

# GBD PROFILE: ITALY

## 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.

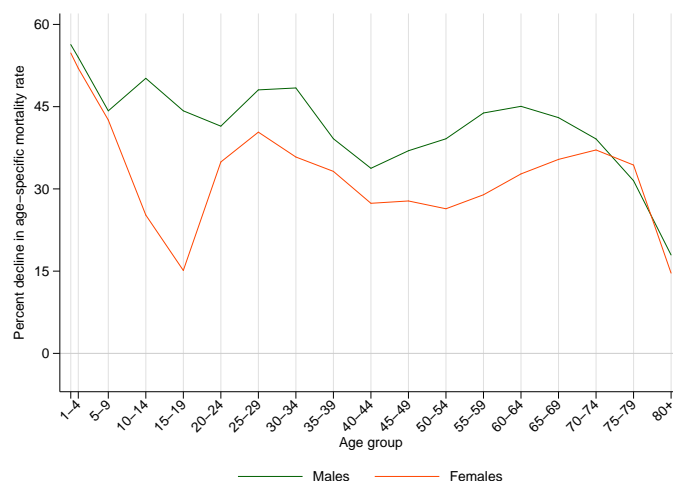
### PROFILE OVERVIEW

- In terms of the number of years of life lost (YLLs) due to premature death in Italy, ischemic heart disease, cerebrovascular disease, and trachea, bronchus, and lung cancers were the highest ranking causes in 2010.
- Of the 25 most important causes of burden, as measured by disability-adjusted life years (DALYs), cirrhosis of the liver showed the largest decrease, falling by 38% from 1990 to 2010.
- The leading risk factor in Italy is dietary risks.

### 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 males aged <1 year (56%). Females aged 80+ years saw the smallest decrease in mortality rate (15%).

