

# GBD PROFILE: MOZAMBIQUE

## 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.

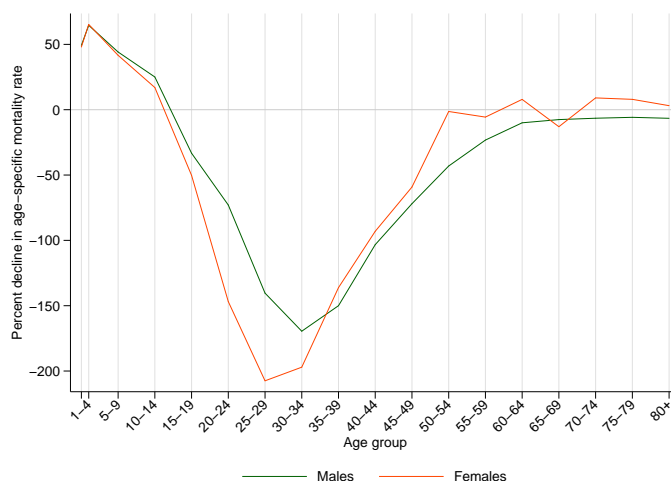
### PROFILE OVERVIEW

- In terms of the number of years of life lost (YLLs) due to premature death in Mozambique, HIV/AIDS, malaria, and lower respiratory infections 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 54% from 1990 to 2010.
- The leading risk factor in Mozambique 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 (65%). Females aged 25-29 years saw the largest increase in mortality rate (207%).

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



### 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, Mozambique

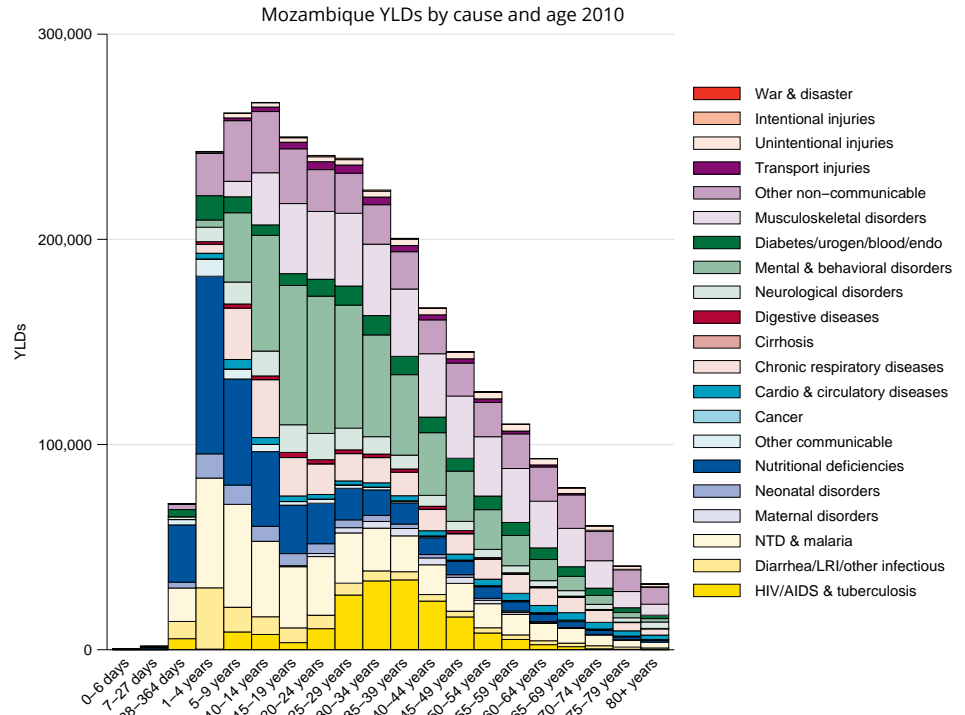
# YLLs in thousands (% of total)	Rank and disorder 1990	Rank and disorder 2010	# YLLs in thousands (% of total)	% change
3,056 (20.0%)	1 Malaria	1 HIV/AIDS	3,680 (21.8%)	> 9,999
1,998 (13.1%)	2 Lower respiratory infections	2 Malaria	3,258 (19.2%)	7
1,913 (12.5%)	3 Diarrheal diseases	3 Lower respiratory infections	1,112 (6.6%)	-45
736 (4.8%)	4 Syphilis	4 Diarrheal diseases	842 (5.0%)	-56
668 (4.4%)	5 Protein-energy malnutrition	5 Neonatal sepsis	616 (3.6%)	8
761 (5.0%)	6 Measles	6 Preterm birth complications	558 (3.3%)	12
587 (3.9%)	7 Neonatal sepsis	7 Neonatal encephalopathy	537 (3.2%)	22
