



## Data Release Information Sheet

### ***Data Summary***

Dataset name: Global Malaria Incidence, Prevalence, and Mortality Geospatial Estimates 2000-2019

Date of release: August 31, 2020

#### Summary:

Annual estimates were produced for the prevalence and incidence of malaria and malaria mortality across all ages for all countries between 2000 and 2019. These estimates were produced using geospatial data from household surveys and routine surveillance data. Survey sources include the Demographic and Health Survey (DHS), Malaria Indicator Survey (MIS) and other country-specific surveys.

This dataset includes the following:

- GeoTIFF raster files for pixel-level estimates of malaria prevalence, incidence, and mortality
- CSV files of aggregated malaria prevalence, incidence, and mortality for each country at zero, first and second administrative divisions

#### Relevant publications and visualizations:

- Battle KE, Lucas TCD, Nguyen M, et al. Mapping the global endemicity and clinical burden of *Plasmodium vivax*, 2000–17: a spatial and temporal modelling study. *The Lancet*. 19 Jun 2019.
- Weiss DJ, Lucas TCD, Nguyen M, et al. Mapping the global prevalence, incidence, and mortality of *Plasmodium falciparum*, 2000-17: a spatial and temporal modelling study. *The Lancet*. 27 Jul 2019.

### **Acknowledgements**

#### Contributing organizations:

- Malaria Atlas Project (MAP)
- Institute for Health Metrics and Evaluation (IHME)

#### Funders:

- Bill and Melinda Gates Foundation (BMGF)

### Suggested Citation:

Malaria Atlas Project, Institute for Health Metrics and Evaluation (IHME). Global Malaria Incidence, Prevalence, and Mortality Geospatial Estimates 2000-2019. Seattle, United States of America: Institute for Health Metrics and Evaluation (IHME), 2020.

## Data Files Information

### CSV files of Aggregated Estimates of Malaria Burden

Stored in files named <SPECIES>\_<MEASURE>\_<LEVEL\_OF\_AGGREGATION><AGE\_GROUP>.CSV

(Example: IHME\_MALARIA\_2000\_2019\_PF\_INC\_ADMIN2\_0\_TO\_4\_Y2020M08D31.CSV)

- **Species:** Plasmodium falciparum [PF], Plasmodium vivax [PV]
- **Measure:** Deaths [MORT], Incidence [INC], Prevalence [PFPR, PVPR]
- **Level of aggregation:** admin0, admin1, or admin2, corresponding to first and second administrative level areas as defined in the Malaria Atlas Project Database (2018). Each row in each table is unique by administrative unit, year, and age group.
- **Age group:** 0 to 4 years (0\_to\_4), 5 to 14 years (5\_to\_14), 15 plus years (15+), 0 to 99 years (All\_Ages)

**Note:** No species tag is provided in the mortality files. Age group tags are only provided in the admin2 files for mortality, Pf incidence, and Pv Incidence. These admin2 files needed to disaggregated by age group given their size.

Variable	Variable Label	Variable Definition
ISO3	ISO3 Code	Three letter country code.
ADM0_code	Admin 0 Code	MAP code identifying the administrative unit.
ADM0_Name	Admin 0 Name	Zero level administrative unit (Country) name as found in MAP shapefile.
ADM1_Code	Admin 1 Code	MAP code identifying the administrative unit.
ADM1_Name	Admin 1 Name	First level administrative unit name as found in MAP shapefile.
ADM2_Code	Admin 2 Code	MAP code identifying the administrative unit.
ADM2_Name	Admin 2 Name	Second level administrative unit (Country) name as found in MAP shapefile.
ADM_Level	Admin Level	Administrative unit level of the estimate location. Possible values: 0,1,2
year	Year	Year of the estimate. Possible values 2000-2019

Variable	Variable Label	Variable Definition
age_group_id	Age Group ID	Age group id represented in the estimate. Possible values: 0_to_4,2_to_10,5_to_14,15+,All_Ages
age_group_name	Age Group Name	Age group name represented in the estimate. Possible values: <ul style="list-style-type: none"> <li>• 0 to 4 years</li> <li>• 2 to 10 years</li> <li>• 5 to 14 years</li> <li>• 15 plus</li> <li>• 0 to 99 years</li> </ul>
sex_id	Sex ID	Sex id of estimate. Possible values: 3
sex	Sex	Sex of estimate. Possible values: Both
measure_id	Measure ID	The measure (indicator) estimated. Possible values: 1,5,6
measure	Measure	The measure (indicator) estimated. Possible values: <ul style="list-style-type: none"> <li>• Prevalence</li> <li>• Incidence</li> <li>• Deaths</li> </ul>
metric_id	Metric ID	Metric/unit of measure of the estimate. Values: 3
metric	Metric	Metric/unit of measure of the estimate. Values: Rate
mean	Mean	Mean estimate of the realizations.
lower	95% credible interval (lower bound)	2.5% percentile estimate.
upper	95% credible interval (upper bound)	97.5% percentile estimate.
pop	Population	Population of the admin unit in the specified age group. This enable quick conversion from rate to count.

## GeoTIFF Raster Files for Pixel-level Estimates of Malaria Burden

Stored in files named <MEASURE>\_<STAT>\_<LEVEL\_OF\_AGGREGATION>\_<AGE\_GROUP>\_<YEAR>.TIF

(Example: IHME\_MALARIA\_2000\_2019\_MORT\_RATE\_LCI\_0\_TO\_4\_2008\_Y2020M08D31.TIF)

- **Measure:** Deaths [MORT], Incidence [INC], Prevalence [PFPR, PVPR]
- **Metric:** Rate
- **Stat:** mean, UCI, or LCI summary statistics from the realizations at each pixel. Lower and upper correspond to 2.5% and 97.5% credible intervals
- **Age Group:** 0 to 4 years (0\_to\_4), 5 to 14 years (5\_to\_14), 15 plus years (15+)
- **Year:** From 2000 to 2019, corresponding to the time period of the estimate

## Data Input Sources

This file contains relevant metadata about the input sources as suggested in the [Guidelines for Accurate and Transparent Health Estimates Reporting \(GATHER\)](#), a statement that promotes best practices in reporting health estimates.

[IHME\\_MALARIA\\_2000\\_2019\\_DATA\\_INPUT\\_SOURCES\\_Y2020M08D31.XLSX](#)

## *Additional Information*

### Terms and Conditions

<http://www.healthdata.org/about/terms-and-conditions>

### Contact information

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These files may be updated periodically, so we appreciate hearing feedback or additional information about how these data are being used.