

## 2.3. Cannabis market

### 2.3.1. Production

#### 2.3.1.1. Cannabis herb

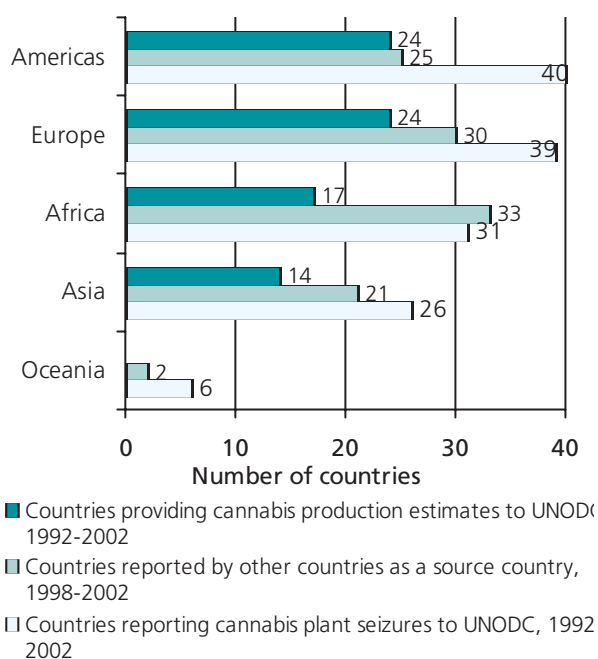
##### *Production is globally dispersed*

Over the 1992-2002 period, 79 countries provided UNODC with cannabis production estimates, indicating that cannabis production took place on their territory. The total number of cannabis producing countries is, however, still larger. Ninety four countries providing information on the origin of seized cannabis herb cited 82 different source countries for the year 2002. Over the 1998-2002 period, 111 cannabis herb source countries were identified with this approach. If cannabis plant seizures are used as an indicator of domestic cannabis production (the plant as such is not usually shipped across borders), 124 source countries over the 1998-2002 were identified, or 142 source countries over the 1992-2002 period.

Based on the number of countries which provided cannabis production estimates and cannabis plant seizures to UNODC, data suggest that the majority of cannabis source countries are located in the Americas. The largest number of countries cited as a source for cannabis herb by other countries are, however, found in Africa. At the same time, data also show that the cannabis source countries are distributed across the world fairly evenly, clearly showing that cannabis production is a truly global problem.

Nonetheless, some concentrations can be identified. North America seems to be the world's largest cannabis market, accounting for 2/3 of global cannabis herb seizures over the 2001-2002 period. US authorities report that two thirds of cannabis herb is domestically produced. Out of cannabis herb imports into the USA, 63% came from Mexico and 23% from Canada in 2002. Mexico reported that 95% of the cannabis herb on its market came from domestic sources; 5% was

**Fig. 90: Spread of cannabis production around the world**



Source: UNODC, Annual Reports Questionnaire Data / DELTA.

imported from Guatemala. The Canadian authorities reported all seized cannabis herb as having originated from domestic sources.

In South America, Colombia is a main source country (for Venezuela and several other countries in the Americas). In addition, Paraguay seems to play a key role in supplying the markets of Brazil, Argentina (99%), Uruguay (100%) and Chile (79%). Local production also takes place in all of these countries. Jamaica is frequently mentioned as a major source country in the Caribbean region. In addition, significant levels of

domestic cannabis production seem to take place in other countries of the Caribbean region as well. Practically all of the Central American countries are mentioned as major source countries for cannabis herb within Central America.

Cannabis production in Africa is reported from practically every country. There are also important movements of cannabis herb across borders in Africa. Significant source countries in central and western Africa are - *inter alia* - Ghana, Nigeria, Cameroon, Côte d'Ivoire, the Democratic Republic of Congo, Congo and Senegal; in southern Africa: the Republic of South Africa, Malawi, Lesotho, Swaziland and Zambia; in eastern Africa: Tanzania, Uganda and Kenya; and in northern Africa: Egypt and Morocco. Cannabis herb exports to Europe are mainly from countries in Western Africa (notably for exports to France) and from the Republic of South Africa (notably for exports to the UK, Ireland and Belgium).

Most countries in Europe also report domestic production of cannabis. The most frequently cited source country in Europe is Albania which supplies most countries in the Balkan region (Bulgaria, FYR of Macedonia, Serbia and Montenegro, Croatia) as well as Greece, Italy, Slovenia, Austria and Sweden. The Netherlands was the second most frequently cited source country in Europe in 2002. In addition, criminal groups importing cannabis herb from the Russian Federation were identified as the main source of the cannabis herb by several East European countries. The Central State Drugs Committee of the Russian Federation estimated, however, that only 30% of the cannabis herb on its market was of Russian origin; 70% was from Kazakhstan.

In Central Asia all of the countries reported cannabis to have been of domestic origin, with Russia being the main export market. In the countries of the Near and Middle East, Lebanon and Egypt were identified as the main source countries. Lebanon was also the main source for cannabis found in Turkey. The main source country in South Asia is India. The main source countries in South-East Asia are Cambodia, Thailand and the

Philippines. With regard to cannabis herb exports from South-East Asia to Europe, Thailand was most frequently mentioned in 2002.

Most of the cannabis herb in the Oceania region is of domestic origins. In addition, North America (33% of imports) and the UK (20% of imports) were mentioned as source countries.

***Production has been rising and may have reached some 32,000 tons in 2002***

Previous UNDCP estimates for the mid 1990s suggested that global cannabis production (cannabis herb and cannabis resin, expressed in cannabis herb equivalents) was around 30,000<sup>r</sup> tons. More recent estimates seem to confirm these orders of magnitude, though showing slightly higher figures.

According to US government estimates cannabis herb production outside the USA was around 15,400 tons in 2002, up from 11,200 tons in 1999<sup>s</sup>. Annual production of marijuana in the USA was estimated by the US authorities to amount to more than 10,000<sup>t</sup> tons in 2001/2002. This would result in a global cannabis herb production of more than 25,000 tons. This includes an estimate for cannabis herb production of 3,500 tons for countries other than the USA, Mexico and Colombia. The latter estimate, however, appears to be rather conservative. US authorities also reckon that "there may be considerable amounts of undetected cannabis cultivation in Central and East Asia, and on the African continent."<sup>u</sup> Estimates provided by member states over the last few years to UNODC suggest that the latter figure could be substantially higher, probably close to 9,000 tons (still conservatively estimated). Global cannabis herb production could thus amount to some 32,000 tons. (This is a tentative estimate which could change substantially as more information becomes available).

If available estimates from various sources are combined, data show a strong decline of cannabis herb production over the 1989-1992 period, followed by an increase over the subsequent decade so that global cannabis herb production in 2002 has again reached

r) UNDCP, "Cannabis as an Illicit Narcotic Crop: A review of the Global Situation of Cannabis Consumption, Trafficking and Production" in UNDCP, *Bulletin on Narcotics*, Double Issue on Cannabis: Recent Development, Vol XLIX No. 1 and 2, 1997 and Vol. L, Nos. 1 and 2, 1998, pp. 45-83.

s) Department of State, *International Narcotics Control Strategy Report*, March 2003.

t) ONDCP, *National Drug Control Strategy*, February 2003, p. 30.

u) A survey conducted in 1998 in Kazakhstan revealed a (minimum) harvest of 1,517 tons (though the potential harvest could have been as high as 148,000 tons). The (minimum) production in Kyrgyzstan amounted to 677 tons (with a potential production of 4250 tons). Paraguay reported the production of 1,415 tons (1998), the Philippines 1,353 tons (2000), Brazil 1,110 tons (2000); India 663 tons (1998), Indonesia 512 tons (1997), South Africa 467 tons (2002), Lebanon 218 tons (2000), Swaziland 210 tons (2001), Nigeria 200 tons (1999), Malawi 175 tons (2000), Guatemala 150 tons (2000), Kenya 130 tons (1999), the Russian Federation 90 tons (1999), Honduras 52 tons (2002), Thailand 25 tons (1997), Tanzania 22 tons (1992), Uganda 21 tons (1999), etc.