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



### 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, Italy

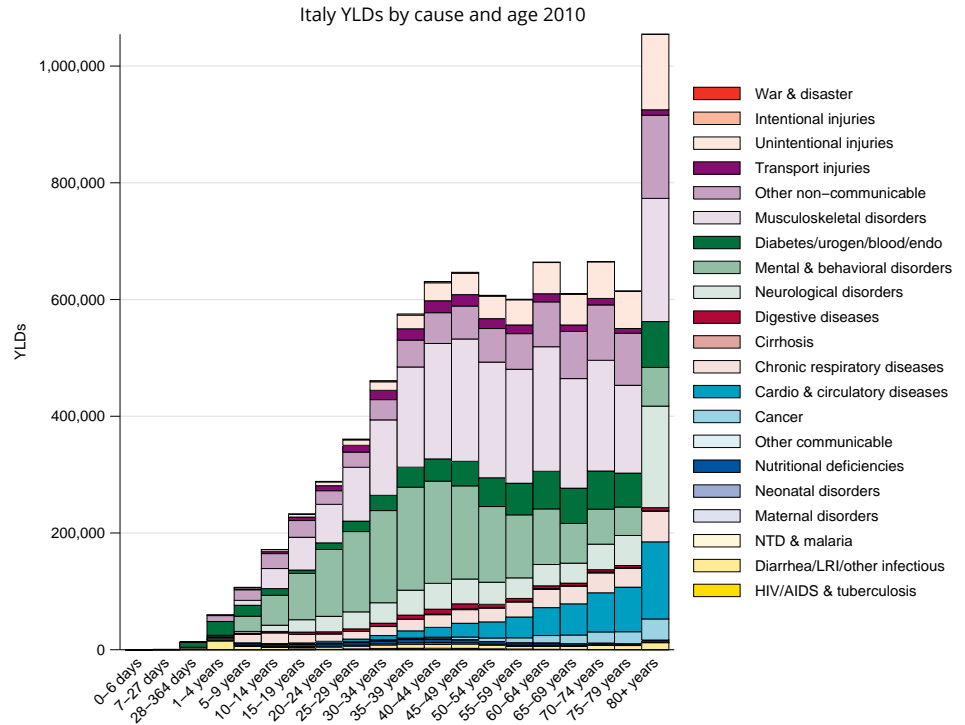
# YLLs in thousands (% of total)	Rank and disorder 1990	Rank and disorder 2010	# YLLs in thousands (% of total)	% change
1,568 (16.8%)	1 Ischemic heart disease	1 Ischemic heart disease	1,174 (14.8%)	-26
1,009 (10.8%)	2 Stroke	2 Stroke	708 (9.0%)	-32
646 (6.9%)	3 Lung cancer	3 Lung cancer	553 (7.0%)	-13
450 (4.8%)	4 Road injury	4 Colorectal cancer	339 (4.3%)	18
365 (3.9%)	5 Cirrhosis	5 Diabetes	245 (3.1%)	-9
288 (3.1%)	6 Colorectal cancer	6 Breast cancer	237 (3.0%)	-9
279 (3.0%)	7 Stomach cancer	7 COPD	228 (2.9%)	-10
267 (2.9%)	8 Diabetes	8 Cirrhosis	231 (2.9%)	-39
261 (2.8%)	9 Breast cancer	9 Road injury	225 (2.8%)	-51
253 (2.7%)	10 COPD	10 Hypertensive heart disease	213 (2.7%)	0
213 (2.3%)	11 Hypertensive heart disease	11 Stomach cancer	182 (2.3%)	-35
173 (1.9%)	12 Self-harm	12 Pancreatic cancer	168 (2.1%)	27
153 (1.6%)	13 Liver cancer	13 Liver cancer	162 (2.0%)	5
149 (1.6%)	14 Congenital anomalies	14 Alzheimers disease	160 (2.0%)	207
146 (1.6%)	15 Preterm birth complications	15 Other cardio & circulatory	142 (1.8%)	20
133 (1.4%)	16 Lower respiratory infections	16 Self-harm	141 (1.8%)	-18
134 (1.4%)	17 Pancreatic cancer	17 Leukemia	120 (1.5%)	-1
122 (1.3%)	18 Leukemia	18 Lower respiratory infections	115 (1.5%)	-14
119 (1.3%)	19 Other cardio & circulatory	19 Chronic kidney disease	109 (1.4%)	7
105 (1.1%)	20 Falls	20 Brain cancer	105 (1.3%)	3
103 (1.1%)	21 Brain cancer	21 Prostate cancer	105 (1.3%)	28
103 (1.1%)	22 Chronic kidney disease	22 Falls	99 (1.2%)	-5
96 (1.0%)	23 Bladder cancer	23 Cardiomyopathy	96 (1.2%)	10
94 (1.0%)	24 HIV/AIDS	24 Non-Hodgkin lymphoma	90 (1.1%)	11
87 (0.9%)	25 Cardiomyopathy	25 Kidney cancers	90 (1.1%)	41
	26 Non-Hodgkin lymphoma	26 Bladder cancer		
	27 Prostate cancer	27 Congenital anomalies		
	31 Kidney cancers	29 Preterm birth complications		
	32 Alzheimers disease	34 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 Italy are low back pain, major depressive disorder, falls, neck pain, and other musculoskeletal 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.

