

# The global health, social and economic impact of alcohol consumption

**Convegno**

**ALCOHOL PREVENTION DAY**

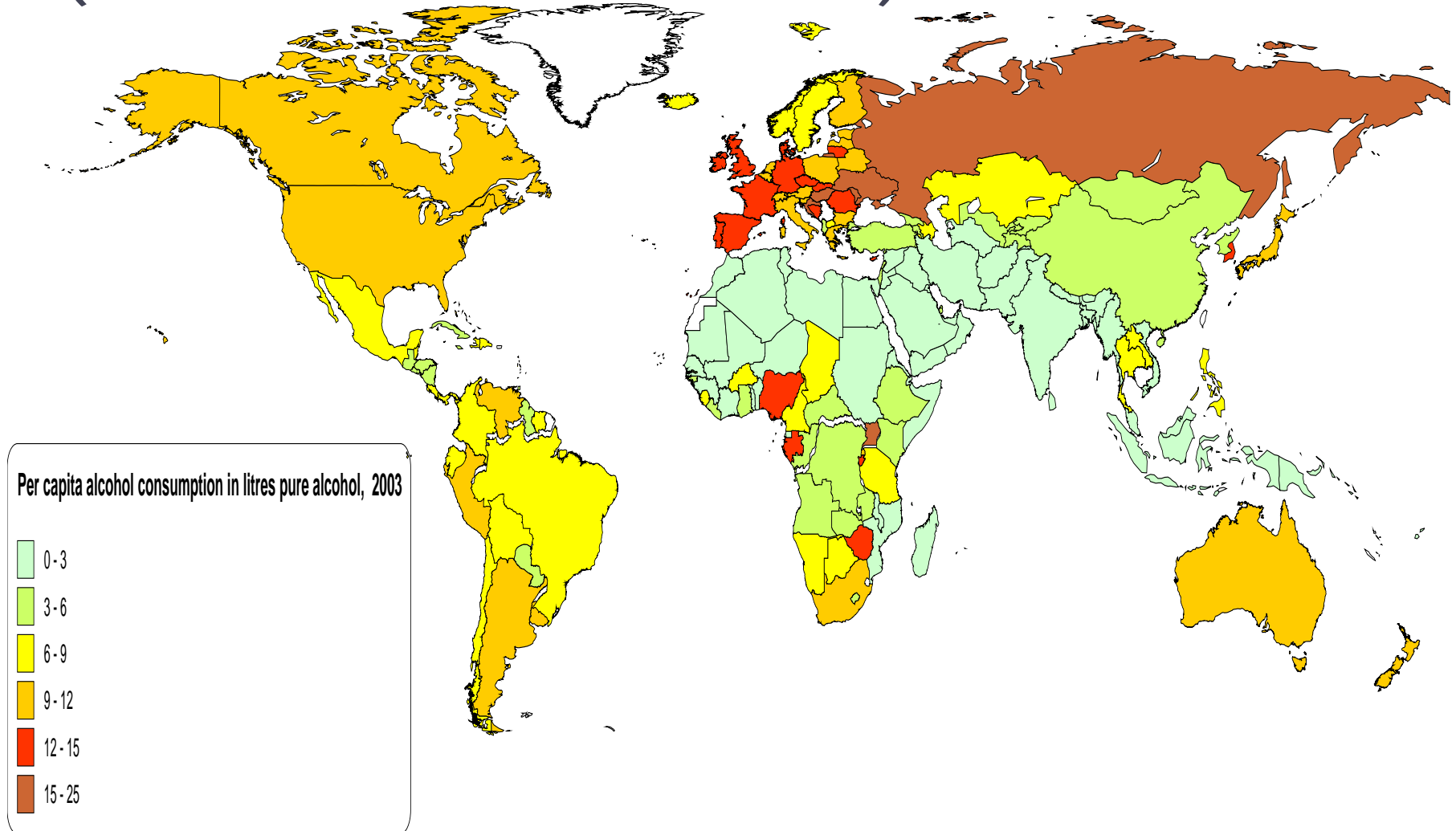