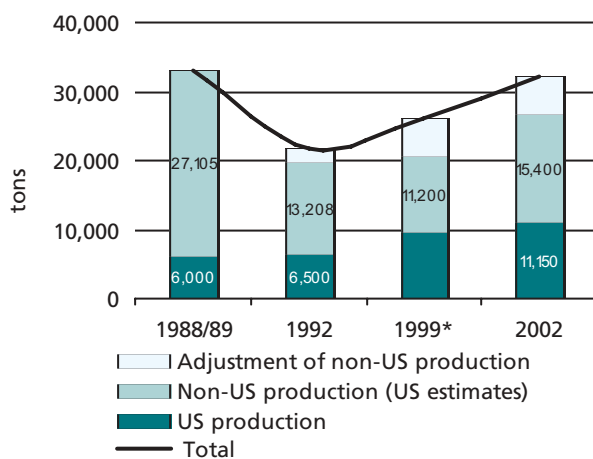
**Table 9: Cannabis herb production in 2002 in metric tons**

Country	mid range estimates	range:	
USA*	11,150	5,577	16,731
Mexico	7,900		
Colombia	4,000		
Others (conservative estimate)	3,500		
<b>Sub-total (based on US estimates)</b>	<b>26,550</b>	<b>20,900</b>	<b>43,300</b>
Others (not included above)	5,500		
<b>Total (rounded)</b>	<b>32,000</b>		

Sources: United States Department of State, International Narcotics Control Strategy Report, March 2003, Drug Availability Steering Committee, *Drug Availability Estimates in the United States*, December 2002, Office on National Drug Control Policy, *National Drug Control Strategy*, February 2003, UNODC, Annual Reports Questionnaire Data.

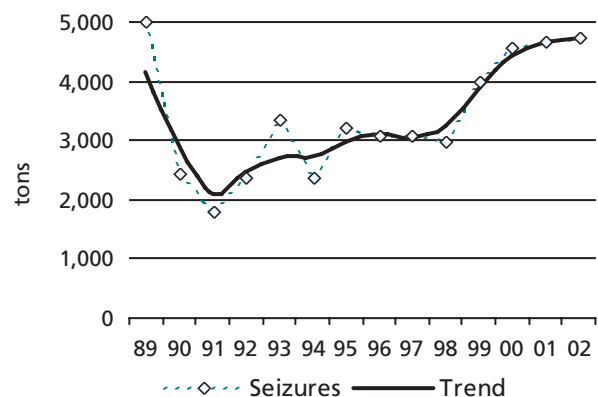
levels similar to the late 1980s. It may also be interesting to note that the trend of global cannabis herb seizures exhibits a very similar pattern over the same period.

A global production of 32,000 tons of cannabis herb would result in a global interception rate of 15%. An estimate of 32,000 tons is thus probably a minimum estimate. A production any lower than this would mean

**Fig. 91: Global cannabis herb production estimates, 1988/89 - 2002**

\* tentative estimate of US production in 1999.

Sources: United States Department of State, *International Narcotics Control Strategy Report*, March 2003, Drug Availability Steering Committee, *Drug Availability Estimates in the United States*, December 2002, Office on National Drug Control Policy, *National Drug Control Strategy*, February 2003, UNODC, Annual Reports Questionnaire Data.

**Fig. 92: Global cannabis herb seizures, 1989-2002**

Source: UNODC, Annual Reports Questionnaire Data / DELTA.

an even higher interception rate - which does not seem to be very likely in the case of cannabis. An estimate of 32,000 tons would be equivalent to an average annual consumption of around 220 grams of cannabis herb per cannabis user.

It should be noted that the current production estimates do not tally with consumption estimates for individual countries. Supply side estimates for the USA, for instance, see a cannabis herb market (including imports) of close to 18,000 tons (range: 10,000 to 24,000 tons) for 2001/2002, consisting of a domestic production of more than 10,000 tons and imports of more than 7,000 tons. Consumption based estimates see a cannabis herb market of around 1,000 tons for the USA<sup>v</sup>. Thus far, this discrepancy has not been resolved.

v) Drug Availability Steering Committee, *Drug Availability Estimates in the United States*, December 2002.

### 2.3.1.2. Cannabis resin

#### *Global cannabis resin production is concentrated in Morocco as well as in Pakistan and Afghanistan*

Over the period 1999-2002, Morocco followed by Pakistan and Afghanistan were the most often cited source countries for cannabis resin. In Western Europe, the world's largest cannabis resin market, where more than two thirds of all cannabis resin seizures were made in 2002, about 80% of the cannabis resin is estimated to originate in Morocco<sup>w</sup>. The Near and Middle East/South-West Asia region accounted for more than 20% of all cannabis resin seizures in 2002. The main source countries for this region are Pakistan and Afghanistan.

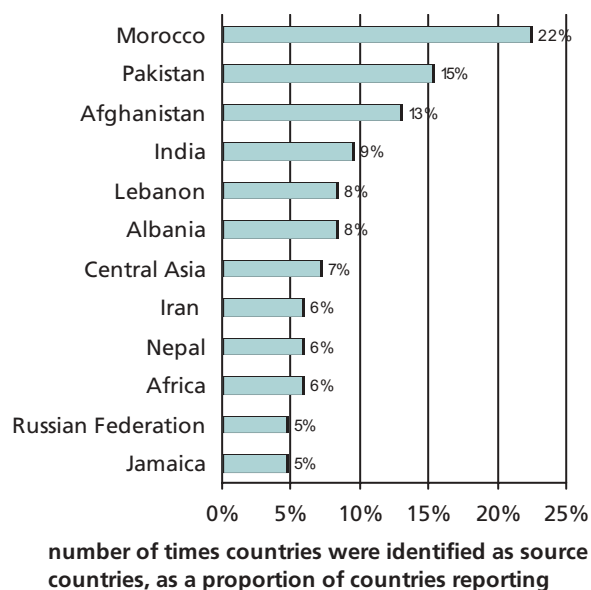
Other important source countries identified are India, Lebanon, Albania, the Central Asian countries (notably Kazakhstan and Kyrgyzstan), Nepal, a number of

African countries and the Russian Federation. The only country in the Americas cited as an important country of origin for cannabis resin is Jamaica. In addition to the countries mentioned above, a significant number of European countries identified Spain and the Netherlands as the countries where criminal groups obtained their cannabis resin.

In 2003, UNODC and the Government of Morocco, conducted the country's first comprehensive cannabis resin survey. The survey revealed a potential production of cannabis resin of 3,080 tons (out of 47,400 tons of cannabis plant material), produced on some 134,000 hectares of land in the Rif region by some 96,600 families.

These are substantial amounts. For comparison, previous UNDCP surveys on cannabis production, conducted in Central Asia (1998) revealed a cannabis resin production of 53 tons (on 2,500 ha) in the Shuy valley of Kazakhstan and of 24 tons in Kyrgyzstan (on 770 ha), suggesting that cannabis resin production in Central Asia is less than 100 tons a year.

**Fig. 93: Main source countries of cannabis resin, 1999-2002 (based on information from 85 countries)**



Source: UNODC, Annual Reports Questionnaire Data / DELTA.

Based on the Moroccan results and an analysis of global cannabis resin seizure data, a tentative estimate of global cannabis resin production can be made. Available data for 2002 suggest that about 60% of seized cannabis resin was of Moroccan origin. (The same percentage is also obtained if the analysis is extended to the 1992-2002 period). Global cannabis resin production could thus be estimated at around 5,100 tons.

However, this is a conservative estimate. The interception rate of cannabis resin in Western Europe (where most of the Moroccan cannabis resin is seized) is probably higher than in other parts of the world. It is therefore likely that the proportion of Moroccan cannabis is less than the proportion of Moroccan cannabis intercepted. Consequently, it would be reasonable to assume that global cannabis resin production is higher than 5,100 tons. Indeed, a comparison of cannabis herb and resin seizures shows that in 2002 (as well as over the

w) Most of Europe's cannabis resin originates in Morocco, accounting for some 80% of West Europe's cannabis resin imports. France, for instance, reported that 82% of the cannabis resin found on its market in 2002 originated in Morocco. Belgium saw 80% to come from Morocco, Sweden 85%, the Czech Republic 70%; Spain, Italy, Denmark, Finland and Ireland reported that almost all of the cannabis resin originated in Morocco. Authorities in the UK reported that the bulk of the cannabis resin found on the UK market is shipped from Morocco via the Iberian Peninsula, France and the Benelux countries to the UK. Similarly, the German authorities see the bulk of the cannabis resin to have originated in Morocco and to have transited Spain and the Netherlands before arriving in Germany.

**Table 10: Tentative estimates of global cannabis resin production, 2003**

1. Estimate based on Moroccan cannabis resin production and seizures				
	Seizures in tons (2002)	Estimated proportion related to cannabis resin originating in Morocco	Potential seizures related to Moroccan cannabis in tons	Cannabis resin production in tons
Western Europe	732	80%	585	
North Africa	71	90%	64	
Seizures related to Moroccan cannabis resin			649	
Global seizures			1,073	
in %			60%	
Cannabis resin production in tons		60%		3,080
Estimate of global cannabis resin production, rounded				5,100
2. Estimate based on cannabis herb estimates and seizures				
	Cannabis herb	Cannabis resin	Proportion	Cannabis resin production in tons
Cannabis seizures in tons (2002 data )	4,741	1,076	23%	
Cannabis production estimates, rounded	32,000		23%	7,400

Sources: UNODC, Annual Reports Questionnaire Data

1998-2002 period) cannabis resin seizures amounted to 23% of cannabis herb seizures. Applying the estimate of 32,000 tons for cannabis herb, the corresponding production figure for cannabis resin could be around 7,400 tons. Based on this estimate Morocco would account for some 40% of global cannabis resin production, but less than 10% of global cannabis herb and resin production taken together.

