

# GBD PROFILE: SWEDEN

## 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.

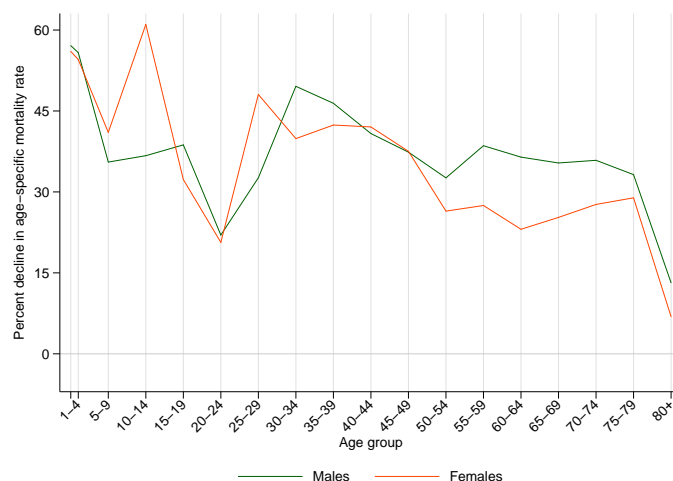
### PROFILE OVERVIEW

- In terms of the number of years of life lost (YLLs) due to premature death in Sweden, 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), lower respiratory infections showed the largest decrease, falling by 49% from 1990 to 2010.
- The leading risk factor in Sweden 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 females aged 10-14 years (61%). Females aged 80+ years saw the smallest decrease in mortality rate (7%).

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



### 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, Sweden

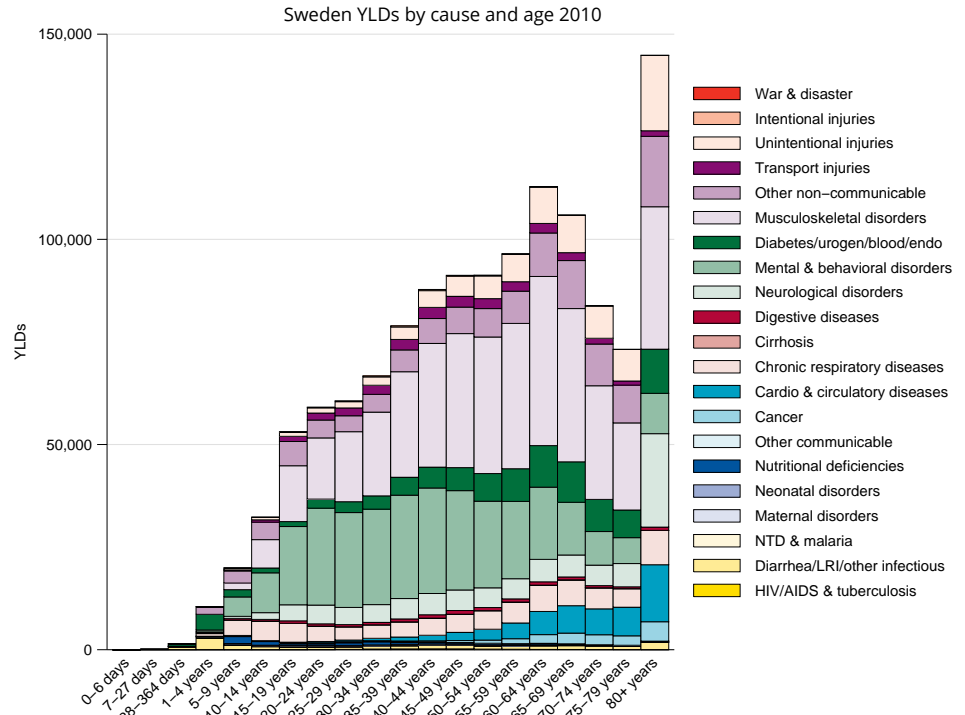
# YLLs in thousands (% of total)	Rank and disorder 1990	Rank and disorder 2010	# YLLs in thousands (% of total)	% change
393 (27.3%)	1 Ischemic heart disease	1 Ischemic heart disease	218 (18.9%)	-46
130 (9.0%)	2 Stroke	2 Stroke	86 (7.5%)	-34
70 (4.9%)	3 Self-harm	3 Lung cancer	60 (5.2%)	17
55 (3.8%)	4 Lung cancer	4 Self-harm	48 (4.2%)	-34
48 (3.3%)	5 Lower respiratory infections	5 Colorectal cancer	43 (3.7%)	5
41 (2.8%)	6 Colorectal cancer	6 Alzheimers disease	42 (3.7%)	136
38 (2.7%)	7 Road injury	7 COPD	35 (3.1%)	35
32 (2.2%)	8 Breast cancer	8 Breast cancer	27 (2.3%)	-16
30 (2.1%)	9 Congenital anomalies	9 Prostate cancer	29 (2.5%)	4
28 (1.9%)	10 Prostate cancer	10 Lower respiratory infections	26 (2.3%)	-51
26 (1.8%)	11 COPD	11 Pancreatic cancer	25 (2.2%)	9
24 (1.7%)	12 Other cardio & circulatory	12 Diabetes	23 (2.0%)	5
23 (1.6%)	13 Pancreatic cancer	13 Other cardio & circulatory	23 (2.0%)	-6
22 (1.5%)	14 Diabetes	14 Road injury	19 (1.6%)	-53
21 (1.5%)	15 Stomach cancer	15 Cirrhosis	18 (1.6%)	1
20 (1.4%)	16 Alzheimers disease	16 Brain cancer	18 (1.6%)	14
19 (1.3%)	17 Cirrhosis	17 Falls	16 (1.4%)	23
18 (1.2%)	18 Aortic aneurysm	18 Aortic aneurysm	15 (1.3%)	-17
17 (1.2%)	19 Brain cancer	19 Atrial fibrillation	15 (1.3%)	99
15 (1.0%)	20 Leukemia	20 Leukemia	14 (1.2%)	-8
14 (1.0%)	21 Ovarian cancer	21 Alcohol use disorders	14 (1.2%)	0
14 (0.9%)	22 Falls	22 Kidney cancers	14 (1.2%)	-4
13 (0.9%)	23 Non-Hodgkin lymphoma	23 Ovarian cancer	13 (1.1%)	-10
13 (0.9%)	24 Kidney cancers	24 Stomach cancer	12 (1.1%)	-41
13 (0.9%)	25 Alcohol use disorders	25 Congenital anomalies	12 (1.1%)	-61
	34 Atrial fibrillation	26 Non-Hodgkin lymphoma		