**Giovedì 29 aprile 2010**

**MESE DI PREVENZIONE ALCOLOGICA**

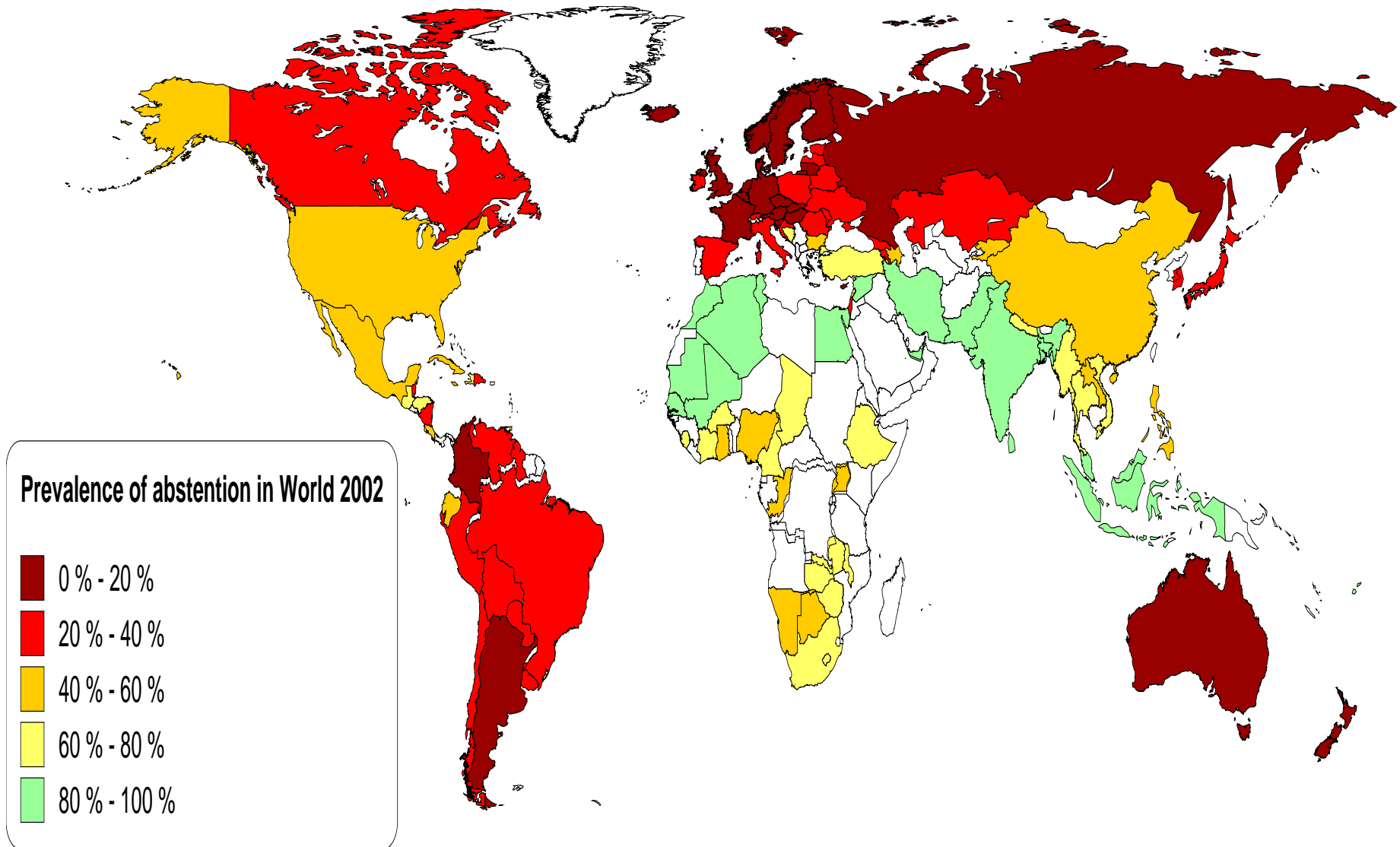