### 2.3.2. Trafficking

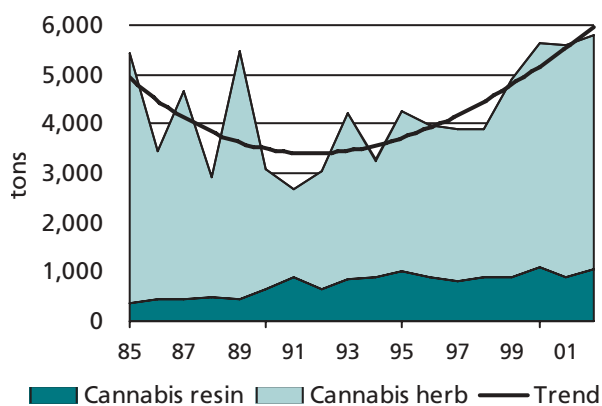
#### *Cannabis is the most extensively trafficked drug worldwide*

The two cannabis products, cannabis herb (marijuana) and cannabis resin (hashish) remain the most extensively trafficked drugs worldwide. Practically all the countries of the world are affected by cannabis trafficking. Seizures of cannabis exceed those of other drugs in almost all countries. In 2002, a total of some 5,800 tons of cannabis products were seized globally. This total includes more than 4,700 tons of cannabis herb, more than 1,000 tons of cannabis resin and more than 1 ton of cannabis oil. The volume of seized cannabis products was more than 15 times the volume of cocaine and more than 100 times the amount of heroin seized.

#### *Cannabis herb seizures were stable but cannabis resin seizures rose in 2002*

The upward trend in cannabis seizures, which began in the early 1990s, continued in 2002. Cannabis herb seizures remained generally stable, but cannabis resin seizures increased in 2002, offsetting the decline reported the previous year. Overall cannabis seizures were almost twice as high in 2002 as a decade earlier.

**Fig. 94: Cannabis seizures, 1985-2002**



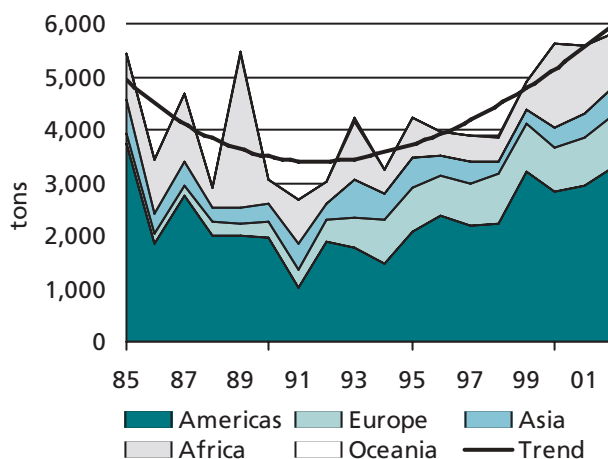
Source: UNODC, Annual Reports Questionnaire Data / DELTA.

#### *Cannabis seizures concentrated in the Americas and in Africa*

Over the 2001-2002 period, 55% of all cannabis seizures were reported from the Americas, 20% from Africa, 16% from Europe, 9% from Asia and less than

1% from Oceania. In 2002 cannabis seizures fell in Oceania and in Africa but increased in Asia, the Americas and in Europe.

**Fig. 95: Cannabis seizures, regional distribution, 1985-2002**



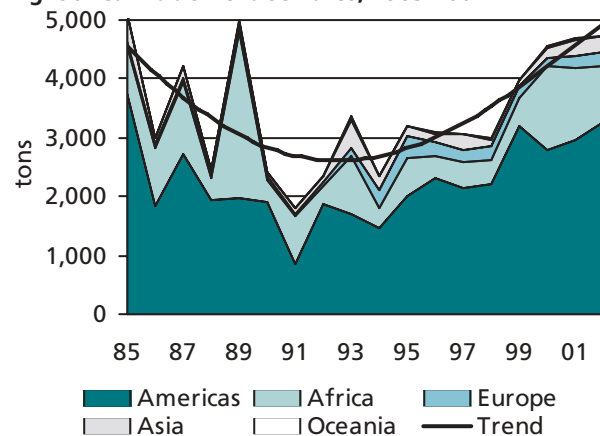
Source: UNODC, Annual Reports Questionnaire Data / DELTA.

#### 2.3.2.1. Trafficking in Cannabis herb

##### *Cannabis herb seizures rose strongly in recent years, but were stable in 2002*

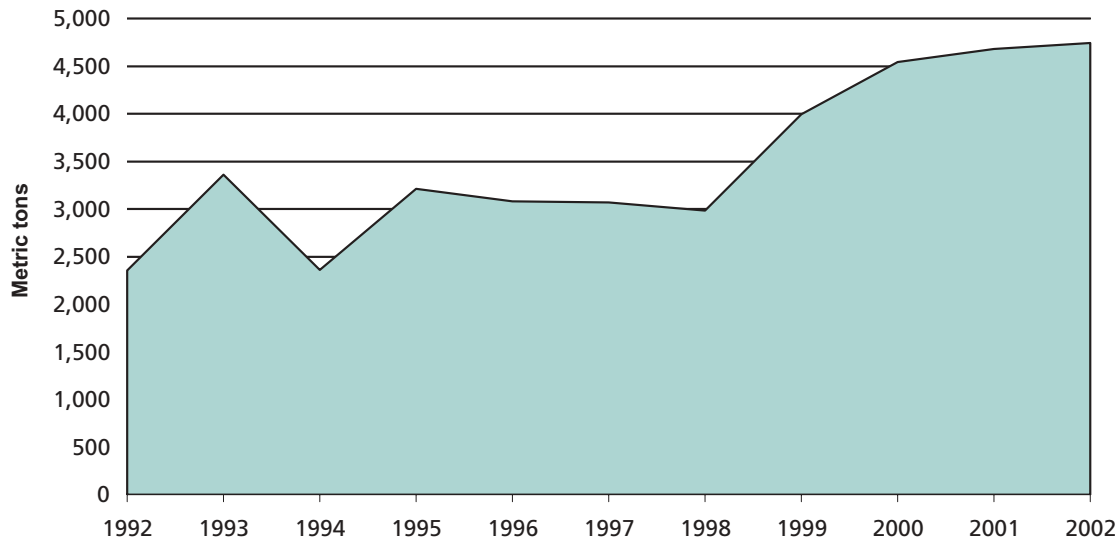
Cannabis herb is by far the most widely trafficked drug worldwide. Over the 2000-2002 period, 169 countries reported seizures of cannabis herb, more than heroin (143 countries), cocaine (140 countries), cannabis resin

