

---

# Region of the Americas

## Antigua and Barbuda

---

### Sociodemographic characteristics

| POPULATION  | 1980 | 1990 | 1995 |
|-------------|------|------|------|
| Total       | N/A  | N/A  | N/A  |
| Adult (15+) | N/A  | N/A  | N/A  |
| % Urban     | 34.6 | 35.4 | 35.8 |
| % Rural     | 65.4 | 64.6 | 64.2 |

### Alcohol production, trade and industry

Antigua and Barbuda produce and export spirits and wine, and import beer.

### Alcohol consumption and prevalence

#### *Consumption*

In the absence of population figures, it is not possible to estimate the adult per capita consumption of absolute alcohol in Antigua and Barbuda.

## Argentina

---

### Sociodemographic characteristics

| POPULATION  | 1980       | 1990       | 1995       |
|-------------|------------|------------|------------|
| Total       | 28 114 000 | 32 547 000 | 34 587 000 |
| Adult (15+) | 19 540 000 | 22 586 000 | 24 651 000 |
| % Urban     | 82.9       | 86.5       | 88.1       |
| % Rural     | 17.1       | 13.5       | 11.9       |

### Health status

Life expectancy at birth, 1990-1995 : 68.6 (males), 75.7 (females)

Infant mortality rate in 1990-1995 : 24 per 1000 live births

### Socioeconomic situation

GNP per capita (US\$), 1995: 8030, PPP estimates of GNP per capita (current int'l \$), 1995: 8310.

Average distribution of labour force by sector, 1990-1992 : agriculture 13%; industry 34%; services 53%

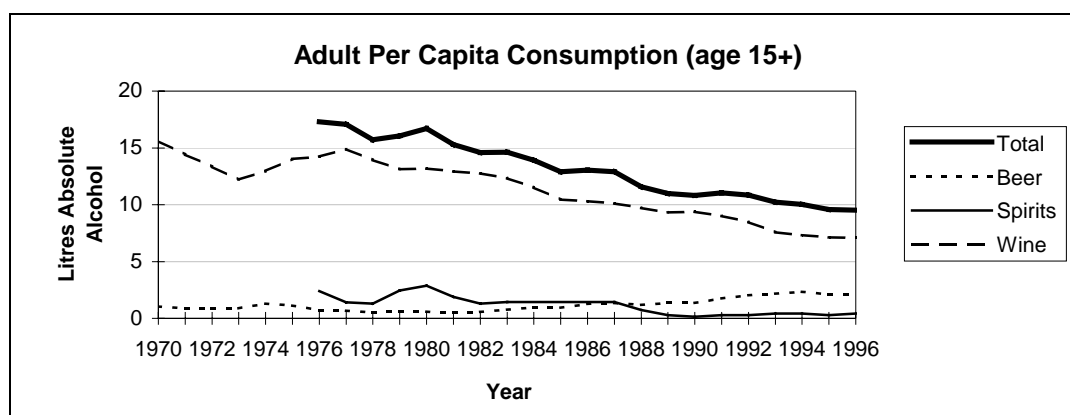
Adult literacy rate (per cent), 1995 : total 96; male 97; female 96

### Alcohol production, trade and industry

With the country's per capita wine consumption decreasing, Argentina's wineries have been subject to mergers and acquisitions. Meanwhile, beer production rose fivefold during the 1980s. Quilmes

Industrial SA, Argentina's largest brewer, is based in Luxembourg and is 15 per cent owned by Heineken Brewery.

### Alcohol consumption and prevalence



#### Consumption

Argentina's per capita alcohol consumption has declined steadily. There is a trend towards an increase in beer consumption.

#### Prevalence

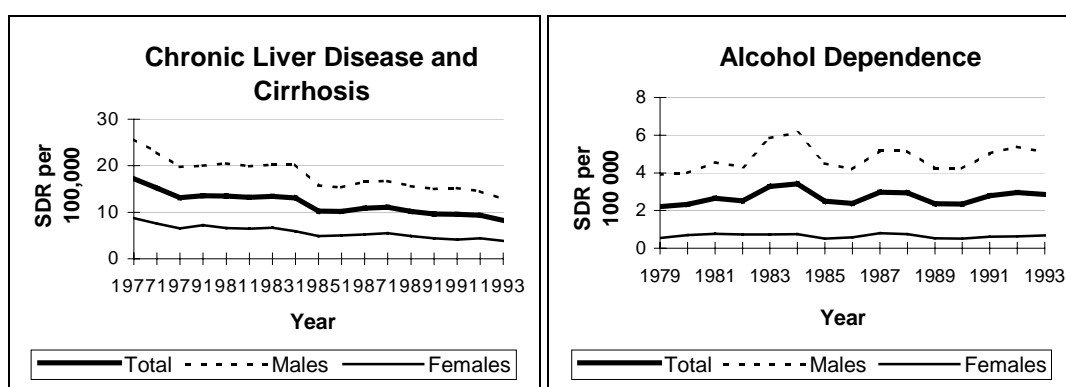
A 1996 epidemiological survey collected information on drinking from 1152 persons over 35 in households in three districts of Buenos Aires. One third of the respondents used no alcohol and one third used alcohol daily (mostly wine).

### Mortality, morbidity, health and social problems from alcohol use

#### Alcohol dependence and related disorders

Of a sample of 4800 young men called up for military service in 1992, 42 per cent were found to have been alcohol abusers (defined either as alcohol dependent or using alcohol "unsuitably") in the previous 30 days.

A study among work groups showed that 26 per cent suffered from alcohol abuse, drinking more than one litre of wine per day or using wine to relieve stress.



#### Mortality

In 1990 mortality among patients admitted for excessive alcohol consumption was 15.4 per cent compared with overall hospital mortality of 11.5 per cent.

#### Morbidity

Alcohol dependent people dominate alcohol and other drug-related admissions to hospital. A 1988 survey of all emergency consultations over one week in three hospitals in Buenos Aires showed that five per cent were related to substance abuse, of which 64 per cent were alcohol-related.

**Health problems**

A case-control study including 131 cases of oesophageal cancer and 262 hospital controls was carried out in the 10 main hospitals in the city of La Plata. Current drinkers were three times as likely to develop oesophageal cancer as non-drinkers. Drinkers who consumed at least 200 grams of ethanol per day were eight times as likely as non-drinkers to develop oesophageal cancer.

**Alcohol policies****Control of alcohol products**

President Carlos Menem removed the 2.5 per cent excise tax on alcohol in 1996. There are no regulations on the advertising of alcoholic beverages.

**Control of alcohol problems**

The legal drinking age is 18 years. A National Preventive Education Plan was implemented in 1987-1989, and preventive publicity campaigns have been designed for radio and television.

**Alcohol data collection, research and treatment**

The Ministry of Health and Social Action is responsible for treatment services. There are no beds in general hospitals specifically for alcohol dependent patients and very few in psychiatric services. Admission is according to clinical requirements. Some treatment is carried out by non-professional organizations of a religious nature.

## Bahamas (the)

---

**Sociodemographic characteristics**

| POPULATION  | 1980    | 1990    | 1995    |
|-------------|---------|---------|---------|
| Total       | 210 000 | 256 000 | 276 000 |
| Adult (15+) | 129 000 | 174 000 | 195 000 |
| % Urban     | 75.1    | 83.6    | 86.5    |
| % Rural     | 24.9    | 16.4    | 13.5    |

**Health status**

Life expectancy at birth, 1990-1995 : 68.7 (males), 77.9 (females)

Infant mortality rate in 1990-1995 : 23 per 1000 live births

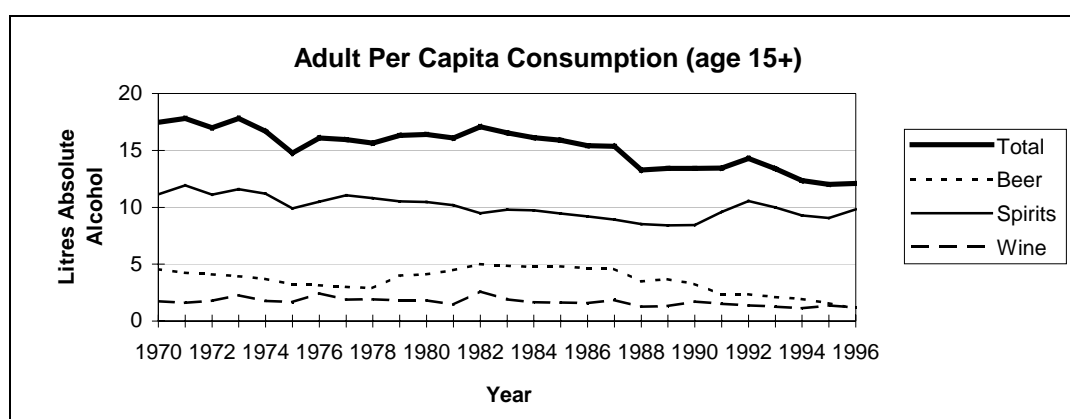
**Socioeconomic situation**

GNP per capita (US\$), 1995: 11 940, PPP estimates of GNP per capita (current int'l \$), 1995: 14 710.

Average distribution of labour force by sector, 1990-1992 : agriculture 5%; industry 4%; services 91%

Adult literacy rate (per cent), 1995 : total 98; male 99; female 98

## Alcohol consumption and prevalence



### Consumption

The relatively high rate of alcohol consumption in the Bahamas may reflect tourist consumption and duty free sales more than indigenous consumption patterns.

## Barbados

### Sociodemographic characteristics

| POPULATION  | 1980    | 1990    | 1995    |
|-------------|---------|---------|---------|
| Total       | 249 000 | 257 000 | 262 000 |
| Adult (15+) | 175 000 | 194 000 | 202 000 |
| % Urban     | 40.2    | 44.8    | 47.4    |
| % Rural     | 59.8    | 55.2    | 52.6    |

### Health status

Life expectancy at birth, 1990-1995 : 72.9 (males), 77.9 (females)

Infant mortality rate in 1990-1995 : 9 per 1000 live births

### Socioeconomic situation

GNP per capita (US\$), 1995: 6560, PPP estimates of GNP per capita (current int'l \$), 1995: 10 620.

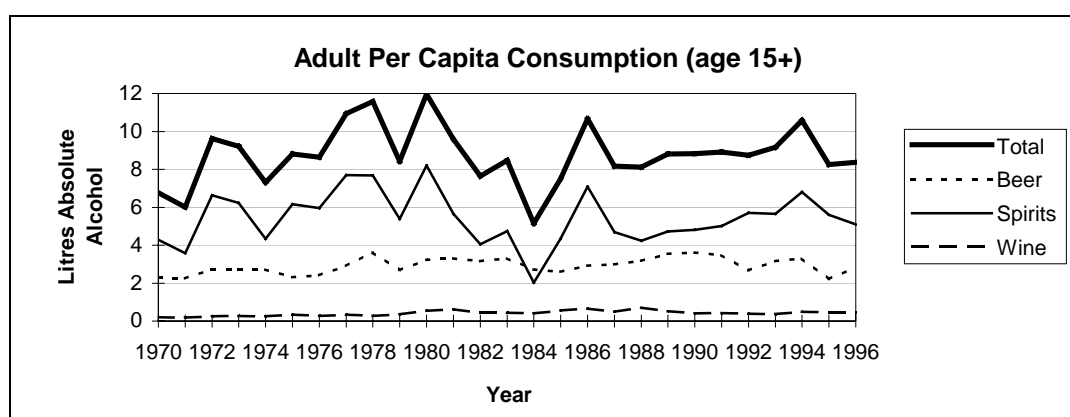
Average distribution of labour force by sector, 1990-1992 : agriculture 7%; industry 11%; services 82%

Adult literacy rate (per cent), 1995 : total 97; male 98; female 97

### Alcohol production, trade and industry

Barbados produces and exports distilled spirits and beer.

## Alcohol consumption and prevalence



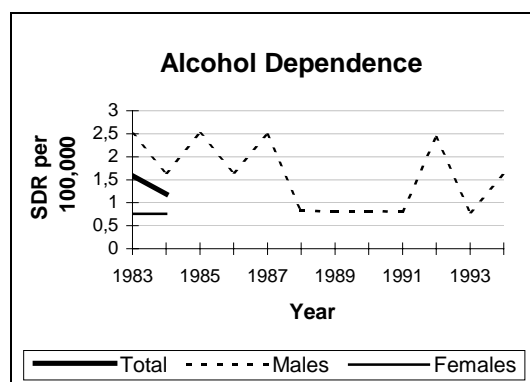
### Consumption

Much of Barbados spirits production is exported. Because of the delay between spirits production and exports, a genuine sense of alcohol consumption in Barbados may only be gained by averaging several years together, to allow for years such as 1984 when high spirits exports combined with low spirits production and imports give the probably erroneous appearance of a substantial decline in consumption.

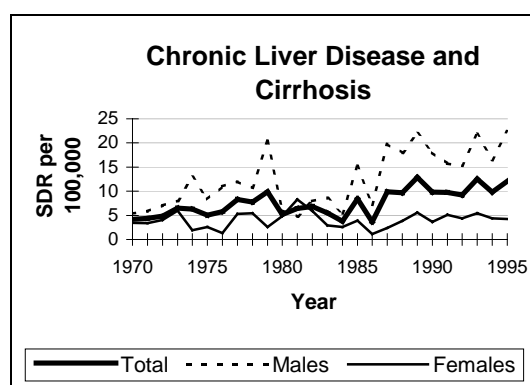
## Mortality, morbidity, health and social problems from alcohol use

### Alcohol dependence and related disorders

In 1994, SDR from alcohol dependence syndrome per 100 000 population was 1.6 for males. Data for females are for the most part unavailable.



### Mortality



# Belize

## Sociodemographic characteristics

| POPULATION  | 1980    | 1990    | 1995    |
|-------------|---------|---------|---------|
| Total       | 146 000 | 189 000 | 215 000 |
| Adult (15+) | 77 000  | 108 000 | 123 000 |
| % Urban     | 49.4    | 47.7    | 46.8    |
| % Rural     | 50.6    | 52.3    | 53.2    |

## Health status

Life expectancy at birth, 1990-1995 : 72.4 (males), 75.0 (females)

Infant mortality rate in 1990-1995 : 33 per 1000 live births

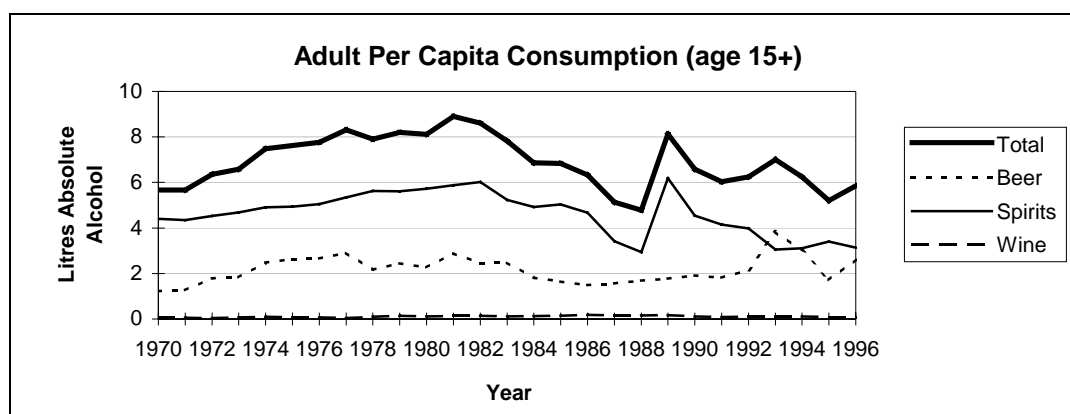
## Socioeconomic situation

GNP per capita (US\$), 1995: 2630, PPP estimates of GNP per capita (current int'l \$), 1995: 5400.

## Alcohol production, trade and industry

Belize produces beer and distilled spirits.

## Alcohol consumption and prevalence



## Consumption

The alcoholic beverage of choice in Belize is spirits. A sharp increase in spirits imports in 1989 accounts for the sudden rise in consumption in the graph above. There is no information available on consumption of smuggled or home- or informally-produced alcoholic beverages.

## Age patterns

Five hundred and twenty interviews were conducted among people aged 14 to 30 in households in Belize City in 1993, using random sampling. Nearly 61 per cent of all respondents had used alcohol at some time in their lives and 43.2 per cent reported usage within the last 30 days. More than 58 per cent of males reported current usage (in the past thirty days) of alcohol, compared with only 29.1 per cent of women. Of those drinking in the past month, 6.6 per cent used alcohol daily (7.5 per cent of males, 4.9 per cent of females). Of those between the ages of 14 and 19, 33.1 per cent (43.9 per cent of males and 22.7 per cent of females) had used alcohol in the past 30 days.

In 1992, a self-administered questionnaire collected data from 3473 students, including 4 sixth forms colleges, 30 high schools and 116 primary schools. Alcohol was the only drug which showed rising use compared with surveys conducted in 1986 and 1989. Fifty-seven per cent (62.7 per cent of males, 52.2 per cent of females) had used alcohol. A quarter of those 10 years-old or younger had used

alcohol, while 82.6 per cent of 17 year-olds had tried alcohol. Of those who used alcohol, 73 per cent had begun using it before age 15.

Only 0.6 per cent of the sample reported using alcohol every day, 2.3 per cent drank at least three times per week, and 10.9 per cent drank weekly. The majority of respondents in each grade used alcohol six times or less per year.

### **Mortality, morbidity, health and social problems from alcohol use**

#### ***Health problems***

Of those who reported ever using alcohol in the Belize city study, 6.7 per cent reported having experienced physical problems caused by alcohol.

#### ***Social problems***

Of those who reported ever using alcohol in the Belize city study, six per cent reported having experienced social problems, including economic, employment, legal or family problems, nervousness or other problems as a result of their drinking.

## **Bolivia**

### **Sociodemographic characteristics**

| POPULATION  | 1980      | 1990      | 1995      |
|-------------|-----------|-----------|-----------|
| Total       | 5 355 000 | 6 573 000 | 7 414 000 |
| Adult (15+) | 3 075 000 | 3 864 000 | 4 408 000 |
| % Urban     | 45.5      | 55.8      | 60.8      |
| % Rural     | 54.5      | 44.2      | 39.2      |

### **Health status**

Life expectancy at birth, 1990-1995 : 57.7 (males), 61.0 (females)

Infant mortality rate in 1990-1995 : 75 per 1000 live births

### **Socioeconomic situation**

GNP per capita (US\$), 1995: 800, PPP estimates of GNP per capita (current int'l \$), 1995: 2540.

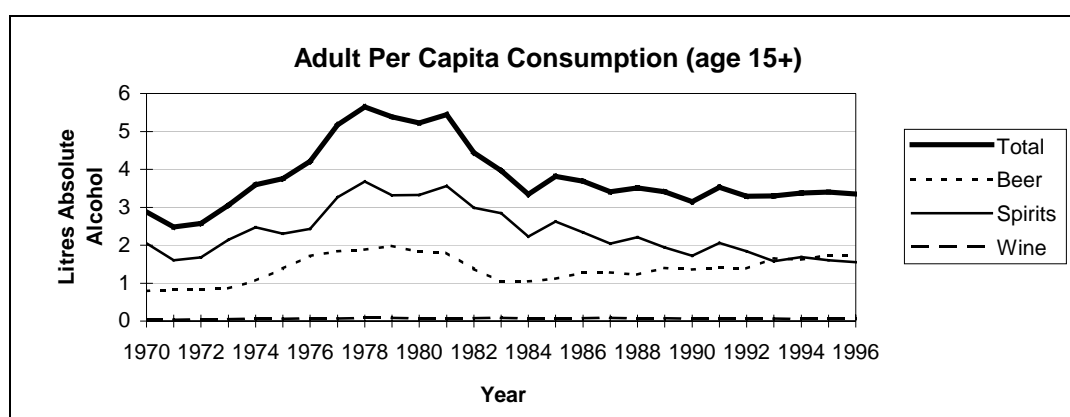
Average distribution of labour force by sector, 1990-1992 : agriculture 47%; industry 19%; services 34%

Adult literacy rate (per cent), 1995 : total 83; male 90; female 76

### **Alcohol production, trade and industry**

Bolivia produces beer, spirits and wine. In 1996, the Argentine brewing giant Quilmes Industrial SA (based in Luxembourg and owned 15 per cent by Heineken) invested US\$ 48 million in brewing operations in Bolivia.

## Alcohol consumption and prevalence



### Consumption

As a result of a decline in apparent spirits consumption, figures for adult consumption of beer and of spirits have converged. The graph above does not take into account home production of *chicha* (a fermented maize drink), legal importation (which is limited) and smuggling (which is significant).

### Prevalence

Lifetime prevalence of alcohol use in 1996 in cities with 30 000 or more inhabitants was 79.2 per cent. Prevalence of use in the past year was 66.9 per cent, and prevalence of use in the past month was 44.2 per cent. Male lifetime prevalence was 84.3 per cent compared to 75.6 per cent for females, and male prevalence rates for the previous year were 76.2 per cent, versus 60.4 per cent for females. Male and female prevalence of use in the previous month was 57.9 per cent and 34.6 per cent, respectively.

Sixty-eight per cent of respondents in a 1993 random sample of 6000 urban residents aged 12 to 50 years had used alcohol at some point in their lives (75 per cent of men and 61 per cent of women), and 41 per cent had used alcohol in the last 30 days (52 per cent of men and 32 per cent of women).

A growing acceptance of alcohol consumption has been observed. In the Andean rural area, the drinking of alcohol by women during civic and religious activities is now accepted. Men reportedly drink heavily, particularly with friends on weekends, and male intoxication is accepted.

### Age patterns

In cities of more than 30 000 inhabitants, 17.7 per cent of those aged 12 to 17 years reported drinking alcohol in the past month, an increase from 16.7 per cent in 1992. Among 18 to 50 year-olds, prevalence of use in the past month ranged from 43.6 to 57.8 per cent. Thirty-five per cent of 12 to 17 year-olds reported use in the previous year, while previous year prevalence rates ranged from 71.1 per cent to 78.6 per cent among respondents 18 to 50 years old. Lifetime prevalence rates were highest among the 25 to 34 and 35 to 50 age groups (92.6 per cent and 94.2 per cent, respectively). The lifetime prevalence rate for the 12 to 17 age group was 38.6 per cent, while the 18 to 24 age group showed a lifetime prevalence of 84.7 per cent.

## Mortality, morbidity, health and social problems from alcohol use

### Alcohol dependence and related disorders

Data from the National Institute for Research on Drug Abuse show that alcohol dependence represented 38.8 per cent of the demand for treatment for addiction to various substances between 1976 and 1980, 27 per cent between 1981 and 1985, and a lower percentage in the following five years.

### Morbidity

In 1985 researchers at the Psychiatric Clinic of the National Health Fund in the city of La Paz reviewed 953 hospitalizations and more than 4500 outpatient consultation records. Twenty-six per cent of hospitalizations (nearly 90 per cent males) and 7.5 per cent of outpatient visits were for alcohol problems.



**Health problems**

A 1990 study by the Department of Hygiene and Industrial Safety in three factories in La Paz found that 7.3 per cent of absenteeism in the first two days of the work week and 1.2 per cent of work-related injuries were directly related to the consumption of alcohol.

**Alcohol policies****Control of alcohol products**

The Ministry of Industry and Trade and the Ministry of Social Welfare and Public Health regulate the industry through licensing.

**Control of alcohol problems**

The Ministry of Social Welfare and Public Health and the Ministry of Education are involved in the coordination of prevention strategies and programmes aimed at the entire population, with special emphasis on the groups at greatest risk. Preventive education is carried out in the schools. Prevention campaigns are carried out by State and private institutions. The National Medical Residency System of the Graduate School of the University of Bolivia includes drug education in all the health science departments.

**Alcohol data collection, research and treatment**

The National Council for the Prevention of Drug Addiction (CONAPRE) plays a role in guiding and supervising research. There are state-run treatment centres for alcohol and other drug problems in state-run general hospitals, and treatment for multiple substance abuse is provided in state-run psychiatric treatment centres. The National Directorate for Prevention is the state agency which operates rehabilitation centres and coordinates rehabilitation with other organizations such as Alcoholics Anonymous.