499 (3.3%)	8 Preterm birth complications	8 Tuberculosis	526 (3.1%)	13
497 (3.3%)	9 Meningitis	9 Meningitis	455 (2.7%)	-8
473 (3.1%)	10 Tuberculosis	10 Syphilis	417 (2.5%)	-42
436 (2.9%)	11 Neonatal encephalopathy	11 Road injury	335 (2.0%)	169
177 (1.2%)	12 Congenital anomalies	12 Protein-energy malnutrition	326 (1.9%)	-50
159 (1.0%)	13 Maternal disorders	13 Maternal disorders	248 (1.5%)	44
123 (0.8%)	14 Fire	14 Stroke	177 (1.0%)	74
118 (0.8%)	15 Road injury	15 Epilepsy	137 (0.8%)	51
130 (0.9%)	16 Mechanical forces	16 Drowning	135 (0.8%)	50
101 (0.7%)	17 Stroke	17 Congenital anomalies	132 (0.8%)	-27
93 (0.6%)	18 Epilepsy	18 Fire	123 (0.7%)	-1
89 (0.6%)	19 Drowning	19 Interpersonal violence	118 (0.7%)	178
67 (0.4%)	20 Cirrhosis	20 Self-harm	117 (0.7%)	179
66 (0.4%)	21 Poisonings	21 Cirrhosis	95 (0.6%)	51
61 (0.4%)	22 Falls	22 Falls	89 (0.5%)	47
57 (0.4%)	23 Animal contact	23 Diabetes	83 (0.5%)	103
63 (0.4%)	24 Glomerulonephritis	24 Ischemic heart disease	80 (0.5%)	95
53 (0.3%)	25 War & legal intervention	25 Chronic kidney disease	78 (0.5%)	110
	29 Interpersonal violence	26 Mechanical forces		
	30 Self-harm	28 Poisonings		
	31 Ischemic heart disease	31 Animal contact		
	32 Diabetes	33 Glomerulonephritis		
	35 Chronic kidney disease	47 Measles		
	55 HIV/AIDS			