**Fig. 96: Cannabis herb seizures, 1985-2002**



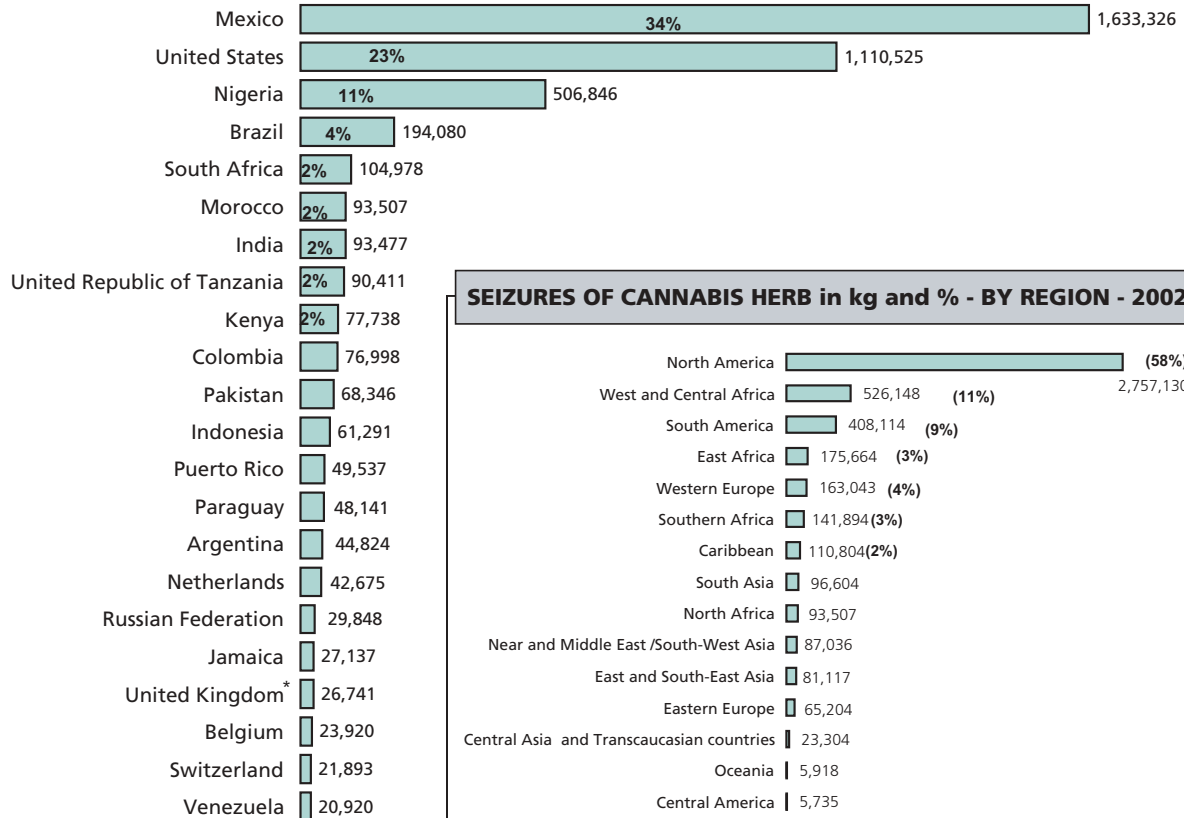
Source: UNODC, Annual Reports Questionnaire Data / DELTA.

Fig. 97: Global seizures of cannabis herb, 1992 -2002

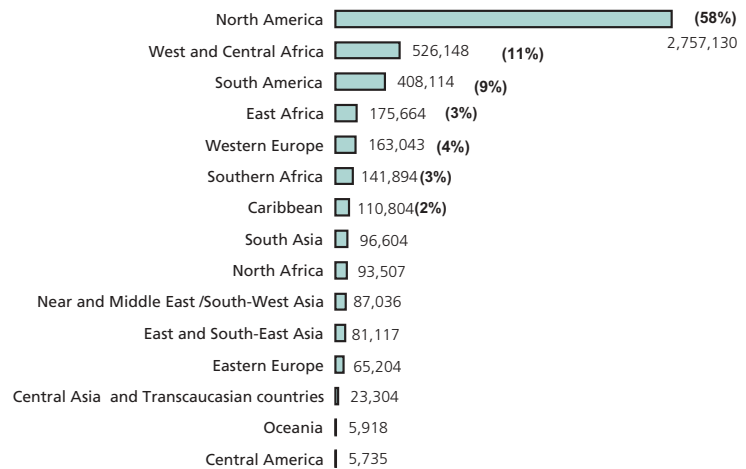


Year	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Metric tons	2,355	3,361	2,359	3,211	3,078	195	2,985	3,992	4,544	4,678	4,741

**SEIZURES OF CANNABIS HERB in % of world total and kg- HIGHEST RANKING COUNTRIES - 2002**

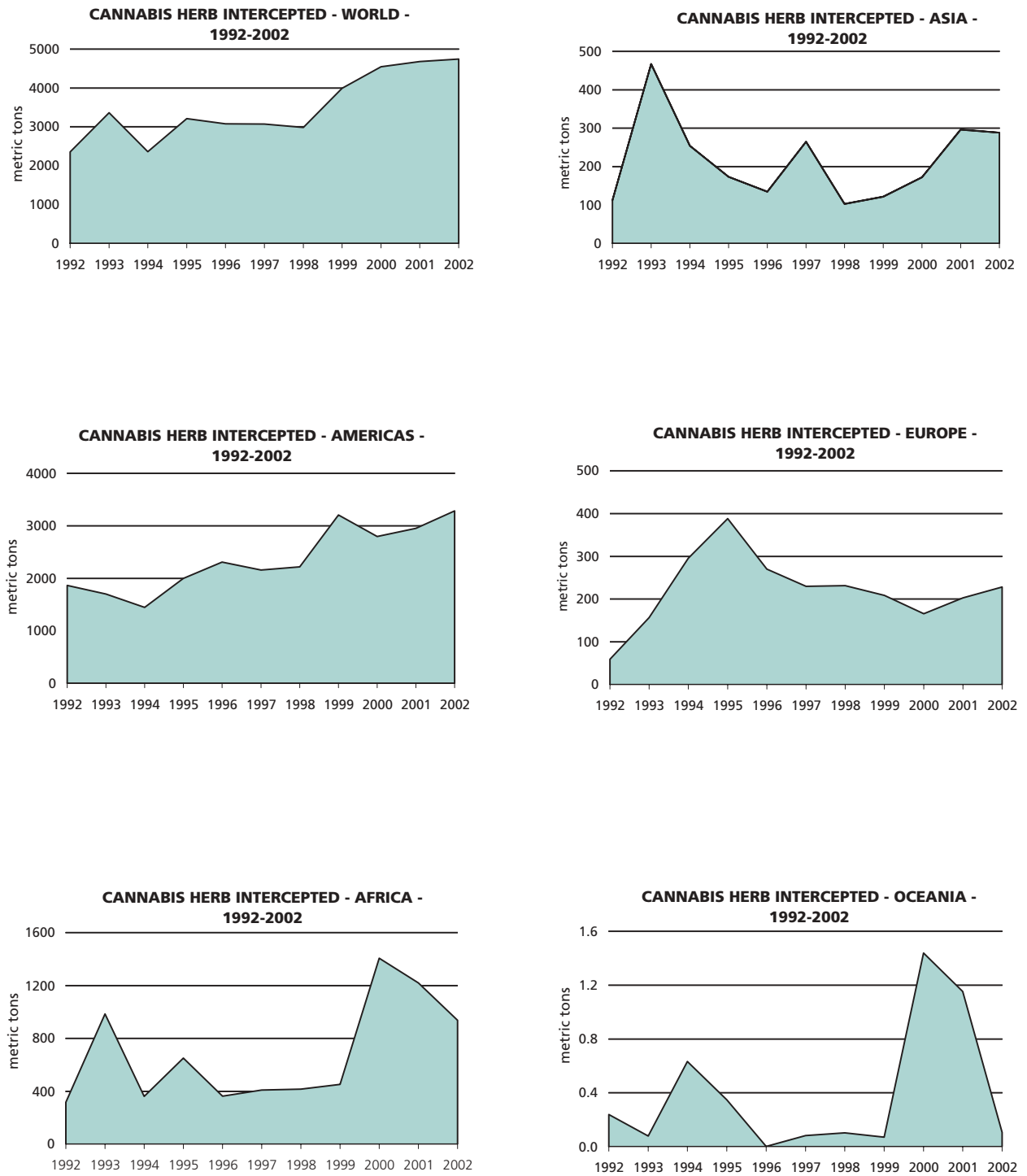


**SEIZURES OF CANNABIS HERB in kg and % - BY REGION - 2002**



\* data refer to 2001.

Fig. 98: Global seizures of cannabis herb, 1992 -2002





(115 countries), amphetamines (97 countries) or ecstasy (84 countries). Following a decline in the 1980s, cannabis herb seizures doubled over the 1992-2002 period. In 2002, however, seizures remained basically stable. This was a consequence of declines reported from Africa and Oceania, offsetting increases in Europe and in the Americas.

### *Trafficking is concentrated in the Americas and in Africa*

There is a concentration of cannabis herb seizures in the Americas (66% of all seizures over the 2001-2002 period), notably in North America (58%), and in Africa (23%). Asia accounted for 6%, Europe for 5% and Oceania for less than 1% of global cannabis herb seizures.

The largest cannabis herb seizures in 2002 were, once again, reported from Mexico (34% of global seizures) and the USA (23%), followed by Nigeria (11%), Brazil (4%) and South Africa (2%).

