

# GBD PROFILE: OMAN

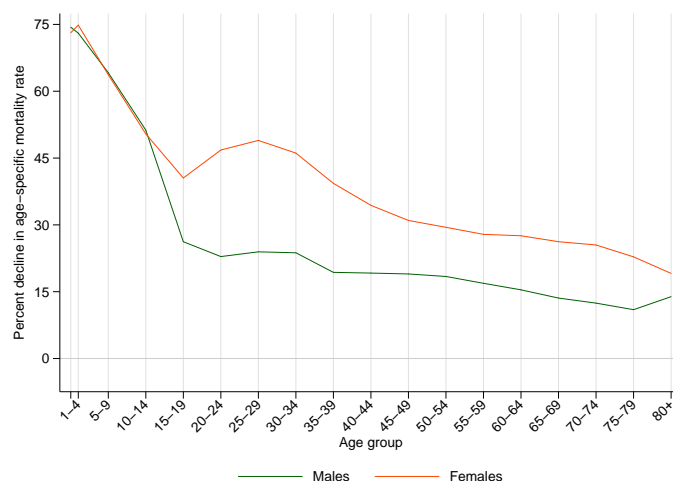
## GLOBAL BURDEN OF DISEASES, INJURIES, AND RISK FACTORS STUDY 2010

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 Oman, road injury, ischemic heart disease, and cerebrovascular disease were the highest ranking causes in 2010.
- Of the 25 most important causes of burden, as measured by disability-adjusted life years (DALYs), congenital anomalies showed the largest decrease, falling by 76% from 1990 to 2010.
- The leading risk factor in Oman is high body-mass index.

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



### ALL-CAUSE MORTALITY RATE

- This chart shows the decline in mortality rate at every age range. The higher points on the chart indicate that declines in mortality rates were faster in those age groups between 1990 and 2010.
- The greatest reductions in all-cause mortality rate were experienced by females aged 1-4 years (75%). Males aged 75-79 years saw the smallest decrease in mortality rate (11%).

