

# GBD PROFILE: GUINEA

## GLOBAL BURDEN OF DISEASES, INJURIES, AND RISK FACTORS STUDY 2010

The Global Burden of Disease Study 2010 (GBD 2010) is a collaborative project of nearly 500 researchers in 50 countries led by the Institute for Health Metrics and Evaluation (IHME) at the University of Washington. It is the largest systematic scientific effort in history to quantify levels and trends of health loss due to diseases, injuries, and risk factors. GBD serves as a global public good to inform evidence-based policymaking and health systems design.

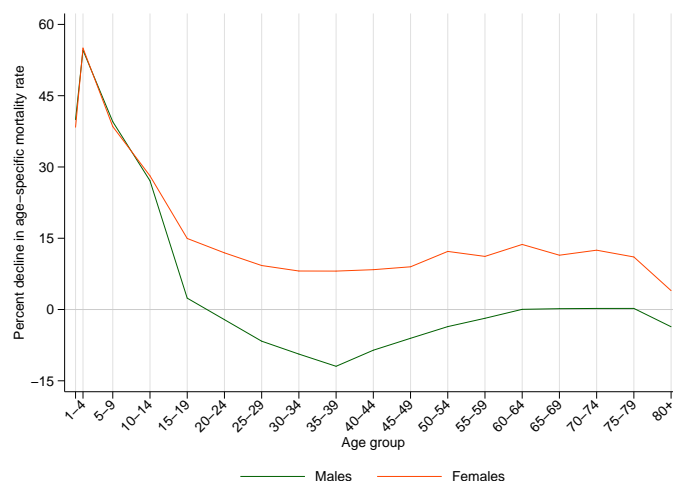
### PROFILE OVERVIEW

- In terms of the number of years of life lost (YLLs) due to premature death in Guinea, malaria, lower respiratory infections, and diarrheal diseases were the highest ranking causes in 2010.
- Of the 25 most important causes of burden, as measured by disability-adjusted life years (DALYs), diarrheal diseases showed the largest decrease, falling by 48% from 1990 to 2010.
- The leading risk factor in Guinea is childhood underweight.

### ALL-CAUSE MORTALITY RATE

- This chart shows the change in mortality rate at every age range. The points above 0 on the chart indicate positive declines in the all-cause mortality rate, while points below 0 indicate an increase in mortality rate between 1990 and 2010.
- The greatest reductions in all-cause mortality rate were experienced by females aged 1-4 years (55%). Males aged 35-39 years saw the largest increase in mortality rate (12%).

Percent decline in age-specific mortality rate by sex from 1990-2010 in Guinea



### CAUSES OF PREMATURE DEATH

Years of life lost (YLLs) quantify premature mortality by weighting younger deaths more than older deaths.