### 2.3.2.2. Trafficking in cannabis resin

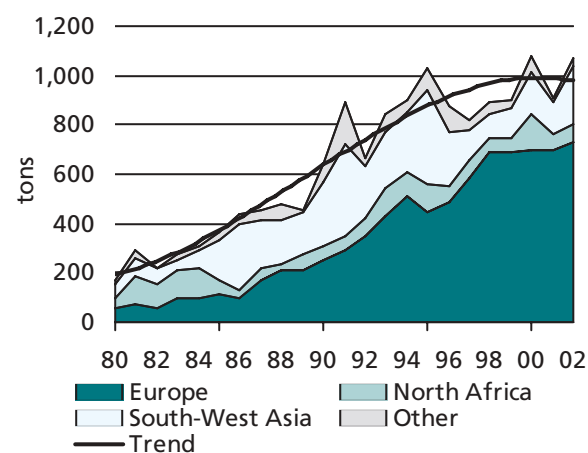
#### *Cannabis resin seizures increased in 2002*

At the global level slightly more than 1,000 tons of cannabis resin were seized in 2002, about the same as in 2000, though more than in 2001 (+18%). Seizures increased in Europe in 2002 (6%), in North Africa (9%) and strongly in South-West Asia (22%), reflecting a strong increase of cannabis production in Afghanistan. The long-term trend of cannabis resin seizures showed a strong increase between 1980 and the mid 1990s, followed, despite the 2002 increase, by stabilization thereafter.

#### *Seizures are concentrated in Europe ...*

Europe accounted for 68%, South-West Asia for 22% and North Africa for 7% of global cannabis resin seizures in 2002. The largest seizures at the global level have been reported repeatedly from Spain (53% of global cannabis resin seizures in 2002), followed by Pakistan (8%) and Morocco (6%). High levels of cannabis resin seizures in the Near & Middle East / South-West Asia region were also reported from Iran, Afghanistan, Lebanon and in Europe from the UK and France. The largest cannabis resin seizures in Eastern Europe were reported by the Russian Federation.

**Fig. 99: Cannabis resin seizures, 1980-2002**



Source: UNODC, Annual Reports Questionnaire Data / DELTA.

#### *... and production in North Africa and South-West Asia*

In contrast to cannabis herb, production and trafficking of cannabis resin is more concentrated. There were 40 countries identified as sources of cannabis resin in 2002. Most of these countries, however, only produce small amounts. Large-scale production is concentrated in two areas: Morocco in North Africa and Pakistan/Afghanistan in South-West Asia. In addition, significant amounts of cannabis resin production have been reported from Central Asia, Lebanon, Nepal, and India and, in the Americas, from Jamaica.

#### *Europe is the main destination*

Outside the main production areas, Europe is the main consumer region. (Within Europe only Albania has been cited by some of its immediate neighbours as a source of cannabis resin). The vast majority of West Europe's cannabis resin imports (some 80%) come from Morocco. France, for instance, reported that 82% of the cannabis resin found on its market in 2002 originated in Morocco. Belgium estimated 80% coming from Morocco, Sweden 85%, and the Czech Republic 70%. Spain, Italy, Denmark, Finland and Ireland reported that almost all of their cannabis resin originated in Morocco. The UK estimated that the bulk of their cannabis resin came from Morocco via the Iberian Peninsula, France and the Benelux countries. Similarly, Germany found much of its cannabis resin coming from Morocco, via Spain and the Netherlands.

The second largest source of cannabis resin for countries in Europe is Afghanistan/Pakistan (10% of seizures in Belgium; 30% in the Czech Republic; and about half in the Russian Federation). Though several European

countries cite Pakistan (and not Afghanistan) as a source, the Pakistani authorities estimate that much of the cannabis resin found on their market originates in Afghanistan. Iran also reported a strong increase of cannabis resin imports from Afghanistan in recent years. Turkey reported that traffickers obtained cannabis resin in Iran for final destination in Germany. Afghan cannabis resin also leaves the country via its northern borders. Tajikistan reported that 80% of seized cannabis resin, which originates almost exclusively from Afghanistan, was destined for the Russian Federation and a further 10% for other Central Asian countries.

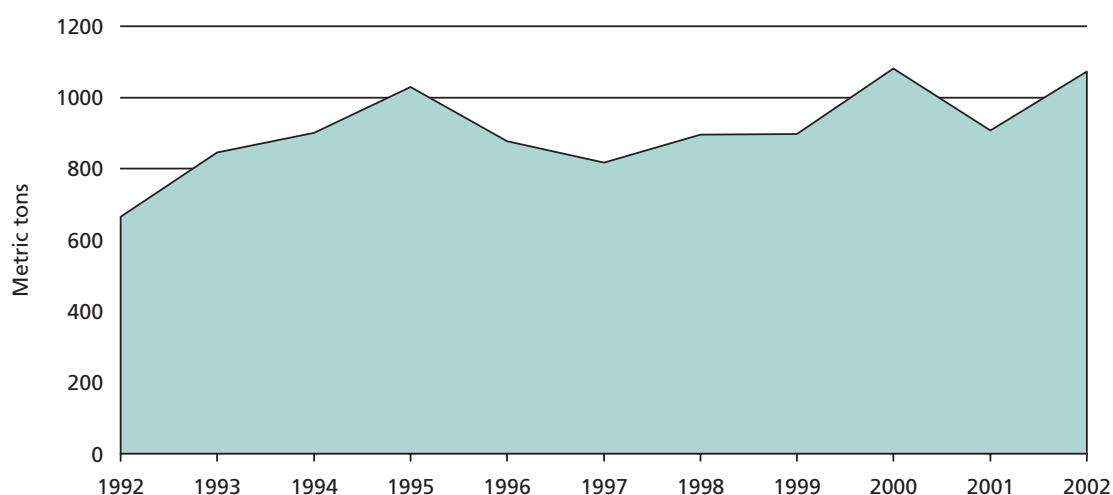
Cannabis resin produced in Central Asia also plays an important role in the CIS region. The Russian authorities estimate that about 30% of cannabis resin imported into their country originates Kazakhstan and 20% in Kyrgyzstan. Some 30% of imports are destined for re-export to the Baltic countries. This is confirmed indirectly by reports from some of the Baltic countries. Lithuania, for instance, reported that 50% of the cannabis resin on its market originated in Central Asia. (Estonia, in contrast, reported that the bulk of cannabis resin seized in the country was shipped via Spain). Some cannabis resin is re-exported from Russia to the Czech Republic as well as to the Netherlands and the UK. Overall cannabis resin exports to Europe are estimated to amount to some 10% of Russian Federation's total supply (domestic production and imports).

#### *Trafficking to other regions remains limited*

Trafficking of cannabis resin to other regions remains limited. Just 3% of global cannabis resin seizures were made in countries outside Europe, South-West Asia and North Africa in 2002. Of these other regions, the largest trafficking areas are South Asia, followed by Eastern Africa. Cannabis resin trafficked in South Asia originates mainly in Pakistan and in Nepal. Cannabis resin found in Eastern Africa was reported to have been smuggled from Pakistan and India.

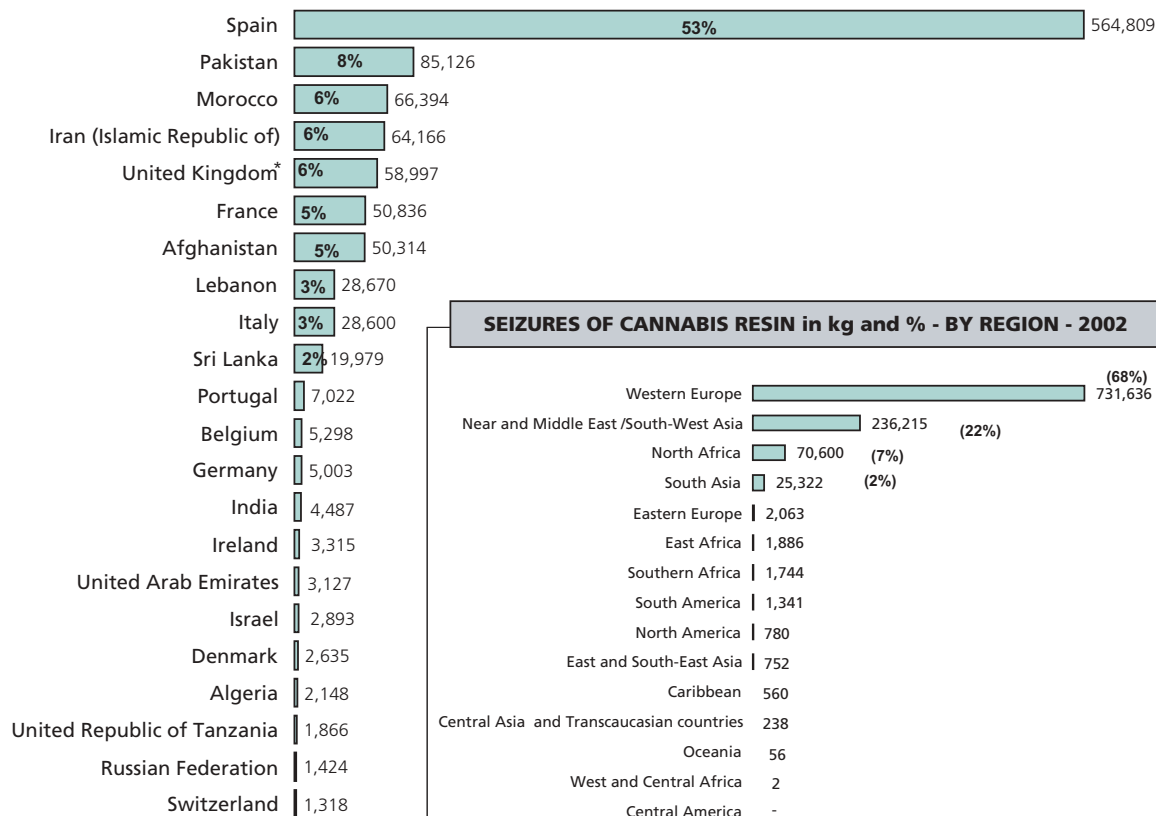
Most of the cannabis resin found in Oceania is shipped to Australia via Europe (mainly via the UK, Spain and the Netherlands). Similarly, most of the cannabis resin in the USA was reported to have been trafficked via Europe (90% via the Netherlands) to the USA. Shipments via Canada accounted for 5% of all cannabis resin imports. The main source for Canada's cannabis resin was reported to be Pakistan. Jamaica was reported to be the main source for cannabis resin in the Caribbean region.