### 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, Oman

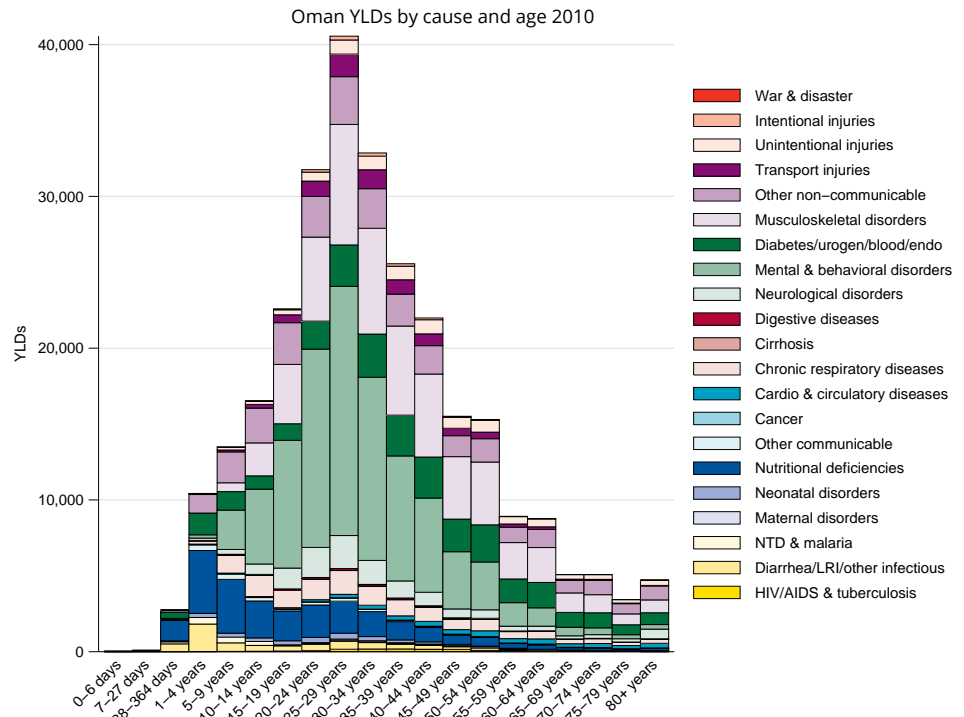
# YLLs in thousands (% of total)	Rank and disorder 1990	Rank and disorder 2010	# YLLs in thousands (% of total)	% change
64 (15.1%)	1 Congenital anomalies	1 Road injury	54 (21.0%)	5
51 (12.1%)	2 Lower respiratory infections	2 Ischemic heart disease	26 (10.0%)	0
50 (11.8%)	3 Road injury	3 Stroke	15 (5.9%)	-24
31 (7.3%)	4 Preterm birth complications	4 Diabetes	15 (5.7%)	128
26 (6.2%)	5 Ischemic heart disease	5 Congenital anomalies	14 (5.6%)	-78
20 (4.8%)	6 Stroke	6 Lower respiratory infections	13 (4.9%)	-75
15 (3.6%)	7 Meningitis	7 Preterm birth complications	9 (3.6%)	-70
14 (3.3%)	8 Protein-energy malnutrition	8 Cirrhosis	5 (2.1%)	106
10 (2.5%)	9 Other cardio & circulatory	9 Other cardio & circulatory	6 (2.2%)	-44
8 (1.8%)	10 Neonatal encephalopathy	10 Meningitis	5 (1.8%)	-69
7 (1.6%)	11 Diabetes	11 Chronic kidney disease	4 (1.7%)	86
6 (1.4%)	12 Diarrheal diseases	12 Rheumatic heart disease	4 (1.6%)	23
6 (1.4%)	13 Drowning	13 Hypertensive heart disease	4 (1.5%)	-1
4 (1.0%)	14 Encephalitis	14 Drowning	4 (1.4%)	-38
4 (0.9%)	15 Hypertensive heart disease	15 Mechanical forces	3 (1.3%)	10
4 (0.9%)	16 Rheumatic heart disease	16 Protein-energy malnutrition	3 (1.2%)	-77
4 (0.9%)	17 Neonatal sepsis	17 Falls	3 (1.2%)	59
3 (0.8%)	18 Mechanical forces	18 Leukemia	2 (0.9%)	7
3 (0.7%)	19 Tuberculosis	19 Neonatal encephalopathy	2 (0.9%)	-69
3 (0.6%)	20 Cirrhosis	20 Diarrheal diseases	2 (0.8%)	-64
3 (0.7%)	21 Maternal disorders	21 Stomach cancer	2 (0.8%)	-9
2 (0.6%)	22 Chronic kidney disease	22 Liver cancer	2 (0.7%)	58
2 (0.5%)	23 Leukemia	23 Breast cancer	2 (0.7%)	195
2 (0.5%)	24 Stomach cancer	24 Lung cancer	2 (0.7%)	24
2 (0.5%)	25 Cardiomyopathy	25 Non-Hodgkin lymphoma	2 (0.7%)	59
	29 Falls	26 Neonatal sepsis		
	31 Lung cancer	32 Tuberculosis		
	32 Liver cancer	38 Cardiomyopathy		
	36 Non-Hodgkin lymphoma	39 Encephalitis		
	49 Breast cancer	52 Maternal disorders		

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 Oman are major depressive disorder, low back pain, iron-deficiency anemia, diabetes mellitus, and anxiety disorders.

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.