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 Sweden 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.

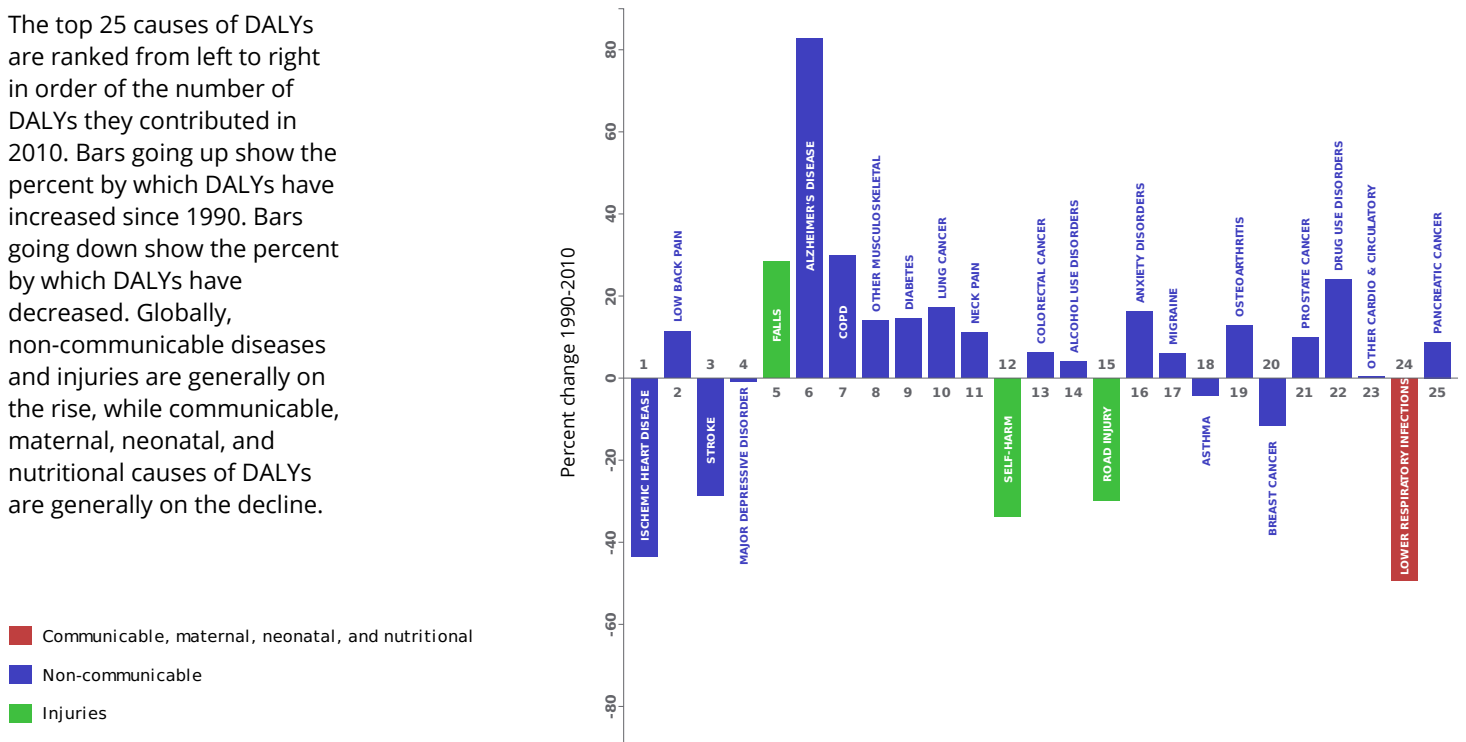


## DISABILITY-ADJUSTED LIFE YEARS (DALYs)

Disability-adjusted life years (DALYs) quantify both premature mortality (YLLs) and disability (YLDs) within a population. In Sweden, the top three causes of DALYs in 2010 were ischemic heart disease, low back pain, and cerebrovascular disease. Two causes that appeared in the 10 leading causes of