Fig. 100: Global seizures of cannabis resin, 1992 - 2002

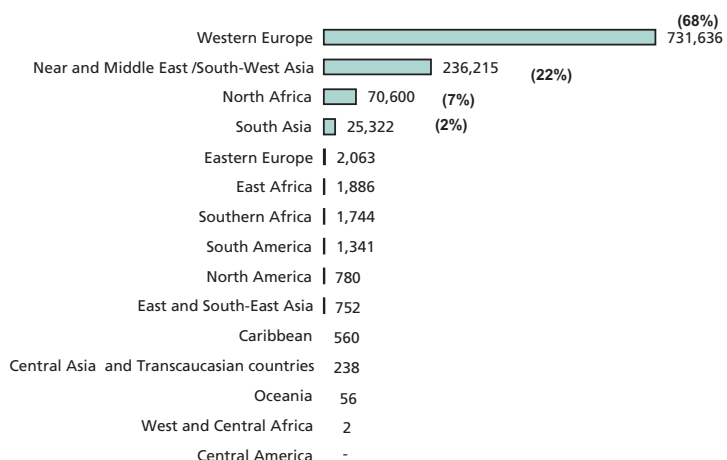


Year	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
Metric tons	665	846	901	1,030	877	818	895	898	1,081	907	1,073

**SEIZURES OF CANNABIS RESIN in % of world total and kg- HIGHEST RANKING COUNTRIES - 2002**

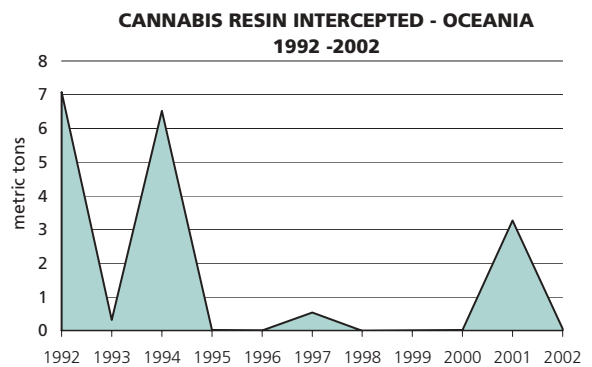
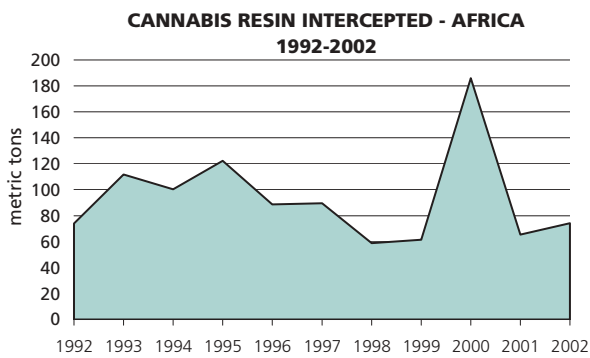
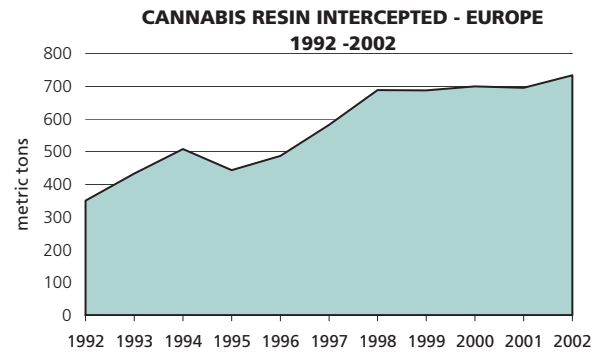
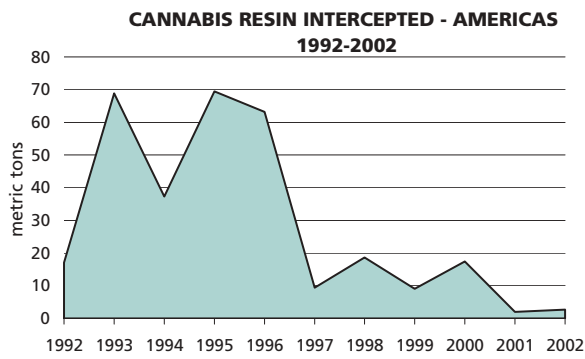
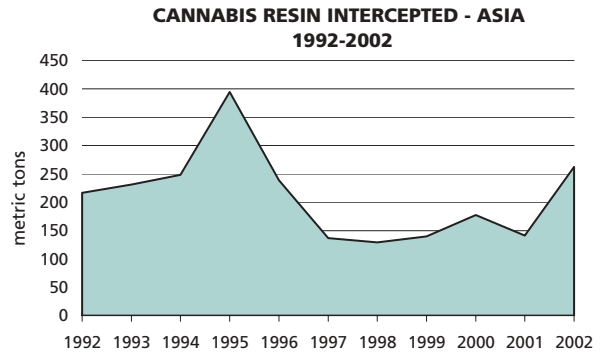
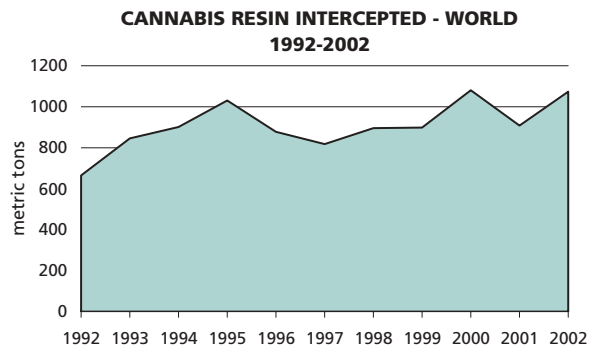