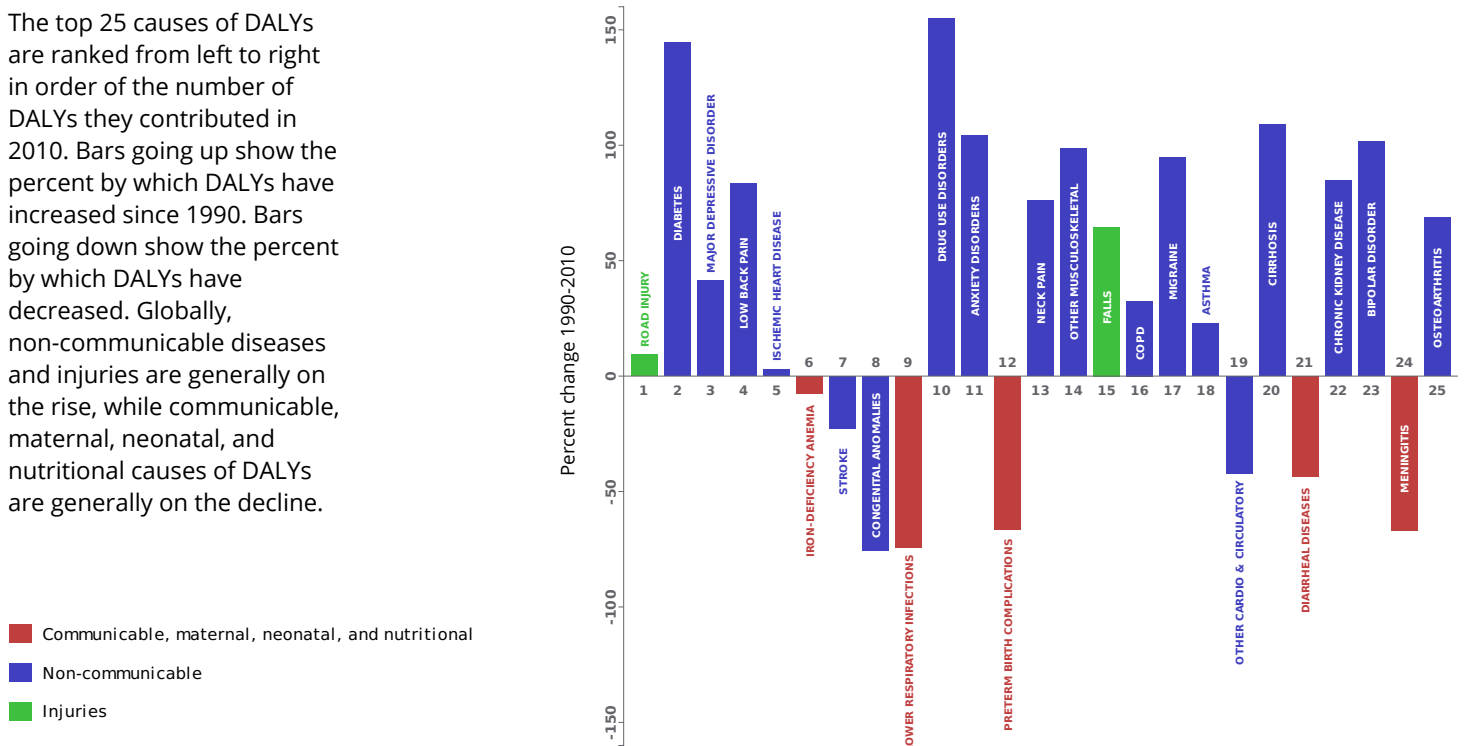


## DISABILITY-ADJUSTED LIFE YEARS (DALYs)

Disability-adjusted life years (DALYs) quantify both premature mortality (YLLs) and disability (YLDs) within a population. In Oman, the top three causes of DALYs in 2010 were road injury, diabetes mellitus, and major depressive disorder. Two causes that appeared in the 10 leading causes of DALYs in 2010 and not 1990 were diabetes mellitus and drug use disorders.

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.