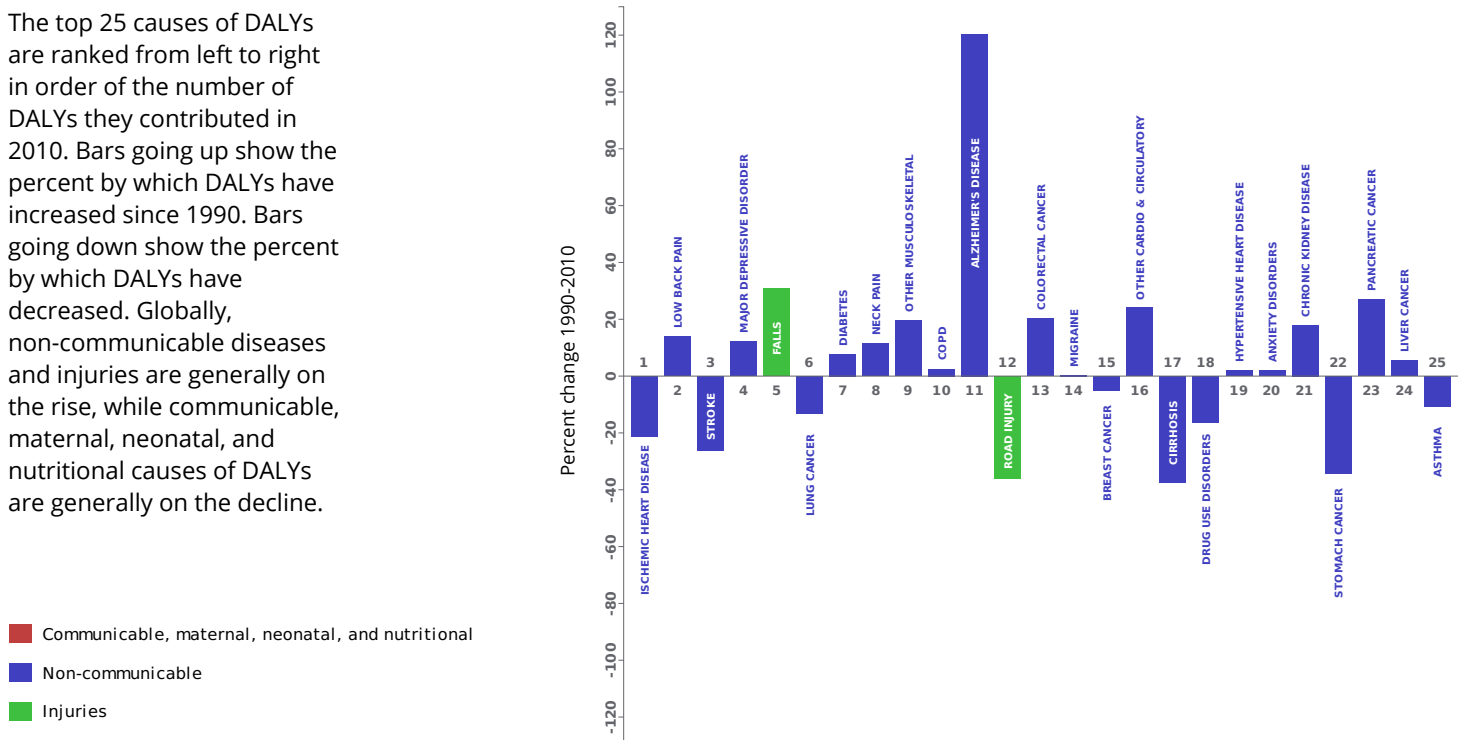


## DISABILITY-ADJUSTED LIFE YEARS (DALYs)

Disability-adjusted life years (DALYs) quantify both premature mortality (YLLs) and disability (YLDs) within a population. In Italy, the top three causes of DALYs in 2010 were ischemic heart disease, low back pain, and cerebrovascular disease. The only cause to appear in the 10 leading causes of DALYs in 2010 and not 1990 was other musculoskeletal 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 1990-2010 for Italy