**SEIZURES OF CANNABIS RESIN in kg and % - BY REGION - 2002**

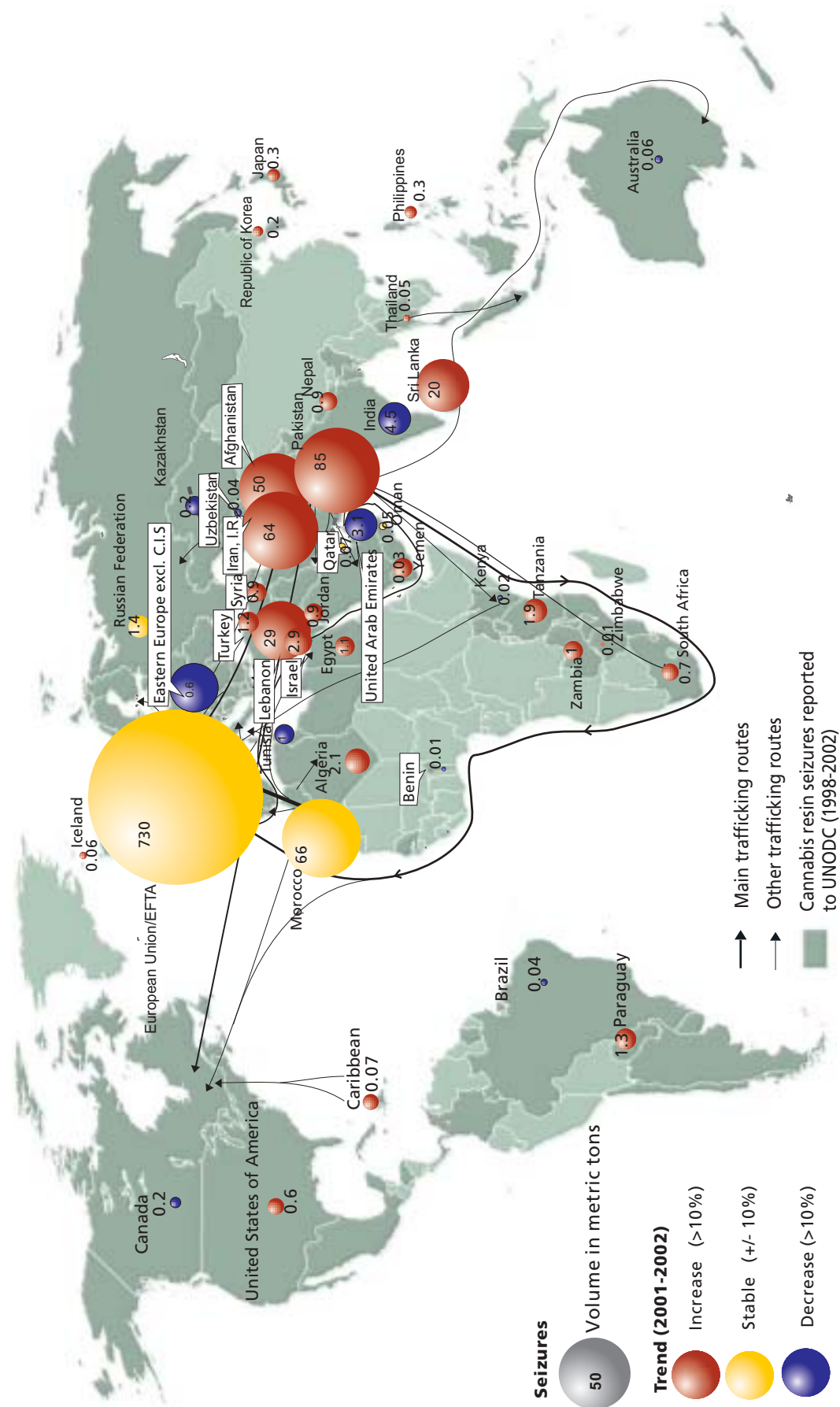


\* data refer to 2001.

Fig. 101: Cannabis interception



Map 16: Cannabis resin seizures 2001 - 2002: extent and trends (countries reporting seizures of more than 10 kg.)



Note: Routes shown are not necessarily documented actual routes, but are rather general indications of the directions of illicit drug flows.

### 2.3.3. Abuse

#### 2.3.3.1. Extent

Cannabis is the most widely consumed illicit drug. Some 146 million people or 3.7% of the population 15-64 consumed cannabis in 2001-2003.

The number of people treated for cannabis abuse is much smaller than for opiates or cocaine. The proportions of patients treated for cannabis abuse, has, however, shown an upward trend in several parts of the world in recent years, reflecting growing consumption, almost unlimited supply and the availability of more potent varieties with a higher THC content.

Though cannabis use continues rising, UNODC's estimate on global cannabis consumption had to be revised downwards compared to last year's estimate (published in *Global Illicit Drug Trends 2003*). Some of the 'decline' was due to a methodological change prompted by the

new Annual Reports Questionnaire<sup>x</sup>. Moreover, some UNODC estimates, when replaced with actual household survey data, turned out to be smaller than previously expected. The most striking example in this regard was Brazil, which affected estimates for South America as a whole. While previous estimates, derived from student studies, suggested that Brazil's cannabis consumption was significantly above the global average, estimates reported by the Brazilian authorities last year (based on a national household survey) showed an annual prevalence rate of just 1% among the adult population. This was clearly below the global average. As a result, UNODC's overall estimates for South America (including the Caribbean and Central America) had to be cut by half (to 6.5 million persons or 2.4% of the population age 15-64).

**Table 11: Annual prevalence estimates of use of cannabis: 2001-2003**

	Number of people (in million)	in % of population age 15 - 64
OCEANIA	3.40	16.40
AFRICA	34.60	7.70
AMERICAS	34.90	6.30
- North America	28.50	10.30
- South America	6.50	2.40
EUROPE	28.80	5.30
- West Europe	20.40	6.70
- East Europe	8.40	3.60
ASIA	44.70	1.90
<b>GLOBAL</b>	<b>146.30</b>	<b>3.70</b>

	Cannabis abuse above global average
	Cannabis abuse close to global average
	Cannabis abuse below global average

Sources: UNODC, Annual Reports Questionnaire data, various Govt. reports, reports of regional bodies, UNODC estimates.

x) In line with a change in the question on prevalence asked in the new Annual Reports Questionnaire, the population base used for calculating the total number of drug users was reduced from 'age 15 and above' to age 15-64', implicitly assuming that no or only negligible cannabis use takes place among the population age 65 and above. As many countries did not increase the reported proportions of drug users among the adult population, the calculated total number of drug users declined.

In terms of average annual prevalence, the reported rates are highest in the Oceania region (16.4%), followed by Africa (7.7%), the Americas (6.3%) and Europe (5.3%). In North America and in Western Europe the rates are 10.3% and 6.6% respectively. The highest levels in the Americas were reported from the USA (11% of the population age 12 and above or more than 13% of the population age 15-64 in 2002). The highest levels in Europe were reported from the UK (10.9% of those age 16-59 in 2003), the Czech Republic (10.9% in 2002), France (9.8% in 2002) and Spain (9.7% in 2001). Cannabis use in Australia affected 15% of the population age 15-64 in 2001.

Relatively low cannabis prevalence rates, in contrast, are reported from countries in Asia (1.9%) mainly reflecting low levels of cannabis use in China and other countries of South-East Asia. In Thailand, for instance, a household survey conducted in 2001 revealed an annual prevalence rate of cannabis use of 1.5% among those age 12-65. Nonetheless, the largest numbers of cannabis users are found in Asia (some 45 million people), which accounts for more than 30% of global cannabis use.

The Americas and Africa account for 24% each of all cannabis use worldwide and Europe for 20%. Cannabis use in Africa is widespread across the continent and particularly high in countries of Western and Southern Africa.

### *Importance of cannabis use compared to other drugs*

In the vast majority of countries, cannabis is the most widely consumed drug<sup>y</sup>. This applies to all countries in the Oceania region, almost all countries in western Europe and North America, most countries in Africa and a majority of countries in Asia. Given this, it is more interesting to identify the countries in which cannabis does not rank 1st.

In some of the East and South East Asian countries, including China, cannabis is reported to rank 3rd after opiates and ATS. In Japan it was reported to rank 3rd after methamphetamine and solvents.

The authorities in the Ukraine report cannabis ranking third after the use of 'kompot' an opium straw extract which is usually injected, and ephedrone (methcathi-

none) which is often injected as well. In Sweden, Hungary and Slovakia cannabis was reported to rank 2nd after sedatives & tranquilizers (mostly benzodiazepines) and in Croatia, Serbia & Montenegro as well as in Latvia and Lithuania authorities reported cannabis 2nd after opiates.

In Venezuela and El Salvador cannabis use was reported to rank second after cocaine. In Brazil, Panama and Guatemala cannabis use was reported to rank 2nd after benzodiazepines.