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 Mozambique are iron-deficiency anemia, major depressive disorder, low back pain, HIV/AIDS, and schistosomiasis.

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.

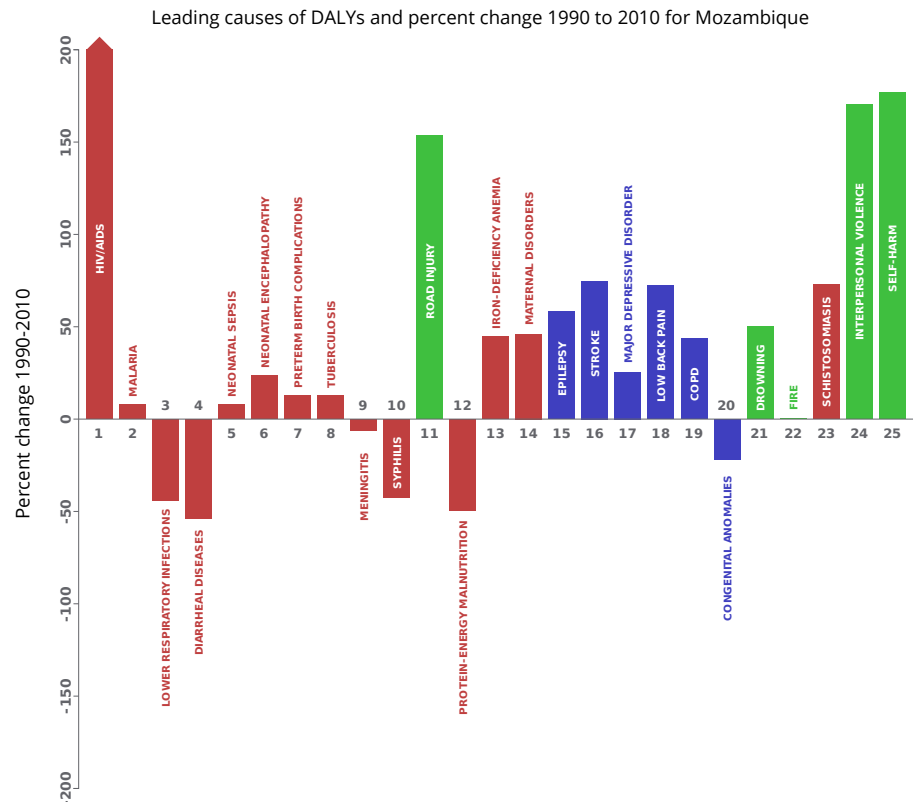


## DISABILITY-ADJUSTED LIFE YEARS (DALYs)

Disability-adjusted life years (DALYs) quantify both premature mortality (YLLs) and disability (YLDs) within a population. In Mozambique, the top three causes of DALYs in 2010 were HIV/AIDS, malaria, and lower respiratory infections. Two causes that appeared in the 10 leading causes of DALYs in 2010 and not 1990 were HIV/AIDS and neonatal encephalopathy (birth asphyxia and birth trauma).

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

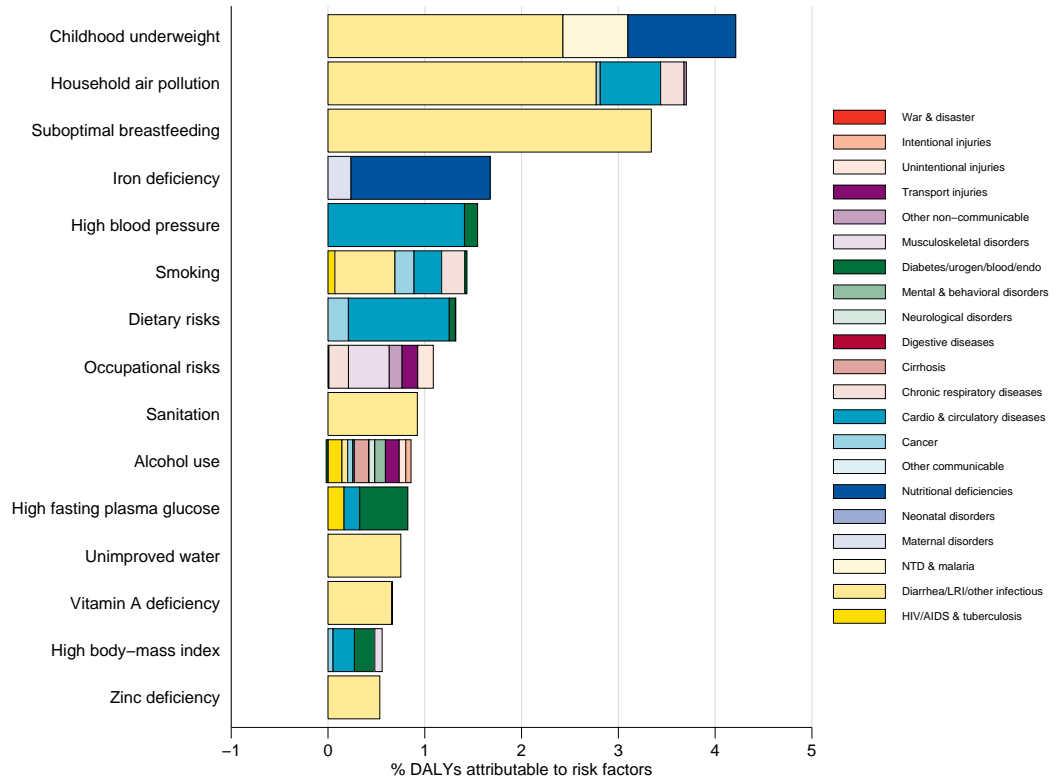


## RISK FACTORS

Overall, the three risk factors that account for the most disease burden in Mozambique 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 occupational risks, respectively, in 2010.

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

The graph shows the top 15 risk factors for Mozambique. 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.



## COUNTRY BENCHMARKING OF BURDEN OF DISEASE

Understanding the relative performance of Mozambique against other comparator countries provides key insight into public health successes and areas where Mozambique might be falling behind. The table identifies Mozambique'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, Mozambique ranked 12th for age-standardized YLD rate and 14th for life expectancy.