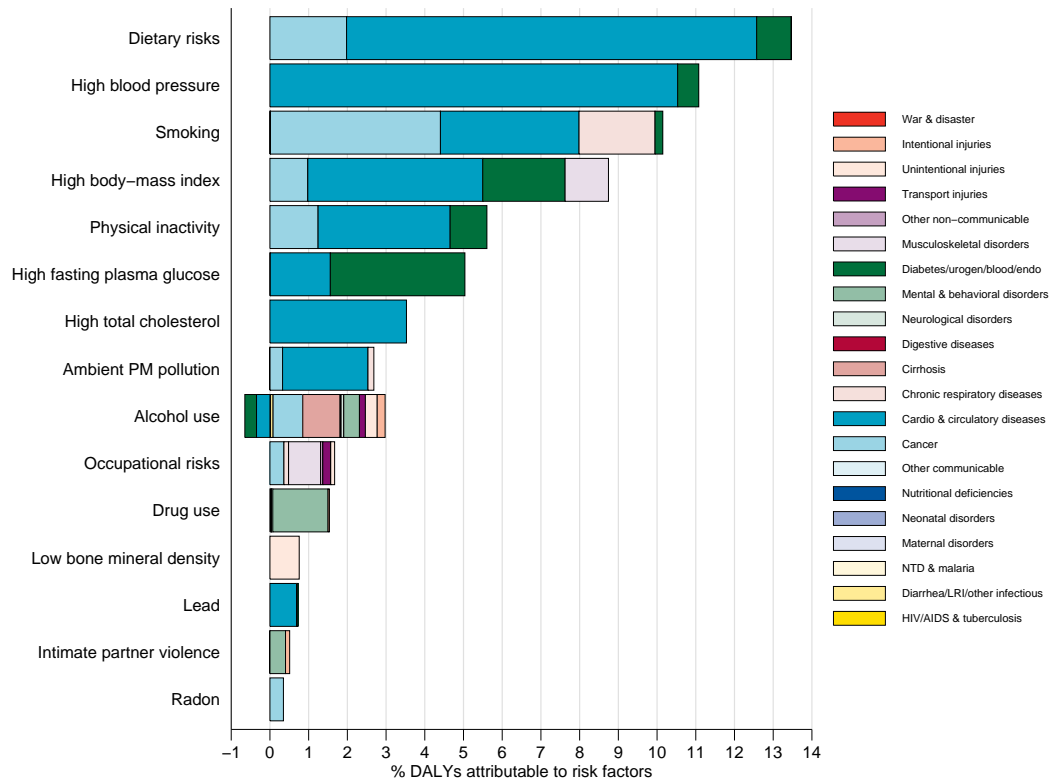


## RISK FACTORS

Overall, the three risk factors that account for the most disease burden in Italy are dietary risks, high blood pressure, and tobacco smoking. The leading risk factors for children under 5 and adults aged 15-49 years were tobacco smoking and alcohol use, respectively, in 2010. Tobacco smoking as a risk factor for children is due to second-hand smoke exposure.

The graph shows the top 15 risk factors for Italy. 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 Italy DALYs