## Brazil

---

**Sociodemographic characteristics**

| POPULATION  | 1980        | 1990        | 1995        |
|-------------|-------------|-------------|-------------|
| Total       | 121 286 000 | 148 477 000 | 161 790 000 |
| Adult (15+) | 75 537 000  | 97 391 000  | 109 538 000 |
| % Urban     | 66.2        | 74.6        | 78.3        |
| % Rural     | 33.8        | 25.4        | 21.8        |

**Health status**

Life expectancy at birth, 1990-1995 : 64.0 (males), 68.7 (females)

Infant mortality rate in 1990-1995 : 58 per 1000 live births

**Socioeconomic situation**

GNP per capita (US\$), 1995: 3640, PPP estimates of GNP per capita (current int'l \$), 1995: 5400.

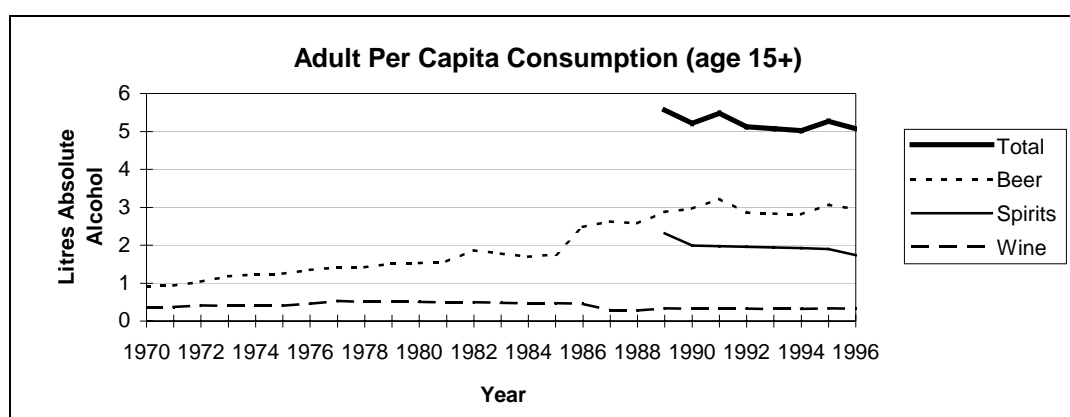
Average distribution of labour force by sector, 1990-1992 : agriculture 25%; industry 25%; services 47%

Adult literacy rate (per cent), 1995 : total 83; male 83; female 83

**Alcohol production, trade and industry**

Brazil is home to the world's fifth largest brewer, Brahma, and its competitor Antartica SA, 12th in the global rankings. Both brewers have been targets for joint ventures with United States brewers Anheuser-Busch and Miller. However, in 1997 the Brazilian government ruled the joint ventures in violation of Brazil's local control laws, and ordered them terminated.

## Alcohol consumption and prevalence



### Consumption

Beer has outpaced spirits as Brazil's alcoholic beverage of choice. Adult per capita consumption of pure alcohol in 1996 was approximately five litres. The Ministry of Agriculture estimates that one billion litres of the local sugar cane distillate *pinga* are produced every year. This would increase the estimate of adult per capita consumption of pure alcohol in 1996 to approximately 8.6 litres.

### Prevalence

A study, published in 1996, using a representative sample of Porto Alegre residents aged 15 years and older found that 24 per cent of the sample were abstainers, 15.5 per cent were heavy drinkers, defined as daily intake of 30g or more of pure alcohol on a single occasion (29.3 per cent of males, 4 per cent of females), and 12.3 per cent reported drinking daily. Women consumed alcoholic beverages in lower frequency and amounts than men, and non-Whites had rates of heavy drinking and dependence that were twice as high as those of Whites. Heavy drinking behaviour and alcohol dependence increased with age, both being more prevalent among those aged 40 years or older. Beer was the most commonly consumed alcoholic beverage (89 per cent), followed by spirits (63 per cent) and wine (61 per cent).

### Age Patterns

Drinking alcohol among young people is common, and increasing among females. Several studies have found mean age of onset to be 10.1 years. Studies of secondary students in public schools in ten Brazilian state capitals during 1987, 1989 and 1993 showed a significant increase in alcohol use in seven out of ten cities between 1987 and 1993. In 1987, 76 per cent of students had used alcohol, 58 per cent in the past year and 31 per cent in the last month, and 5 per cent on 20 or more days during the past month. By 1993, life-time use among males had increased in only three cities, while among females use had increased in eight cities. Younger students (12 to 15 years old) more consistently increased their alcohol use than their older counterparts. Prevalence of use in the past 30 days increased in nine cities, while frequent use (six or more times in the last 30 days) increased in six cities.

A household survey published in 1995 of 950 adolescents aged 10 to 18 in the urban area of Porto Alegre found alcohol use prevalent in 70 per cent of the sample. Males drank more heavily and frequently than females, and drinking increased with age. The mean age for experimentation with alcohol was 10.1, with no gender differences. This is in marked contrast to a 1996 study of those aged 15 years and over, for whom modal age of onset was 15 for males and 20 for females. About 26 per cent of those who had ever tried alcohol became intoxicated, and beer was the most common beverage used for intoxication (51 per cent of those who ever got intoxicated), followed by spirits (32 per cent). The most frequent place of initiation into alcohol use was "family setting", and when the 40 per cent of the sample that reported drinking in the last 30 days were asked about drinking situations, 70.1 per cent reported that they usually drink with their family. Heavy drinking by adolescents was positively associated with their perception that their parents were drinking too much.

## **Mortality, morbidity, health and social problems from alcohol use**

### ***Alcohol dependence and related disorders***

A 1992 study of the metropolitan areas of São Paulo, Brasília and Porto Alegre used a cross-sectional design to draw a probabilistic sample of residents in each site aged 15 years and over. Overall psychiatric morbidity ranged between 30 and 50 per cent. Alcohol dependence ranked second only to anxiety and phobic states in men. Four per cent, five per cent and nine per cent of males presented with alcohol dependence in São Paulo, Brasília and Porto Alegre respectively. Studies in other cities have found similar rates for alcohol dependence: 3.2 per cent in Rio de Janeiro, 8 per cent in São Paulo, and 9.3 per cent in Porto Alegre (using two positive responses to the CAGE survey as the criterion for dependence).

### ***Mortality***

In 1995 there were 1112 alcohol-attributable deaths in São Paulo, 1.7 per cent of the total deaths in the city. Of these, 46.7 per cent were due to alcoholic liver cirrhosis or hepatitis, while 52.8 per cent were attributed to alcohol dependence. According to official data from the Federal Health Department, alcohol dependence and alcohol psychosis represented the great majority of mental health mortality: 78.5 per cent and 4.5 per cent, respectively.

Out of 8665 total violent deaths in São Paulo city in 1994, 1522 were accompanied by a toxicological examination and a death certificate. Analysis of these showed substantial proportions of every category of violent death were related to alcohol. Of 530 homicides, 51.7 per cent showed positive blood alcohol concentration. Of 165 suicides, 36.4 per cent had a positive BAC. Of 47 falls, 35.9 per cent had a positive BAC. Of 42 drowning deaths, 54.8 per cent tested positive for alcohol. Of 146 deaths classified as "other accidents," 43.2 per cent were alcohol-related. Of 250 deaths categorized as "all other external causes," 36.4 per cent had a positive BAC. In the 124 pedestrian deaths from motor vehicle crashes, 52.4 per cent had been drinking, while 51.8 per cent of the 218 non-pedestrian motor vehicle crash fatalities had a positive BAC.

### ***Morbidity***

In 1988 alcohol dependence was found to be the main etiological factor in 71 per cent of 200 diagnosed cases of liver cirrhosis in São Paulo. An interview study of 103 alcohol dependent patients and 63 controls at a hospital in Brazil in 1990 suggested that suicide was more common among alcohol dependent patients than controls: 17 of the alcohol dependent patients had attempted suicide as compared to only three attempts among controls.

Analysis of 797 consecutive cases of chronic pancreatitis from 1963 to 1987 in São Paulo and Belo Horizonte determined alcohol dependence to be the main etiological agent in 89.6 per cent of all cases. In 1988 and 1989, studies of 65 304 and 67 592 inpatients, respectively, at a sample of Brazilian hospitals found that alcohol-related admissions represented 95 per cent of all substance-related admissions. Men accounted for 95 per cent of all alcohol-related admissions, and 80 per cent of the men admitted with alcohol problems were 30 years or older.

### ***Social problems***

Of 1136 traffic crash notifications between 1976 and 1985, 25 per cent included information on driver alcohol use, based either on self-report or on breathalyser tests. Of the cases where driver alcohol use data were present, approximately 18 per cent of drivers reported alcohol use before driving or presented BAC in excess of 0.08 g%. An earlier examination of the relationship between alcohol consumption and traffic crashes between 1966 and 1975 revealed that 25 per cent of the drivers involved had alcohol in their blood, and 18 per cent exceeded 0.08 g%.

In 1980, 1170 files from the Social Services Section of São Paulo Police Department were classified as "family conflicts" cases. Comments on excessive alcohol use were found in 343 out of 1170 files (29 per cent).

## **Alcohol policies**

### ***Control of alcohol products***

There is no public health-based legislation on the production, import and export of alcoholic beverages. In 1996, the advertising of alcoholic beverages (except beer) was prohibited in the media

between 06:00 and 21:00 hours. However, only beverages containing more than 13 per cent of pure alcohol are considered alcoholic beverages in this legislation.

The state of São Paulo forbids the sale of alcohol on state roads. However, alcohol sales are permitted on all federal roads crossing the state, and on all roads in other states.

#### ***Control of alcohol problems***

The minimum legal age for drinking is 18 years. Consumption of alcohol during working hours is prohibited. The BAC limit for driving is 0.08 g%. The Federal University of São Paulo offers a specialist training course in alcohol and drug misuse directed at health care professionals. A few professional associations offer courses for physicians. No national agency exists to address alcohol policy.

#### ***Alcohol data collection, research and treatment***

The Brazil Centre for Drug Abuse Education (CEBRID) has conducted periodic surveys of alcohol and other drug use among secondary schools students in ten state capitals.

A national programme has been set up to establish a country-wide policy on the treatment and rehabilitation of alcohol dependent persons.

A forthcoming publication of WHO (Riley and Marshall [ed.] Alcohol and public health in eight developing countries, 1999) includes an in-depth case study from Brazil.

## **Canada**

---

### **Sociodemographic characteristics**

| POPULATION  | 1980       | 1990       | 1995       |
|-------------|------------|------------|------------|
| Total       | 24 594 000 | 27 791 000 | 29 463 000 |
| Adult (15+) | 19 011 000 | 22 030 000 | 23 325 000 |
| % Urban     | 75.7       | 76.6       | 76.7       |
| % Rural     | 24.3       | 23.4       | 23.3       |

### **Health status**

Life expectancy at birth, 1990-1995 : 74.2 (males), 80.7 (females)

Infant mortality rate in 1990-1995 : 7 per 1000 live births

### **Socioeconomic situation**

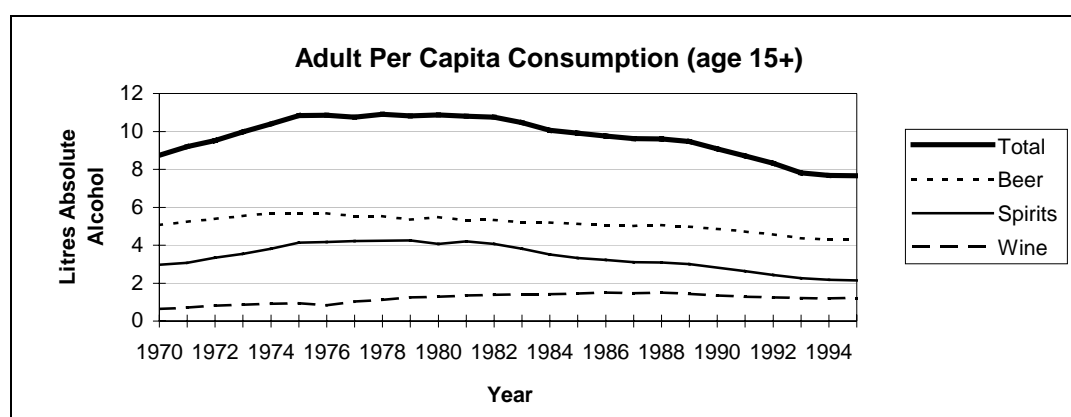
GNP per capita (US\$), 1995: , 19 380 PPP estimates of GNP per capita (current int'l \$), 1995: .

Average distribution of labour force by sector, 1990-1992 : agriculture 5%; industry 23%; services 72%

### **Alcohol production, trade and industry**

Canada is a major producer of beer and spirits. The beer market is dominated by two giants, Molson Breweries (half-owned by Foster's of Australia) and Labatt, owned by Interbrew of Belgium. These two are within one percentage point of each other's market share, and together sell 95 per cent of Canada's beer. The other Canadian alcohol giant is Seagram, the world's third largest producer of distilled spirits.

## Alcohol consumption and prevalence



### Consumption

Growth in consumption of all alcoholic beverages combined was moderate during the 1950s and into the early 1960s; increases averaged about one per cent per year. From 1963 through 1975, the rate of growth averaged about four per cent per year and then slowed to less than one per cent per year until 1980. Since 1980, per capita consumption of alcohol has declined on average per year by 2.3 per cent. From 1950 to 1975, spirits consumption increased steadily. Sales stabilized after 1975, and since 1980, consumption has decreased at an average annual rate of 4.2 per cent. Wine consumption has had the highest rate of growth over the period since 1950, but remains at a low level. Beer has increased the least of the three beverages since 1950. Consumption remained virtually unchanged during most of the 1970s and since 1980 has been trending downward, but by a lower rate (1.4 per cent) than spirits.

The illegal trade in alcoholic beverages and the growth in non-regulated production began to emerge as a significant source of consumption in the early 1990s. A 1996 report of the Auditor General indicates that the evasion of excise duty on spirits due to "home production" resulted in a loss of revenues as high as CA\$ 200 million (US\$ 133 million) in 1994-1995.

### Prevalence

According to various national surveys, the proportion of Canadians who drank alcohol continued to decline throughout the 1990s. About 80 per cent of the population drank in 1979, 81 per cent in 1985, 78 per cent in 1989, 79 per cent in 1991, 74 per cent in 1993, and 72 per cent in 1994.

Of the 9189 respondents in the 1994 Canadian Alcohol and Drug Survey, 72.3 per cent were current drinkers (i.e. they drank alcohol within the past year), 13.5 per cent were former drinkers (drank alcohol in previous years but not in the past year), and 12.8 per cent had never drank alcohol. Men were more likely than women to be current drinkers (78.1 per cent versus 66.7 per cent), and the proportion who said they drank ranged from 84 per cent among 20 to 24 year olds to 46 per cent among individuals over 75 years of age. More people in Alberta (76.4 per cent) and British Columbia (75.6 per cent) said they drink than in other parts of the country (i.e. 67.2 per cent in Prince Edward Island). A higher proportion of drinkers have higher incomes, post-secondary education and are employed than non-drinkers.

The 1989 National Alcohol and Drug Survey indicated that most drinking is done in private settings, such as a quiet evening at home (18 per cent), a party or other social gathering (16 per cent), having friends visit (16 per cent), or visiting others (15 per cent).

### Age patterns

In 1995, 58.8 per cent of students in Ontario had used alcohol in the past 12 months. This represents an increase from the 56.5 per cent recorded in 1993, and a decrease from the 66.2 per cent recorded in 1989. Males had slightly higher rates of alcohol use than females (60.0 per cent and 57.6 per cent in 1995, respectively). The largest percentage of alcohol use was in the 18 years and over age category (78.2 per cent compared with 75.0 per cent in the 16 to 17 age group, 56.9 per cent in the 14 to 15 age group, and 31 per cent in the 13 years and under age group).

### ***Alcohol use among population subgroups***

A 1989 national sample of "street youths" indicated that about 88 per cent drank alcohol, while nine per cent reported drinking daily.

### **Economic impact of alcohol**

In 1992/1993 the sale of alcoholic beverages totalled CA\$ 10.43 billion (US\$ 8.14 billion). The average Canadian age 15 or older spent CA\$ 462 (US\$ 360) on alcoholic beverages in 1992/1993.

It is estimated that in 1992 alcohol abuse accounted for about CA\$ 7.5 billion (US\$ 5.85 billion) in costs, or about CA\$ 265 (US\$ 207) per capita. The largest economic costs of alcohol are lost productivity due to morbidity and premature mortality (CA\$ 4.14 billion or US\$ 3.23 billion), law enforcement (CA\$ 1.36 billion or US\$ 1.06 billion), and direct health care costs (CA\$ 1.30 billion or US\$ 1.01 billion).

Alcohol provided employment for 15 741 Canadians and more than CA\$ 4.2 billion (US\$ 3.3 billion) in government revenue in 1992/1993.

### **Mortality, morbidity, health and social problems from alcohol use**

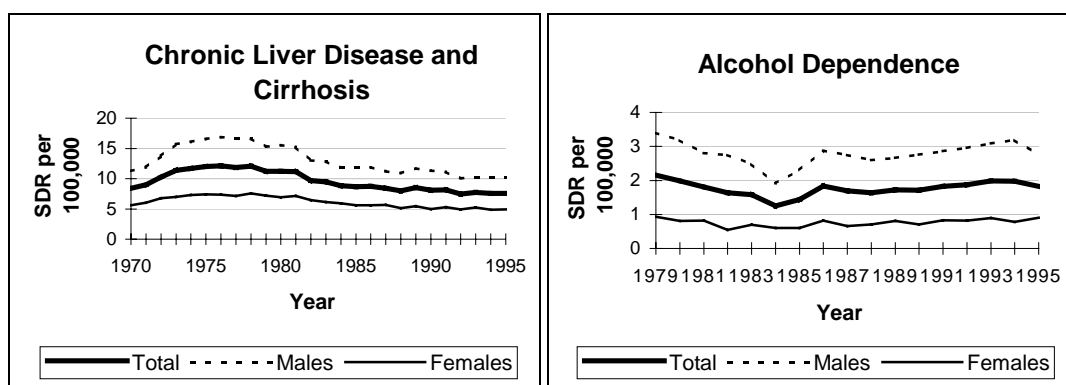
#### ***Alcohol dependence and related disorders***

The SDR in 1995 from alcohol dependence was 1.8 per 100 000 population. Rates for men were approximately three times those for women.

#### ***Mortality***

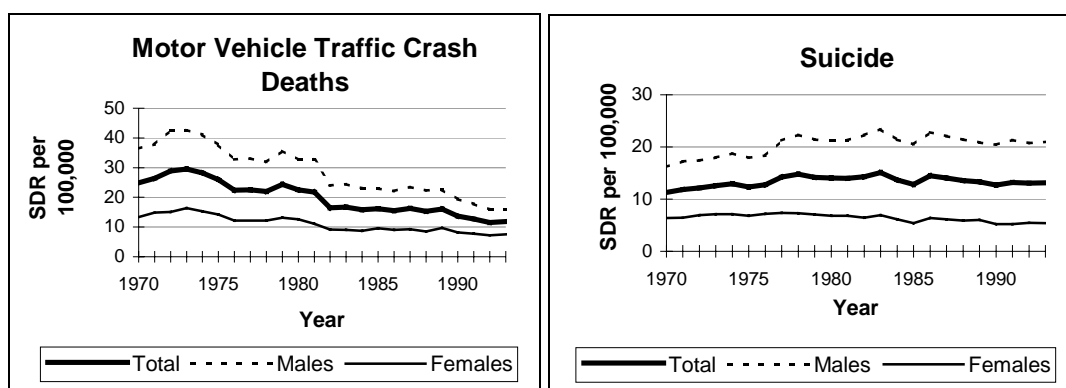
An estimated 6701 Canadians lost their lives as a result of alcohol consumption in 1992. This represents three per cent of total mortality in Canada for 1992.

Approximately 80 per cent of total liver cirrhosis mortality is attributable to alcohol use.



The largest number of alcohol-related deaths stems from impaired motor vehicle driving crashes. In 1993, 46 per cent of drivers fatally injured in motor vehicle crashes had some alcohol in their blood, 39 per cent were over the legal limit of 0.08 g% BAC, and 30 per cent were over 0.15 g% BAC. It is estimated that 1021 men and 456 women died in motor vehicle crashes in 1992 as the result of drinking. Motor vehicle deaths represent 22 per cent of all alcohol-related deaths and 33 per cent of productive life years lost.

Since 1991 the proportion of fatally injured drivers with BAC levels over the legal limit has increased, following a decade of decline. The proportion of drivers who are impaired is high among drivers between the ages of 20 and 25 (46.2 per cent) and 26 and 35 (47.6 per cent). Regionally, Prince Edward Island (60 per cent) and Newfoundland (56.3 per cent) have the highest proportion of fatally injured drivers who are alcohol-impaired and Alberta (26.8 per cent) has the lowest proportion.



In 1992 there were 918 alcohol-related suicides.

### ***Morbidity***

There were an estimated 86 076 hospital separations (56 474 for men and 29 602 for women) due to alcohol in 1992. The number of alcohol-related hospital days is estimated at 1 149 106 (755 204 for men and 393 902 for women). The 86 076 hospitalizations due to alcohol constitute two per cent of all hospitalizations, and the 1.15 million days of hospitalization due to alcohol represent three per cent of the total days spent in hospital for any cause.

### ***Social problems***

Respondents in the 1993 General Social Survey were asked if their drinking affected their social life, physical health, happiness, home life or marriage, work, or finances. Nearly one-tenth (9.2 per cent) of drinkers suffered at least one problem as a result of their drinking. The most common problems related to physical health (5.1 per cent) and financial position (4.7 per cent). In 1993 there were 92 539 people charged with alcohol-related traffic offences, or 413 per 100 000 population age 16 or older. Men accounted for 90 per cent of these charges in each year from 1990 to 1993.

## **Alcohol policies**

### ***Control of alcohol products***

For three decades the price of alcohol increased substantially, but generally at rates similar to other consumer goods. Since 1986, however, the price of alcohol has increased at a slightly faster pace than the prices for other consumer goods. In 1992/1993 the cost of 10 litres of absolute alcohol, as a percentage of personal disposable income, increased to 2.89 per cent from 2.78 per cent in 1991/1992, and 2.68 per cent in 1990/1991.

The federal government has authority over alcohol imports and exports, as well as alcohol-related excise taxes. There is a proliferation of taxes, particularly at the provincial level, and no official statistics exist on total tax burdens. The following are estimates of the total tax levy per litre of absolute alcohol on alcoholic beverages (in Canadian dollars): beer - 36.30 (US\$ 26.50); spirits - 53.83 (US\$ 39.30); table wine - 32.24 (US\$ 23.53); fortified wine - 21.50 (US\$ 15.70). At the federal level, an excise duty is levied on beer and spirits, and an excise tax on wine. As of 1991, beer from 1.2 to 2.5 per cent alcohol by volume is taxed CAN\$ 0.13990 (US\$0.10) per litre, spirits are taxed CAN\$ 11.066 (US\$ 8.08) per litre of absolute alcohol, and wine from 1.2 to 7 per cent alcohol by volume is taxed CAN\$ 0.2459 (US\$0.18) per litre. On 1 January, 1991, a federal value added tax replaced a 19 per cent manufacturers sales tax on alcoholic beverages. The prevailing rate of the new federal tax is seven per cent.

In most provinces, the liquor monopolies regulate or monitor the prices at which most alcoholic beverages may be sold for off-premise consumption. In the case of beer, however, the states of Alberta, British Columbia and Saskatchewan have eliminated or reduced pricing restrictions for beer sold out of the monopoly stores and from vendor outlets. In Quebec, domestic beer is sold through grocery stores only, and the government has no involvement in beer pricing.

Hours of sale for the purchase of alcoholic beverages are regulated by the liquor monopolies in each province and territory.

Federal regulations prohibit a range of advertising messages, including any that attempt to influence non-drinkers to drink; appeal to minors; associate consumption with high-risk activities; suggest consumption is associated with social acceptance, personal success, or athletic or business achievement; or violate the relevant provincial advertising law.

### ***Control of alcohol problems***

The minimum legal drinking age is 19 in all Canadian provinces and territories, except in Quebec, Manitoba and Alberta, where the minimum age is 18.