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
Guinea	1,508	3	1,233	5	69,094	6	48,350	7	14,811	8	14,194	8	52.1	5	59.4	7	43.7	5	50.2	7
Myanmar	1,640	5	1,185	3	55,134	2	36,251	2	13,542	1	11,974	1	56.5	2	63.9	2	48.6	2	55.6	1
Rwanda	2,000	13	1,062	1	76,083	10	35,591	1	15,064	9	13,895	3	49.7	10	64.6	1	42.3	9	54.8	2
Guinea-Bissau	1,603	4	1,391	10	72,398	8	55,214	11	14,670	7	14,148	7	50.8	8	56.6	11	42.8	7	48	10
Afghanistan	1,931	12	1,668	12	68,958	5	52,078	9	17,727	15	17,252	15	51.9	6	57.7	9	42.4	8	47.3	12
Madagascar	1,451	2	1,156	2	56,586	3	37,200	3	14,116	3	14,145	6	56.1	3	63.6	3	47.6	3	53.8	3
Togo	1,282	1	1,199	4	51,184	1	46,594	6	14,577	6	13,973	5	58.3	1	60.2	6	49.1	1	51	6
<b>Mozambique</b>	<b>1,659</b>	<b>6</b>	<b>1,725</b>	<b>13</b>	<b>74,370</b>	<b>9</b>	<b>67,547</b>	<b>14</b>	<b>15,342</b>	<b>12</b>	<b>14,841</b>	<b>12</b>	<b>50</b>	<b>9</b>	<b>52.5</b>	<b>14</b>	<b>41.9</b>	<b>10</b>	<b>44.5</b>	<b>14</b>
Sierra Leone	1,682	7	1,347	8	78,271	11	49,641	8	15,322	11	15,221	14	48.9	11	58.6	8	40.9	12	49.1	8
Ethiopia	2,152	15	1,292	7	86,420	14	43,719	4	13,713	2	12,723	2	46.7	14	60.9	4	40.2	14	52.5	4
Malawi	1,768	10	1,730	14	79,007	12	66,486	13	15,082	10	14,549	10	48.7	12	52.9	13	41	11	45	13
Central African Republic	2,131	14	2,408	15	81,026	13	90,581	15	15,696	14	15,022	13	48.3	13	46.2	15	40.8	13	39.5	15
Eritrea	1,807	11	1,353	9	67,111	4	44,346	5	15,508	13	14,614	11	52.4	4	60.6	5	44	4	51.2	5
Somalia	1,738	8	1,606	11	70,184	7	57,208	12	14,350	4	14,546	9	51.3	7	55.8	12	43.6	6	47.4	11
Niger	1,765	9	1,268	6	88,497	15	52,955	10	14,526	5	13,915	4	46.1	15	57.7	10	39	15	48.9	9

