501.86)	1.12 (1.03 to 1.23)	55.53 (43.77 to 71.11)
Europe & Central Asia–World Bank	7,194.69 (6,873.45 to 7,474.86)	0.70 (0.67 to 0.73)	16,885.49 (15,341.11 to 18,490.21)	1.08 (0.99 to 1.17)	54.53 (42.84 to 69.98)
European region	7,239.98 (6,917.66 to 7,522.16)	0.70 (0.66 to 0.73)	17,011.99 (15,457.14 to 18,628.19)	1.07 (0.98 to 1.17)	54.14 (42.48 to 69.49)
Latin America & Caribbean–World Bank	538.55 (525.39 to 551.69)	0.18 (0.17 to 0.18)	3,997.26 (3,681.58 to 4,352.57)	0.56 (0.52 to 0.61)	218.38 (193.8 to 245.48)
Middle East & North Africa–World Bank	58.81 (53.73 to 65.58)	0.04 (0.04 to 0.05)	201.93 (181.30 to 223.45)	0.06 (0.06 to 0.07)	39.37 (22.65 to 56.44)
North America	4,327.66 (4,109.44 to 4,454.67)	1.27 (1.21 to 1.30)	9,571.03 (8,808.74 to 10,050.68)	1.50 (1.39 to 1.57)	18.23 (13.56 to 22.73)
Northern Africa	4.54 (2.84 to 6.35)	0.00 (0.00 to 0.01)	1.71 (1.05 to 5.27)	0.00 (0.00 to 0.00)	–73.93 (–83.59 to 1.85)
Region of the Americas	4,865.38 (4,635.17 to 4,998.02)	0.78 (0.74 to 0.80)	13,529.81 (12,547.1 to 14,297.48)	1.02 (0.94 to 1.07)	29.83 (24.00 to 36.21)
South Asia–World Bank	33.60 (17.05 to 71.38)	0.00 (0.00 to 0.01)	369.71 (181.49 to 548.83)	0.02 (0.01 to 0.03)	401.61 (182.09 to 717.63)
South-East Asia region	57.85 (29.93 to 102.84)	0.01 (0.00 to 0.01)	420.27 (212.16 to 625.33)	0.02 (0.01 to 0.03)	238.44 (108.21 to 405.01)
Southern Africa	5.21 (1.67 to 9.22)	0.01 (0.00 to 0.01)	5.74 (2.40 to 9.81)	0.00 (0.00 to 0.01)	–49.23 (–69.52 to 25.01)
Sub-Saharan Africa–World Bank	9.19 (4.86 to 12.93)	0.00 (0.00 to 0.00)	26.94 (21.36 to 33.44)	0.00 (0.00 to 0.00)	51.91 (21.66 to 188.66)
Western Africa	1.76 (1.16 to 2.22)	0.00 (0.00 to 0.00)	7.04 (4.93 to 10.15)	0.00 (0.00 to 0.00)	84.81 (29.84 to 153.71)
Western Pacific region	3,011.43 (2,286.92 to 3,462.09)	0.24 (0.19 to 0.28)	7,743.64 (6,382.32 to 9,234.41)	0.29 (0.23 to 0.34)	17.19 (–7.17 to 49.83)
World Bank high income	12,722.96 (12,158.83 to 13,006.43)	1.02 (0.97 to 1.04)	28,638.89 (25,732.41 to 31,046.28)	1.27 (1.16 to 1.37)	24.84 (17.52 to 33.25)
World Bank low income	16.65 (8.65 to 28.57)	0.01 (0.00 to 0.01)	23.32 (12.21 to 48.34)	0.01 (0.00 to 0.01)	–22.67 (–54.46 to 45.72)
World Bank lower middle income	134.35 (88.15 to 201.03)	0.01 (0.01 to 0.02)	690.19 (460.95 to 897.12)	0.03 (0.02 to 0.03)	151.88 (68.84 to 269.35)
World Bank upper middle income	2,375.41 (1,612.35 to 2,953.04)	0.13 (0.09 to 0.17)	9,692.75 (8,218.16 to 11,210.52)	0.28 (0.24 to 0.33)	110.57 (58.78 to 189.46)

DALYs, disability-adjusted life years; GBD, Global Burden of Disease; UI, uncertainty interval; YLDs, years lived with disability; YLLs, years of life lost.