In recent years, a number of provinces have initiated education programmes aimed at reducing impaired driving and/or encouraging the responsible consumption of alcohol. Canada's Drug Strategy, launched by the federal government in 1987, was a collaborative effort of the federal, provincial and territorial governments and many non-governmental organizations. The objective of the Strategy was to reduce harm caused by alcohol and other drug use. A separate national programme on impaired driving was launched at the same time as the Drug Strategy. This programme, targeted at young people, included broadcast messages and supporting materials, using the theme "Play It Smart"; a server training programme for on-premise establishments; and teaching aids. Both the impaired driving programme and Canada's Drug Strategy were due to expire on 31 March, 1992. The Drug Strategy (and the impaired driving programme within the Strategy's context) was subsequently renewed and given a new sunset date of 31 March, 1997. After that date, health programming developed under the Drug Strategy was to be merged with other health and social programmes relating to population health.

There are four specific drinking and driving offences in the federal Criminal Code: operating or having care or control of a motor vehicle while one's ability to drive is impaired by alcohol or a drug; impaired driving causing death or bodily harm; operating or having care or control of a motor vehicle when one's BAC is over 0.08 g%; and failing to provide a breath or blood sample for analysis. These four offences are punishable by imprisonment, heavy fines and lengthy driving prohibitions. Since 1987 the Canadian brewing industry has spent more than CAN\$ 95 million on "responsible use" programmes. Efforts have included paid television messages, radio advertisements, outdoor billboards, posters and brochures as well as the funding of third parties in targeted programmes. In 1996, the brewing industry launched "Stand Up, Speak Out, Be Heard", a media programme aimed at young people.

### ***Alcohol data collection, research and treatment***

The Canadian Centre on Substance Abuse was created by an Act of Parliament in August 1988 to provide a national focus for drug and alcohol issues in Canada. The Centre's three broad goals were to promote increased awareness of issues related to alcohol and drug abuse, promote increased participation in the reduction of harm associated with alcohol and drug abuse, and promote the use and effectiveness of relevant programmes. The Canadian Centre on Substance Abuse established a National Clearinghouse on Substance Abuse to collect and disseminate information, compile and maintain a variety of databases, and coordinate the Canadian Substance Abuse Information Network. The Centre has published a variety of directories, statistical profiles, pamphlets, research and policy papers and special reports.

In most provinces, alcohol and drug addiction agencies are funded by the government. Typically, these organizations operate treatment and rehabilitation facilities and are involved in preventive education, information and sometimes data collection and research. In Ontario, the Addiction Research Foundation sponsors a wide variety of local, national and international studies of alcohol and other drug use.



# Chile

## Sociodemographic characteristics

| POPULATION  | 1980       | 1990       | 1995       |
|-------------|------------|------------|------------|
| Total       | 11 143 000 | 13 154 000 | 14 262 000 |
| Adult (15+) | 7 403 000  | 9 195 000  | 10 051 000 |
| % Urban     | 81.2       | 83.3       | 83.9       |
| % Rural     | 18.8       | 16.7       | 16.1       |

## Health status

Life expectancy at birth, 1990-1995 : 70.4 (males), 77.4 (females)

Infant mortality rate in 1990-1995 : 16 per 1000 live births

## Socioeconomic situation

GNP per capita (US\$), 1995: 4160, PPP estimates of GNP per capita (current int'l \$), 1995: 9520.

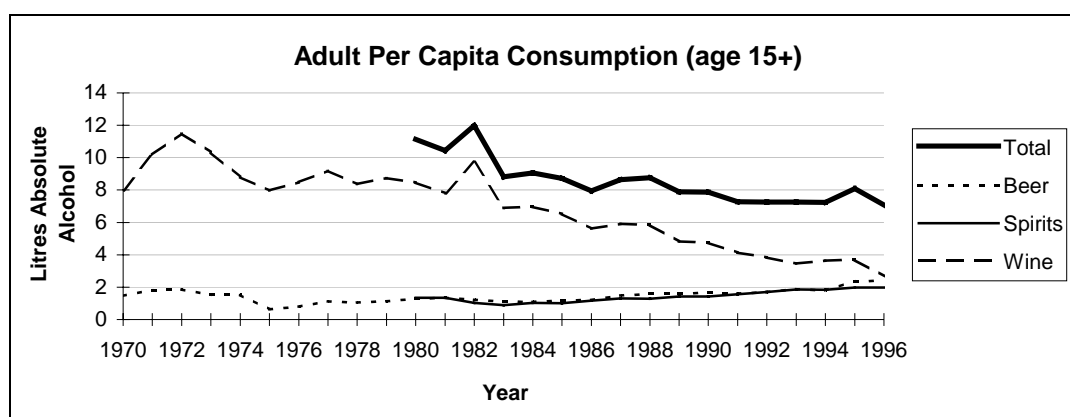
Average distribution of labour force by sector, 1990-1992 : agriculture 19%; industry 26%; services 55%

Adult literacy rate (per cent), 1995 : total 95; male 95; female 95

## Alcohol production, trade and industry

Chile produces substantial amounts of beer and wine, and also reports domestic spirits production. As wine production has declined overall, wine exports have increased both as a percentage of wine produced and in gross numbers. Chile's wine industry is comprised of approximately 30 wineries, the largest four of which control more than 80 per cent of the country's export business. Chile is currently the world's seventh largest exporter of wine, and the largest in South America. The Ministry of Agriculture expects Chile's global ranking to rise to number four (trailing only Italy, France and Spain) by the year 2000.

## Alcohol consumption and prevalence



### Consumption

As wine consumption has declined, consumption of beer and spirits has risen to meet it. Clandestine production of alcoholic beverages is estimated at about 20 per cent of the recorded annual consumption level, suggesting that total consumption is closer to 8.5 litres of absolute alcohol per adult.

### Prevalence

Results of a survey of 29 066 inhabitants of 13 regions in Chile were published in 1997. The universe represented was 869 038 inhabitants. Lifetime prevalence of alcohol consumption was 72.4 per cent

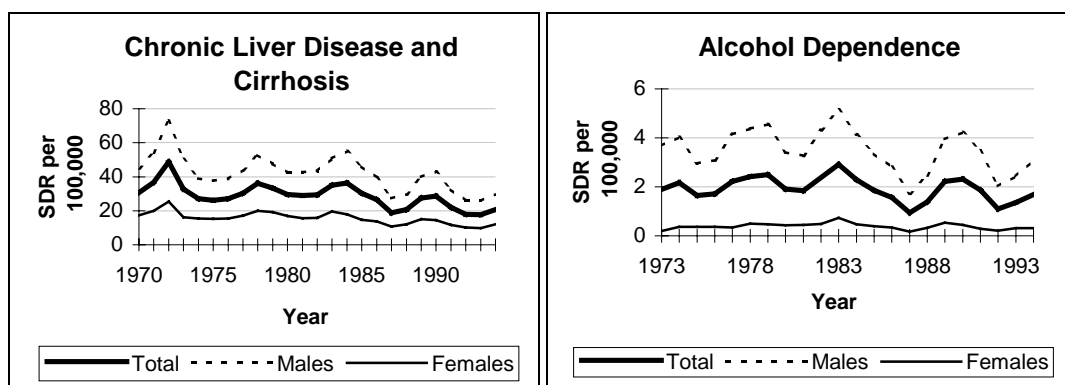
(74.5 per cent for males and 70.4 per cent for females). The average age of initiation of alcohol use was 13.3 years.

A study published in 1996 drew on a national sample of 10 544 urban inhabitants between the ages of 12 and 64, representing a population of 6 186 528. The percentage of the sample who had consumed alcohol during the past month was 39.9 (50.2 for males and 31 for females). Use in the past month was highest among those in the 19 to 25 age group (49.7 per cent). In general, use in the past month increased with socioeconomic status. Approximately 60 per cent of the sample consumed alcohol in the past year (68.6 per cent of males and 53.5 per cent of females), and 12.6 per cent of the sample were ex-drinkers (11.1 per cent of males and 13.9 per cent of females).

#### **Age patterns**

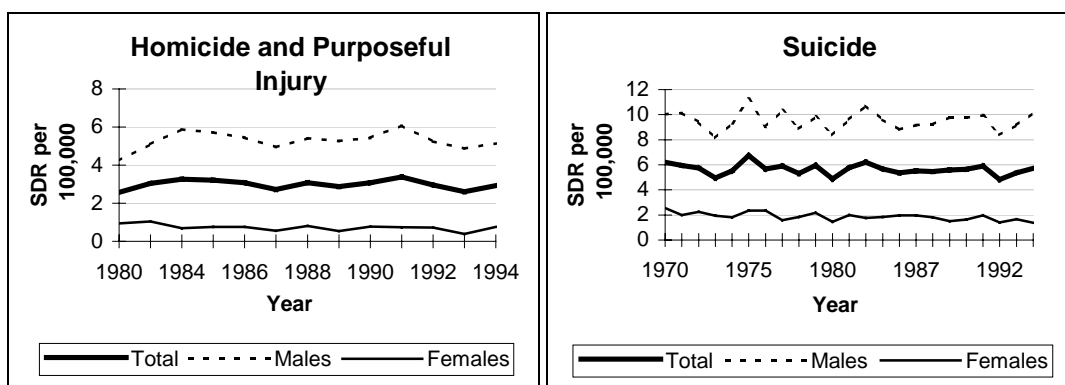
Regular consumption of alcohol among young people rose from 11.5 per cent in 1984 to 18 per cent in 1990. Approximately 70 per cent of all children who complete secondary school education consume alcohol, more than 15 per cent have been inebriated before the age of 15, and five per cent drink more than once a week. These percentages are higher among young people who have dropped out of school, among the unemployed and among the children of alcohol dependent parents.

### **Mortality, morbidity, health and social problems from alcohol use**



#### **Mortality**

Between 1981 and 1983, 38.6 per cent of suicides were alcohol-related. Of all homicides recorded between 1981 and 1983, the proportion of persons with alcohol in their blood was 48.6 per cent, and in 1984, it was reported that in 52 per cent of the cases of homicide, the victim was an excessive alcohol drinker.



#### **Social problems**

The number of drivers arrested for drunk driving declined from 5400 in 1983 to an average of 2900 in 1986 and 1987.

## Alcohol policies

### *Control of alcohol products*

There are regulations limiting where and when alcoholic beverages may be sold, but the marketing of alcohol is unrestricted.

### *Control of alcohol problems*

The minimum legal drinking age is 21 years. All university health and science programmes include courses on alcohol dependence in their undergraduate curricula. The Ministry of Health offers training on recognition and treatment of alcohol problems for general practitioners.

### *Alcohol data collection, research and treatment*

The Centre for Alcoholism Studies and the Ibero-American Association for the Study of Alcohol Problems have developed plans for treatment and academic programmes. Religious organizations, with some professional assistance, have set up centres for the treatment and guidance of alcohol and other drug dependent persons.

## Colombia

### Sociodemographic characteristics

| POPULATION  | 1980       | 1990       | 1995       |
|-------------|------------|------------|------------|
| Total       | 26 525 000 | 32 300 000 | 35 101 000 |
| Adult (15+) | 15 908 000 | 20 900 000 | 23 542 000 |
| % Urban     | 63.9       | 70.0       | 72.7       |
| % Rural     | 36.1       | 30.0       | 27.3       |

### Health status

Life expectancy at birth, 1990-1995 : 66.4 (males), 72.3 (females)

Infant mortality rate in 1990-1995 : 37 per 1000 live births

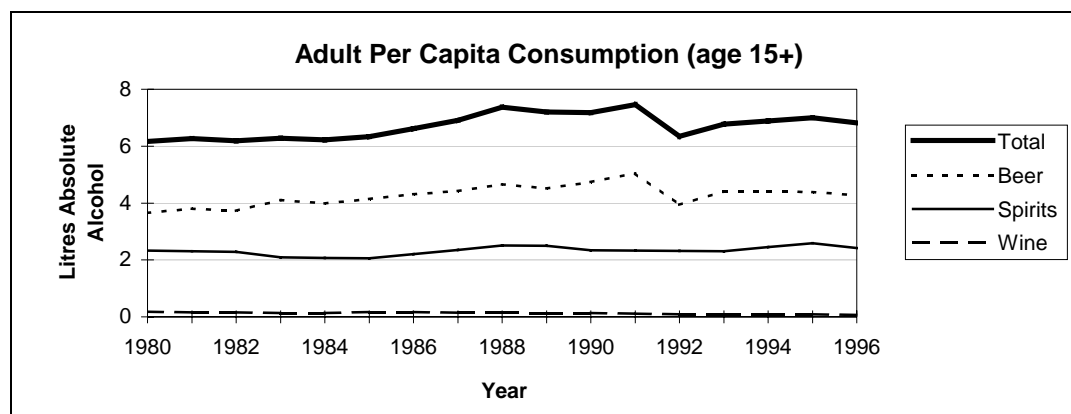
### Socioeconomic situation

GNP per capita (US\$), 1995: 1910, PPP estimates of GNP per capita (current int'l \$), 1995: 6130.

Average distribution of labour force by sector, 1990-1992 : agriculture 10%; industry 24%; services 66%

Adult literacy rate (per cent), 1995 : total 91; male 91; female 91

### Alcohol consumption and prevalence



### **Consumption**

No clandestine production of alcohol has been reported. Beer is the alcoholic beverage of choice. Overall consumption has risen slightly since 1980.

### **Prevalence**

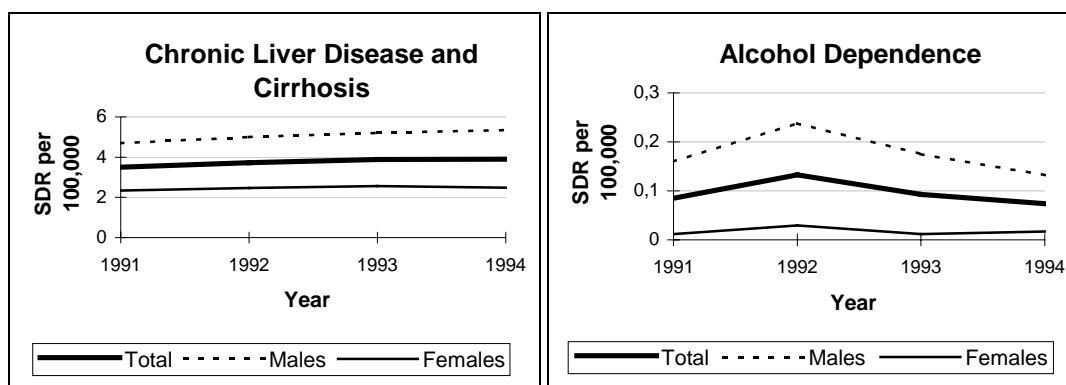
In 1996, a probabilistic, multi-stage stratified sample was taken of 18 770 individuals between the ages of 12 and 60 living in non-institutional households in all the departments of Colombia. The rate of use of any alcoholic beverage during the last year was 59.8 per cent, and the rate of use during the last month was 35 per cent. The highest levels of use during the last month were found among males aged 18 to 44 years who were working and had college-level education. The mean age of start of use for alcoholic beverages was 15.9 years, slightly higher among males than females.

A 1987 survey of a random sample of 2800 urban residents aged 12 to 64 years found that 67 per cent had used alcohol at some time in their lives (81 per cent of men and 51 per cent of women). An interview study that same year of a representative sample of the urban population (n = 2 800) aged 15 to 64 years, not including institutional populations, reported that alcohol was the drug most consumed by both sexes (70.5 per cent of males, and 41.6 per cent of females), the prevalence being highest in groups aged 16 to 37 years.

## **Mortality, morbidity, health and social problems from alcohol use**

### **Alcohol dependence and related disorders**

A 1987 interview study used the CAGE questionnaire to evaluate respondents for alcohol dependence. Judging from responses regarding events in the previous month, criteria for the diagnosis of alcohol dependence were met by eight per cent of the sample, the highest rates being five per cent for females aged 25 to 29 years and 20 per cent among males aged 38 to 49.



## **Alcohol policies**

### **Control of alcohol problems**

The minimum legal drinking age is 18, but it is not strictly enforced. The Colombian Corporation against Alcoholism and Drug Abuse (SURGIR) is involved in alcohol policy decisions. Law 30, passed in 1986, established a National Plan for the Prevention and Treatment of Drug Abuse and the Rehabilitation of Drug Abusers. The Ministry of Health is responsible for carrying out the National Plan. The Family Welfare Institute provides prevention training for educators, and the Ministry of Education offers seminars to professors on primary prevention of alcohol dependence. Efforts are being made to educate parents and community leaders.

### **Alcohol data collection, research and treatment**

The University of Antioquia, through the National School of Public Health, has been the principal institution conducting research on the epidemiology of alcohol dependence.

The Mental Hospital of Antioquia conducts courses in which multidisciplinary teams are trained to provide treatment. There are 14 State drug abuse and alcohol dependence services, which operate in hospitals, and there are eight associated private institutions and many other independent ones that provide prevention, treatment and rehabilitation services. Treatment services are also provided by the

social security system. Four AA groups in the capital city of Bogota provide advisory services, prevention, intervention and treatment through self-help groups.

## Costa Rica

### Sociodemographic characteristics

| POPULATION  | 1980      | 1990      | 1995      |
|-------------|-----------|-----------|-----------|
| Total       | 2 284 000 | 3 035 000 | 3 424 000 |
| Adult (15+) | 1 397 000 | 1 928 000 | 2 227 000 |
| % Urban     | 43.1      | 47.1      | 49.7      |
| % Rural     | 56.9      | 52.9      | 50.3      |

### Health status

Life expectancy at birth, 1990-1995 : 74.0 (males), 78.7 (females)

Infant mortality rate in 1990-1995 : 14 per 1000 live births

### Socioeconomic situation

GNP per capita (US\$), 1995: 2610, PPP estimates of GNP per capita (current int'l \$), 1995: 5850.

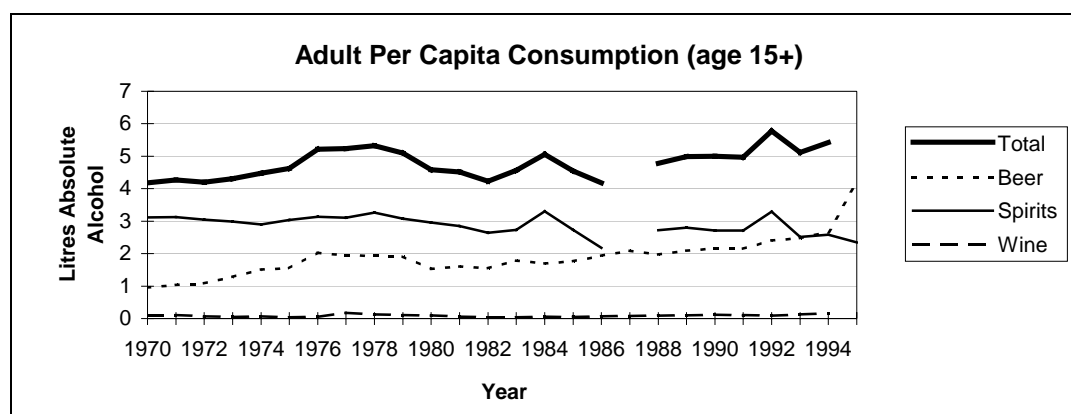
Average distribution of labour force by sector, 1990-1992 : agriculture 25%; industry 27%; services 48%

Adult literacy rate (per cent), 1995 : total 95; male 95; female 95

### Alcohol production, trade and industry

The brewing companies, Cerveceria Costa Rica and Cerveceria Americana, both produce beer, the latter holding approximately eight per cent of the market. Anheuser-Busch, the world's largest brewer, has signed a distribution agreement with Cerveceria Costa Rica, while Miller Brewing has set up a joint venture with Cerveceria Americana to brew the Miller brand for Latin America. Spirits and wine are imported.

### Alcohol consumption and prevalence



#### Consumption

Consumption of wine is very low. Beer recently displaced spirits as the alcoholic beverage of choice, and is responsible for the increase in adult per capita consumption, according to figures provided by the Costa Rican government.

#### Prevalence

In a 1995 study of seven provinces in Costa Rica, lifetime prevalence of alcohol use was 62.3 per cent. Prevalence of use in the last year was 40.3 per cent, and prevalence of use in the last month was 24.9

per cent. Approximately 24.6 per cent were moderate drinkers, 9.7 per cent were excessive drinkers and 6.9 per cent were deemed alcohol dependent. About 58.7 per cent abstained from alcohol.

Another 1995 survey found that 56 per cent of the sample abstained from alcohol, 22 per cent were moderate drinkers, 10 per cent were excessive drinkers and five per cent were alcohol dependent. In a 1987 drug prevalence survey carried out on a sample of 2083 persons by the Institute on Alcoholism and Drug Dependence, 3.5 per cent had used illegal drugs and of these, 81 per cent had also used alcohol. Of the non-consumers of illegal drugs, 34.2 per cent had used alcohol.

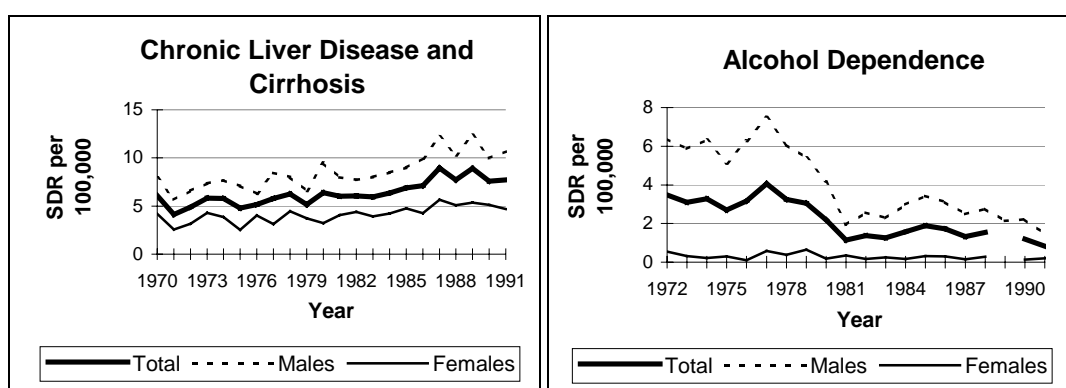
#### ***Alcohol use among population subgroups***

In 1990, interviews with a sample of 469 residents of San Jose's shantytowns aged 15 years and over revealed that nine per cent were heavy drinkers.

### **Mortality, morbidity, health and social problems from alcohol use**

#### ***Alcohol dependence and related disorders***

A 1990 survey of residents of San Jose's shantytowns aged 15 or over found that five per cent showed signs of physical dependence on alcohol. The Costa Rican Social Security Fund (CCSS), the institution responsible for hospital and outpatient services throughout the country, does not maintain a specific register for alcohol dependence, but recorded 2166 discharges following a diagnosis of "alcoholism" in 1986 (0.7 percent of all discharges). Of these, 1250 were diagnosed with alcohol dependence syndrome, 302 with alcoholic psychosis, and 247 with alcoholic cirrhosis of the liver.



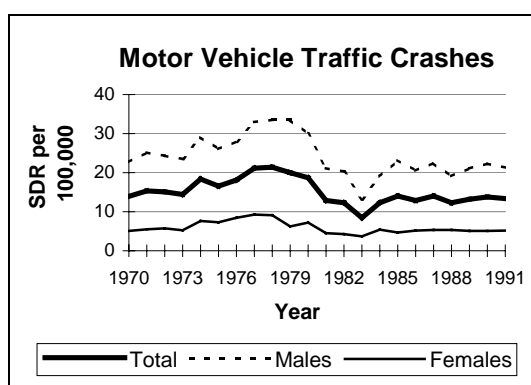
#### ***Mortality***

A total of 116 deaths were directly attributable to alcohol use in 1992. The majority of these were caused by alcoholic hepatitis (50) and alcoholic cirrhosis (32).

#### ***Health problems***

In 1993, a total of 8313 patients received medical treatment for alcohol problems. The Alcoholic Rehabilitation Centre and outpatients service reported a total of 1737 discharges during 1987. The average number of days of hospitalization was 12.8.

Of a total of 927 644 emergency consultations in 1987, 13 per cent were for problems related to alcohol.



***Social problems***

Of 30 116 motor vehicle traffic crashes in 1992, five per cent (1475) were caused by the inebriation of the driver. There were 119 435 traffic crashes during 1981-1987, of which five per cent were associated with drunk driving. It is estimated that 30 per cent of absenteeism and injuries at work are alcohol-related.

**Alcohol policies*****Control of alcohol problems***

The Institute on Drug Dependence and Alcoholism's health promoters provide community education. The number of advertising messages promoting consumption of beer, rum, vodka and whisky through television, radio and the press was 71 271 in 1993. An attempt to counteract such promotion was made through preventive messages in the same media in 1993.