Ranks for top 25 causes of YLLs 1990-2010, Guinea

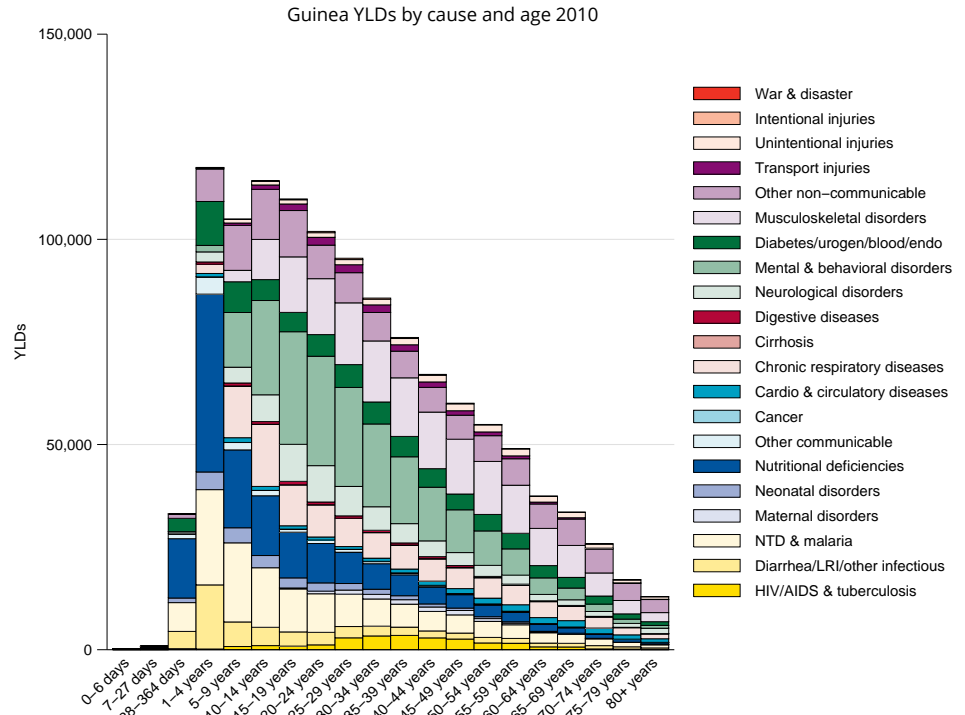
# YLLs in thousands (% of total)	Rank and disorder 1990	Rank and disorder 2010	# YLLs in thousands (% of total)	% change
1,158 (18.3%)	1 Lower respiratory infections	1 Malaria	1,404 (22.5%)	48
939 (14.8%)	2 Malaria	2 Lower respiratory infections	847 (13.7%)	-27
595 (9.4%)	3 Diarrheal diseases	3 Diarrheal diseases	294 (4.8%)	-50
338 (5.3%)	4 Protein-energy malnutrition	4 Neonatal encephalopathy	278 (4.5%)	27
271 (4.3%)	5 Meningitis	5 Meningitis	273 (4.4%)	0
307 (4.8%)	6 Measles	6 Protein-energy malnutrition	257 (4.2%)	-25
221 (3.5%)	7 Neonatal encephalopathy	7 Preterm birth complications	249 (4.1%)	23
207 (3.3%)	8 Preterm birth complications	8 Neonatal sepsis	258 (4.2%)	38
187 (3.0%)	9 Neonatal sepsis	9 HIV/AIDS	194 (3.2%)	532
121 (1.9%)	10 Tetanus	10 Tuberculosis	118 (1.9%)	10
114 (1.8%)	11 Syphilis	11 Stroke	113 (1.8%)	25
107 (1.7%)	12 Tuberculosis	12 Maternal disorders	112 (1.8%)	22
91 (1.4%)	13 Maternal disorders	13 Road injury	103 (1.7%)	77
91 (1.4%)	14 Stroke	14 Congenital anomalies	88 (1.4%)	-3
93 (1.5%)	15 Congenital anomalies	15 Ischemic heart disease	79 (1.3%)	48
59 (0.9%)	16 Road injury	16 Syphilis	77 (1.3%)	-31
54 (0.9%)	17 Ischemic heart disease	17 Epilepsy	74 (1.2%)	52
54 (0.9%)	18 Iron-deficiency anemia	18 Fire	60 (1.0%)	13
54 (0.9%)	19 Fire	19 Liver cancer	51 (0.8%)	71
55 (0.9%)	20 Epilepsy	20 Measles	61 (1.0%)	-81
37 (0.6%)	21 Falls	21 Tetanus	50 (0.8%)	-62
33 (0.5%)	22 COPD	22 Cirrhosis	42 (0.7%)	57
30 (0.5%)	23 Liver cancer	23 Diabetes	40 (0.7%)	88
32 (0.5%)	24 Asthma	24 Falls	38 (0.6%)	6
27 (0.4%)	25 Cirrhosis	25 Iron-deficiency anemia	36 (0.6%)	-33
	26 HIV/AIDS	31 COPD		
	29 Diabetes	34 Asthma		

This chart shows the change in the top 25 causes of YLLs due to premature mortality from 1990 to 2010. Solid lines indicate a cause has moved up in rank or stayed the same. Broken lines indicate a cause has moved down in rank. The causes are color coded by blue for non-communicable diseases, green for injuries, and red for communicable, maternal, neonatal, and nutritional causes of death.

## YEARS LIVED WITH DISABILITY (YLDs)

Years lived with disability (YLDs) are estimated by weighting the prevalence of different conditions based on severity. The top five leading causes of YLDs in Guinea are iron-deficiency anemia, major depressive disorder, low back pain, malaria, and asthma.

The size of the colored portion in each bar represents the number of YLDs attributable to each cause. The height of each bar shows which age groups had the most YLDs in 2010. The causes are aggregated. For example, musculoskeletal disorders include low back pain and neck pain.