DALYs in 2010 and not 1990 were Alzheimer's disease and other dementias and diabetes mellitus.

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 Sweden

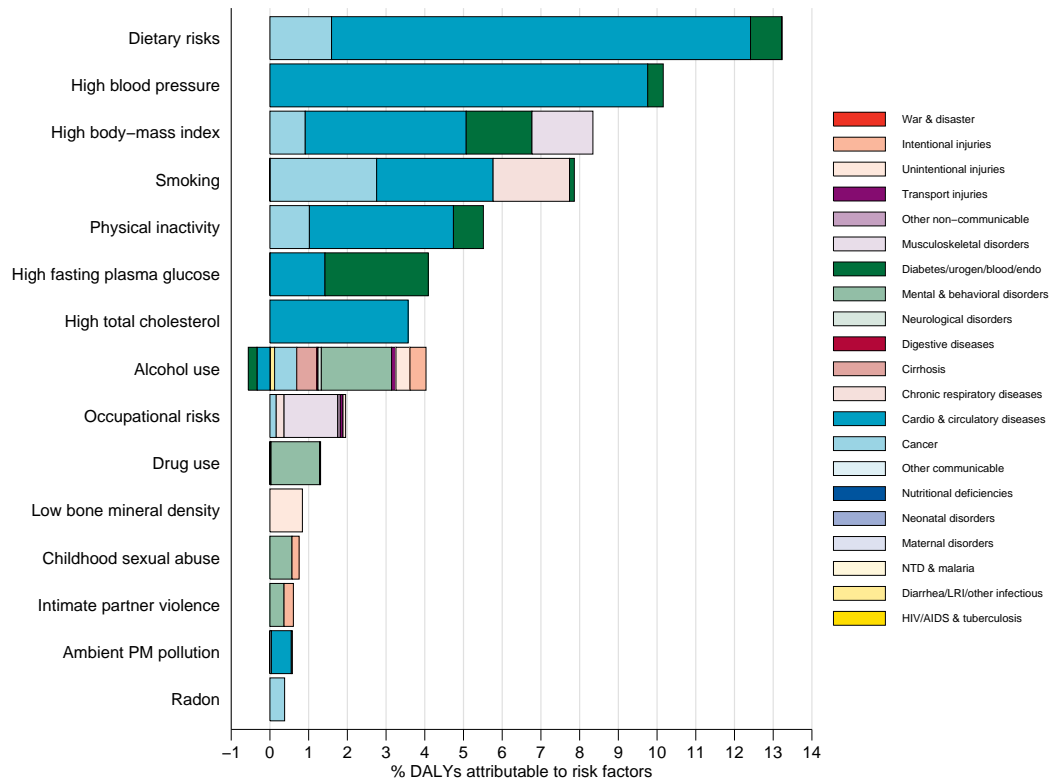


## RISK FACTORS

Overall, the three risk factors that account for the most disease burden in Sweden are dietary risks, high blood pressure, and high body-mass index. The leading risk factors for children under 5 and adults aged 15-49 years were zinc deficiency and alcohol use, respectively, in 2010.