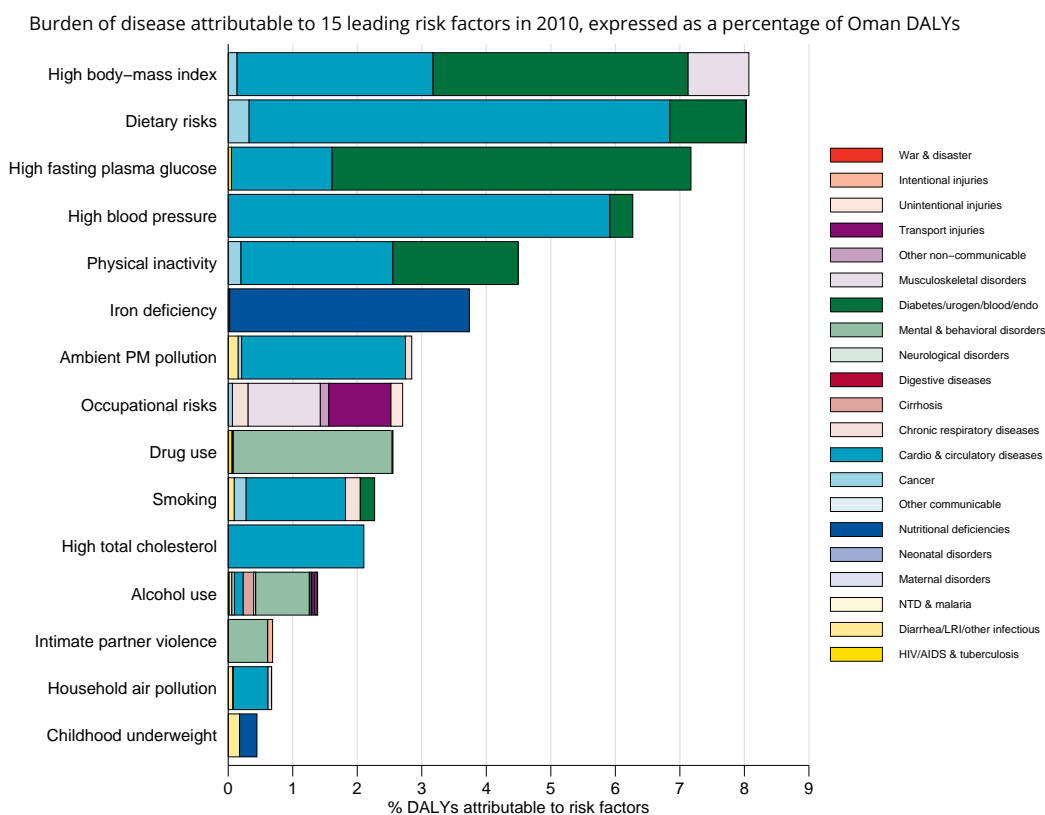
Leading causes of DALYs and percent change 1990 to 2010 for Oman



## RISK FACTORS

Overall, the three risk factors that account for the most disease burden in Oman are high body-mass index, dietary risks, and high fasting plasma glucose. The leading risk factors for children under 5 and adults aged 15-49 years were childhood underweight and dietary risks, respectively, in 2010.