***Alcohol data collection, research and treatment***

The Institute on Drug Dependence and Alcoholism (IAFA) has been granted the power and responsibility of standardizing, regulating and coordinating activities related to the country's alcohol and drug problems. IAFA produces compilations of annual statistics on production, importation and per capita consumption of alcoholic beverages, deaths related to alcohol consumption, numbers of traffic crashes caused by drunken driving, and publicity and prevention indicators. They also maintain records of persons treated for alcohol problems, by treatment centre.

IAFA offers intensive training courses in the Schools of Medicine, Psychology, Social Work, Nursing and Education on alcohol and alcohol dependence, and in coordination with the Ministry of Education provides advisors for educators. IAFA is also responsible for guiding and supervising research studies.

Treatment is carried out mainly by IAFA and the Costa Rican Social Security Fund, which have specialized clinics and hospitals for that purpose. In addition, many communities have organized care systems, some supervised by IAFA and others receiving only advisory services and authorization. The Salvation Army has treatment centres in various parts of the country and Alcoholics Anonymous groups exist in almost all cities. According to the 1994 WHO Atlas survey, the facilities available are: four outpatient facilities (20 treatment slots), five inpatient facilities (50 beds), two residential facilities (210 beds), three detoxification centres (35 beds), 22 general hospitals (10 beds), 1350 Alcoholics Anonymous facilities, 13 self-help facilities (142 beds), five public care facilities (50 treatment slots), two spiritual counselling facilities, and two private practitioners (35 treatment slots).

## Cuba

**Sociodemographic characteristics**

| POPULATION  | 1980      | 1990       | 1995       |
|-------------|-----------|------------|------------|
| Total       | 9 710 000 | 10 598 000 | 11 041 000 |
| Adult (15+) | 6 608 000 | 8 177 000  | 8 519 000  |
| % Urban     | 68.1      | 73.6       | 76.0       |
| % Rural     | 31.9      | 26.4       | 24.0       |

**Health status**

Life expectancy at birth, 1990-1995 : 73.5 (males), 77.3 (females)

Infant mortality rate in 1990-1995 : 12 per 1000 live births

**Socioeconomic situation**

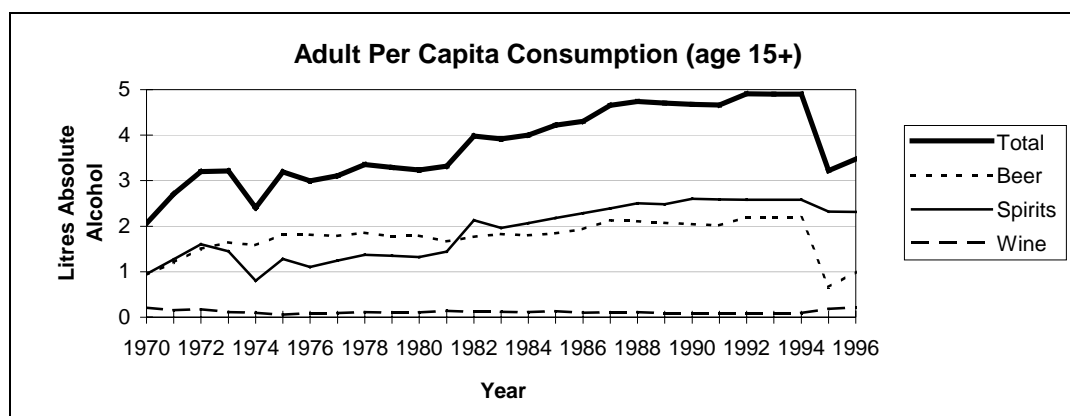
Average distribution of labour force by sector, 1990-1992 : agriculture 24%; industry 29%; services 47%

Adult literacy rate (per cent), 1995 : total 95; male 96; female 94

## Alcohol production, trade and industry

Cuba produces beer, rum and other distilled spirits products.

## Alcohol consumption and prevalence



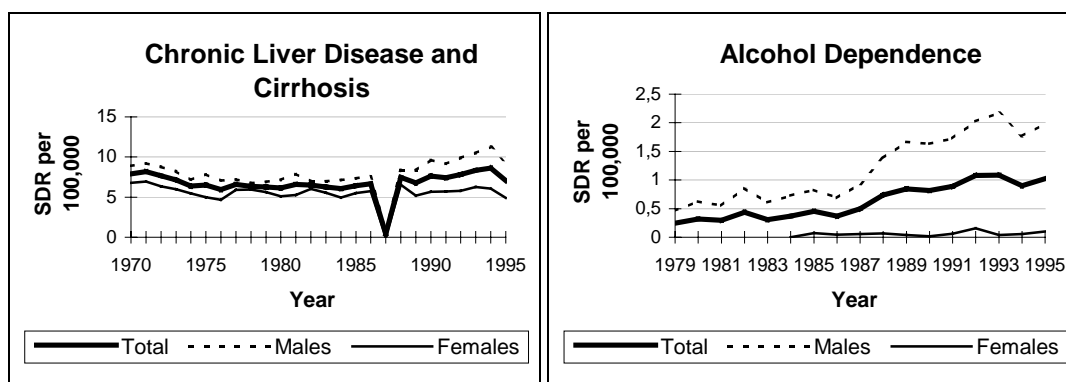
### Consumption

Distilled spirits are the alcoholic beverage of choice in Cuba. By the mid-1990s, Cuba's beer consumption was declining reportedly because of difficulty obtaining sufficient malt from its former suppliers in Eastern Europe and the former Soviet Union.

### Prevalence

A pilot study for a general population survey in 1993 and 1994 surveyed health behaviours of persons aged 35 years and over who had seen a randomly selected sample of family doctors in three health areas: Hnos. Cruz in Pinar del Rio Province, Santos Suarez in Havana City Province, and Tamayo in Havana City Province. Of the 4820 people screened, 43.7 per cent were males and the mean age for males was 52.9 (52.8 for females). More than 70 per cent of the sample population were White, the same percentage as that of the total population of these areas. The mean number of days men drank spirits in a week was 2.2, with a standard deviation of 2.3. Women averaged 0.5 days drinking spirits, with a standard deviation of 1.5. The mean number of bottles of beer per week for men was 2.7, with a standard deviation of 10.7, and the mean number of bottles for women was 0.4, with a standard deviation of 4.7.

## Mortality, morbidity, health and social problems from alcohol use



### Morbidity

During 1992 a total of 472 cases of optic neuropathy were reported in Cuba by local physicians, predominantly among adult men who used alcohol and tobacco.



# Dominican Republic (the)

## Sociodemographic characteristics

| POPULATION  | 1980      | 1990      | 1995      |
|-------------|-----------|-----------|-----------|
| Total       | 5 697 000 | 7 110 000 | 7 823 000 |
| Adult (15+) | 3 291 000 | 4 477 000 | 5 078 000 |
| % Urban     | 50.5      | 60.4      | 64.6      |
| % Rural     | 49.5      | 39.6      | 35.4      |

## Health status

Life expectancy at birth, 1990-1995 : 67.6 (males). 71.1 (females)

Infant mortality rate in 1990-1995 : 42 per 1000 live births

## Socioeconomic situation

GNP per capita (US\$), 1995: 1460, PPP estimates of GNP per capita (current int'l \$), 1995: 3870.

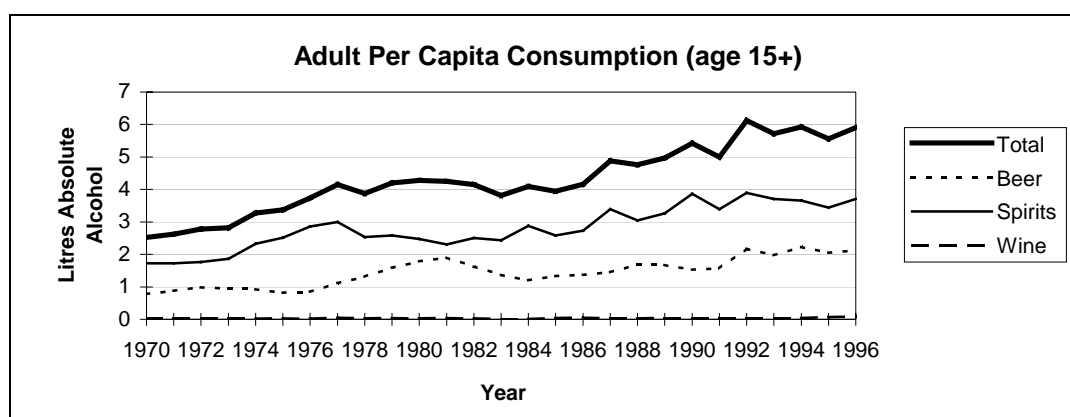
Average distribution of labour force by sector, 1990-1992 : agriculture 46%; industry 15%; services 39%

Adult literacy rate (per cent), 1995 : total 82; male 82; female 82

## Alcohol production, trade and industry

The Dominican Republic produces beer, wine and spirits. The brewing company Cerveceria Nacional Dominicana, of which the tobacco giant Phillip Morris has an equity share, produces Presidente, the country's leading beer brand with 95 per cent of the country's beer. Labatt, a subsidiary of Interbrew, created a beer called Soberana in 1997 to be brewed by Cerveceria Vegana to challenge Presidente's market dominance.

## Alcohol consumption and prevalence



### Consumption

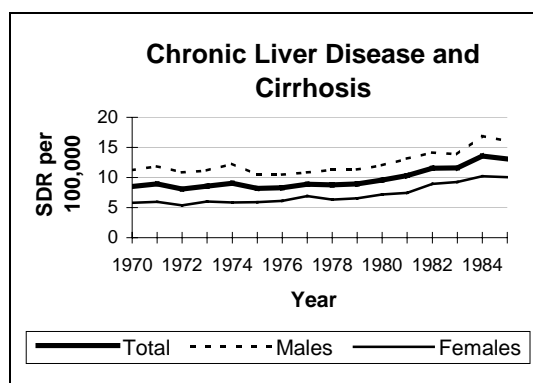
Spirits and beer dominate alcohol consumption in the Dominican Republic. Consumption of wine, solely from imports, is very low.

### Prevalence

A survey on alcohol and other drug prevalence and attitudes was carried out in the Dominican Republic in 1992, using a probability sample of the urban population between the ages of 12 and 45 (3015 interviews). Overall, 65 per cent of the population had used alcohol during their lifetime (72 per cent of men and 59 per cent of women). Of the males, 64.8 per cent had used alcohol at least once in the last year, and 49.9 per cent had used it in the last month. The rates were 46 per cent and 30.7 per cent, respectively, for females. About 39 per cent had used alcohol in the last 30 days (49 per cent

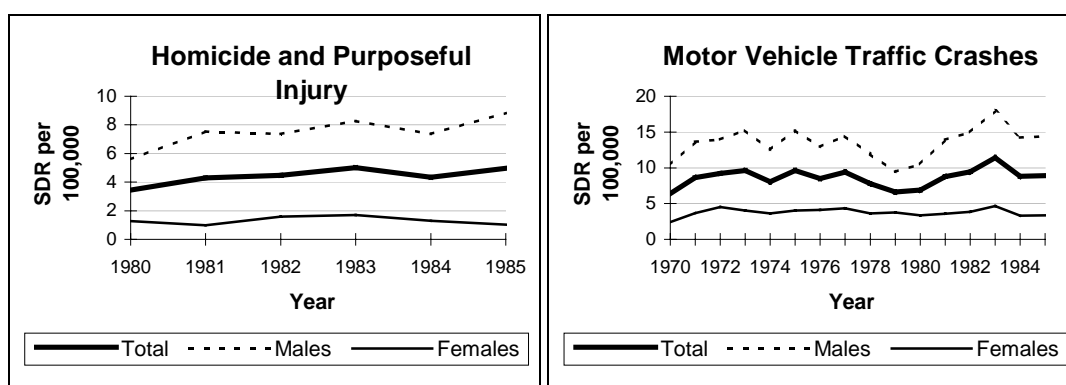
of men and 30 per cent of women). Men in their mid-20s had the highest rates of prevalence, and both male and female prevalence rates appeared to peak at or around the age of 25.

### Mortality, morbidity, health and social problems from alcohol use



#### Mortality

An observational, clinical and comparative study was made of the BAC levels in patients who were victims of a homicide or involved in a motor vehicle crash, and were sent to the emergency room at the Fco. E. Moscoso Puella and Dr. Luis E. Aybar hospitals of Santa Domingo. The information was collected between July and September of 1989. Seventy-eight per cent of the studied cases presented BAC levels over the accepted values.



## Ecuador

### Sociodemographic characteristics

| POPULATION  | 1980      | 1990       | 1995       |
|-------------|-----------|------------|------------|
| Total       | 7 961 000 | 10 264 000 | 11 460 000 |
| Adult (15+) | 4 553 000 | 6 266 000  | 7 286 000  |
| % Urban     | 47.0      | 54.8       | 58.4       |
| % Rural     | 53.0      | 45.2       | 41.6       |

### Health status

Life expectancy at birth, 1990-1995 : 66.4 (males), 71.4 (females)

Infant mortality rate in 1990-1995 : 50 per 1000 live births

### Socioeconomic situation

GNP per capita (US\$), 1995: 1390, PPP estimates of GNP per capita (current int'l \$), 1995: 4220.

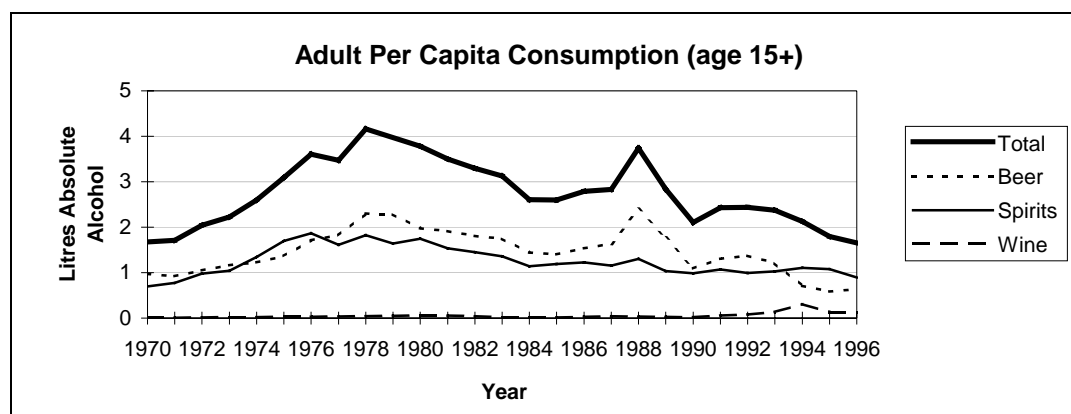
Average distribution of labour force by sector, 1990-1992 : agriculture 33%; industry 19%; services 48%

Adult literacy rate (per cent), 1995 : total 90; male 92; female 88

### Alcohol production, trade and industry

Ecuador produces beer and distilled spirits.

### Alcohol consumption and prevalence



#### Consumption

Recorded alcohol consumption comes primarily from beer and spirits. Clandestine production of alcohol, destined almost exclusively for domestic consumption, was estimated by PAHO to be three times the volume of controlled production.

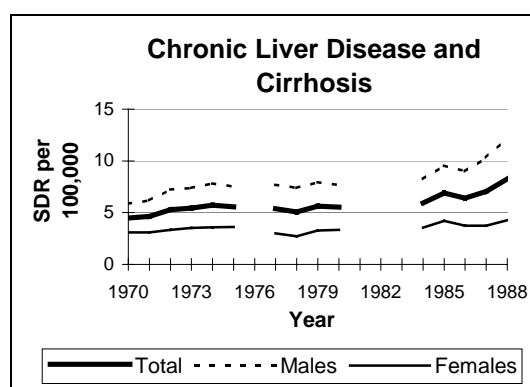
#### Prevalence

In a 1989 survey of 6147 randomly selected persons aged 10 years and older from both urban and rural areas, 75.7 per cent had used alcohol at some time in their lives. Thirteen per cent consumed alcohol daily. Non-defined "pathological drinking" was found to be associated with the wine-producing areas, and the male to female ratio for this pathology was nine to one. The proportion of non-drinkers in the country was 23.6 per cent, these being predominantly women.

### Mortality, morbidity, health and social problems from alcohol use

#### Alcohol dependence and related disorders

According to the Ministry of Health, the rate of alcohol dependence per 100 000 inhabitants rose from 23.26 to 25.81 between 1994 and 1996. In 1988, the most recent year for which statistics were available, there were 2367 hospital discharges (2249 males and 118 females), and 16 deaths (15 males and one female) from alcohol dependence syndrome.



***Mortality***

In 1988, there were 172 deaths (136 males and 36 females) and 882 hospital discharges (521 males and 261 females) from cirrhosis.

**Alcohol policies*****Control of alcohol products***

Alcoholic beverages may not be sold in education or health institutions. The advertising of alcoholic beverages on television is permitted only between 20:30 and 04:00 hours. Alcohol advertising in cinemas is allowed after 19:00 hours.

A warning label is required on beverages with an alcohol content of six per cent or more. The warning reads: "The excessive consumption of alcoholic beverages may cause health and family problems."

***Alcohol data collection, research and treatment***

The Ministry of Health is responsible for the health care of drug dependent persons. There are numerous support groups within the community. Some have a religious affiliation and others are part of an international network, such as Alcoholics Anonymous groups. Treatment is provided in psychiatric hospitals and outpatient clinics.

---

## El Salvador

---

**Sociodemographic characteristics**

| POPULATION  | 1980      | 1990      | 1995      |
|-------------|-----------|-----------|-----------|
| Total       | 4 525 000 | 5 172 000 | 5 768 000 |
| Adult (15+) | 2 443 000 | 2 923 000 | 3 422 000 |
| % Urban     | 41.5      | 43.9      | 45.0      |
| % Rural     | 58.5      | 56.1      | 55.0      |

**Health status**

Life expectancy at birth, 1990-1995 : 63.9 (males), 68.8 (females)

Infant mortality rate in 1990-1995 : 46 per 1000 live births

**Socioeconomic situation**

GNP per capita (US\$), 1995: 1610, PPP estimates of GNP per capita (current int'l \$), 1995: 2610.

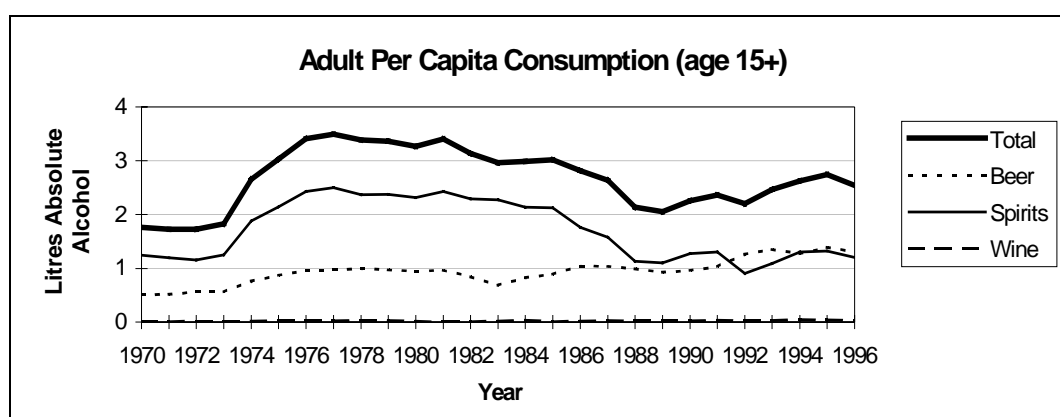
Average distribution of labour force by sector, 1990-1992 : agriculture 11%; industry 23%; services 66%

Adult literacy rate (per cent), 1995 : total 71; male 73; female 70

**Alcohol production, trade and industry**

El Salvador produces beer, wine and spirits. The country's only brewer, La Constancia, has a joint venture distribution agreement with Anheuser-Busch, the world's largest brewer, and contract brews Guinness Stout for the local market.

## Alcohol consumption and prevalence



### *Consumption*

Recorded beer consumption has grown steadily in recent years, and consumption of distilled spirits has fallen. There are no data available on consumption of smuggled or home- or informally-produced alcoholic beverages.

## Alcohol policies

### *Control of alcohol products*

There are no provisions for controlling the number of establishments selling alcohol. Production and marketing of alcohol are regulated by the Ministry of Finance through the Office of Income Administration, but this office does not have the resources necessary to monitor retail sales. Measures are reportedly in force to regulate the advertising of alcoholic beverages.

### *Control of alcohol problems*

Educational institutions for health professionals generally restrict education on drug problems to a few hours.

### *Alcohol data collection, research and treatment*

The Mental Health Department of the Ministry of Public Health is responsible for dealing with drug problems. There are no statistics on the number of persons who request and receive treatment. Some treatment is carried out in the psychiatric hospital, but there is no specific assignment of beds for treatment of alcohol-related conditions.

# Guatemala

## Sociodemographic characteristics

| POPULATION  | 1980      | 1990      | 1995       |
|-------------|-----------|-----------|------------|
| Total       | 6 917 000 | 9 197 000 | 10 621 000 |
| Adult (15+) | 3 744 000 | 5 020 000 | 5 913 000  |
| % Urban     | 37.4      | 39.5      | 41.5       |
| % Rural     | 62.6      | 60.5      | 58.5       |

## Health status

Life expectancy at birth, 1990-1995 : 62.4 (males), 67.3 (females)

Infant mortality rate in 1990-1995 : 49 per 1000 live births

## Socioeconomic situation

GNP per capita (US\$), 1995: 1340, PPP estimates of GNP per capita (current int'l \$), 1995: 3340.

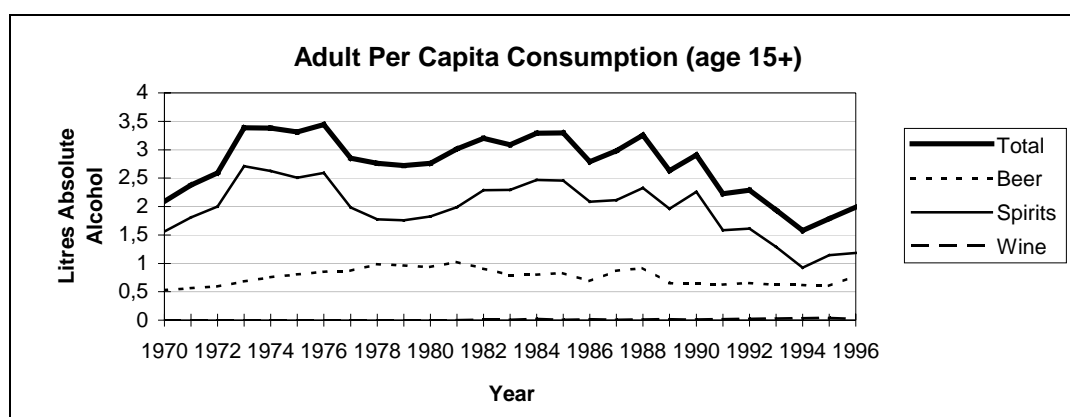
Average distribution of labour force by sector, 1990-1992 : agriculture 50%; industry 18%; services 32%

Adult literacy rate (per cent), 1995 : total 56; male 65; female 48

### Alcohol production, trade and industry

Guatemala produces beer and distilled spirits. In 1994, the brewing company Cerveceria Centroamerica signed an agreement to distribute Anheuser-Busch products in Guatemala.

### Alcohol consumption and prevalence



#### Consumption

Distilled spirits is the alcoholic beverage of choice in Guatemala. Wine consumption is very low, and comes entirely from imports. There are no data available on consumption of smuggled or informal or home-production of alcoholic beverages.

#### Prevalence

A 1990 random sample of 1807 urban residents aged 12 to 45 years found that 57 per cent had used alcohol at some point in their life (65 per cent of men and 48 per cent of women), and that approximately 26 per cent had used alcohol in the last 30 days (33 per cent of men and 19 per cent of women). Males in their 30s had the highest rates of prevalence, and the rates for both males and females increased with age.

### Alcohol policies

#### Control of alcohol products

The alcohol beverage industry is a private industry that operates according to the free market. Imports are regulated. The Law on Alcohol regulates the production, marketing, importation and exportation of alcoholic beverages, but in practice it is not enforced.