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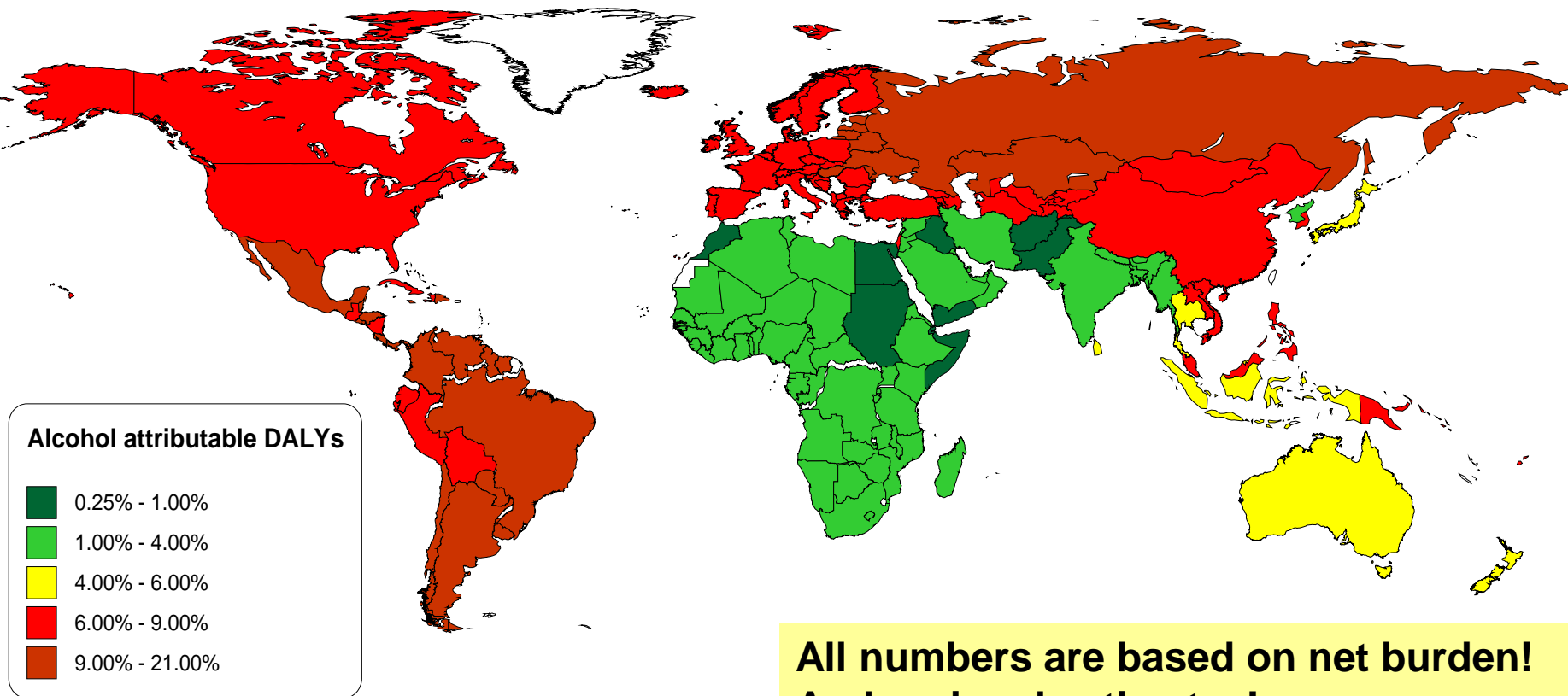
# Adult alcohol per capita consumption (recorded + unrecorded) 2005