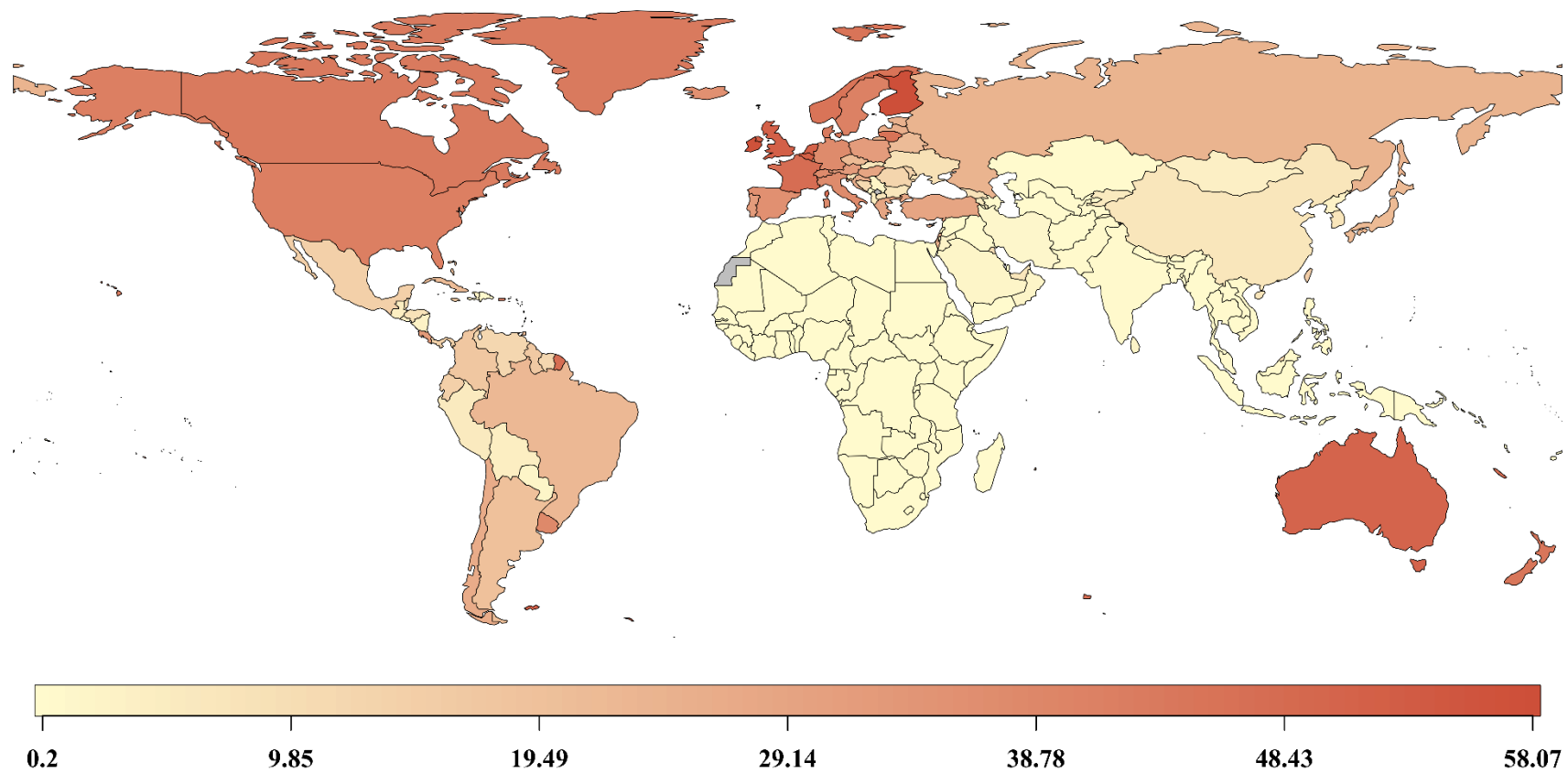


Fig. 1. Global age-standardized disability-adjusted life year (DALY) rates per 100,000 people.