#### Alcohol data collection, research and treatment

In 1985 the National Commission for the Prevention of Drug and Alcohol Abuse was founded, and in 1986 a programme was initiated to train multidisciplinary personnel at the primary health care level in diagnosis and treatment of alcohol dependence and drug abuse, with emphasis on joint work with Alcoholics Anonymous. There are almost 750 Alcoholics Anonymous groups, 450 of which are located in the capital.

# Guyana

## Sociodemographic characteristics

| POPULATION  | 1980    | 1990    | 1995    |
|-------------|---------|---------|---------|
| Total       | 759 000 | 796 000 | 835 000 |
| Adult (15+) | 450 000 | 530 000 | 565 000 |
| % Urban     | 30.5    | 33.6    | 36.2    |
| % Rural     | 69.5    | 66.4    | 63.8    |

## Health status

Life expectancy at birth, 1990-1995 : 62.4 (males), 68.0 (females)

Infant mortality rate in 1990-1995 : 48 per 1000 live births

## Socioeconomic situation

GNP per capita (US\$), 1995: 590, PPP estimates of GNP per capita (current int'l \$), 1995: 2440.

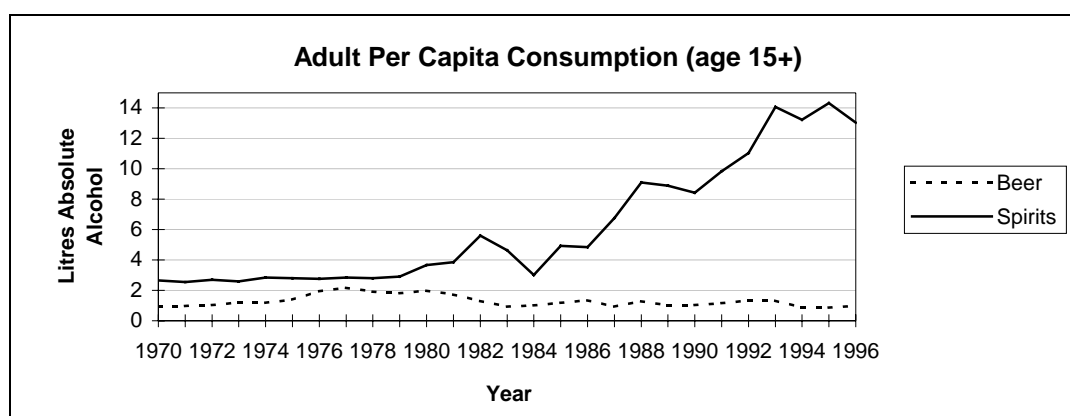
Average distribution of labour force by sector, 1990-1992 : agriculture 27%; industry 26%; services 47%

Adult literacy rate (per cent), 1995 : total 97; male 99; female 96

## Alcohol production, trade and industry

Guyana produces beer and distilled spirits, and is a significant exporter of distilled spirits.

## Alcohol consumption and prevalence



## Consumption

Recorded wine consumption is very low, and figures are unavailable beyond 1983. The alcoholic beverage of choice is distilled spirits, and consumption of spirits has risen steadily since 1984.

# Haiti

## Sociodemographic characteristics

| POPULATION  | 1980      | 1990      | 1995      |
|-------------|-----------|-----------|-----------|
| Total       | 5 353 000 | 6 486 000 | 7 180 000 |
| Adult (15+) | 3 174 000 | 3 876 000 | 4 291 000 |
| % Urban     | 23.7      | 28.6      | 31.6      |
| % Rural     | 76.3      | 71.4      | 68.4      |

## Health status

Life expectancy at birth, 1990-1995 : 55.0 (males), 58.3 (females)

Infant mortality rate in 1990-1995 : 86 per 1000 live births

## Socioeconomic situation

GNP per capita (US\$), 1995: 250, PPP estimates of GNP per capita (current int'l \$), 1995: 910.

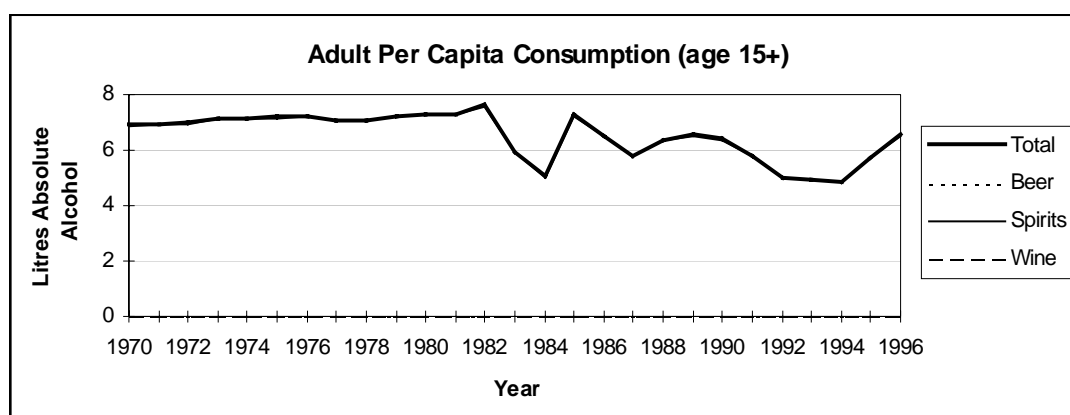
Average distribution of labour force by sector, 1990-1992 : agriculture 68%; industry 9%; services 23%

Adult literacy rate (per cent), 1995 : total 45; male 48; female 42

## Alcohol production, trade and industry

Haiti produces beer, and imports wine and spirits.

## Alcohol consumption and prevalence



### Consumption

Distilled spirits consumption dominates total alcohol consumption. Recorded beer and wine consumption are so low they do not appear on the graph above. There is no information available on consumption of smuggled or informally- or home-produced alcoholic beverages.

### Prevalence

In a 1990 random sample of 2100 urban residents between the ages of 12 and 45, 58 per cent had used alcohol at some time in their life (60 per cent of men and 56 per cent of women), and 5 per cent had used alcohol in the last 30 days (6 per cent of men and 4 per cent of women). Males consistently had the highest rates of prevalence across the life span. Prevalence among women was extremely low, peaking at less than 10 per cent between the ages of 40 and 44.

# Honduras

## Sociodemographic characteristics

| POPULATION  | 1980      | 1990      | 1995      |
|-------------|-----------|-----------|-----------|
| Total       | 3 569 000 | 4 879 000 | 5 654 000 |
| Adult (15+) | 1 884 000 | 2 673 000 | 3 179 000 |
| % Urban     | 34.9      | 40.7      | 43.9      |
| % Rural     | 65.1      | 59.3      | 56.1      |

## Health status

Life expectancy at birth, 1990-1995 : 65.4 (males), 70.1 (females)



Infant mortality rate in 1990-1995 : 43 per 1000 live births

### Socioeconomic situation

GNP per capita (US\$), 1995: 600, PPP estimates of GNP per capita (current int'l \$), 1995: 1900.

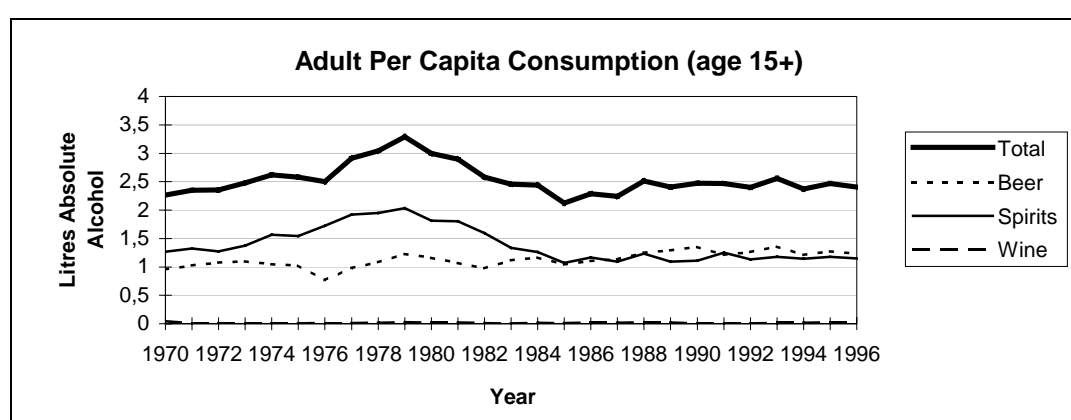
Average distribution of labour force by sector, 1990-1992 : agriculture 38%; industry 15%; services 47%

Adult literacy rate (per cent), 1995 : total 73; male 73; female 73

### Alcohol production, trade and industry

Honduras produces beer, and imports wine and spirits. Cerveceria Hondurena, a local brewer, signed a joint venture distribution agreement in 1994 with Anheuser-Busch, the world's largest brewer, to distribute its products in Honduras.

### Alcohol consumption and prevalence



#### Consumption

The unrecorded production and consumption of alcoholic beverages is considered to constitute a substantial portion of the market. In rural areas, *aguardiente* which is a traditional spirit and rum are the drinks of preference; in urban areas, beer is favoured.

#### Prevalence

A 1979 study on alcohol use and problems showed that most male drinkers began consuming alcohol before age 15, and most women after age 17.

### Alcohol policies

#### Control of alcohol products

Hours of sale of alcohol are regulated, but not always complied with.

*Aguardiente* is the only alcoholic beverage that is subject to special sales regulation. All mass media publicity or propaganda that induces the young to drink alcoholic beverages, associates the use of such beverages with sports, or offends the dignity of the women is prohibited.

#### Control of alcohol problems

The minimum legal drinking age is 21. The Honduran Institute for the Prevention and Treatment of Alcoholism, Drug Addiction and Drug Abuse deals with primary prevention. Attention is focused particularly on secondary school students. The Mental Health Division of the Ministry of Public Health conducts an undergraduate programme for medical students and a training programme for graduate physicians who work in mental health clinics.

#### Alcohol data collection, research and treatment.

Treatment is provided by psychiatrists and psychologists as well as by private religious institutions. Professional help with alcohol problems is more frequently sought by members of the upper social

classes, and traditional healers assist those in the low income classes and in rural areas. There are no formal programmes for social reintegration of persons in recovery from alcohol dependence.

## Jamaica

### Sociodemographic characteristics

| POPULATION  | 1980      | 1990      | 1995      |
|-------------|-----------|-----------|-----------|
| Total       | 2 133 000 | 2 366 000 | 2 447 000 |
| Adult (15+) | 1 275 000 | 1 582 000 | 1 693 000 |
| % Urban     | 46.8      | 51.5      | 53.7      |
| % Rural     | 53.2      | 48.5      | 46.3      |

### Health status

Life expectancy at birth, 1990-1995 : 71.4 (males), 75.8 (females)

Infant mortality rate in 1990-1995 : 14 per 1000 live births

### Socioeconomic situation

GNP per capita (US\$), 1995: 1510, PPP estimates of GNP per capita (current int'l \$), 1995: 3540.

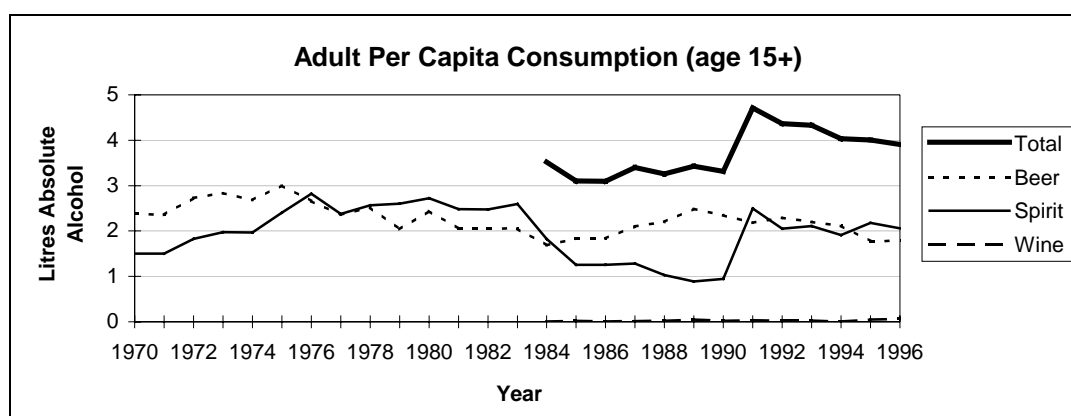
Average distribution of labour force by sector, 1990-1992 : agriculture 26%; industry 24%; services 50%

Adult literacy rate (per cent), 1995 : total 85; male 81; female 89

### Alcohol production, trade and industry

Jamaica produces and exports a substantial amount of distilled spirits, mostly rum, and also produces and exports beer. Exports of the country's Red Stripe beer increased in the early 1990s after it was featured in the film *The Firm*. In 1993, the transnational brewing and distilling company Guinness acquired 51 per cent of Desnoes & Geddes, the Jamaican producers of Red Stripe beer.

### Alcohol consumption and prevalence



#### Consumption

The alcoholic beverages of choice are distilled spirits and beer. Very little wine is consumed in Jamaica, although in 1994 recorded wine consumption doubled from its 1992 level. There are no data available on consumption of smuggled or informally- or home-produced alcoholic beverages.

#### Prevalence

In a 1990 national sample of 5000 residents aged 15 years and older, from both rural and urban areas, 32 per cent had used alcohol at some time in their lives (45 per cent of men and 20 per cent of women).

In 1987, a total of 6007 persons representing the household population of Jamaica 12 years and older were interviewed in their homes. About 84.8 per cent of males and 64.2 per cent of females reported ever using alcohol. Approximately 35 per cent of males 20 to 40 years old reported having had five or more drinks on the same occasion at least once in the two weeks before they were interviewed compared to between seven and nine per cent of females of the same age. Comparable figures on excessive alcohol consumption for males and females 40 years old and over were 36 per cent and four per cent, respectively.

### ***Age Patterns***

A 1987 study of 8886 post-primary students indicated that three out of every four students (76.3 per cent) had consumed alcohol during their lifetime, and one in every three students (33.3 per cent) drank alcohol during the 30 days period before the survey. Male lifetime prevalence rates were higher than those of females (84.7 per cent and 68.9 per cent, respectively). The lifetime prevalence increased progressively with age, rising from 71.2 per cent in the 13 to 14 age group to 86.8 per cent in the 19 to 21 age group.

## **Mortality, morbidity, health and social problems from alcohol use**

### ***Health problems***

A study of 35 patients diagnosed with chronic pancreatitis between 1976 and 1990 (29 men and six women, ages ranging from 21 to 67 with a mean of 45) found that 77 per cent had a history of chronic alcohol abuse.

# **Mexico**

## **Sociodemographic characteristics**

| POPULATION  | 1980       | 1990       | 1995       |
|-------------|------------|------------|------------|
| Total       | 67 056 000 | 84 511 000 | 93 674 000 |
| Adult (15+) | 37 320 000 | 52 345 000 | 60 049 000 |
| % Urban     | 66.3       | 72.6       | 75.3       |
| % Rural     | 33.7       | 27.4       | 24.7       |

## **Health status**

Life expectancy at birth, 1990-1995 : 67.8 (males), 73.9 (females)

Infant mortality rate in 1990-1995 : 36 per 1000 live births

## **Socioeconomic situation**

GNP per capita (US\$), 1995: 3320, PPP estimates of GNP per capita (current int'l \$), 1995: 6400.

Average distribution of labour force by sector, 1990-1992 : agriculture 23%; industry 29%; services 48%

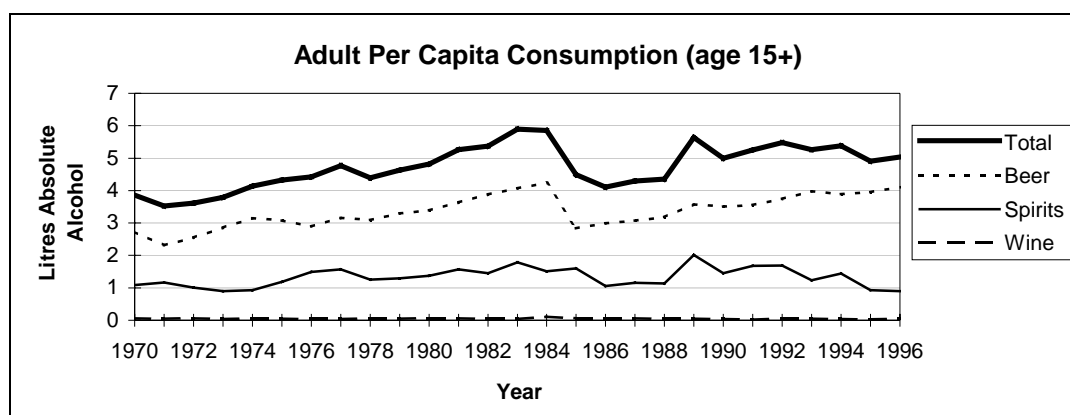
Adult literacy rate (per cent), 1995 : total 90; male 92; female 87

## **Alcohol production, trade and industry**

Mexico is the world's seventh largest beer market, dominated by two firms: Grupo Modelo, which is 51 per cent owned by Anheuser-Busch, controls 57 per cent of the beer market, while Fomento Economico Mexicano (FEMSA) controls the remainder. There are very few speciality beers made in Mexico and imports make up less than one per cent of the market. Two firms, Allied-Domecq and Bacardi, also control 90 per cent of the brandy and rum markets. The tequila industry is less concentrated. Tequila production in 1996 increased 27.5 per cent and exports increased 14 per cent. However, brandy and rum have outstripped it in popularity despite its being the national beverage. Recent changes in trade policy have led to an explosion of imports as well as an increase in exports. Between 1980 and 1993, imports of distilled spirits doubled while exports fell by more than one half.

Exports of wines grew by six hundred per cent while imports increased slightly. Beer imports and exports both increased, posting 1993 levels six and 44 times those of 1980, respectively.

### Alcohol consumption and prevalence



#### Consumption

Beer is the alcoholic beverage of choice in terms of recorded consumption. The 1989 National Household Survey (see below) estimated per capita intake at 4.6 litres, per capita intake of drinkers at 5.6 litres, and per capita intake of drinking males at 8.1 litres. The survey estimated that 19 per cent of total consumption was in informally produced beverages such as *aguardiente*, *pulque* and 96 proof alcohol. These figures are probably low for two reasons: respondents to surveys tend to under-report their consumption, and the survey did not include rural areas (25 per cent of the population). Prevalence surveys have indicated that rural consumption of such beverages is four times as common as in urban areas.

#### Prevalence

In a 1993 survey of 18 737 permanent residents of Mexico conducted throughout eight regions, 77 per cent of males and 57.5 per cent of females were found to have consumed alcohol in the previous two years. Of the total sample, 23 per cent had consumed five or more drinks per occasion. In the 1993 National Survey on Addictions (NSA), using a national sample of 10 879, 74 per cent reported ever using alcohol, 65 per cent reported using in the past year, 24 per cent had drunk alcohol in the past thirty days, and two per cent had drunk five or more drinks at one sitting at least once per week.

In 1991 the NSA estimated that 0.5 per cent of the urban population of the country drank *aguardientes* (96 proof alcohol). Data from the NSA in 1989 showed that the population that drank this type of beverage was mainly male (4.6 per cent), with low participation of females (0.4 per cent).

The NSA, defining abstinence as no alcohol consumption in the previous 24 months, estimated the abstinence rate at 25 per cent in 1989. When abstinence was defined as no alcohol consumption in the previous 12 months, the rate reached 46 per cent (27 per cent of males and 63 per cent of females aged 18 years and older). In the same year, the national household survey showed that 25 per cent of the drinkers consumed 78 per cent of the available alcohol.

A 1988 survey of a random sample of 12 557 individuals between the ages of 12 and 65 from urban localities of greater than 2500 inhabitants reported that 82 per cent of males and 44 per cent of females had consumed alcohol during the last 12 months. Daily consumption was uncommon, while consumption to the point of intoxication was frequent. Approximately 31 per cent of males and five per cent of females between the ages of 18 and 65 were frequent heavy users (once a week or more often, at least five drinks per occasion).

#### Age patterns

The NSA of 1993 reported that in the two years prior to the survey, 54 per cent of the population between 12 and 18 years-old had used alcohol, compared with 70 per cent of those between 19 and 65 years-old. In both groups males were three times more likely than females to use alcohol.

A high school survey conducted in Mexico City in 1993 estimated that 9.2 per cent of the students had used "coolers" (a prepared cocktail or canned beverage combining rum and coke), 9.1 per cent had consumed beer, 7 per cent had used spirits and 5.6 per cent had drunk wine.

The 1990 NSA showed that 28 per cent of those aged 12 to 17 years (32 per cent of males and 23 per cent of females), and 53 per cent of those aged 18 to 65 years (74 per cent of males and 36 per cent of females) were current drinkers. Approximately 4.4 per cent of 12 to 17 year-olds (7.2 per cent of males and 1.4 per cent of females) and 17 per cent of 18 to 65 year-olds (31 per cent of men and 5 per cent of women) drank once a week or more. Males and females between 30 and 39 were the most likely to drink heavily.

#### *Use among population subgroups*

Higher income groups are more likely to drink wine, brandy, rum or other prepared alcoholic beverages, while those in the lower income groups are more likely to drink *pulque*, *aguardientes* or beer.

A 1986 survey conducted in a public general hospital found that 10 per cent of the patients treated in the emergency room, four per cent of the hospitalized patients and three per cent of those given outpatient consultations were "heavy drinkers".

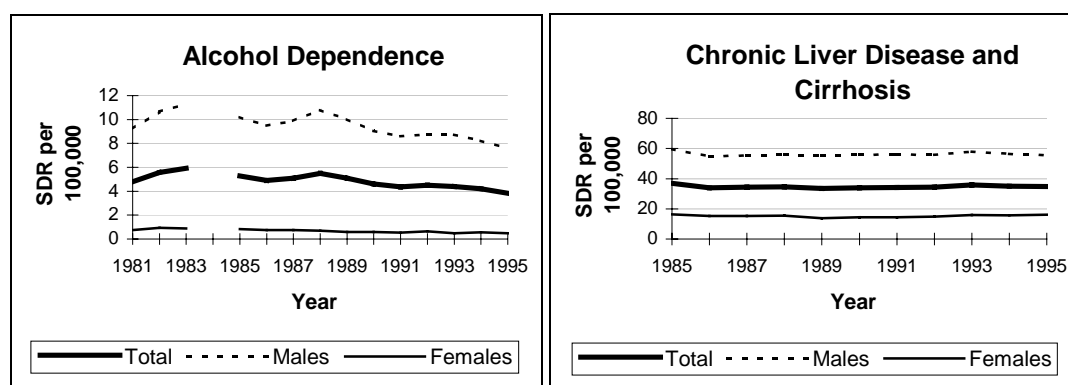
### **Economic impact of alcohol**

Alcohol beverage sales totalled US\$ 2.3 billion in 1995, 74 per cent of which derived from beer. Households earning incomes in the two lowest deciles spend a far greater percentage of their income on alcoholic beverages than those in the two highest income deciles. Nationally, households spend an average of one per cent of household income on alcoholic beverages. This figure is doubled in rural areas.

### **Mortality, morbidity, health and social problems from alcohol use**

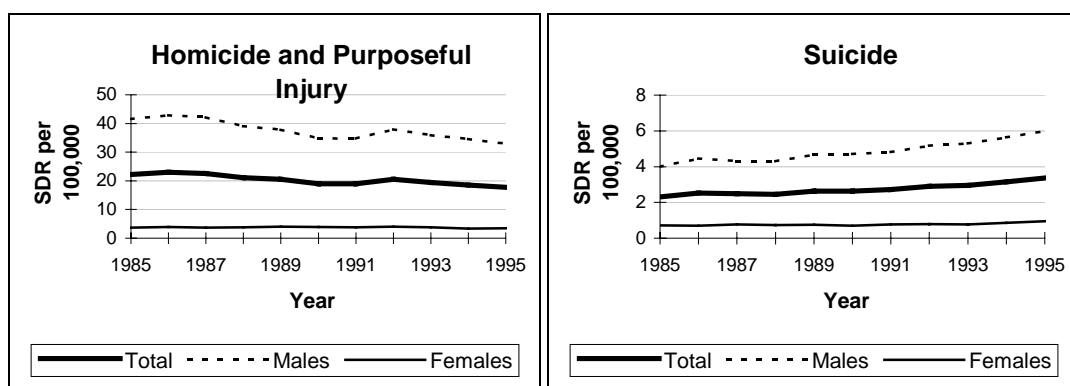
#### *Alcohol dependence and related disorders*

The 1989 Mexican National Survey on Addiction, carried out between February and July of 1988, used a multi-stage stratified sampling design, selecting households at random, and then interviewing one individual per household for a total of 12 557 interviews representing a response rate of 84 per cent. The sample is considered to be representative of the urban population of Mexico aged 12 to 65 years, representing 65 per cent of the total population. In the survey, men were at nearly six times higher risk for alcohol-related problems such as dependence, traffic crashes, work problems, accidents and family problems. The lowest risk of dependence was among 15 to 17 year-olds, and the highest risk was found in the 30 to 39 year age group. In total, about 12 per cent of male users and 0.6 per cent of female users aged 18 to 65 years met WHO International Classification of Disease (ICD) criteria for alcohol dependence.