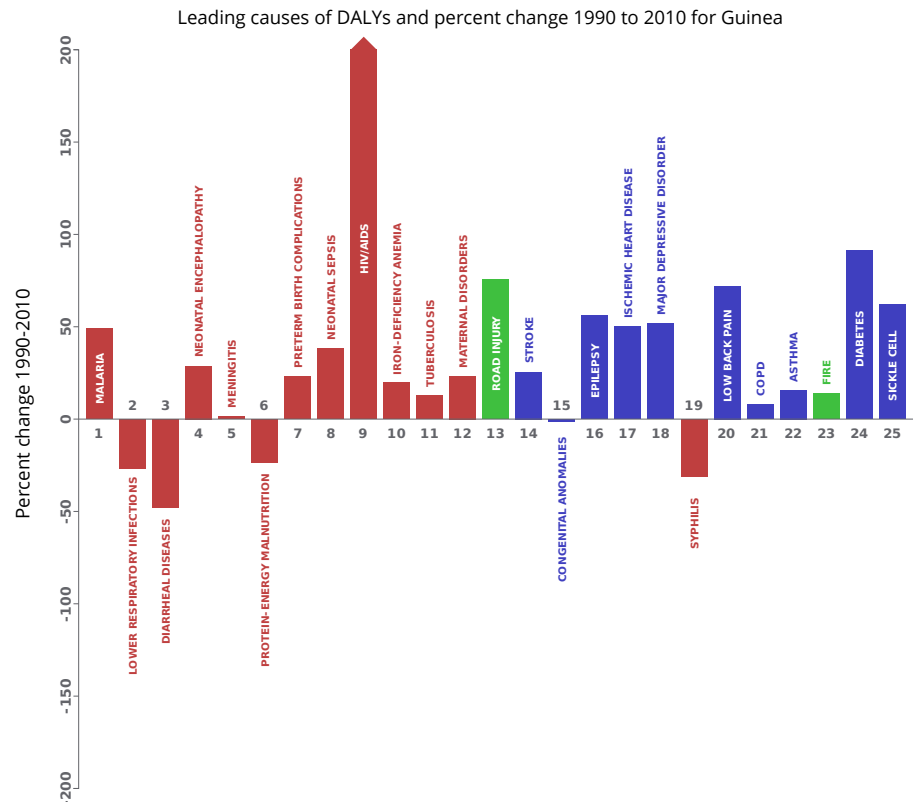


## DISABILITY-ADJUSTED LIFE YEARS (DALYs)

Disability-adjusted life years (DALYs) quantify both premature mortality (YLLs) and disability (YLDs) within a population. In Guinea, the top three causes of DALYs in 2010 were malaria, lower respiratory infections, and diarrheal diseases. The only cause to appear in the 10 leading causes of DALYs in 2010 and not 1990 was HIV/AIDS.

The top 25 causes of DALYs are ranked from left to right in order of the number of DALYs they contributed in 2010. Bars going up show the percent by which DALYs have increased since 1990. Bars going down show the percent by which DALYs have decreased. Globally, non-communicable diseases and injuries are generally on the rise, while communicable, maternal, neonatal, and nutritional causes of DALYs are generally on the decline.

- Communicable, maternal, neonatal, and nutritional
- Non-communicable
- Injuries