# Prevalence of abstinence in World 2002



# Alcohol-attributable burden of disease 2004



**All numbers are based on net burden!  
And regional estimates!**

# Leading causes of attributable global mortality and burden of disease, 2004

## Attributable Mortality

%

<b>1.</b>	<b>High blood pressure</b>	<b>12.8</b>
<b>2.</b>	<b>Tobacco use</b>	<b>8.7</b>
<b>3.</b>	<b>High blood glucose</b>	<b>5.8</b>
<b>4.</b>	<b>Physical inactivity</b>	<b>5.5</b>
<b>5.</b>	<b>Overweight and obesity</b>	<b>4.8</b>
<b>6.</b>	<b>High cholesterol</b>	<b>4.5</b>
<b>7.</b>	<b>Unsafe sex</b>	<b>4.0</b>
<b>8.</b>	<b>Alcohol use</b>	<b>3.8</b>
<b>9.</b>	<b>Childhood underweight</b>	<b>3.8</b>
<b>10.</b>	<b>Indoor smoke from solid fuels</b>	<b>3.3</b>

**59 million total global deaths in 2004**

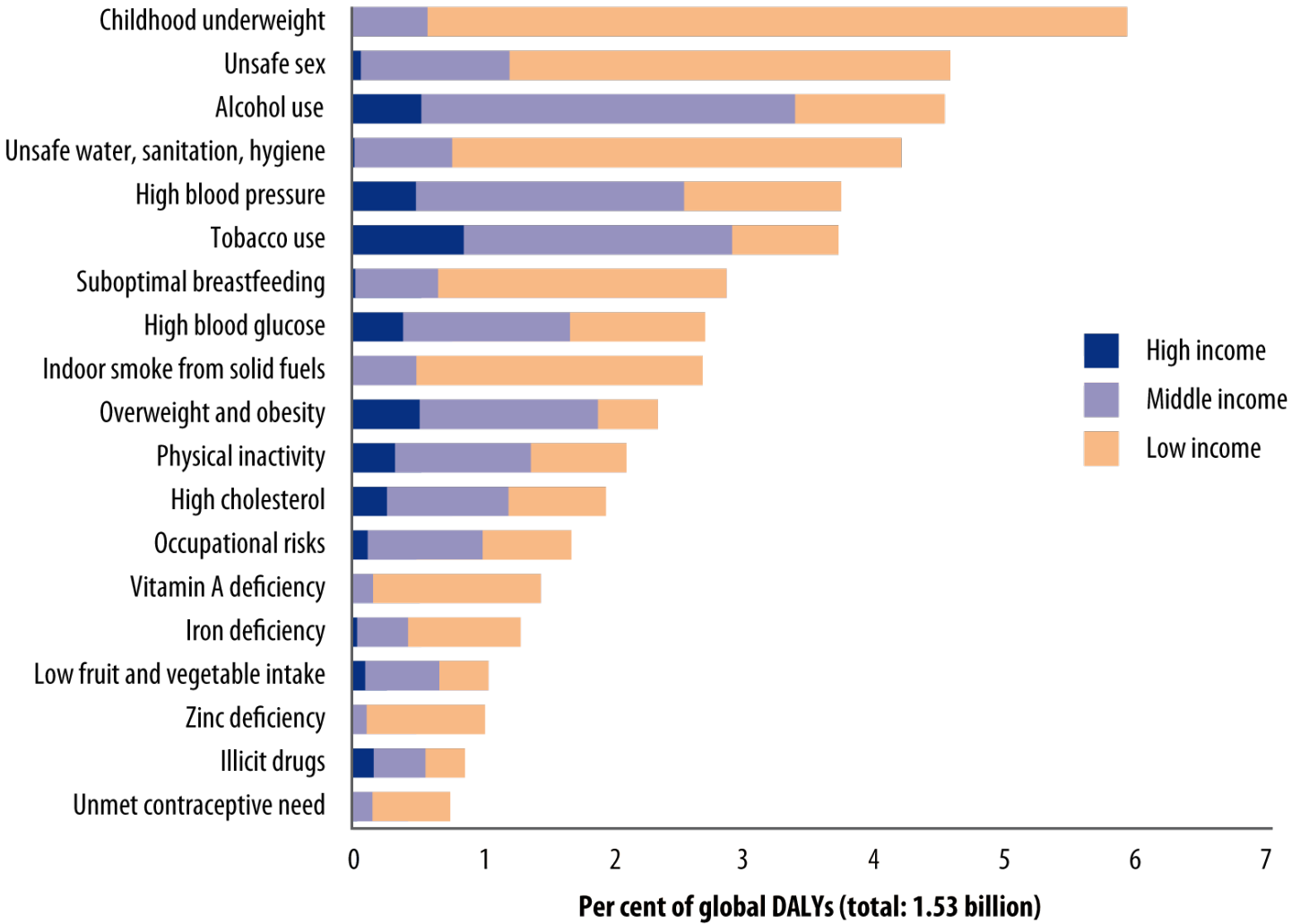
## Attributable DALYs

%

<b>1.</b>	<b>Childhood underweight</b>	<b>5.9</b>
<b>2.</b>	<b>Unsafe sex</b>	<b>4.6</b>
<b>3.</b>	<b>Alcohol use</b>	<b>4.5</b>
<b>4.</b>	<b>Unsafe water, sanitation, hygiene</b>	<b>4.2</b>
<b>5.</b>	<b>High blood pressure</b>	<b>3.7</b>
<b>6.</b>	<b>Tobacco use</b>	<b>3.7</b>
<b>7.</b>	<b>Suboptimal breastfeeding</b>	<b>2.9</b>
<b>8.</b>	<b>High blood glucose</b>	<b>2.7</b>
<b>9.</b>	<b>Indoor smoke from solid fuels</b>	<b>2.7</b>
<b>10.</b>	<b>Overweight and obesity</b>	<b>2.3</b>