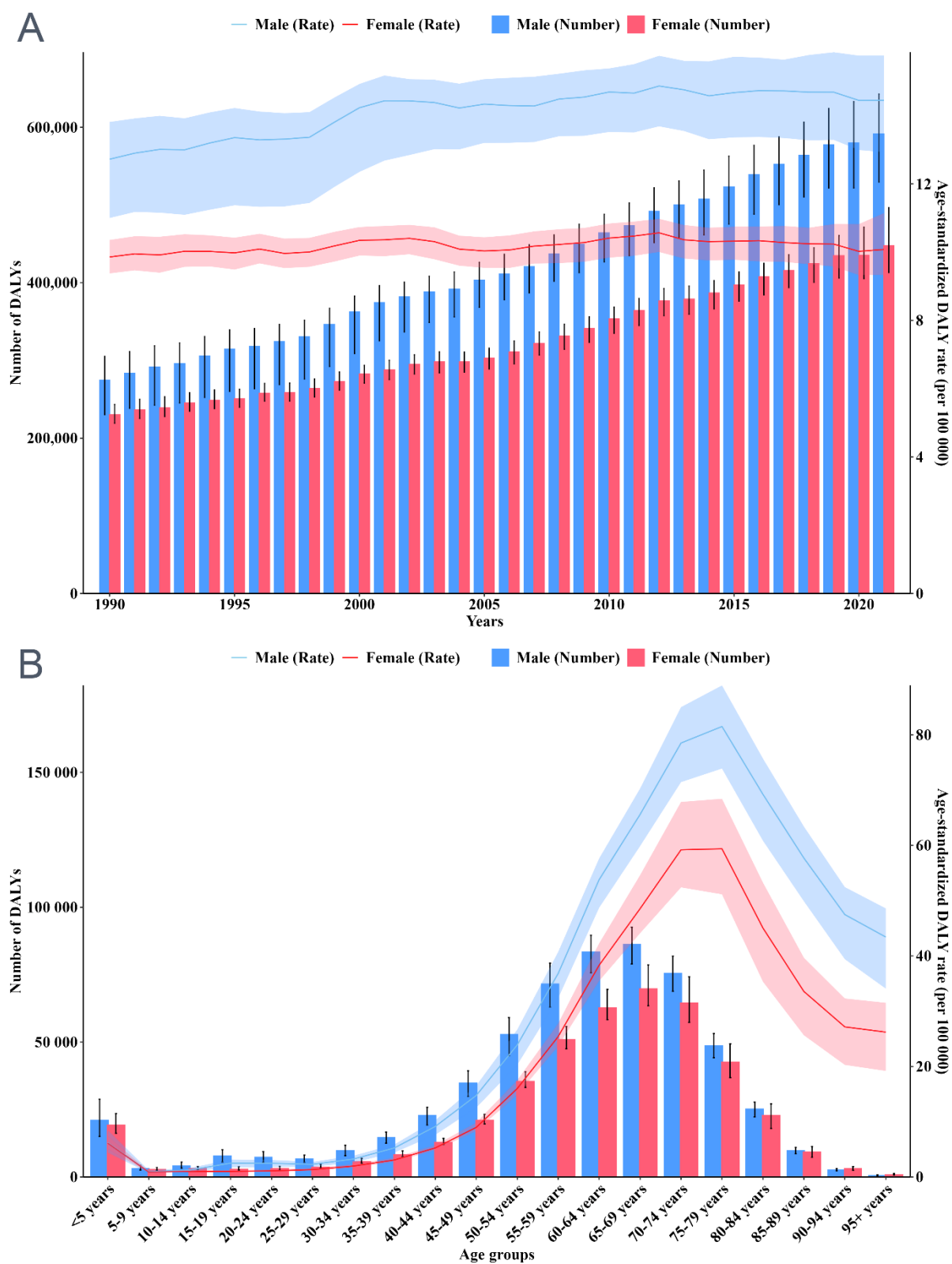


Fig. 2. (A) Disability-adjusted life year (DALY) counts and age-standardized DALY rates per 100,000 people by year and sex. DALY, disability-adjusted life year. (B) DALY counts and age-standardized DALY rates per 100,000 people by age group.