The graph shows the top 15 risk factors for Oman. 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 Oman against other comparator countries provides key insight into public health successes and areas where Oman might be falling behind. The table identifies Oman'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, Oman ranked 9th for life expectancy and 11th 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
Israel	584	3	406	1	12,760	3	7,682	1	10,877	2	10,792	3	76.4	3	81.1	1	66.2	3	69.7	2
Slovenia	760	7	465	5	17,330	5	9,491	6	11,410	5	11,095	5	73.1	6	79.3	6	63.2	6	68.3	6
South Korea	813	9	447	3	18,830	7	8,941	4	10,074	1	9,575	1	72.1	7	79.7	4	63.8	5	70.3	1
Trinidad and Tobago	934	12	883	13	24,788	13	21,845	13	12,458	12	12,885	14	69.1	13	70.6	13	59.5	13	59.4	13
Cyprus	530	1	451	4	11,703	2	8,924	3	11,659	7	11,481	8	78	1	80.2	2	67.1	1	68.8	3
Czech Republic	876	10	548	8	19,311	8	10,997	7	11,015	3	10,759	2	71.6	9	77.5	7	62.4	8	67.2	7
Malta	549	2	438	2	11,476	1	8,404	2	11,535	6	11,615	10	77.2	2	80.1	3	66.6	2	68.7	4
<b>Oman</b>	<b>783</b>	<b>8</b>	<b>596</b>	<b>10</b>	<b>22,087</b>	<b>11</b>	<b>13,868</b>	<b>10</b>	<b>12,455</b>	<b>11</b>	<b>11,963</b>	<b>11</b>	<b>71.3</b>	<b>10</b>	<b>75.9</b>	<b>9</b>	<b>60.7</b>	<b>11</b>	<b>64.8</b>	<b>10</b>
Barbados	744	6	593	9	21,168	10	15,643	12	12,700	13	12,588	13	71.9	8	75.6	10	61.4	9	63.3	12
Saudi Arabia	641	4	538	7	17,367	6	12,637	8	12,745	14	12,489	12	74	5	77.1	8	62.5	7	65.1	9
Portugal	679	5	468	6	16,152	4	9,407	5	11,409	4	11,123	6	74.3	4	79.4	5	64.4	4	68.6	5
Seychelles	1,133	14	1,187	14	29,858	14	31,195	14	11,681	9	11,259	7	66.7	14	66.1	14	58.3	14	58.1	14
Equatorial Guinea	2,053	15	1,284	15	79,601	15	53,344	15	15,024	15	14,660	15	48.7	15	57.7	15	41.3	15	48.6	15
Slovakia	893	11	652	11	20,667	9	13,779	9	11,905	10	11,042	4	71	11	75.4	11	61.2	10	65.4	8
Hungary	970	13	694	12	23,806	12	15,271	11	11,665	8	11,589	9	69.4	12	74.5	12	60.2	12	64.2	11