**1.5 billion total global DALYs in 2004**

# Percentage of disability-adjusted life years (DALYs) attributed to 19 leading risk factors



Deaths by Disease Category	WORLD				
	M	W	T	% M	% W
Tuberculosis	238	16	254	10.0%	3.3%
HIV/AIDS (effect of alcohol on trX)	27	21	47	1.1%	4.2%
Lower respiratory Infections	69	14	84	2.9%	2.9%
Maternal and perinatal conditions (low birth weight)	2	1	3	0.1%	0.3%
Cancer	377	111	487	15.9%	22.4%
Diabetes mellitus	0	0	0	0.0%	0.1%
Neuropsychiatric disorders	109	25	135	4.6%	5.1%
Cardiovascular diseases	466	80	545	19.6%	16.1%
Cirrhosis of the liver	297	76	373	12.5%	15.3%
Unintentional injuries	556	110	666	23.4%	22.2%
Intentional injuries	232	40	272	9.8%	8.0%
<b>Total 'detrimental effects' attributable to alcohol</b>	<b>2,373</b>	<b>495</b>	<b>2,868</b>	<b>100.0%</b>	<b>100.0%</b>
Diabetes mellitus	- 8	- 4	- 12	8.3%	3.2%
Cardiovascular diseases	- 88	- 128	- 215	91.7%	96.8%
<b>Total 'beneficial effects' attributable to alcohol</b>	<b>-96</b>	<b>-132</b>	<b>-227</b>	<b>100.0%</b>	<b>100.0%</b>
<b>All alcohol-attributable net deaths</b>	<b>2,278</b>	<b>363</b>	<b>2,640</b>		
<b>All deaths</b>	<b>31,063</b>	<b>27,674</b>	<b>58,738</b>		
<b>Percentage of all net deaths attributable to alcohol</b>	<b>7.3%</b>	<b>1.3%</b>	<b>4.5%</b>	<b>+0.7</b>	

Burden of Disease Category	WORLD				
	M	W	T	%M	%W
Tuberculosis	5,516	470	5,986	8.0%	3.7%
HIV/AIDS	624	526	1,150	0.9%	4.2%
Lower respiratory Infections	917	190	1,107	1.3%	1.5%
Maternal and perinatal conditions (low birth weight)	64	55	119	0.1%	0.4%
Cancer	4,732	1,536	6,268	6.9%	12.3%
Diabetes mellitus	0	28	28	0.0%	0.2%
Neuropsychiatric disorders	23,265	3,417	26,682	33.7%	27.3%
Cardiovascular diseases	5,985	939	6,924	8.7%	7.5%
Cirrhosis of the liver	5,502	1,443	6,945	8.0%	11.5%
Unintentional injuries	15,694	2,910	18,604	22.8%	23.2%
Intentional injuries	6,639	1,021	7,660	9.6%	8.1%
<b>Total 'detrimental effects' attributable to alcohol</b>	<b>68,938</b>	<b>12,536</b>	<b>81,474</b>	<b>100.0%</b>	<b>100.0%</b>
Diabetes mellitus	-238	-101	-340	22.2%	8.1%
Cardiovascular diseases	-837	-1145	-1981	77.8%	91.9%
<b>Total 'beneficial effects' attributable to alcohol</b>	<b>-1,075</b>	<b>-1,246</b>	<b>-2,321</b>	<b>100.0%</b>	<b>100.0%</b>
<b>All alcohol-attributable net DALYs</b>	<b>67,863</b>	<b>11,290</b>	<b>79,153</b>		
<b>All DALYs</b>	<b>799,536</b>	<b>730,631</b>	<b>1,530,168</b>		
<b>Percentage of all net DALYs attributable to alcohol</b>	<b>8.5%</b>	<b>1.5%</b>	<b>5.2%</b>	<b>+ 0.6%</b>	

# Deaths attributable to alcohol consumption in Italy in 2004 (in 1,000)

Disease Category	ITALY			EUR		
	M	W	T	M	W	T
Maternal and perinatal conditions (low birth weight)	0.0	0.0	0.0	0.3	0.2	0.5
Cancer	7.1	4.3	11.5	64.5	40.1	104.6
Diabetes mellitus	0.0	0.0	0.0	0.0	0.1	0.1
Neuropsychiatric disorders	0.3	0.1	0.4	27.6	7.7	35.3
Cardiovascular diseases	5.0	2.6	7.6	156.9	47.3	204.2
Cirrhosis of the liver	5.0	3.3	8.3	89.6	44.4	134.0
Unintentional injuries	3.6	1.0	4.5	190.0	34.9	224.9
Intentional injuries	0.6	0.2	0.8	62.9	11.4	74.2
Total 'detrimental effects' attributable to alcohol	21.6	11.5	33.1	591.8	186.2	777.9
Diabetes mellitus	-0.8	-0.4	-1.2	-3.6	-3.3	-6.9
Cardiovascular diseases	-5.9	-4.8	-10.7	-53.8	-98.0	-151.9
Total 'beneficial effects' attributable to alcohol	-6.7	-5.3	-11.9	-57.4	-101.3	-158.8
All alcohol-attributable net deaths	14.9	6.2	21.2	534.3	84.8	619.2
All deaths	280.2	273.2	553.4	4846.7	4646.3	9493.0
Percentage of all net deaths attributable to alcohol	<b>5.3%</b>	<b>2.3%</b>	<b>3.8%</b>	<b>11.0%</b>	<b>1.8%</b>	<b>6.5%</b>