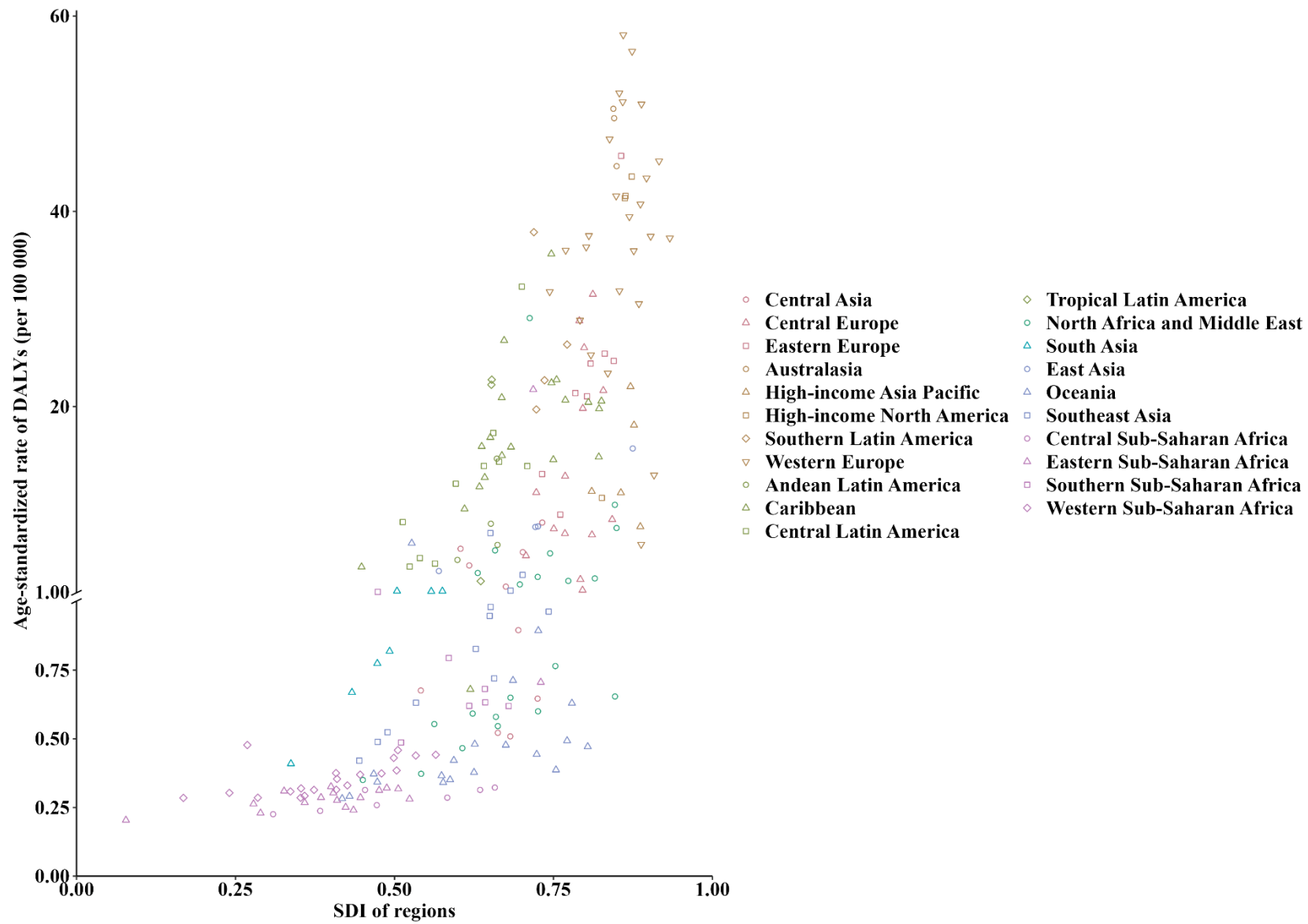


Fig. 3. Age-standardized disability-adjusted life year (DALY) rates per 100,000 people by regional Socio-demographic Index (SDI).