#### *Mortality*

Almost 50 per cent of those convicted of homicide in 1985 admitted to having consumed alcoholic beverages to excess before the crime. Twenty-four per cent of the reported suicides in 1980 had a significant history of alcohol-related problems, and 38 per cent had BAC exceeding 0.10 g%.

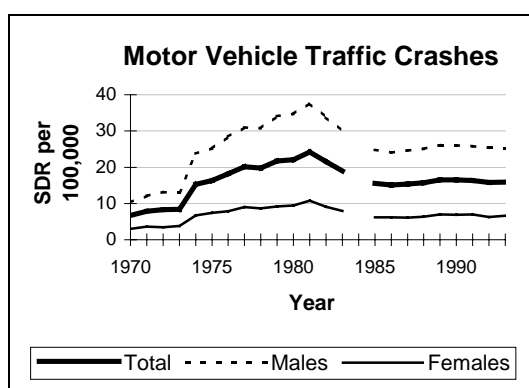


### Morbidity

In a 1991 cross-sectional study of eight emergency hospitals among patients over the age of 15, 17 per cent tested positive on the breathalyser, and 21 per cent of all patients had consumed alcohol in the six hours before the emergency occurred. A 1988 survey of a random sample of emergency room admissions showed that in 22 per cent of the traumatic events evaluated, patients had evidence of alcohol in their blood. A 1986 survey conducted in a public general hospital found that 10 per cent of the patients treated in the emergency room, four per cent of the hospitalized patients and three per cent of those given outpatient consultations were "heavy drinkers" (no definition given).

### Social Problems

According to the 1989 Mexican National Survey on Addiction, 4.8 per cent of 5957 people surveyed reported having been in alcohol-related traffic crashes (8.2 per cent of men and 0.6 per cent of women). The percentage of automobile crashes occurring when the driver was drunk increased from 8 per cent in 1968 to 16 per cent in 1983.



In a random sample of 1590 women from urban and rural zones who had attended *DIF* (*Desarrollo Integral de la Familia*) counselling services in 1992, approximately 25 per cent of urban women associated maltreatment with the offender's state of drunkenness. Among the women who experienced domestic violence (56.7 per cent in urban, 44.2 in rural zones), the proportion whose aggressor was under the influence of alcohol was 8.8:1 in rural and 4.2:1 in urban areas.

In a 1987 survey carried out in three hospitals in Acapulco, all patients involved in assaults or fights were interviewed and breath tested. Positive breathalyser results were associated with a relative risk of 5.23, increasing to 14.49 in those patients who consumed more than 100 grams of pure alcohol prior to the assault or fight.

Between 1964 and 1984, approximately 20 per cent of recorded crimes in Mexico were carried out under the influence of alcohol.

## Alcohol policies

### *Control of alcohol products*

The taxation law in force since 1982 set rates for locally-produced as well as imported alcoholic beverages. The tax rate for beer is 21.5 per cent, for table wines 15 per cent, and for distilled beverages 40 per cent. Taxes are adjusted annually by the Sub-Ministry of Foreign Commerce and Industry Development.

Each State licenses establishments to sell alcoholic beverages. The number of alcohol outlets per 100 000 inhabitants increased from 303 in 1970 to 378 in 1985. As a result of recent changes in trade policy (notably signing of the NAFTA and GATT accords), taxes on imported alcoholic beverages have fallen from 80 per cent to 10 per cent of the price of the beverage.

The Ministry of Health has the responsibility for authorizing advertising of alcoholic beverages. Every commercial advertisement must have a warning label, the content of which should discourage alcohol abuse and encourage moderation. Alcoholic beverage containers must have a warning label concerning the adverse health effects of alcohol, which reads as follows: "The abuse in the consumption of this product is injurious to health."

### *Control of alcohol problems*

It is forbidden to sell alcohol to persons under 18 years of age. Consumption of alcohol in the work place is prohibited, and bars and canteens selling alcoholic beverages may not function near places of work. The Committee on Education of the National Council on Addictions works with the Autonomous University of Mexico to offer comprehensive courses on alcohol problems in its medical curriculum, and with the Mexican Institute of Psychiatry for training of physicians and others working in the alcohol field.

### *Alcohol data collection, research and treatment*

The National Institute of Statistics, Geography and Informatics and the Centre for Information on Addictions are both involved in collecting data of various kinds regarding alcohol. The Mexican Social Research Institute of Alcohol Studies is involved with policy and prevention.

The National Council on Addictions, which includes representatives of social, governmental and private sectors coordinated by the Ministry of Health, has developed a national programme with treatment as a priority and coordinates work with various institutions. There are few specialized treatment programmes for alcohol problems: mostly this work is carried out through other programmes, usually in the form of acute detoxification centres.

A forthcoming publication of WHO (Riley and Marshall [ed.] Alcohol and public health in eight developing countries, 1999) includes an in-depth case study from Mexico.

## Nicaragua

### Sociodemographic characteristics

| POPULATION  | 1980      | 1990      | 1995      |
|-------------|-----------|-----------|-----------|
| Total       | 2 802 000 | 3 676 000 | 4 433 000 |
| Adult (15+) | 1 469 000 | 1 916 000 | 2 397 000 |
| % Urban     | 53.4      | 59.8      | 62.9      |
| % Rural     | 46.6      | 40.2      | 37.1      |

### Health status

Life expectancy at birth, 1990-1995 : 64.8 (males), 68.5 (females)

Infant mortality rate in 1990-1995 : 52 per 1000 live births

### Socioeconomic situation

GNP per capita (US\$), 1995: 380, PPP estimates of GNP per capita (current int'l \$), 1995: 2000.

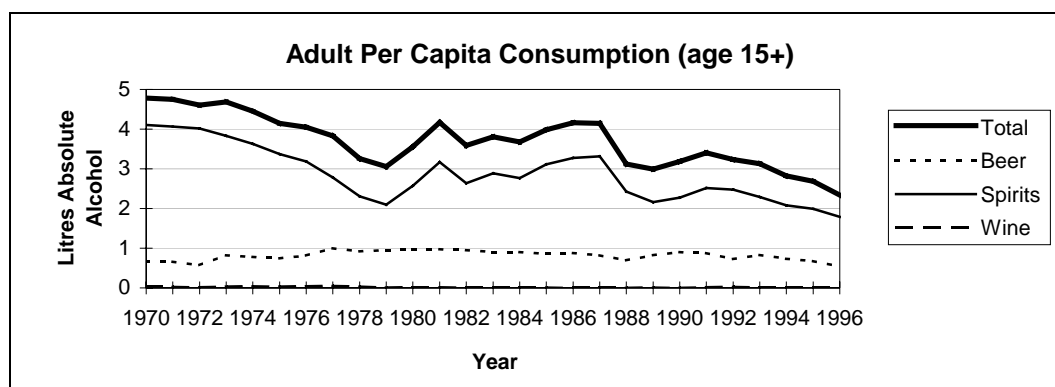
Average distribution of labour force by sector, 1990-1992 : agriculture 46%; industry 16%; services 38%

Adult literacy rate (per cent), 1995 : total 66; male 65; female 67

### Alcohol production, trade and industry

Nicaragua produces beer and distilled spirits.

### Alcohol consumption and prevalence



### Consumption

The alcoholic beverage of choice in Nicaragua is distilled spirits. The apparent decline since the early 1990s is a result of an increase in exports, at the same time, available data suggest that spirits production has remained unchanged. There are no data available regarding consumption of smuggled or home- or illicit alcohol production.

## Panama

### Sociodemographic characteristics

| POPULATION  | 1980      | 1990      | 1995      |
|-------------|-----------|-----------|-----------|
| Total       | 1 950 000 | 2 398 000 | 2 631 000 |
| Adult (15+) | 1 163 000 | 1 552 000 | 1 753 000 |
| % Urban     | 49.7      | 51.7      | 53.3      |
| % Rural     | 50.3      | 48.3      | 46.7      |

### Health status

Life expectancy at birth, 1990-1995 : 70.9 (males), 75.0 (females)

Infant mortality rate in 1990-1995 : 25 per 1000 live births

### Socioeconomic situation

GNP per capita (US\$), 1995: 2750, PPP estimates of GNP per capita (current int'l \$), 1995: 5980.

Average distribution of labour force by sector, 1990-1992 : agriculture 27%; industry 14%; services 59%

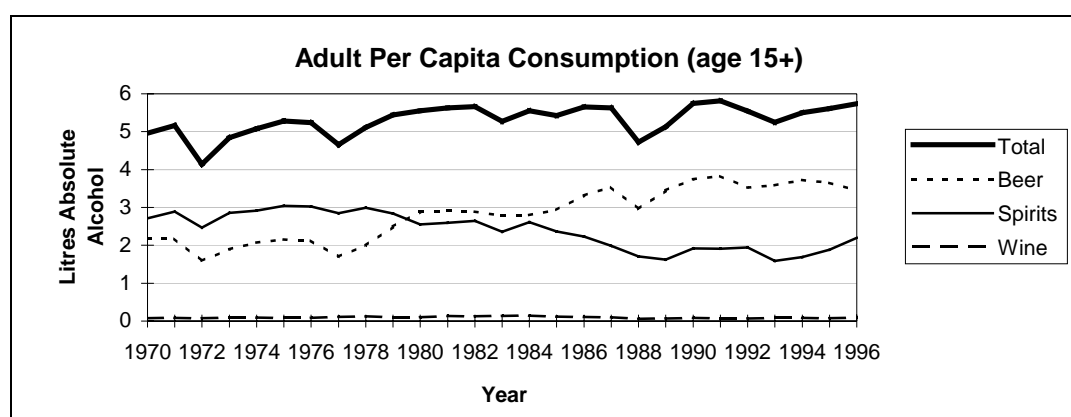
Adult literacy rate (per cent), 1995 : total 91; male 91; female 90

### Alcohol production, trade and industry

Panama produces beer, distilled spirits and a small amount of wine. In 1994, it was the world's fifth largest importer of beer from the United States.



## Alcohol consumption and prevalence



### Consumption

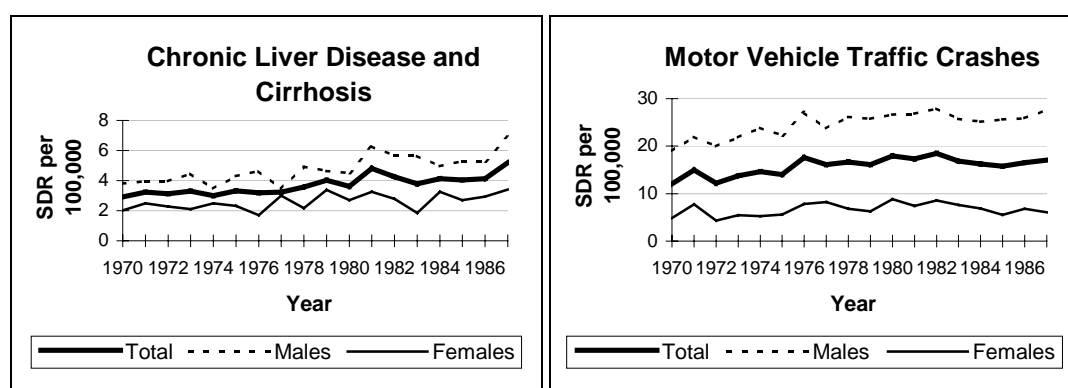
Beer has surpassed distilled spirits as the alcoholic beverage of choice, at least in terms of recorded consumption. It is known that certain alcoholic beverages are home-made in rural areas but there are no official figures available regarding the quantity of production of these beverages.

### Prevalence

No national surveys have been carried out. A 1991 study interviewed 1026 people between the ages of 12 and 45 years in households in Panama City, San Miguelito and Colon, urban areas that have within their bounds approximately one-third of the total population of the country. Seventy-nine per cent of all respondents had used alcohol at some time in their lives and 38 per cent were current users (in the last 30 days). Thirty-day prevalence as a per cent of lifetime prevalence was very high (48 per cent) and an even higher percentage of those who used within the last 12 months were current users (71 per cent). Males had higher rates of lifetime use than females (62 per cent versus 33 per cent). Lifetime prevalence was 59.9 per cent for the 12 to 14 age group, 79.5 per cent for the 15 to 19 age group, 84.4 per cent for the 20 to 24 age group, 79.9 per cent for the 25 to 29 age group, 82.7 per cent for the 30 to 34 age group, 78.9 per cent for the 35 to 39 age group, and 80.4 per cent for the 40 to 45 age group. Alcohol use tended to increase with the level of education.

In a 1991 random sampling of 911 urban residents between the ages of 12 and 45, 79.4 per cent had used alcohol at some time in their lives (89 per cent of men and 70 per cent of women). Close to 38 per cent had used alcohol in the last 30 days (52 per cent of men and 22 per cent of women). Men in their twenties had the highest prevalence of alcohol use, and both male and female prevalence rates appeared to peak between the age of 20 and 30, with a dramatic increase around age 14.

## Mortality, morbidity, health and social problems from alcohol use



### Social Problems

During 1984-1985, alcohol was found in the blood in 8.7 per cent of motor vehicle traffic crashes.

## Alcohol policies

### *Control of alcohol products*

The manufacture, marketing and distribution of psychoactive substances is controlled by the government. There is legislation to regulate production, alcohol content, quality control, and wholesale distribution. Advertisements may not show individuals drinking liquor. Legislation exists on alcohol content and quality control.

### *Control of alcohol problems*

The minimum legal drinking age is 18. Health professionals receive some training in the treatment of alcohol-related problems in universities at the undergraduate level.

### *Alcohol data collection, research and treatment*

The government health systems are responsible for treatment. Almost all regions have specialized mental health teams that treat drug problems, including alcohol dependence. Efforts are being made to coordinate the initiatives of various working groups. The National Psychiatric Hospital has specific programmes on alcohol. Approximately 5 to 10 per cent of its 1000 beds are used annually for addicts. The Social Security Fund's psychiatric ward also treats addicts, and there are Alcoholics Anonymous groups as well.

## Paraguay

---

### Sociodemographic characteristics

| POPULATION  | 1980      | 1990      | 1995      |
|-------------|-----------|-----------|-----------|
| Total       | 3 136 000 | 4 317 000 | 4 960 000 |
| Adult (15+) | 1 824 000 | 2 557 000 | 2 961 000 |
| % Urban     | 41.7      | 48.8      | 52.7      |
| % Rural     | 58.3      | 51.2      | 47.3      |

### Health status

Life expectancy at birth, 1990-1995 : 68.1 (males), 71.9 (females)

Infant mortality rate in 1990-1995 : 38 per 1000 live births

### Socioeconomic situation

GNP per capita (US\$), 1995: 1690, PPP estimates of GNP per capita (current int'l \$), 1995: 3650.

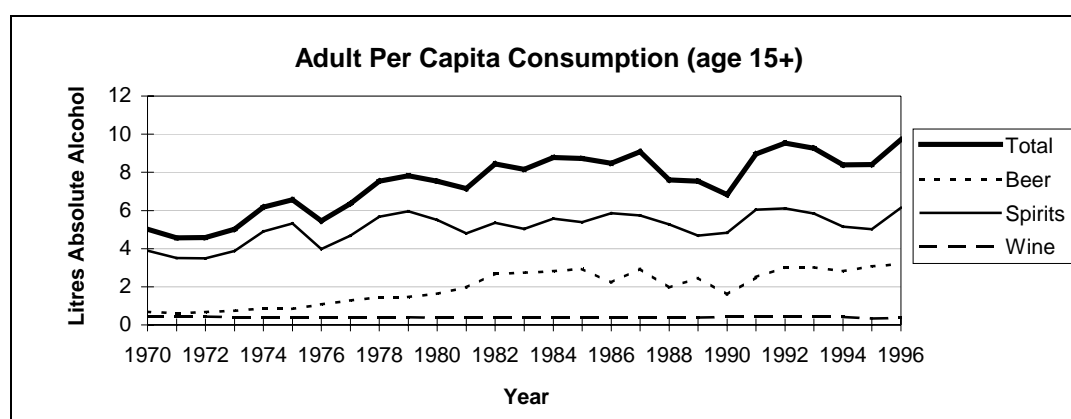
Average distribution of labour force by sector, 1990-1992 : agriculture 48%; industry 21%; services 31%

Adult literacy rate (per cent), 1995 : total 92; male 93; female 91

### Alcohol production, trade and industry

Paraguay produces beer, distilled spirits and wine. Domestic beer production has grown steadily over the past two decades. Imports of beer more than tripled between 1993 and 1994, and imports from a single manufacturer, Anheuser-Busch, grew 77 per cent in 1995.

## Alcohol consumption and prevalence



### Consumption

Spirits consumption fluctuated, but has generally increased since the 1970s. Coupled with increased consumption of beer this fuelled a rise in overall adult per capita alcohol consumption. There is no information available on consumption of smuggled or home- or informally-produced alcoholic beverages.

### Prevalence

A 1991 study interviewed 2485 people between the ages of 12 and 45 who were living in private homes in the larger urban areas of the country. The prevalence of alcohol use was 79.5 per cent, (88 per cent of men and 75 per cent of women), while abuse (more than 100 grams of absolute alcohol at one sitting) affected 35.6 per cent of the sample population.

## Mortality, morbidity, health and social problems from alcohol use

### Health problems

A hospital-based case-control study of 131 cases of oesophageal cancer and 381 controls was carried out through the use of a questionnaire in four hospitals and all private clinics in the capital city of Asuncion between January, 1988 and March, 1991. Stopping the consumption of distilled spirits clearly reduced the risk of oesophageal cancer. The risk ratio of long-term to short-term quitting was about three, although even those who quit for greater than 15 years still had four times the risk of those who never drank at all. The study found no effect for beer or wine, which were less frequently consumed in the population studied.

## Peru

### Sociodemographic characteristics

| POPULATION  | 1980       | 1990       | 1995       |
|-------------|------------|------------|------------|
| Total       | 17,321,000 | 21,588,000 | 23,780,000 |
| Adult (15+) | 10,066,000 | 13,441,000 | 15,431,000 |
| % Urban     | 64.6       | 69.8       | 72.2       |
| % Rural     | 35.4       | 30.2       | 27.8       |

### Health status

Life expectancy at birth, 1990-1995 : 64.1 (males), 68.0 (females)

Infant mortality rate in 1990-1995 : 64 per 1000 live births

### Socioeconomic situation

GNP per capita (US\$), 1995: 2310, PPP estimates of GNP per capita (current int'l \$), 1995: 3770.

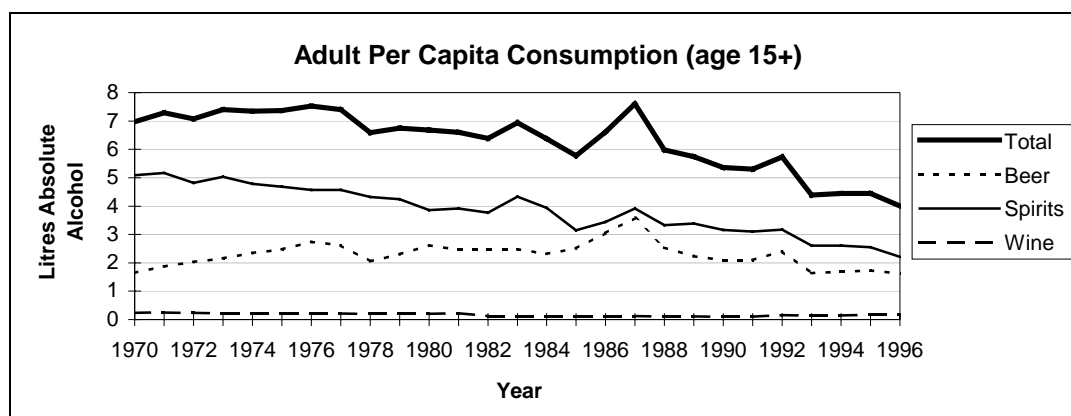
Average distribution of labour force by sector, 1990-1992 : agriculture 35%; industry 12%; services 53%

Adult literacy rate (per cent), 1995 : total 89; male 94; female 83

### Alcohol production, trade and industry

Peru produces beer, distilled spirits and wine. The Backus Corporation is Peru's largest privately-owned enterprise. Backus owns three breweries, which are being consolidated into the Union de Cervecerias Peruanas Backus y Johnston S.A.

### Alcohol consumption and prevalence



#### Consumption

According to figures procured from local industry sources, in 1994, Peruvians consumed in absolute alcohol per person above age 14: 2.48 litres of beer, 0.4 litres of wine, 1.42 litres of *chicha* (a local fermented beverage made from purple corn with an alcohol content of approximately 10 per cent), 1.36 litres of distilled spirits. Total consumption according to this estimate was 5.66 litres of absolute alcohol per person aged 15 or above.

#### Prevalence

A 1992 survey of a representative sample drawn from the country's 15 largest cities interviewed 1794 people between the ages of 12 and 50. The most common alcoholic drink was beer, consumed by 74 per cent of the sample, followed by wine/champagne/whisky, consumed by 9.5 per cent. Ninety-two per cent had used alcohol in their lives, while 82.9 per cent had used it in the past year. Use of alcohol rose with income. Nearly 60 per cent never drank to intoxication, while 25.2 per cent said they had tried to stop drinking in the past month and nearly nine per cent had tried five times or more.

In a 1986 survey of a random sample of 5000 urban residents between the ages of 12 and 45, 87 per cent had used alcohol at some time in their lives (90 per cent of men and 82 per cent of women), and 45 per cent had used alcohol in the past 30 days (55 per cent of men and 32 per cent of women). For both genders, the prevalence of alcohol use increased with age.

A 1986 national household survey carried out in Lima and the provinces with a sample of 7425 persons found that 87.2 per cent used alcohol at least once, and 34.8 per cent used it in the last year. Beer was the most commonly used alcoholic beverage, drunk by 54 per cent of the sample, while wine was the second most common, drunk by 11.4 per cent.

#### Age patterns

In the 1992 survey, of those aged 12 to 19 years, 79.6 had used alcohol. More than 60 per cent of those aged 12 to 14 years had begun drinking between the ages of 5 and 11. In the 1986 survey, 54.6 per cent of those aged 14 to 16 years had tried alcohol, while 81.3 per cent of 15 to 18 year-olds had drunk alcohol.

## Mortality, morbidity, health and social problems from alcohol use

### *Alcohol dependence and related disorders*

Although there are no statistics available for the country as a whole, a study of 2000 patients visiting a single outpatient clinic in 1987 found that 12 per cent were alcohol dependent. In 1993, lifetime prevalence rates of alcohol dependence and related DSM-III diagnoses were determined for a population sample of 815 people from the Independencia district of Lima, using interviews based on a revised form of the Spanish translation of the DIS (Diagnostic Interview Schedule). The prevalence of alcohol abuse or dependence was higher among the men (34.8 per cent) than among the women (2.5 per cent), but the onset for women was earlier. Alcohol dependence was strongly associated with antisocial personality disorder and with drug abuse or dependence.

### *Mortality*

Between 1980 and 1992, alcohol-related motor vehicle crashes averaged 8.1 per cent of total motor vehicle crashes. Between 1985 and 1992, four per cent of motor vehicle deaths were caused by drunk drivers, and 14 per cent were caused by drunk pedestrians.

### *Social problems*

Alcohol as a "social problem" contributes to an average of 45 000 police interventions per year. Between 1974 and 1981, the Ethilic Dosage Service in the city of Cusco measured the blood alcohol of all those taken for traffic infractions. Approximately 35 per cent showed positive blood alcohol, with 27 per cent of the total having blood alcohol exceeding 0.10 g%.