## COUNTRY BENCHMARKING OF BURDEN OF DISEASE

Understanding the relative performance of Italy against other comparator countries provides key insight into public health successes and areas where Italy might be falling behind. The table identifies Italy'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, Italy ranked 2nd for life expectancy and 6th 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
Belgium	615	7	460	10	13,458	8	9,381	11	11,119	8	10,933	7	75.9	7	79.5	11	65.7	7	68.5	11
United Kingdom	638	9	455	9	13,452	7	8,949	9	11,453	13	11,435	13	75.7	8	79.9	9	65.4	8	68.6	10
Germany	644	10	433	7	14,032	9	8,512	5	11,165	9	11,015	8	75.4	9	80.2	7	65.3	9	69	8
Finland	655	11	437	8	14,467	10	9,050	10	11,092	7	11,248	12	75.1	11	80.1	8	63.8	12	67.3	13
Japan	469	1	352	1	9,658	1	6,827	1	9,406	1	9,094	1	79.1	1	82.6	1	70.1	1	73.1	1
France	549	2	408	5	12,717	5	8,666	7	11,358	11	11,194	11	77.1	2	80.9	5	66.5	4	69.5	6
Taiwan	723	12	481	13	16,396	12	10,440	13	10,592	3	9,639	2	73.7	12	78.8	13	64.8	11	69.5	5
<b>Italy</b>	<b>561</b>	<b>4</b>	<b>389</b>	<b>2</b>	<b>12,202</b>	<b>3</b>	<b>7,485</b>	<b>2</b>	<b>11,038</b>	<b>5</b>	<b>10,907</b>	<b>6</b>	<b>77</b>	<b>3</b>	<b>81.5</b>	<b>2</b>	<b>66.7</b>	<b>3</b>	<b>70.2</b>	<b>3</b>
The Bahamas	949	15	541	15	29,297	15	18,258	15	13,220	14	12,791	14	67.4	15	76	15	57.4	15	63.2	15
Spain	557	3	393	3	12,630	4	7,694	4	10,136	2	10,068	3	76.9	5	81.4	3	67.5	2	70.9	2
Bahrain	811	14	512	14	20,581	14	11,478	14	13,517	15	13,353	15	71.4	14	77.6	14	60.1	14	64.8	14
Greece	573	5	465	11	12,011	2	8,806	8	11,040	6	10,809	5	76.9	4	79.6	10	66.5	5	68.7	9
New Zealand	637	8	413	6	14,523	11	8,611	6	11,247	10	11,067	9	75.3	10	80.7	6	64.9	10	69.2	7
Israel	584	6	406	4	12,760	6	7,682	3	10,877	4	10,792	4	76.4	6	81.1	4	66.2	6	69.7	4
Slovenia	760	13	465	12	17,330	13	9,491	12	11,410	12	11,095	10	73.1	13	79.3	12	63.2	13	68.3	12