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



## COUNTRY BENCHMARKING OF BURDEN OF DISEASE

Understanding the relative performance of Sweden against other comparator countries provides key insight into public health successes and areas where Sweden might be falling behind. The table identifies Sweden'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, Sweden ranked 4th for age-standardized YLL rate 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
Switzerland	532	2	369	3	11,825	4	7,071	3	10,663	2	10,807	2	77.5	4	82.2	3	67.5	2	70.8	2
Netherlands	572	8	426	9	11,847	5	7,988	6	11,355	12	11,492	15	77	7	80.6	9	66.5	5	69.1	8
Ireland	692	15	453	12	14,298	13	8,764	11	11,024	5	11,138	8	74.8	15	79.9	12	65.2	14	68.9	10
Iceland	548	4	365	2	11,310	3	6,675	1	10,763	3	11,108	7	77.6	2	82.2	2	65.5	10	68.4	13
Australia	568	7	389	4	12,381	7	7,722	5	11,153	9	10,979	5	76.9	8	81.5	4	66.4	7	70.1	3
Canada	558	6	422	8	12,079	6	8,546	9	10,806	4	10,845	3	77.2	5	80.6	7	67	3	69.6	5
Austria	622	10	418	7	13,732	11	8,401	7	11,052	6	11,381	12	75.7	10	80.6	8	65.8	8	69.1	7
<b>Sweden</b>	<b>539</b>	<b>3</b>	<b>403</b>	<b>5</b>	<b>11,196</b>	<b>2</b>	<b>7,296</b>	<b>4</b>	<b>11,378</b>	<b>14</b>	<b>11,250</b>	<b>11</b>	<b>77.6</b>	<b>3</b>	<b>81.4</b>	<b>5</b>	<b>66.8</b>	<b>4</b>	<b>69.6</b>	<b>4</b>
Denmark	656	14	504	15	14,383	14	9,592	15	11,209	11	11,456	14	75.2	13	78.9	15	65.3	13	67.9	14
Belgium	615	9	460	14	13,458	10	9,381	14	11,119	8	10,933	4	75.9	9	79.5	14	65.7	9	68.5	12
United Kingdom	638	11	455	13	13,452	9	8,949	12	11,453	15	11,435	13	75.7	11	79.9	13	65.4	11	68.6	11
Germany	644	12	433	10	14,032	12	8,512	8	11,165	10	11,015	6	75.4	12	80.2	10	65.3	12	69	9
Finland	655	13	437	11	14,467	15	9,050	13	11,092	7	11,248	10	75.1	14	80.1	11	63.8	15	67.3	15
Japan	469	1	352	1	9,658	1	6,827	2	9,406	1	9,094	1	79.1	1	82.6	1	70.1	1	73.1	1
France	549	5	408	6	12,717	8	8,666	10	11,358	13	11,194	9	77.1	6	80.9	6	66.5	6	69.5	6