## Alcohol policies

### *Control of alcohol problems*

The minimum legal drinking age is 18. Driving under the influence of alcohol is considered a misdemeanor. "Ordinary drunk driving," defined as blood alcohol concentration exceeding 0.06 g% but less than 0.10 g%, carries a fine of between 20 and 40 per cent of the minimum salary per month established by the Labour Authority. "Gross drunk driving," with blood alcohol concentration of 0.10 g% or above, receives a fine of between 60 and 100 per cent of the minimum monthly salary. A second offence committed within a year of the first carries a fine of double the first amount and, in the case of gross drunk driving, removal of licence for three to six months. The second repeat offence within 12 months receives double the sanctions of the first repeat offence. The third repeat offence within 12 months carries double the fine of the second and permanent licence revocation.

There is no governmental institution in charge of prevention, and preventive activities are not organized. Little instruction on drug abuse is provided at the undergraduate level, and there is no specialization in drug abuse. Some multidisciplinary courses have been organized.

### *Alcohol data collection, research and treatment*

Treatment is financed by the government and Social Security. The National Institute of Mental Health coordinates activities, and care is provided by health services. There are various community organizations that provide help, including Alcoholics Anonymous.

## Puerto Rico

### Sociodemographic characteristics

| POPULATION  | 1980      | 1990      | 1995      |
|-------------|-----------|-----------|-----------|
| Total       | N/A       | N/A       | 3,717     |
| Adult (15+) | 2 187 000 | 2 568 000 | 2 768 000 |
| % Urban     | N/A       | N/A       | N/A       |
| % Rural     | N/A       | N/A       | N/A       |

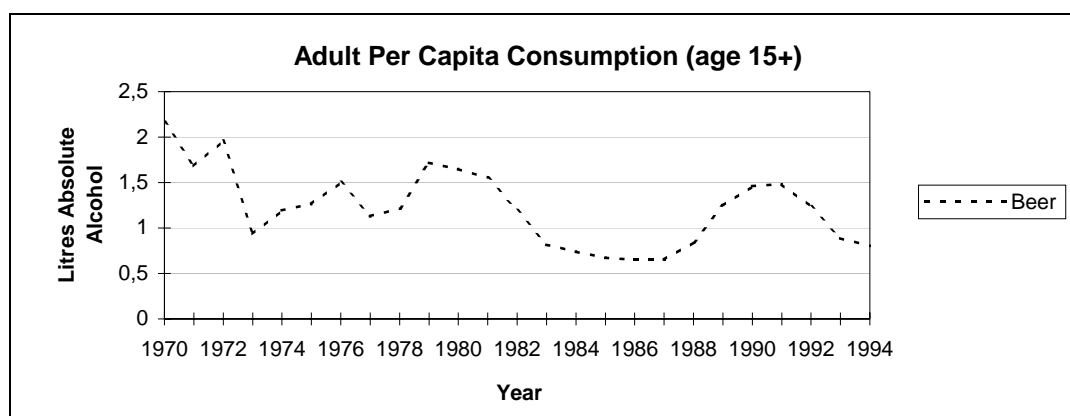
## Health status

Life expectancy at birth, 1990-1995 : 75

## Alcohol production, trade and industry

Cerveceria India brews the island's leading local beer, Medalla, which had between 12 and 15 per cent of the local market in 1995, behind the brands Budweiser and Coors. The Island also houses a Bacardi factory as well as other rum producers.

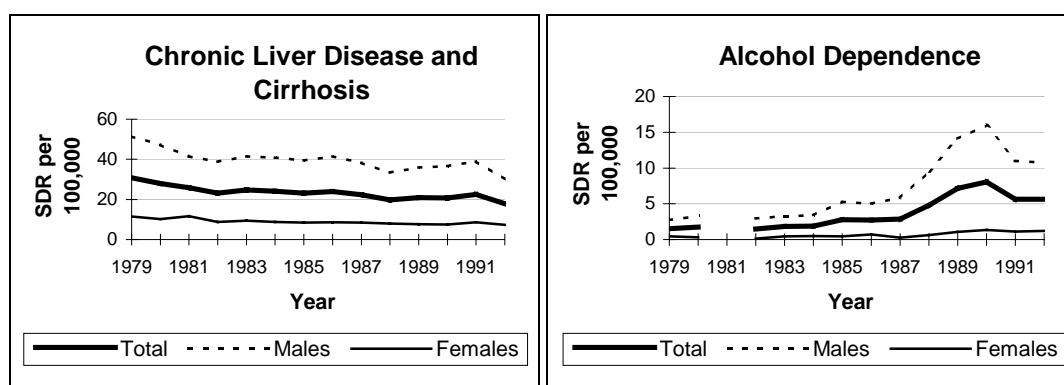
## Alcohol consumption and prevalence



### Consumption

The chart above is deceptive on two counts: first, there is no information available on spirits production or exports, so it is impossible to estimate the considerable spirits consumption on this rum-producing island; second, there is no import information for beer, and since the two leading beer brands are both imports, beer consumption is greatly underestimated. Also, there is no information available of any kind regarding wine consumption.

## Mortality, morbidity, health and social problems from alcohol use



### Mortality

The rate of death from chronic liver disease and cirrhosis decreased slightly between 1970 and 1992, while the rate of death from alcohol dependence increased sharply in the late 1980s, particularly for men.

# Suriname

## Sociodemographic characteristics

| POPULATION  | 1980    | 1990    | 1995    |
|-------------|---------|---------|---------|
| Total       | 355 000 | 400 000 | 423 000 |
| Adult (15+) | 213 000 | 259 000 | 273 000 |
| % Urban     | 44.8    | 47.5    | 50.4    |
| % Rural     | 55.2    | 52.5    | 49.6    |

## Health status

Life expectancy at birth, 1990-1995 : 67.8 (males), 72.8 (females)

Infant mortality rate in 1990-1995 : 28 per 1000 live births

## Socioeconomic situation

GNP per capita (US\$), 1995: 880, PPP estimates of GNP per capita (current int'l \$), 1995: 2250.

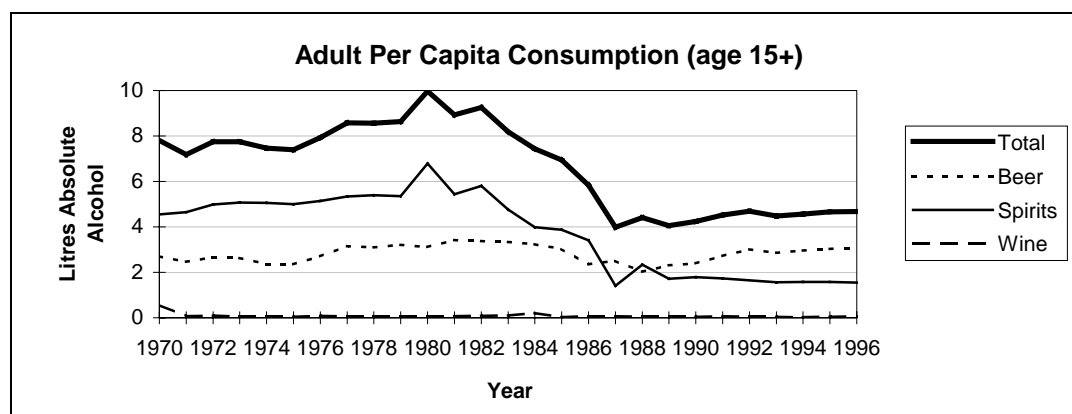
Average distribution of labour force by sector, 1990-1992 : agriculture 20%; industry 20%; services 60%

Adult literacy rate (per cent), 1992 : total 96; male 96; female 96

## Alcohol production, trade and industry

Suriname produces beer, and imports distilled spirits and wine.

## Alcohol consumption and prevalence



## Consumption

Beer and spirits are the alcoholic beverages of choice, according to recorded production and trade figures. There are no data available on consumption of smuggled or informally- or home-produced alcoholic beverages.

# Trinidad and Tobago

## Sociodemographic characteristics

| POPULATION  | 1980      | 1990      | 1995      |
|-------------|-----------|-----------|-----------|
| Total       | 1 082 000 | 1 236 000 | 1 306 000 |
| Adult (15+) | 708 000   | 816 000   | 885 000   |
| % Urban     | 63.1      | 69.1      | 71.8      |
| % Rural     | 36.9      | 30.9      | 28.2      |

## Health status

Life expectancy at birth, 1990-1995 : 69.3 (males), 74.0 (females)

Infant mortality rate in 1990-1995 : 18 per 1000 live births

## Socioeconomic situation

GNP per capita (US\$), 1995: 3770, PPP estimates of GNP per capita (current int'l \$), 1995: 8610.

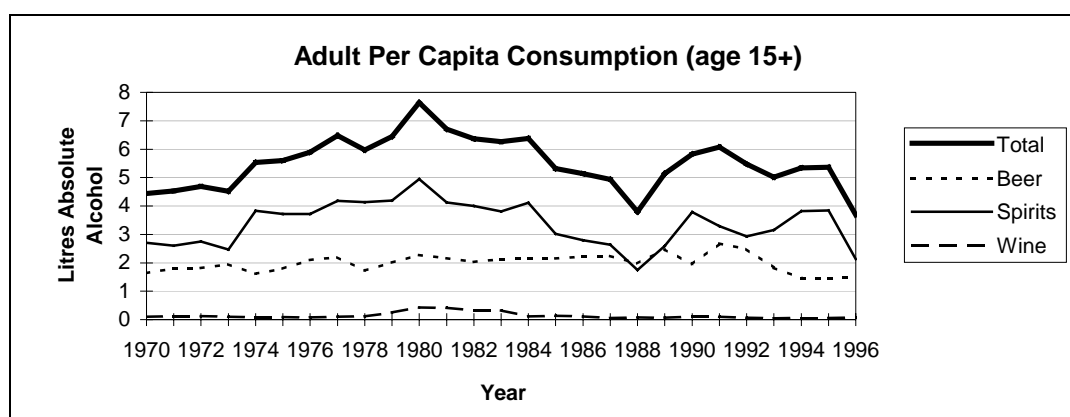
Average distribution of labour force by sector, 1990-1992 : agriculture 10%; industry 33%; services 57%

Adult literacy rate (per cent), 1995 : total 98; male 99; female 97

## Alcohol production, trade and industry

Trinidad and Tobago produce beer and distilled spirits, and import small amounts of wine.

## Alcohol consumption and prevalence



### Consumption

Distilled spirits is the alcoholic beverage of choice, and its fluctuations have determined the shape of recorded adult per capita alcohol consumption. There is no information available regarding consumption of smuggled or home-brewed or informally produced alcohol.

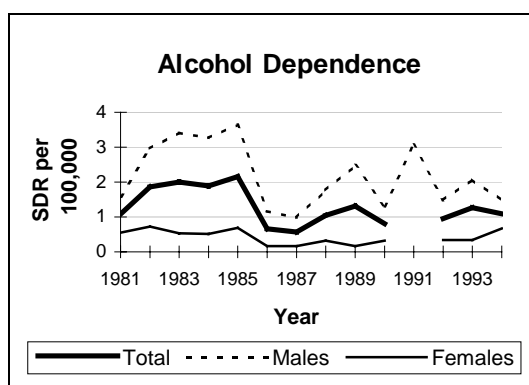
### Prevalence

A school survey conducted in 1985 showed that 91 per cent of students had used alcohol.

## Mortality, morbidity, health and social problems from alcohol use

### Alcohol dependence and related disorders

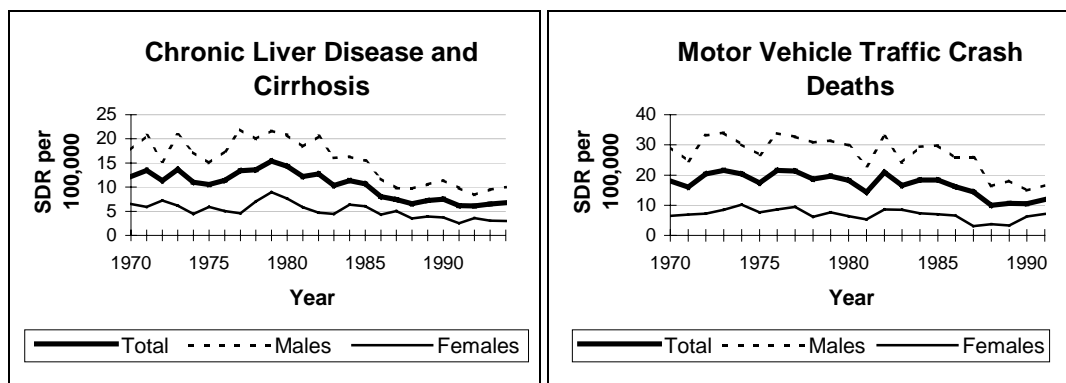
The SDR per 100 000 population from alcohol dependence was 1.1 in 1994, nearly the same level reported in 1981.





**Mortality**

The SDR from chronic liver disease and cirrhosis has fallen steadily from a high point in 1979 of 15.4 to its 1994 level of 6.7 per 100 000 population.

**Morbidity**

According to data from the largest general hospital, 55 per cent of the drivers treated for injuries from motor vehicle crashes in 1979 presented BAC of 0.08 g% or greater.

**Health problems**

The total number of people treated for alcohol-related problems in psychiatric hospitals rose from 697 in 1985 to 835 in 1987.

**Alcohol policies****Control of alcohol products**

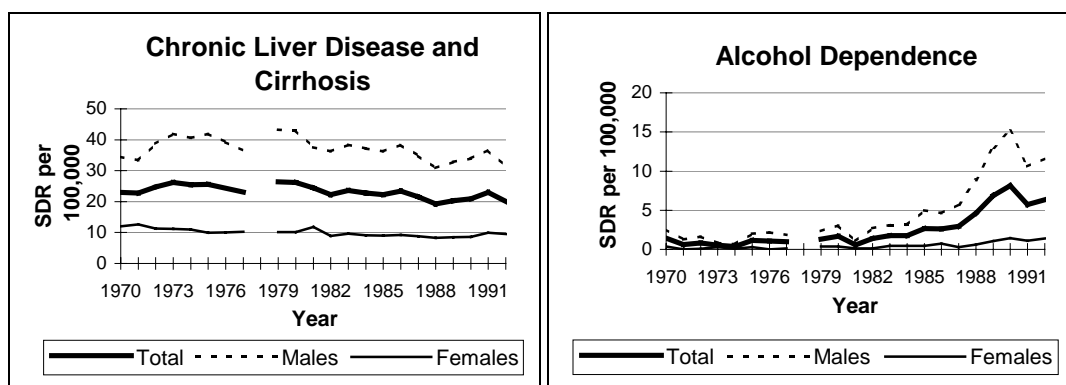
There is some regulation of places where alcohol may be sold.

**Control of alcohol problems**

The minimum legal age for alcohol consumption is 16 years. A Council on Alcohol and Drug Abuse has been established to coordinate and supervise programmes for drug abuse control. The major centres of higher education participate in training related to drug abuse. In medical courses, this topic is approached in psychiatry courses.

**Alcohol data collection, research and treatment**

Most patients seeking treatment for alcohol-related problems enter the psychiatric hospital. There is a specialized 29-bed centre for the treatment of alcoholic patients, and there are treatment and rehabilitation centres run by Alcoholics Anonymous throughout the country. Some companies have programmes to assist employees with alcohol-related problems.

**Mortality, morbidity, health and social problems from alcohol use**

**Mortality**

The rate of death from chronic liver disease and cirrhosis decreased slightly between 1970 and 1992, while the rate of death from alcohol dependence increased sharply in the late 1980s, particularly for men.

## United States of America (the)

**Sociodemographic characteristics**

| POPULATION  | 1980        | 1990        | 1995        |
|-------------|-------------|-------------|-------------|
| Total       | 227 757 000 | 249 924 000 | 263 250 000 |
| Adult (15+) | 176 454 000 | 195 685 000 | 205 210 000 |
| % Urban     | 73.7        | 75.2        | 76.2        |
| % Rural     | 26.3        | 24.8        | 23.8        |

**Health status**

Life expectancy at birth, 1990-1995 : 72.5 (males), 79.3 (females)

Infant mortality rate in 1990-1995 : 9 per 1000 live births

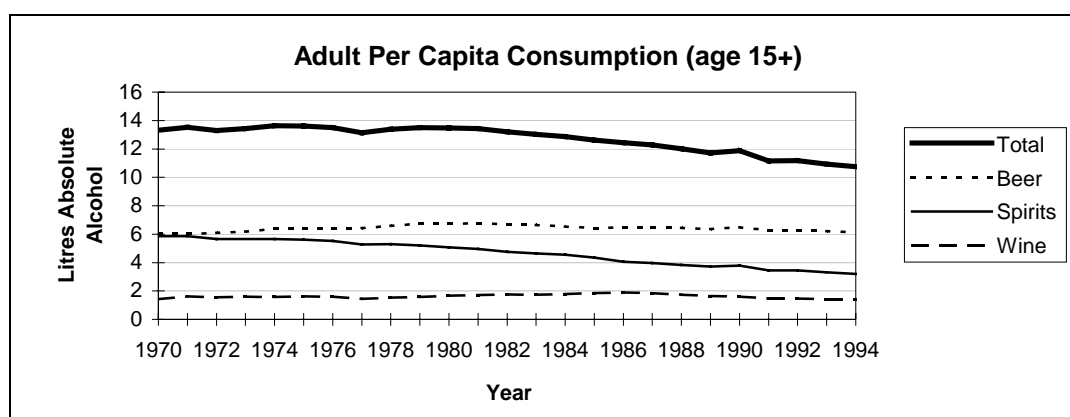
**Socioeconomic situation**

GNP per capita (US\$), 1995: 26 980, PPP estimates of GNP per capita (current int'l \$), 1995: 26 980.

Average distribution of labour force by sector, 1990-1992 : agriculture 3%; industry 25%; services 72%

**Alcohol production, trade and industry**

The United States (US) is the world's largest beer market, and home to some of the world's largest brewing companies, including global leader Anheuser-Busch. In 1995, the top five companies accounted for 91 per cent of domestic production. The speciality beer market is highly fragmented with more than 800 micro-brewers. The US is also the world's largest importer of beer and spirits. The world's largest wine maker, E. & J. Gallo, is located in the US along with two of the world's largest spirits producers, both of which primarily produce whisky.

**Alcohol consumption and prevalence****Consumption**

Alcohol consumption has been falling steadily in the United States since 1980, primarily due to a decline in consumption of distilled spirits. Beer and wine consumption both increased slightly in the 1980s, but have reverted to their 1970 levels.

### ***Prevalence***

According to the 1996 national household survey of a multistage area probability sample of 18 269 persons aged 12 years or older approximately 51 per cent had used alcohol in the past month, about 15.5 per cent engaged in binge drinking (five or more drinks on at least one occasion in the past month, and about 5.4 per cent were heavy drinkers (drinking five or more drinks per occasion on five or more days in the past 30 days). About 59 per cent of men were past month alcohol users, compared with 44 per cent of women. Men were much more likely than women to be binge drinkers (22.8 per cent and 8.7 per cent, respectively) and heavy drinkers (9.3 per cent and 1.9 per cent, respectively). In general, the higher the level of educational attainment, the more likely was the current use of alcohol. The 1995 national household survey measured lifetime prevalence of alcohol use at 80 per cent, use in the past year at 65 per cent, and use in the past 30 days at 52 per cent.

A 1995 report found that hazardous drinking - five or more drinks on one occasion - accounted for more than 53 per cent of all drinking in the United States. Another 25 per cent of drinking took place in a potentially hazardous fashion - three to four drinks on one occasion. The heaviest drinking 10 per cent of American adults, averaging two to four drinks per day, accounted for 60 per cent of total alcohol consumption. The heaviest drinking five per cent, averaging more than four drinks a day, accounted for 41 per cent of total consumption.

### ***Ages patterns***

Young adult (18 to 25 years old) drinkers surveyed in the 1996 national household survey were the most likely to binge or drink heavily. About half the drinkers in this age group were binge drinkers and about one in five were heavy drinkers. Among youths age 12 to 17, the rate of current alcohol use was 49.8 per cent in 1979, 32.5 per cent in 1990, 21.1 per cent in 1995, and 18.8 per cent in 1996.

Researchers at the University of Michigan annually measure alcohol and other drug use among a random sample of the nation's young people (grades 8, 10 and 12 and college). In 1995, 55 per cent of 8th graders, 71 per cent of 10th graders, 81 per cent of 12th graders and 90 per cent of college students had tried alcohol. In 1995, lifetime prevalence of alcohol use for high school seniors was 80.7 per cent (80.9 per cent for males and 80.1 per cent for females). Annual prevalence was 73.7 per cent (74.5 per cent for males and 72.7 per cent for females), and 30-day prevalence was 51.3 per cent (55.7 per cent for males and 47.0 per cent for females). Daily prevalence (daily use in the past thirty days) was 3.5 per cent (5.5 per cent for males and 1.6 per cent for females). In 1995, 15 per cent of 8th-graders, 25 per cent of 10th-graders and 31 per cent of 12th-graders reported binge drinking (having five or more drinks in a row on at least one occasion in the prior two weeks), a slight increase from the early 1990s.

There is a substantial sex difference among high school seniors and college students in the prevalence of occasions of heavy drinking, defined as five or more drinks on one occasion. The rates for high school seniors are 23 per cent for females versus 37 per cent for males in 1995; for college males, 35 per cent for females and 47 per cent for males. College men also have much higher rates of daily drinking than college women (5.3 per cent versus 1.8 per cent in 1995).

### ***Alcohol use among population subgroups***

In the 1996 national household survey, Whites continued to have the highest rate of alcohol use in the past 30 days (54 per cent). Rates for Hispanics and Blacks were 43 per cent and 42 per cent, respectively. The rate of binge use was lower among Blacks (13.1 per cent) than among Whites (16.1 per cent) and Hispanics (16.7 per cent). Heavy use showed no statistically significant differences by race/ethnicity (5.5 per cent for Whites, 6.2 per cent for Hispanics, and 5.3 per cent for Blacks).

### ***Economic impact of alcohol***

People in the United States spent US\$ 90 billion on alcoholic beverages in 1995, 56 per cent of the total amount spent on beverages.

In 1992, alcohol abuse, alcohol dependence and related disorders cost an estimated US\$ 148 billion. Adjusting for inflation and population changes yields an estimate of US\$ 166.5 billion for 1995. This includes US\$ 22.5 billion for health care expenditures, US\$ 119.3 billion for productivity losses, and US\$ 24.7 billion for other losses, including traffic crashes, fires, and criminal justice costs.

Federal tax and customs duty from alcohol totalled US\$ 7.5 billion in 1995: US\$ 3.6 billion for distilled spirits, US\$ 3.3 billion for beer, and US\$ 587 million for wine. This amounts to slightly more than one-half of one per cent of total federal government revenues. Individual states collected an additional US\$ 3.6 billion in revenues from taxes dedicated to alcoholic beverages, approximately four-tenths of one per cent of total state revenues.

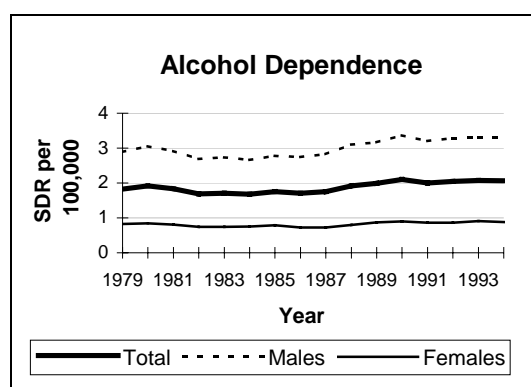
### **Mortality, morbidity, health and social problems from alcohol use**

#### ***Alcohol dependence and related disorders***

In a 1994 national probability sample of 8098 respondents 15 to 54 years old, 7.2 per cent of the sample met the criteria for a diagnosis of alcohol dependence, and an additional 2.5 per cent met the criteria for alcohol abuse without dependence.

A 1992 study used a large multistage design to draw a national sample of 42 861 respondents 18 years of age or older, over-sampling Blacks and young adults (18 to 29 years old). The combined prevalence rate of alcohol abuse or alcohol dependence was 7.4 per cent. This prevalence rate is higher than the six per cent reported in 1988.