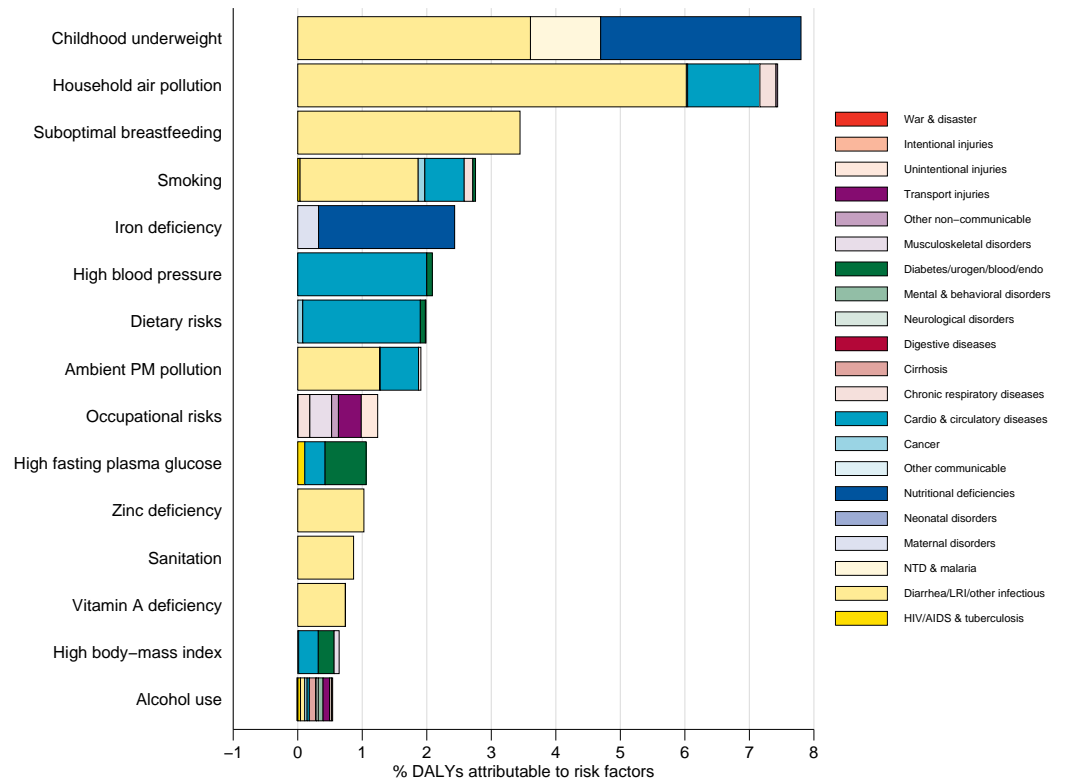


## RISK FACTORS

Overall, the three risk factors that account for the most disease burden in Guinea are childhood underweight, household air pollution from solid fuels, and suboptimal breastfeeding. The leading risk factors for children under 5 and adults aged 15-49 years were childhood underweight and iron deficiency, respectively, in 2010.

The graph shows the top 15 risk factors for Guinea. The colored portion of each bar represents the specific diseases attributable to that risk factor while bar size represents the percentage of DALYs linked to specific risk factors.

Burden of disease attributable to 15 leading risk factors in 2010, expressed as a percentage of Guinea DALYs



## COUNTRY BENCHMARKING OF BURDEN OF DISEASE

Understanding the relative performance of Guinea against other comparator countries provides key insight into public health successes and areas where Guinea might be falling behind. The table identifies Guinea's rank across 14 other comparator countries, selected and ordered by income per capita, for five metrics of interest, with 1 indicating the best rank and 15 indicating the worst rank.

- Age-standardized rates are used to make meaningful comparisons across time by adjusting for changes in population size and age structure.
- Life expectancy incorporates mortality, and health-adjusted life expectancy further incorporates years lived in less than ideal health.
- In 2010, Guinea ranked 8th for age-standardized death rate and 12th for age-standardized YLD rate.