# Alcohol-attributable burden of disease in 1,000 DALYS for Italy 2004

Disease Category	ITALY			EUR		
	M	W	T	M	W	T
Maternal and perinatal conditions (low birth weight)	0	0	0	11	9	20
Cancer	67	45	113	782	516	1298
Diabetes mellitus	0	0	0	0	7	7
Neuropsychiatric disorders	40	28	68	4573	1018	5591
Cardiovascular diseases	44	22	66	1927	489	2416
Cirrhosis of the liver	62	37	99	1680	839	2519
Unintentional injuries	84	17	101	4725	738	5463
Intentional injuries	13	3	17	1549	256	1806
Total 'detrimental effects' attributable to alcohol	311	154	465	15246	3872	19118
Diabetes mellitus	-17	-7	-24	-116	-56	-172
Cardiovascular diseases	-54	-42	-96	-488	-832	-1320
Total 'beneficial effects' attributable to alcohol	-71	-49	-120	-604	-889	-1493
All alcohol-attributable net deaths	240	104	345	14642	2983	17625
All deaths	3367	3214	6581	84476	67271	151747
Percentage of all net deaths attributable to alcohol	<b>7.1%</b>	<b>3.2%</b>	<b>5.2%</b>	<b>17.3%</b>	<b>4.4%</b>	<b>11.6%</b>

# Clear systematic variation

	Low and middle income						High income				World	
	very high or high mortality; lowest consumption		very high or high mortality; low consumption		low mortality		very low mortality		Former Socialist: low mortality			
	Islamic middle east and Indian subcontinent (EMR-D, SEAR-D) <sup>1</sup>		Poorest countries in Africa and SA (AFR-D, AFR-E, AMR-D) <sup>2</sup>		Better-off developing countries (AMR-B, EMR-B, SEAR-B, WPR-B) <sup>3</sup>		(AMR A, EUR A, WPR A) <sup>4</sup>		Eastern Europe and (EUR B, EUR C) <sup>5</sup>			
	DALYs	%	DALYs	%	DALYs	%	DALYs	%	DALYs	%		
<b>Infectious diseases</b>	1,134	<b>10.5</b>	3,860	<b>29.8</b>	2,030	<b>6.3</b>	235	<b>3.2</b>	984	<b>6.3</b>	8,243	<b>10.4</b>
<b>% of total disease burden which is AA</b>	<b>2.2%</b>		<b>3.3%</b>		<b>7.5%</b>		<b>6.5%</b>		<b>15.6%</b>		<b>5.2%</b>	

# But alcohol does not only impact on health

- **Social harm is often as large as health harm**
- **Main kinds of social harm:**
  - **Financial**
  - **Household**
  - **Employment/studies**
  - **Marriage/intimate relationships**
  - **Family**
  - **Friendship/social life**
  - **Violence/injuries**



# Social harm

- **There is considerable harm all over the world**
- **But again, there seems to be more harm per drinker in low and middle income countries**

# Economic costs

- **Both health and social harm incur considerable costs**
- **These costs are both in high income and in low to middle income parts of the world**
- **Costs are similar, even though there is less drinking in low to middle income countries**

# Categories of costs in % of GDP PPP

	<b>High income</b>	<b>Middle income</b>
Health care	0.3%	0.1%
Law enforcement and other direct costs	0.4%	0.3%
Productivity losses	1.7%	1.7%
<b>Total</b>	<b>2.5%</b>	<b>2.1%</b>

# Summary of global impact of alcohol use

- Alcohol use causes considerable health harm around the globe
- Overall harm is largest in Eastern Europe, but the EU is also among the regions with considerable health harm
- Looking at the bigger picture, health is only one of the major consequences of alcohol use, and not associated to the largest proportion of economic costs of alcohol (productivity losses)

## Summary II

**=> We need a global strategy to reduce the harm from alcohol (World Health Assembly 2010)!**