## COUNTRY BENCHMARKING OF BURDEN OF DISEASE, CONTINUED

This figure shows the rank of Italy 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 Italy 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	Ischemic heart disease	Stroke	Low back pain	Lung cancer	Road injury	Major depressive disorder	Diabetes	Falls	COPD	Neck pain	Cirrhosis	Other musculoskeletal	Colorectal cancer	Migraine	Breast cancer	Stomach cancer	Drug use disorders	Hypertensive heart disease	Anxiety disorders	Other cardio & circulatory	Alzheimer's disease	Self-harm	Congenital anomalies	Asthma	Preterm birth complications
Belgium	6	5	10	15	9	5	7	12	11	11	7	10	10	9	13	3	9	6	4	11	14	11	5	7	6
United Kingdom	13	6	14	14	2	3	2	7	13	7	2	8	11	12	15	6	15	1	12	2	10	6	4	13	7
Germany	11	4	15	10	5	9	8	13	8	9	12	12	14	5	10	10	10	9	10	7	9	6	10	8	8
Finland	14	10	12	6	4	11	6	14	2	15	8	9	3	10	5	8	3	5	6	3	15	15	8	8	2
Japan	1	9	4	1	1	1	5	2	1	6	6	15	7	1	2	15	5	8	2	7	2	8	3	9	1
France	3	1	13	9	7	12	1	11	4	10	9	13	9	4	7	1	6	3	14	13	13	13	2	11	4
Taiwan	2	15	3	4	12	2	13	4	15	2	14	2	4	2	1	11	2	11	7	6	1	12	1	4	3
<b>Italy</b>	<b>5</b>	<b>8</b>	<b>8</b>	<b>12</b>	<b>6</b>	<b>7</b>	<b>10</b>	<b>10</b>	<b>5</b>	<b>13</b>	<b>10</b>	<b>11</b>	<b>8</b>	<b>15</b>	<b>9</b>	<b>12</b>	<b>13</b>	<b>12</b>	<b>5</b>	<b>4</b>	<b>8</b>	<b>3</b>	<b>7</b>	<b>6</b>	<b>11</b>
The Bahamas	8	13	1	2	8	14	14	1	6	3	13	4	5	7	8	13	12	15	15	15	6	2	14	14	15
Spain	4	7	2	7	10	4	12	5	7	12	11	14	6	14	6	9	11	4	3	9	12	4	10	2	5
Bahrain	15	11	6	5	15	15	15	3	12	1	5	1	1	3	4	4	8	13	13	14	3	7	15	12	14
Greece	7	12	11	8	11	13	3	9	3	14	4	7	2	11	3	7	4	7	8	5	5	1	13	1	13
New Zealand	12	2	5	11	13	8	4	8	14	5	1	5	15	6	12	2	14	2	11	1	11	10	9	15	9
Israel	10	3	9	3	3	6	11	6	9	8	3	6	12	8	14	5	7	9	1	8	9	5	11	5	12
Slovenia	9	14	7	13	14	10	9	15	10	4	15	3	13	13	11	14	1	14	10	12	4	14	12	3	10
Ranking of leading age-standardized rates of disability-adjusted life years (DALYs) relative to comparator countries in 2010																									
Country	Ischemic heart disease	Low back pain	Stroke	Major depressive disorder	Falls	Lung cancer	Diabetes	Neck pain	Other musculoskeletal	COPD	Alzheimer's disease	Road injury	Colorectal cancer	Migraine	Breast cancer	Other cardio & circulatory	Cirrhosis	Drug use disorders	Hypertensive heart disease	Anxiety disorders	Chronic kidney disease	Stomach cancer	Pancreatic cancer	Liver cancer	Asthma
Belgium	10	10	8	4	13	15	7	12	10	12	14	10	13	10	15	14	8	10	6	5	5	5	10	3	6
United Kingdom	11	14	7	3	9	11	1	7	13	15	10	2	10	12	14	6	10	15	2	12	3	3	6	1	14
Germany	12	15	4	11	10	10	8	10	9	9	7	3	9	5	9	13	12	7	10	10	10	10	12	6	9
Finland	14	12	9	14	14	4	3	15	8	3	15	4	3	11	6	5	13	9	8	4	2	7	15	5	10
Japan	1	4	12	1	1	3	2	6	15	1	3	1	5	1	1	1	5	3	4	2	8	15	11	14	7
France	3	13	3	9	12	13	4	9	11	4	11	7	6	4	13	12	11	4	3	15	6	4	8	12	12
Taiwan	2	3	15	2	3	8	13	2	2	11	1	11	12	2	2	4	15	1	11	7	14	12	1	15	1
<b>Italy</b>	<b>5</b>	<b>8</b>	<b>6</b>	<b>10</b>	<b>8</b>	<b>7</b>	<b>9</b>	<b>13</b>	<b>7</b>	<b>5</b>	<b>8</b>	<b>8</b>	<b>7</b>	<b>15</b>	<b>10</b>	<b>7</b>	<b>7</b>	<b>11</b>	<b>13</b>	<b>6</b>	<b>4</b>	<b>13</b>	<b>9</b>	<b>10</b>	<b>8</b>
The Bahamas	6	1	11	13	4	1	14	3	5	2	5	15	2	7	4	15	6	13	15	8	13	6	2	13	13
Spain	4	2	5	5	7	9	11	11	14	6	13	6	11	14	5	8	9	12	5	3	11	9	4	9	4
Bahrain	13	5	10	15	2	2	15	1	1	13	2	14	1	3	3	11	2	8	12	14	15	1	5	11	11
Greece	15	11	14	12	11	14	5	14	6	7	6	13	4	9	7	3	4	6	9	11	7	11	7	7	3
New Zealand	9	6	1	8	5	6	6	5	4	14	12	9	15	6	11	2	1	14	1	13	9	2	3	2	15
Israel	7	9	2	7	6	5	12	8	12	8	9	5	8	8	12	9	3	5	7	1	12	8	14	4	5
Slovenia	8	7	13	6	15	12	10	4	3	10	4	12	14	13	8	10	14	2	14	9	1	14	13	8	2
Ranking Legend	1 - 3			4 - 7				8 - 11				12 - 15													