## COUNTRY BENCHMARKING OF BURDEN OF DISEASE, CONTINUED

This figure shows the rank of Mozambique 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 Mozambique 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	Malaria	Lower respiratory infections	Diarrheal diseases	Syphilis	Protein-energy malnutrition	Measles	Neonatal sepsis	Meningitis	Preterm birth complications	Tuberculosis	Neonatal encephalopathy	Iron-deficiency anemia	Maternal disorders	Congenital anomalies	Major depressive disorder	Road injury	Epilepsy	Fire	Mechanical forces	COPD	Stroke	Low back pain	Drowning	Falls	Schistosomiasis
Guinea	12	13	4	12	5	10	12	11	9	3	15	12	12	5	4	3	12	7	7	3	5	6	2	12	11
Myanmar	6	1	7	2	1	4	1	1	6	13	12	3	1	12	7	1	2	1	8	14	11	1	9	11	1
Rwanda	9	6	5	6	7	1	7	3	7	10	8	1	11	7	14	15	6	9	5	12	13	12	12	6	7
Guinea-Bissau	13	9	9	11	8	12	14	12	13	5	10	13	9	8	5	12	13	6	6	9	6	5	5	13	5
Afghanistan	1	12	2	1	2	2	2	5	4	4	1	2	5	14	15	14	1	8	15	4	15	15	15	9	1
Madagascar	3	3	6	14	10	9	8	2	11	1	2	4	3	11	2	8	7	4	4	8	14	11	7	1	13
Togo	7	2	1	9	3	8	13	7	8	2	9	9	2	2	9	7	10	2	1	2	4	10	1	10	8
<b>Mozambique</b>	<b>15</b>	<b>8</b>	<b>8</b>	<b>15</b>	<b>4</b>	<b>11</b>	<b>15</b>	<b>9</b>	<b>12</b>	<b>11</b>	<b>13</b>	<b>8</b>	<b>7</b>	<b>3</b>	<b>11</b>	<b>2</b>	<b>11</b>	<b>12</b>	<b>12</b>	<b>1</b>	<b>1</b>	<b>9</b>	<b>13</b>	<b>8</b>	<b>14</b>
Sierra Leone	14	11	3	5	15	7	9	13	15	6	14	15	4	9	3	6	14	5	3	10	7	8	3	15	15
Ethiopia	4	14	10	7	6	15	5	10	14	14	5	6	14	10	1	11	4	15	14	13	2	2	6	5	6
Malawi	11	4	14	4	9	3	11	4	2	8	11	7	8	15	8	9	5	14	2	5	12	3	14	2	12
Central African Republic	10	5	12	13	13	6	3	14	10	15	4	11	10	13	13	13	3	3	13	15	10	4	11	7	3
Eritrea	2	7	13	8	11	14	4	6	1	12	3	10	15	1	12	5	8	10	10	11	9	13	8	3	9
Somalia	8	10	11	3	12	5	6	8	5	9	6	5	13	6	10	10	9	11	11	7	8	14	10	4	10
Niger	5	15	15	10	14	13	10	15	3	7	7	14	6	4	6	4	15	13	9	6	3	7	4	14	4
Ranking of leading age-standardized rates of disability-adjusted life years (DALYs) relative to comparator countries in 2010																									
Country	HIV/AIDS	Malaria	Lower respiratory infections	Diarrheal diseases	Neonatal sepsis	Neonatal encephalopathy	Preterm birth complications	Tuberculosis	Meningitis	Syphilis	Road injury	Protein-energy malnutrition	Iron-deficiency anemia	Maternal disorders	Epilepsy	Stroke	Major depressive disorder	Low back pain	COPD	Congenital anomalies	Drowning	Fire	Schistosomiasis	Interpersonal violence	Self-harm
Guinea	6	13	12	3	12	15	9	3	12	11	4	6	10	9	10	5	4	8	4	9	2	7	11	3	2
Myanmar	7	2	3	5	1	12	5	8	1	2	3	1	1	1	2	12	8	1	14	14	9	1	1	12	13
Rwanda	9	6	1	1	6	8	6	7	3	6	7	3	2	2	4	6	14	10	3	1	7	4	7	14	8
Guinea-Bissau	10	15	8	12	14	11	11	5	14	8	11	10	12	8	15	7	2	9	7	11	5	6	5	5	3
Afghanistan	1	1	9	2	2	1	12	4	5	1	14	2	3	11	1	15	15	15	13	13	13	8	1	15	6
Madagascar	2	5	2	6	9	2	7	1	2	13	2	7	6	5	6	14	7	12	11	2	8	3	13	10	7
Togo	12	10	7	9	15	9	10	2	10	12	6	5	8	3	13	4	5	7	1	10	3	5	8	6	5
<b>Mozambique</b>	<b>14</b>	<b>14</b>	<b>4</b>	<b>7</b>	<b>13</b>	<b>14</b>	<b>8</b>	<b>13</b>	<b>7</b>	<b>14</b>	<b>12</b>	<b>4</b>	<b>7</b>	<b>7</b>	<b>12</b>	<b>1</b>	<b>6</b>	<b>13</b>	<b>6</b>	<b>3</b>	<b>14</b>	<b>10</b>	<b>14</b>	<b>9</b>	<b>14</b>
Sierra Leone	8	11	6	4	8	13	15	9	11	4	5	14	15	6	11	8	9	6	5	7	1	2	15	4	4
Ethiopia	4	3	11	8	4	3	14	11	6	9	10	9	4	4	5	2	1	2	12	4	6	9	6	11	10
Malawi	15	7	10	10	10	10	1	10	4	7	13	8	5	13	7	13	11	3	9	12	15	15	12	2	15
Central African Republic	13	12	14	15	3	6	13	15	15	15	15	15	13	15	3	11	10	4	15	15	12	13	3	13	12
Eritrea	5	4	5	11	7	5	3	12	8	5	9	11	11	12	9	10	13	11	8	5	10	12	9	8	11
Somalia	11	8	13	13	5	7	4	14	9	3	8	13	9	14	8	9	12	14	10	6	11	14	10	7	9
Niger	3	9	15	14	11	4	2	6	13	10	1	12	14	10	14	3	3	5	2	8	4	11	4	1	1
Ranking Legend	1 - 3			4 - 7			8 - 11			12 - 15															