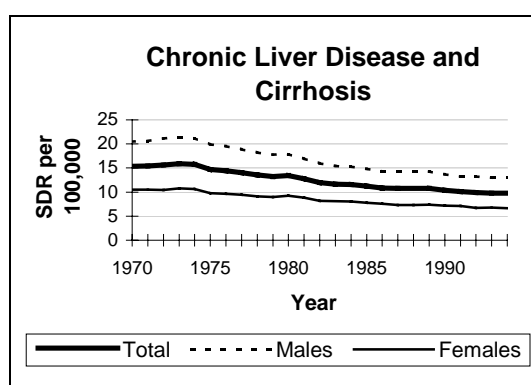
According to an analysis of demographic, clinical, and treatment episode characteristics of 3087 American Indian veterans discharged from Department of Veterans Affairs hospitals in fiscal year 1991, 46.3 per cent of discharged American Indian veterans had substance use disorders, compared with 23.4 per cent of discharged veterans overall. More than 97 per cent of American Indian substance use diagnoses were for alcohol dependence, while rates of other drug use disorders were low. Substance dependent American Indians were younger, and more likely to be male and unmarried, than non-dependent American Indians.

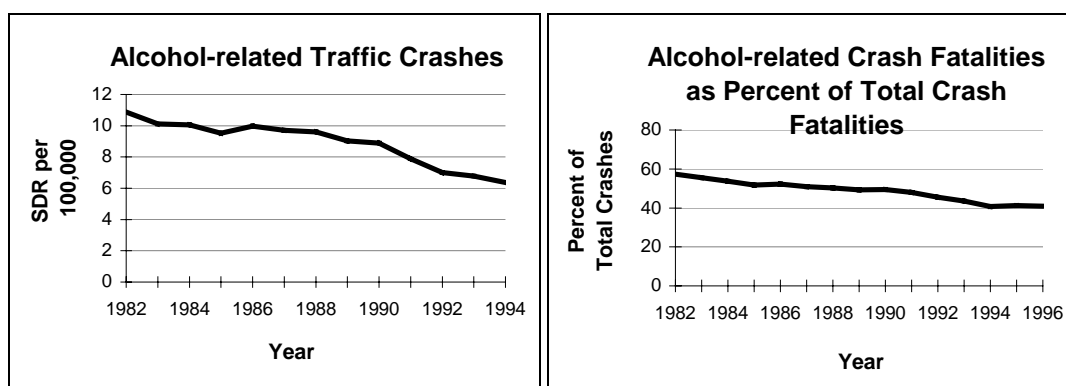


#### ***Mortality***

In 1995 alcohol contributed more than 100 000 deaths annually, making it the fourth leading cause of death. The number of deaths attributable to alcohol problems in 1992 was estimated in a 1998 report at 107 400.

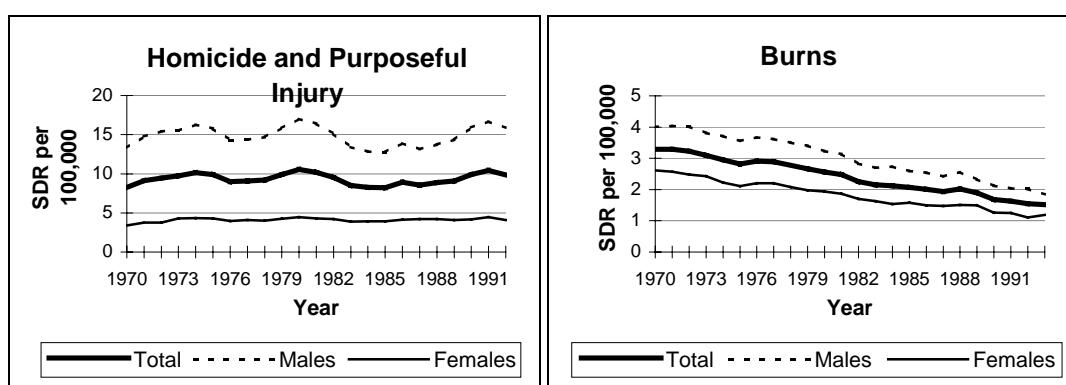
In 1996, 17 196 persons were killed in alcohol-related motor vehicle crashes, 40.9 per cent of total motor vehicle crash deaths. Of these, 3732 had BAC measuring between 0.01g% and 0.09 g%, and 13 395 had BAC of 0.10 g% or higher.





A 1994 study compared drinking patterns of 6355 persons aged 25 to 64 years who died as a result of either injury or disease. The study showed that those who died of injury drank more frequently and more heavily than those who died of disease. Daily drinking, binge drinking and heavy drinking increased the likelihood of injury as the underlying cause of death.

Between 24 and 35 per cent of suicides in 1993 had positive BACs at the time of death. In a review of 15 studies investigating the drinking patterns of homicide offenders in the early 1990s, it was found that, in most of the studies, more than 60 per cent of homicide offenders were drinking at the time of the offence. Another study found that one-half to two-thirds of homicides and serious assaults, alcohol is present in the offender, the victim or both. Alcohol use has also been implicated in 33 to 61 per cent of burn fatalities. Between 17 and 53 per cent of fatal falls are alcohol-related, and alcohol is involved in approximately one-third of all drowning and boating deaths.



### **Morbidity**

In 1996, 321 000 persons were injured in alcohol-related motor vehicle crashes, nine per cent of all those injured in motor vehicle crashes.

A 1993 study found that of 2657 patients admitted to a hospital emergency room for treatment of blunt or penetrating trauma, 47 per cent had a positive BAC (0.01 g% or greater) and about 36 per cent were intoxicated (BAC of 0.10 g% or greater). Intoxicated patients were more likely to be in the 25 to 34 year old age group, and to be male and non-white, and the highest proportion of intoxicated patients was found among victims of stab wounds.

A 1994 study of a representative sample of 29 192 working adults estimated that the odds of occupational injury increased with the frequency of heavy drinking, with odds ratios varying from 1.08 (one occasion of heavy drinking) to 1.74 (daily heavy drinking) after adjusting for the effects of age, gender, education, occupation, and strenuous job activity.

### **Social problems**

In a 1994 study of college campus date rapes, 53 per cent of offenders and 43 per cent of victims had been drinking. A 1992 study found that more than 25 per cent of offenders used alcohol immediately preceding a rape.

It was estimated in 1993 that alcohol contributes to 60 to 70 per cent of domestic violence. In a 1991 study of 450 accounts of the most recent violent episodes reported by community residents, 20 per cent involved marital abuse. Of these marital incidents, 44 per cent of assailants and 14 per cent of victims had been drinking. While research findings vary widely, it is clear that problem drinking often contributes to child abuse (22 to 63 per cent of cases), and sexual molestation and incest (30 to 71 per cent of cases).

## **Alcohol policies**

### ***Control of alcohol products***

The federal excise tax rate per gallon is US\$ 0.58 on beer, US\$ 1.07 on table wine and US\$ 13.50 on spirits. States also apply their own alcohol taxes at varying levels. Small wineries receive US\$ 0.90 per wine gallon credit for the first 100 000 wine gallons removed per year, which allows them to retain the pre-1991 federal tax rate of \$ 0.17.

States are responsible for regulating the sale and distribution of alcoholic beverages and in this regard establish types and numbers of retail outlets, advertising restrictions, days and hours of sale, etc. Two retail systems operate in the United States. In 18 states, a monopoly (or control) system exists under which the government controls the wholesale trade in alcoholic beverages and restricts the retail sale of some or all types of alcoholic beverages to government-owned stores. In the second type of system - "licence states" - all alcoholic beverages are sold by private licensees. Licence types are usually divided into two categories: on-premise consumption and off-premise consumption. Each category generally provides for licensees with the singular or combined privilege to sell beer, wine or spirits. Thirty-two states and the District of Columbia fall into this category.

Local county and city governments in many states have the choice of whether to permit or prohibit the sale of alcoholic beverages. This choice is referred to as a local option. The extent of participation by the local governments varies between states.

The Distilled Spirits Council of the United States (DISCUS), the distilled spirits industry's trade association, announced on 7 November, 1996, that it would end a long-standing voluntary ban on the advertising of distilled spirits on television and radio. There are no federal regulations banning broadcast advertising of alcoholic beverages. Numerous cities have passed full or partial bans on billboard advertising of alcohol.

The Bureau of Alcohol, Tobacco and Firearms (ATF) in the Department of the Treasury has responsibility for the regulation of the labelling, advertising, trade practices, production, importation, exportation, and taxation of beverage alcohol. ATF has reviews, but does not pre-approve, the content of alcohol advertisements to ensure that consumers are not misled or deceived, and that advertising does not include deceptive, false, or misleading statements about the product, obscene or indecent statements or representations, curative or therapeutic representations that are untrue in any particular or tend to create a misleading impression, and representations that are inconsistent with information required to appear on the label of the product.

Beginning in 1989, alcoholic beverage containers must carry the following warning label: "Government Warning: 1) According to the Surgeon General, women should not drink alcoholic beverages during pregnancy because of the risk of birth defects. 2) Consumption of alcoholic beverages impairs your ability to drive a car or operate machinery, and may cause health problems."

### ***Control of alcohol problems***

BAC levels and penalties are legislated at the state level, which in most states is 0.10 g%. The BAC level has been lowered to 0.08 g% in 15 states. All states prescribe mandatory penalties for offenders, consisting of licence suspension or revocation, fines, imprisonment and/or specified hours of community service in addition to, or in lieu of, imprisonment. Forty-five states prescribe mandatory licence suspension or revocation for second-time offenders for periods ranging from 30 days to three years. Imprisonment is mandatory in 16 states for first time offenders; in 45 states, for second time offenders; and in 44 states for third time offenders. As of September 1995, 27 states and the District of Columbia had set the BAC level at 0.02 g% or lower for drivers under the age of 21. The Presidential (now National) Commission on Drunk Driving was created in April 1982 to heighten public awareness of the seriousness of the drinking and driving problem.

The 1986 Omnibus Anti-Drug Act created the Centre for Substance Abuse Prevention in the Department of Health and Human Services, which has been active both at the community level and in national media in promoting alcohol and other drug problem prevention coalitions and messages. Thousands of local anti-drug coalitions exist at the grassroots level, and most of them work on alcohol as well as other drug problems.

#### ***Alcohol data collection, research and treatment***

The National Institute on Alcohol Abuse and Alcoholism, created in 1970, is responsible for carrying out and funding research programmes on alcohol. It is required to devote 15 per cent of its research budget to health services research. The National Drug and Alcoholism Treatment Utilization Survey (NDATUS) provides data on treatment capacity, utilization rates, and staffing patterns of facilities that provide alcohol and other drug services. The National Highway Traffic Safety Administration in the US Department of Transportation publishes an annual compilation of motor vehicle crash data with detailed information on alcohol-related crashes and fatalities. The Centre for Disease Control (CDC) also collects data of various types pertaining to alcohol.

Between 1982 and 1993, there was a 147 per cent increase (from 4233 to 10 466) in the number of alcohol-only and combined alcohol and drug treatment units and a 190 per cent increase (from 283 169 to 822 298) in the number of clients served on a given day. The most current data available (1993) reported 1087 units (9.5 per cent of total units) as alcohol-only treatment facilities, 9379 (81.6 per cent) units as combined alcohol and other drug treatment facilities, and 1030 (nine per cent) units as drug-only treatment facilities. The treatment capacity for each type of facility was 136 957, 984 861, and 150 149 clients, respectively. The data showed that on a given day, 102 386 clients used alcohol-only treatment facilities, (10.8 per cent of total clients), 719 902 clients used combined alcohol and other drug treatment facilities, and 121 920 clients used drug-only facilities (12.9 per cent).

Alcoholics Anonymous is widely available in the United States, with meetings occurring in most major cities on a daily basis.

## Uruguay

### **Sociodemographic characteristics**

| POPULATION  | 1980      | 1990      | 1995      |
|-------------|-----------|-----------|-----------|
| Total       | 2 914 000 | 3 094 000 | 3 186 000 |
| Adult (15+) | 2 128 000 | 2 297 000 | 2 409 000 |
| % Urban     | 85.2      | 88.9      | 90.3      |
| % Rural     | 14.8      | 11.1      | 9.7       |

### **Health status**

Life expectancy at birth, 1990-1995 : 69.3 (males), 75.7 (females)

Infant mortality rate in 1990-1995 : 20 per 1000 live births

### **Socioeconomic situation**

GNP per capita (US\$), 1995: 5170, PPP estimates of GNP per capita (current int'l \$), 1995: 6630.

Average distribution of labour force by sector, 1990-1992 : agriculture 5%; industry 22%; services 73%

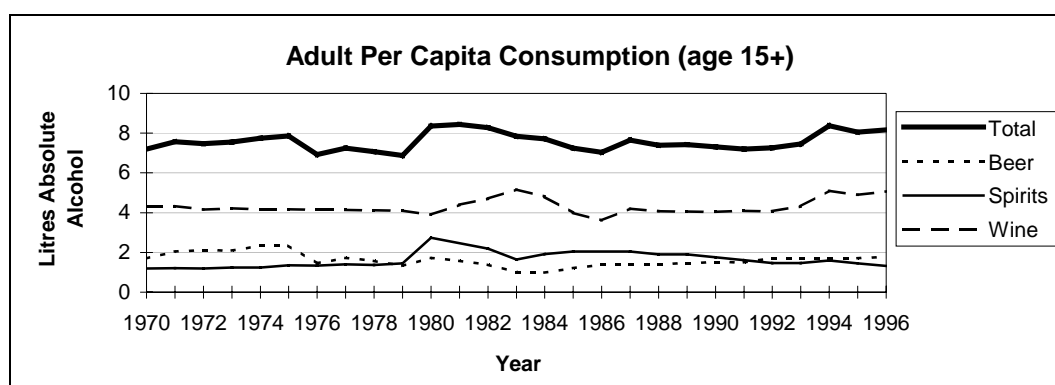
Adult literacy rate (per cent), 1995 : total 97; male 98; female 97

### **Alcohol production, trade and industry**

Distilled spirits production is governed by the state production monopoly, the Administracion Nacional de Combustibles, Alcohol Y Portland (ANCAP). ANCAP is an autonomous organization that produces methyl and ethyl alcohol as well as distilled beverages. There are private distilleries, but

these operate under government authorization and control. Uruguay also produces beer and wine, as well as a range of local distilled and fermented beverages.

### Alcohol consumption and prevalence



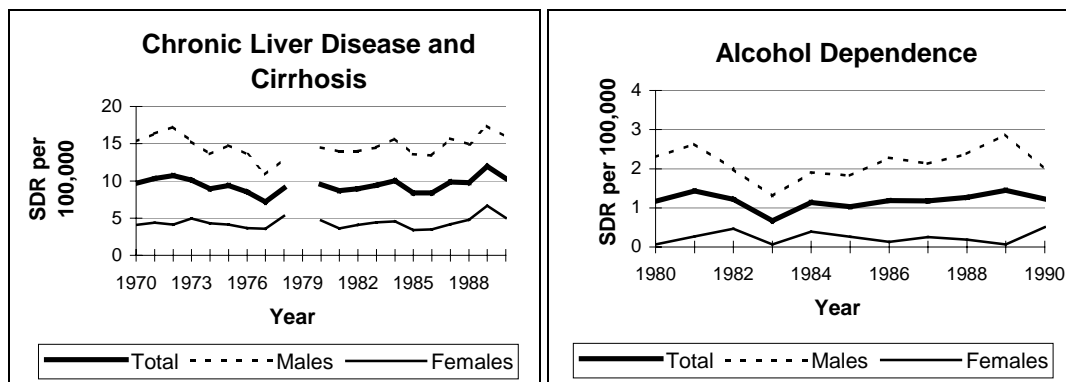
#### Consumption

Wine is the alcoholic beverage of choice. The spirits data above may be underestimated, based on a comparison with ANCAP data. There are no data available regarding consumption of smuggled or informally- or home-produced alcohol.

#### Prevalence

As of 1989 no national surveys of drinking prevalence had been done. It was reported that young people were starting to drink from age 14, and increasingly drank beer.

### Mortality, morbidity, health and social problems from alcohol use



#### Alcohol dependence and related disorders

According to a 1989 report, approximately 30 per cent of the beds at the psychiatric hospital in Montevideo were occupied by patients with alcohol problems.

#### Mortality

Deaths from chronic liver disease and cirrhosis and alcohol dependence have remained at roughly the same level in recent years.

### Alcohol policies

#### Control of alcohol products

As of 1989, distilled spirits were taxed a percentage of retail price, ranging from 44 per cent for *pineau* and 76 per cent for cognac to 113 per cent for *grappa* and *caña*.

There are no limits on the hours when alcohol may be sold. There are also no limits on alcohol advertising.



**Control of alcohol problems**

The sale of alcohol to persons under age 18 is prohibited.

**Alcohol data collection, research and treatment**

Alcoholics Anonymous has been present in the country since the late 1960s, and has expanded throughout the country, but its numbers and effectiveness are limited.

## Venezuela

**Sociodemographic characteristics**

| POPULATION  | 1980       | 1990       | 1995       |
|-------------|------------|------------|------------|
| Total       | 15 091 000 | 19 502 000 | 21 844 000 |
| Adult (15+) | 8 952 000  | 12 062 000 | 13 931 000 |
| % Urban     | 83.3       | 90.4       | 92.8       |
| % Rural     | 16.7       | 9.6        | 7.2        |

**Health status**

Life expectancy at birth, 1990-1995 : 69.0 (males), 74.7 (females)

Infant mortality rate in 1990-1995 : 23 per 1000 live births

**Socioeconomic situation**

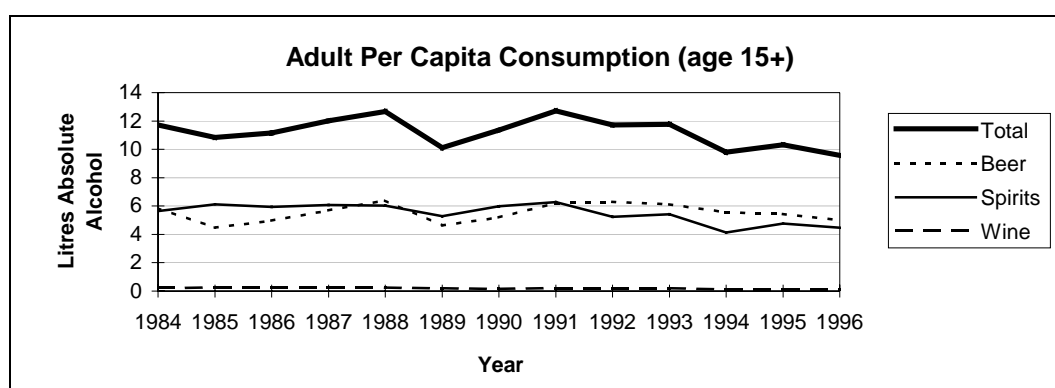
GNP per capita (US\$), 1995: 3020, PPP estimates of GNP per capita (current int'l \$), 1995: 7900.

Average distribution of labour force by sector, 1990-1992 : agriculture 13%; industry 25%; services 62%

Adult literacy rate (per cent), 1995 : total 91; male 92; female 90

**Alcohol production, trade and industry**

Venezuela produces beer, distilled spirits and wine. Cervecerja Polar, the country's largest brewer, has a market share of 90 per cent. The Brazilian brewing giant Companhia Cervejaria Brahma has acquired a controlling interest in Venezuela's Cervecerja Nacional.

**Alcohol consumption and prevalence****Consumption**

Beer and spirits are the alcoholic beverages of choice. According to figures obtained from the country, wine consumption is extremely low, and barely appears on the chart.

### Prevalence

In the 1996 national household survey, of 6 000 respondents, 71.1 per cent reported drinking alcohol at some point in their lives, 62.9 had drunk in the past year, 51.5 per cent in the previous month, and 35.6 in the preceding week.

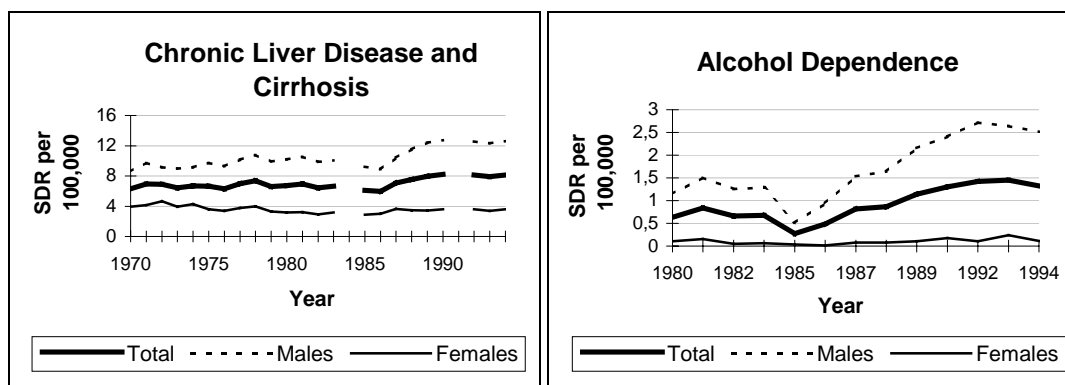
### Age patterns

Drinking is slightly higher among young adults. In a 1996 survey of 5401 university students, 80.5 per cent of the respondents had drunk alcohol, 66 per cent in the past year and 28.8 per cent in the past month. When younger ages are included, as in a 1996 survey of 6697 students in basic, middle, diversified and professional schools, 70.4 per cent of students reported using alcohol.

## Mortality, morbidity, health and social problems from alcohol use

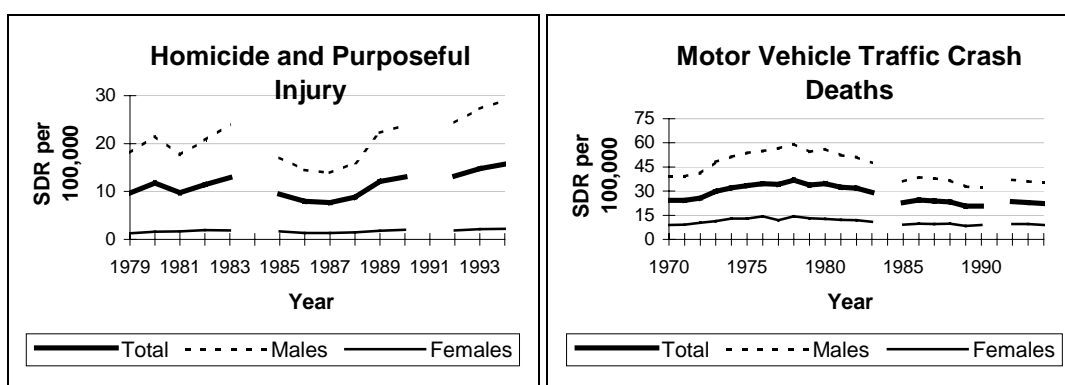
### Alcohol dependence and related disorders

The frequency of substance use disorders and non-pathological use of drugs was assessed in a cohort of 1013 undergraduate medical and 426 pharmacy students from the University of the Andes in Merida, Venezuela in the early 1990s. Among medical students, lifetime prevalence of alcohol abuse was 10 per cent, and lifetime prevalence of alcohol dependence was three per cent. Among pharmacy students, lifetime prevalence of alcohol abuse was 6.1 per cent, and lifetime prevalence of alcohol dependence was 1.4 per cent.



### Mortality

Alcohol was present in 56 per cent of homicides between 1977 and 1979.



### Social Problems

Between 1961 and 1964 at least 50 per cent of road accidents occurred under the influence of alcohol.

The proportion of crime associated with alcohol use has been estimated at almost 20 per cent during the 1990s.

## **Alcohol policies**

### ***Control of alcohol products***

There is an Organic Law on the sale of liquor, retail distribution of alcohol and on alcohol products (Article 28) which establishes the hours of sale. Article 9 provides criteria for calculating the number of retail distributors permitted, but many places sell alcohol without a licence. Alcohol advertisements have been prohibited on radio and television since 1981.

### ***Alcohol data collection, research and treatment***

The National Council on Scientific and Technological Research (CONICIT) coordinates, supervises and promotes research projects.

Psychiatric hospitals have almost no beds for alcohol (and other drug) dependent people, except for Caracas Psychiatric Hospital which has 24 beds for “alcoholism” and another 24 for drug addiction. By law, the Ministries of Health and Social Welfare and of Justice are responsible for treating prisoners who have alcohol problems, but they have only a small unit for the treatment of alcohol (and other drug) dependent people and some orientation centres for outpatient care. The Ministry of Family participates in treatment and rehabilitation through the Jose Felix Ribas Foundation which has six hospitalization centres that function as treatment communities, and seven centres for outpatient care.