Age-standardized death rates, YLL rates, YLD rates, and life expectancy at birth and health-adjusted life expectancy at birth for 1990 and 2010, both sexes combined																				
Country	Age-standardized death rate (per 100,000)				Age-standardized YLL rate (per 100,000)				Age-standardized YLD rate (per 100,000)				Life expectancy at birth				Health-adjusted life expectancy at birth			
	1990		2010		1990		2010		1990		2010		1990		2010		1990		2010	
	Rate	Rank	Rate	Rank	Rate	Rank	Rate	Rank	Rate	Rank	Rate	Rank	LE	Rank	LE	Rank	HALE	Rank	HALE	Rank
Haiti	1,717	12	3,321	15	61,823	7	137,295	15	15,059	11	16,428	14	54.1	7	37.2	15	45.7	7	31.8	15
Tanzania	1,357	3	1,137	3	55,603	5	43,461	6	14,553	5	14,177	11	56.6	4	61.7	6	47.8	5	52.2	6
Nepal	1,285	2	832	1	49,745	1	26,361	1	13,660	3	12,959	3	58.8	1	69.2	1	49.8	1	58.8	1
Comoros	1,439	4	1,223	7	52,340	3	38,959	5	13,050	1	12,879	2	57.5	3	62.8	5	49.5	2	54	4
Burkina Faso	1,521	7	1,396	12	68,852	8	59,507	13	14,862	10	13,409	4	52.1	8	55.2	13	43.8	8	47.1	13
Uganda	1,658	10	1,290	9	75,253	13	45,587	7	15,596	14	13,882	5	50.4	12	60.3	7	42.2	13	51.5	7
Mali	1,726	13	1,331	10	78,963	15	53,703	11	14,609	7	13,991	8	48.7	15	57.3	11	41.1	15	48.6	10
<b>Guinea</b>	<b>1,508</b>	<b>6</b>	<b>1,233</b>	<b>8</b>	<b>69,094</b>	<b>10</b>	<b>48,350</b>	<b>9</b>	<b>14,811</b>	<b>9</b>	<b>14,194</b>	<b>12</b>	<b>52.1</b>	<b>9</b>	<b>59.4</b>	<b>9</b>	<b>43.7</b>	<b>9</b>	<b>50.2</b>	<b>9</b>
Myanmar	1,640	9	1,185	5	55,134	4	36,251	3	13,542	2	11,974	1	56.5	5	63.9	3	48.6	4	55.6	2
Rwanda	2,000	15	1,062	2	76,083	14	35,591	2	15,064	12	13,895	6	49.7	14	64.6	2	42.3	12	54.8	3
Guinea-Bissau	1,603	8	1,391	11	72,398	11	55,214	12	14,670	8	14,148	10	50.8	11	56.6	12	42.8	10	48	11
Afghanistan	1,931	14	1,668	13	68,958	9	52,078	10	17,727	15	17,252	15	51.9	10	57.7	10	42.4	11	47.3	12
Madagascar	1,451	5	1,156	4	56,586	6	37,200	4	14,116	4	14,145	9	56.1	6	63.6	4	47.6	6	53.8	5
Togo	1,282	1	1,199	6	51,184	2	46,594	8	14,577	6	13,973	7	58.3	2	60.2	8	49.1	3	51	8
Mozambique	1,659	11	1,725	14	74,370	12	67,547	14	15,342	13	14,841	13	50	13	52.5	14	41.9	14	44.5	14

## COUNTRY BENCHMARKING OF BURDEN OF DISEASE, CONTINUED

This figure shows the rank of Guinea relative to the same comparator countries for the leading causes of DALYs in 1990 (top) and 2010 (bottom).

- The columns are ordered by the absolute number of DALYs in Guinea for that particular year, with greatest burden on the left.
- The numbers indicate the rank across countries for each cause in terms of age-standardized DALY rates, with 1 as the best performance and 15 as the worst.