## COUNTRY BENCHMARKING OF BURDEN OF DISEASE, CONTINUED

This figure shows the rank of Sweden 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 Sweden 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	Low back pain	Stroke	Major depressive disorder	Self-harm	Falls	Road injury	Lung cancer	Other musculoskeletal	COPD	Neck pain	Diabetes	Lower respiratory infections	Colorectal cancer	Alcohol use disorders	Alzheimer's disease	Asthma	Migraine	Breast cancer	Anxiety disorders	Congenital anomalies	Osteoarthritis	Prostate cancer	Other cardio & circulatory	Drug use disorders
Switzerland	3	1	3	10	14	14	11	4	6	12	13	11	4	5	8	11	6	12	9	7	13	8	12	5	9
Netherlands	5	5	7	15	2	3	4	12	12	9	8	9	3	8	2	4	1	6	12	13	12	1	6	11	2
Ireland	15	10	11	2	3	8	7	10	11	15	12	8	14	14	3	5	12	8	10	9	14	6	10	10	6
Iceland	8	7	2	6	6	6	5	8	5	4	14	1	11	2	9	7	3	9	11	4	1	11	15	2	10
Australia	7	2	4	3	4	4	12	6	14	11	3	4	1	12	5	9	15	15	4	12	6	3	11	3	15
Canada	6	6	1	5	7	1	8	11	15	8	6	12	7	7	6	13	11	5	6	5	7	12	8	1	11
Austria	10	9	14	8	11	13	14	5	9	7	11	13	2	9	10	2	2	7	7	8	11	10	4	9	13
<b>Sweden</b>	<b>9</b>	<b>13</b>	<b>6</b>	<b>14</b>	<b>10</b>	<b>5</b>	<b>3</b>	<b>1</b>	<b>4</b>	<b>2</b>	<b>1</b>	<b>7</b>	<b>10</b>	<b>3</b>	<b>13</b>	<b>8</b>	<b>13</b>	<b>13</b>	<b>2</b>	<b>10</b>	<b>9</b>	<b>14</b>	<b>14</b>	<b>6</b>	<b>5</b>
Denmark	12	14	10	7	12	12	9	14	10	14	2	14	6	15	15	10	7	4	14	6	15	5	13	4	12
Belgium	4	4	9	9	9	10	15	15	3	10	10	10	9	10	7	14	4	10	13	2	5	7	9	14	7
United Kingdom	13	12	12	4	1	7	2	13	1	13	5	3	15	11	4	6	14	14	15	14	4	13	3	7	14
Germany	11	15	8	11	8	11	10	9	7	6	7	15	8	13	12	3	9	3	8	11	8	9	2	13	8
Finland	14	8	15	12	15	15	6	3	2	3	15	6	12	1	11	15	5	11	3	3	10	4	5	8	1
Japan	1	3	13	1	5	2	1	2	13	1	4	5	13	4	1	1	8	1	1	1	3	15	1	12	3
France	2	11	5	13	13	9	13	7	8	5	9	2	5	6	14	12	10	2	5	15	2	2	7	15	4
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	Alzheimer's disease	COPD	Other musculoskeletal	Diabetes	Lung cancer	Neck pain	Self-harm	Colorectal cancer	Alcohol use disorders	Road injury	Anxiety disorders	Migraine	Asthma	Osteoarthritis	Breast cancer	Prostate cancer	Drug use disorders	Other cardio & circulatory	Lower respiratory infections	Pancreatic cancer
Switzerland	4	1	3	14	14	4	13	1	11	5	14	11	3	5	8	7	10	9	9	7	8	4	2	3	3
Netherlands	3	6	9	15	5	9	11	8	5	14	7	2	14	3	4	11	6	2	1	13	9	1	12	11	9
Ireland	14	9	10	5	10	5	10	9	8	8	12	7	13	7	10	8	9	10	6	11	11	11	8	13	7
Iceland	6	7	1	7	4	14	4	2	2	6	13	3	2	6	2	14	8	5	11	2	15	9	4	4	2
Australia	5	3	2	2	3	8	8	13	7	4	4	5	12	2	13	12	15	15	3	6	12	14	5	2	1
Canada	9	4	5	6	1	13	7	15	14	12	11	8	7	4	6	3	5	12	14	9	7	13	3	8	5
Austria	12	11	8	11	13	2	9	4	13	7	9	10	4	11	12	5	7	1	7	5	3	12	11	1	13
<b>Sweden</b>	<b>7</b>	<b>13</b>	<b>6</b>	<b>8</b>	<b>6</b>	<b>11</b>	<b>5</b>	<b>3</b>	<b>9</b>	<b>1</b>	<b>9</b>	<b>5</b>	<b>12</b>	<b>3</b>	<b>9</b>	<b>13</b>	<b>13</b>	<b>13</b>	<b>3</b>	<b>13</b>	<b>5</b>	<b>6</b>	<b>5</b>	<b>10</b>	
Denmark	8	14	14	12	9	10	15	12	15	15	2	6	15	14	11	6	4	8	5	12	14	10	7	10	14
Belgium	10	5	12	4	12	12	12	7	10	13	10	13	11	8	15	4	11	3	10	15	10	8	15	12	8
United Kingdom	11	12	11	3	7	6	14	11	1	10	5	1	10	9	5	13	14	14	12	14	6	15	10	14	4
Germany	13	15	7	10	8	3	6	6	12	9	8	4	9	10	7	10	3	6	8	8	2	6	14	9	12
Finland	15	8	13	13	15	15	2	5	4	3	15	15	1	15	9	2	12	7	4	4	5	7	9	6	15
Japan	1	2	15	1	2	1	1	14	3	2	3	14	6	1	1	1	1	4	15	1	1	2	1	15	11
France	2	10	4	9	11	7	3	10	6	11	6	12	8	13	14	15	2	11	2	10	4	3	13	7	6
Ranking Legend	1 - 3			4 - 7			8 - 11			12 - 15															