## COUNTRY BENCHMARKING OF BURDEN OF DISEASE, CONTINUED

This figure shows the rank of Oman 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 Oman 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	Congenital anomalies	Road injury	Lower respiratory infections	Preterm birth complications	Ischemic heart disease	Iron-deficiency anemia	Major depressive disorder	Stroke	Low back pain	Meningitis	Protein-energy malnutrition	Diabetes	Other cardio & circulatory	Diarrheal diseases	Neonatal encephalopathy	COPD	Neck pain	Anxiety disorders	Drowning	Falls	Asthma	Drug use disorders	Other musculoskeletal	Encephalitis	Hypertensive heart disease
Israel	4	3	2	7	6	4	4	1	11	3	8	7	5	7	3	9	12	1	2	5	5	11	11	2	3
Slovenia	5	10	5	3	5	9	5	6	8	2	4	2	8	3	5	11	9	8	4	13	3	1	7	7	9
South Korea	3	11	3	1	3	5	1	15	4	7	9	10	1	9	1	11	7	11	9	10	8	15	11	6	6
Trinidad and Tobago	11	4	12	11	12	14	9	9	1	12	10	15	9	13	13	8	4	12	13	2	12	13	10	8	14
Cyprus	2	9	7	2	4	1	10	3	14	6	6	1	4	6	6	5	15	11	3	4	9	6	12	3	4
Czech Republic	6	6	6	6	14	7	3	11	10	4	3	4	6	2	9	12	7	9	6	12	1	3	6	6	5
Malta	7	1	1	4	8	3	7	2	15	1	1	8	3	5	2	7	13	6	1	8	7	12	14	1	2
<b>Oman</b>	<b>15</b>	<b>15</b>	<b>13</b>	<b>10</b>	<b>10</b>	<b>12</b>	<b>13</b>	<b>8</b>	<b>7</b>	<b>14</b>	<b>14</b>	<b>13</b>	<b>15</b>	<b>11</b>	<b>10</b>	<b>3</b>	<b>2</b>	<b>4</b>	<b>9</b>	<b>3</b>	<b>6</b>	<b>10</b>	<b>2</b>	<b>14</b>	<b>12</b>
Barbados	13	2	10	14	1	13	15	4	2	11	11	14	14	10	15	2	5	15	12	1	14	15	9	5	8
Saudi Arabia	12	13	9	15	9	11	12	5	6	10	12	12	7	14	12	10	1	3	10	6	8	14	1	12	10
Portugal	8	12	8	5	2	2	6	10	13	9	2	9	2	8	7	6	14	5	5	10	13	7	13	4	1
Seychelles	1	5	14	8	11	6	11	14	3	13	13	3	13	12	11	14	3	2	15	7	11	9	3	13	15
Equatorial Guinea	14	14	15	13	7	15	14	13	5	15	15	11	11	15	14	15	10	13	14	11	15	2	5	15	11
Slovakia	9	7	11	9	15	10	8	7	9	5	5	5	10	4	4	4	6	14	8	14	4	4	4	9	7
Hungary	10	8	4	12	13	8	2	12	12	8	7	6	12	1	8	13	8	10	7	15	2	5	8	10	13
Ranking of leading age-standardized rates of disability-adjusted life years (DALYs) relative to comparator countries in 2010																									
Country	Road injury	Diabetes	Major depressive disorder	Low back pain	Ischemic heart disease	Iron-deficiency anemia	Stroke	Congenital anomalies	Lower respiratory infections	Drug use disorders	Anxiety disorders	Preterm birth complications	Neck pain	Other musculoskeletal	Falls	COPD	Migraine	Asthma	Other cardio & circulatory	Cirrhosis	Diarrheal diseases	Chronic kidney disease	Bipolar disorder	Meningitis	Osteoarthritis
Israel	2	8	7	11	3	3	1	6	1	8	1	6	11	13	6	6	7	6	5	3	9	9	4	1	1
Slovenia	10	1	6	8	5	7	4	5	4	4	5	5	7	5	15	9	14	3	6	11	2	1	7	4	9
South Korea	3	7	1	4	1	5	8	3	5	7	8	2	12	15	2	1	15	5	1	10	7	4	2	3	6
Trinidad and Tobago	11	15	11	1	12	15	14	14	11	12	4	13	5	8	5	8	5	11	10	6	13	14	15	12	12
Cyprus	6	10	12	13	7	1	3	1	3	5	6	3	13	11	7	4	8	10	3	2	8	6	3	5	2
Czech Republic	5	2	2	9	10	10	7	2	7	1	11	4	6	3	12	12	11	1	9	9	1	2	9	6	8
Malta	1	3	14	15	6	2	2	9	6	10	13	7	14	9	9	7	6	8	2	1	6	8	1	7	3
<b>Oman</b>	<b>14</b>	<b>14</b>	<b>8</b>	<b>7</b>	<b>9</b>	<b>13</b>	<b>10</b>	<b>13</b>	<b>9</b>	<b>10</b>	<b>8</b>	<b>2</b>	<b>2</b>	<b>4</b>	<b>5</b>	<b>2</b>	<b>7</b>	<b>13</b>	<b>7</b>	<b>12</b>	<b>12</b>	<b>11</b>	<b>13</b>	<b>14</b>	
Barbados	8	12	10	2	4	14	5	10	12	14	3	12	4	12	3	2	4	15	15	5	10	11	14	11	10
Saudi Arabia	13	13	13	6	11	12	11	11	10	11	14	14	1	1	1	11	1	9	7	4	11	13	10	10	15
Portugal	4	5	5	14	2	4	6	4	8	6	9	1	15	10	8	3	9	13	4	8	5	7	5	2	4
Seychelles	12	11	9	3	15	6	15	12	14	13	2	11	3	14	13	14	10	12	11	15	14	15	13	14	5
Equatorial Guinea	15	9	15	5	8	11	13	15	15	15	15	15	10	7	10	15	3	14	14	12	15	10	12	15	7
Slovakia	9	4	4	10	14	9	9	8	9	2	7	9	9	4	11	10	13	4	12	13	4	5	8	9	11
Hungary	7	6	3	12	13	8	12	7	2	3	12	10	8	6	14	13	12	2	8	14	3	3	6	8	13
Ranking Legend	1 - 3			4 - 7				8 - 11					12 - 15												