Ranking of leading age-standardized rates of disability-adjusted life years (DALYs) relative to comparator countries in 1990																														
Country	Lower respiratory infections	Malaria	Diarrheal diseases	Protein-energy malnutrition	Meningitis	Measles	Neonatal encephalopathy	Preterm birth complications	Neonatal sepsis	Iron-deficiency anemia	Tuberculosis	Tetanus	Syphilis	Maternal disorders	Congenital anomalies	Stroke	Road injury	COPD	Epilepsy	Ischemic heart disease	Asthma	Fire	Major depressive disorder	Falls	Low back pain					
Haiti	1	2	14	2	9	1	7	4	10	15	12	12	12	7	6	15	4	1	4	14	7	2	8	4	3					
Tanzania	8	13	4	7	2	5	4	1	4	9	6	1	7	5	2	3	6	2	6	3	1	5	2	1	13					
Nepal	9	1	7	3	1	6	15	8	3	7	9	13	5	1	13	2	2	15	3	5	11	3	1	5	15					
Comoros	5	5	1	8	3	8	8	14	8	5	3	4	13	10	11	11	13	9	9	11	4	11	9	3	5					
Burkina Faso	13	10	15	5	12	7	3	3	9	12	4	9	2	3	7	1	11	8	10	2	8	8	10	14	4					
Uganda	7	7	6	9	11	9	10	2	7	6	14	10	8	8	4	5	7	4	5	4	3	15	13	9	8					
Mali	4	14	13	15	13	15	11	15	15	14	10	8	11	15	1	9	8	13	15	9	14	14	6	15	1					
<b>Guinea</b>	<b>15</b>	<b>11</b>	<b>5</b>	<b>11</b>	<b>14</b>	<b>12</b>	<b>14</b>	<b>10</b>	<b>11</b>	<b>11</b>	<b>5</b>	<b>14</b>	<b>10</b>	<b>14</b>	<b>8</b>	<b>7</b>	<b>5</b>	<b>6</b>	<b>13</b>	<b>7</b>	<b>13</b>	<b>9</b>	<b>4</b>	<b>12</b>	<b>7</b>					
Myanmar	2	6	10	1	4	4	12	6	1	3	15	7	3	2	14	10	1	14	2	10	15	1	7	11	2					
Rwanda	10	9	8	12	6	2	5	7	5	1	11	2	4	13	9	12	15	12	7	12	6	12	14	6	12					
Guinea-Bissau	12	12	12	13	15	14	9	13	13	13	8	11	9	12	10	8	12	11	14	8	10	7	5	13	6					
Afghanistan	14	3	3	4	7	3	1	5	2	2	7	15	1	9	15	14	14	7	1	15	12	10	15	8	14					
Madagascar	6	4	9	14	5	11	2	11	6	4	1	3	14	6	12	13	10	10	8	13	5	6	3	2	11					
Togo	3	8	2	6	8	10	6	9	12	10	2	6	6	4	3	6	9	5	11	6	9	4	11	10	10					
Mozambique	11	15	11	10	10	13	13	12	14	8	13	5	15	11	5	4	3	3	12	1	2	13	12	7	9					
Ranking of leading age-standardized rates of disability-adjusted life years (DALYs) relative to comparator countries in 2010																														
Country	Malaria	Lower respiratory infections	Diarrheal diseases	Neonatal encephalopathy	Meningitis	Protein-energy malnutrition	Preterm birth complications	Neonatal sepsis	HIV/AIDS	Iron-deficiency anemia	Tuberculosis	Maternal disorders	Road injury	Stroke	Congenital anomalies	Epilepsy	Ischemic heart disease	Major depressive disorder	Syphilis	Low back pain	COPD	Asthma	Fire	Diabetes	Sickle cell					
Haiti	3	4	9	5	7	4	4	10	4	15	10	4	2	14	11	4	14	7	11	3	1	11	9	15	10					
Tanzania	8	8	3	6	2	7	1	4	14	9	5	10	6	1	2	6	2	12	12	12	2	1	6	4	9					
Nepal	1	1	5	12	1	2	3	3	3	4	4	1	1	2	4	2	10	1	4	15	15	10	2	2	2					
Comoros	5	9	4	8	6	9	11	8	1	8	9	9	11	11	8	9	6	11	13	5	10	4	12	9	6					
Burkina Faso	15	15	15	3	15	12	7	9	8	13	2	6	14	6	13	12	7	3	3	4	9	5	15	13	14					
Uganda	9	2	1	7	10	5	2	6	13	5	14	7	10	4	3	8	3	13	10	13	6	3	11	6	7					
Mali	14	5	12	13	12	15	15	15	9	14	7	12	7	8	1	14	11	10	9	1	13	13	14	10	11					
<b>Guinea</b>	<b>11</b>	<b>14</b>	<b>7</b>	<b>15</b>	<b>13</b>	<b>11</b>	<b>10</b>	<b>11</b>	<b>6</b>	<b>11</b>	<b>6</b>	<b>14</b>	<b>5</b>	<b>7</b>	<b>9</b>	<b>10</b>	<b>9</b>	<b>4</b>	<b>7</b>	<b>7</b>	<b>5</b>	<b>12</b>	<b>8</b>	<b>7</b>	<b>13</b>					
Myanmar	4	7	8	11	3	1	5	1	7	1	13	2	4	12	15	3	8	9	2	2	14	15	1	11	1					
Rwanda	7	3	2	4	5	6	6	5	10	2	12	3	9	9	5	5	4	14	5	9	4	2	4	5	4					
Guinea-Bissau	13	12	14	10	14	14	13	13	11	12	11	13	12	10	12	15	12	2	6	8	8	7	7	12	12					
Afghanistan	2	13	6	1	8	3	14	2	2	3	8	15	15	15	14	1	15	15	1	14	12	14	10	14	3					
Madagascar	6	6	10	2	4	13	8	7	5	6	1	8	3	13	6	7	13	8	14	10	11	8	3	1	8					
Togo	10	11	13	9	11	10	12	14	12	10	3	5	8	5	10	13	5	5	8	6	3	9	5	8	15					
Mozambique	12	10	11	14	9	8	9	12	15	7	15	11	13	3	7	11	1	6	15	11	7	6	13	3	5					
Ranking Legend	1 - 3			4 - 7			8 - 11			12 - 15																				