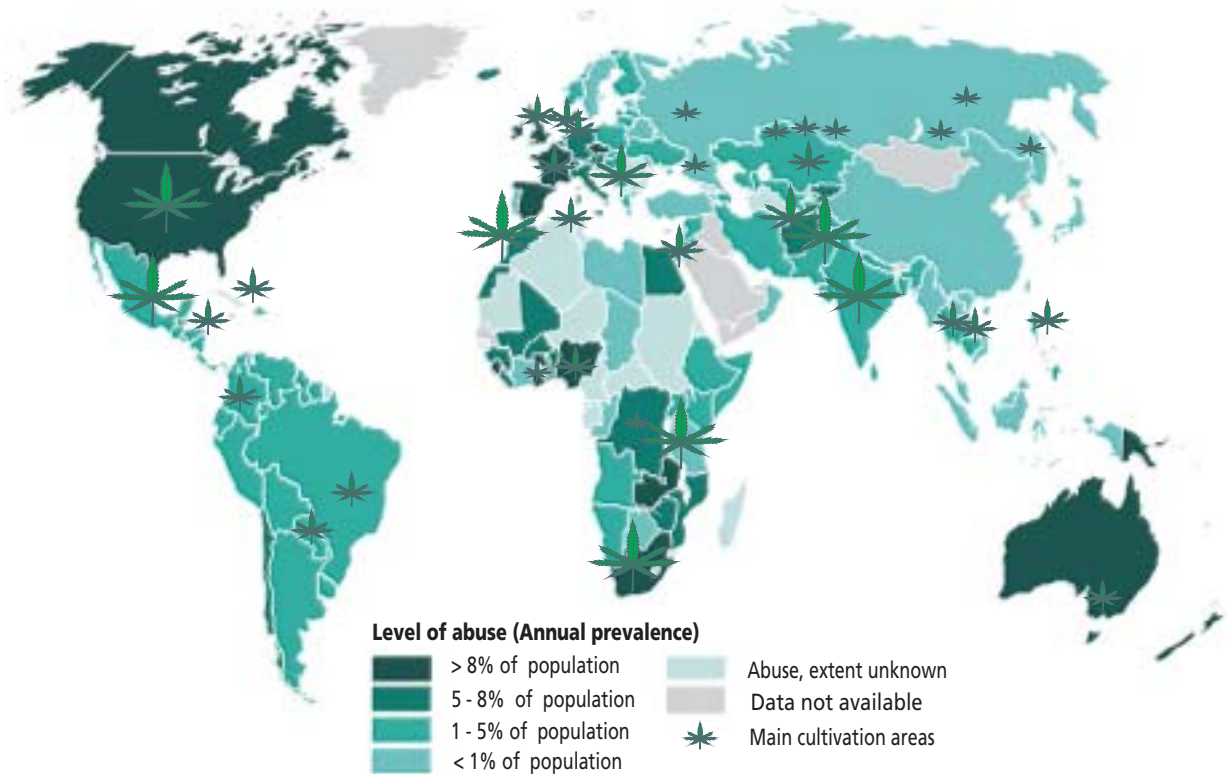
In countries around the Horn of Africa, notably in Yemen, Somalia and Ethiopia, rapid assessment studies revealed that Khat was more widespread than cannabis.

In some countries of the Near and Middle East use of benzodiazepines, opiates or ATS (notably fenetylline) appear to be close to, or exceeding cannabis use.

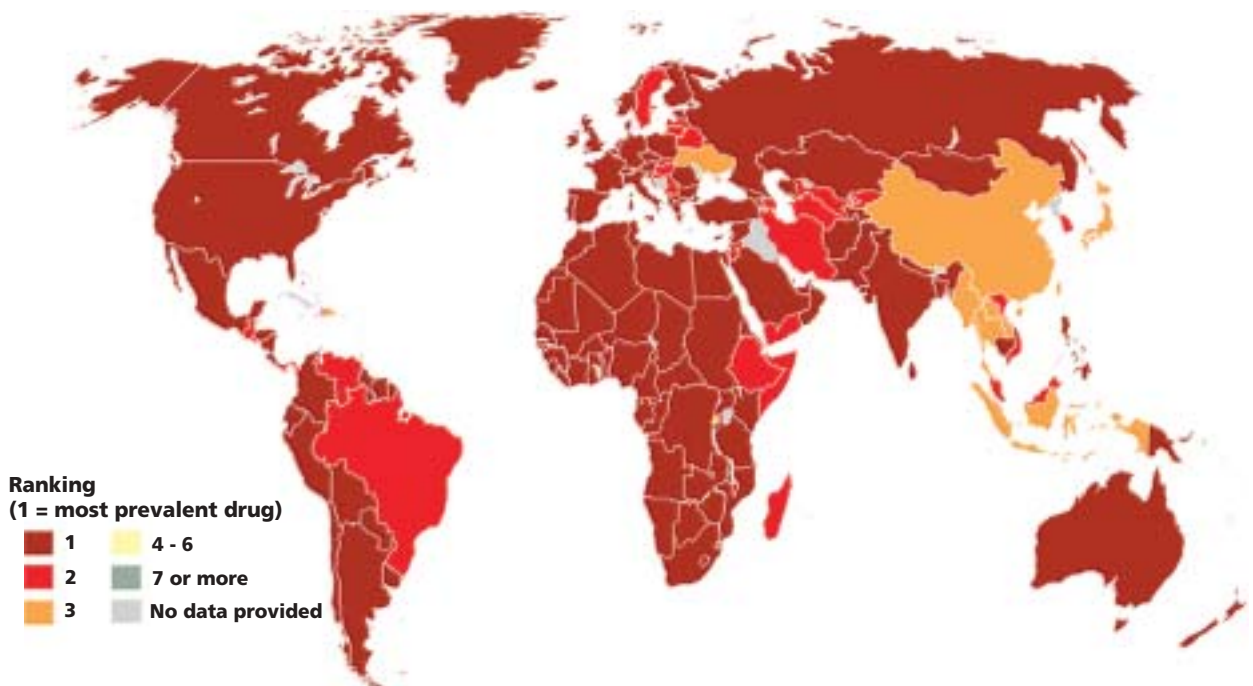
The cannabis ranking for some of the countries mentioned above, however, could change if all of the information were based on household surveys. This is because registration systems in place often have a built-in bias for the identification of drugs other than cannabis.

y) Reference is made to the 'unadjusted ranking' provided by Member States. Subsequent adjustments, as reflected in the ranking of the cannabis map, have been made in order to improve comparability as some countries include alcohol and tobacco as 'drugs', so that cannabis only ranks third in these countries, while most of the countries do not have alcohol and tobacco included in their drug rankings.

Map 17: Use of cannabis 2001 - 2003 (or latest year available)



Map 18: Ranking of cannabis in order of prevalence in 2002 (or latest year available)



Sources: UNODC Annual Reports Questionnaires data, SAMSHA US National Household Survey on Drug Abuse, Iranian Ministry of Health, Rapid Assessment Study and UNODC ARQ, Council of Europe, ESPAD.

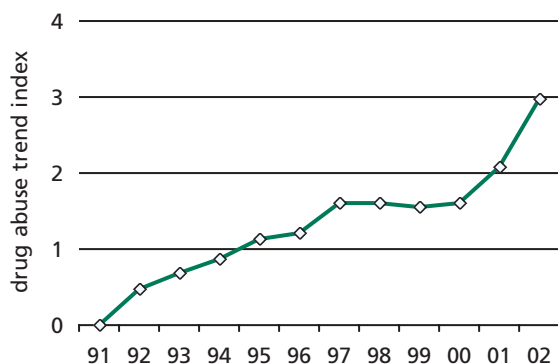
### 2.3.3.2. Trends

#### Overview

##### *Cannabis use rises again strongly...*

Based on UNODC's Drug Abuse Trend Index global cannabis consumption continued its steep increase over the 2000-2002 period. This follows a gradual increase in the early 1990s (1991-1997) and some stabilization over the 1997-2000 period.

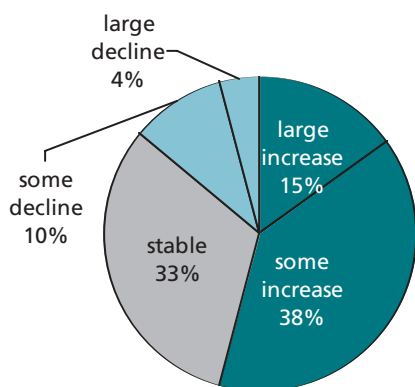
**Fig. 102: Cannabis consumption trend based on national experts' perceptions**



Source: UNODC, Annual Reports Questionnaire Data.

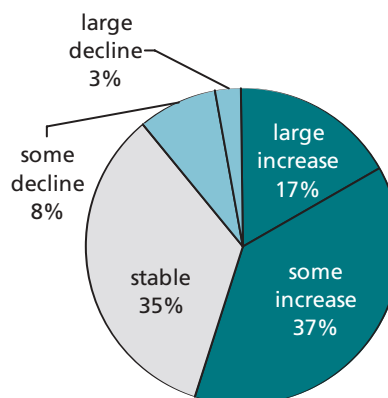
There are significantly more countries reporting rising levels of cannabis use than there are countries reporting falling levels. Overall, 54% of countries reporting perceived cannabis consumption trends in 2002 (n = 95 countries) saw an increase, while only 11% reported a decline. A year earlier, 53% of those countries reported an increase and 14% saw a decline.

**Fig. 103: Cannabis use trends in 2001 (n = 95 countries)**



Source: UNODC, Annual Reports Questionnaire Data.

**Fig. 104: Cannabis use trends in 2002 (n = 95 countries)**



Source: UNODC, Annual Reports Questionnaire Data.

Increases for 2002 were reported from a majority of countries in Africa, South America, Europe and several parts of Asia, excluding most countries in South-East Asia and Australia. In North America, the trend was basically stable.

#### AMERICAS

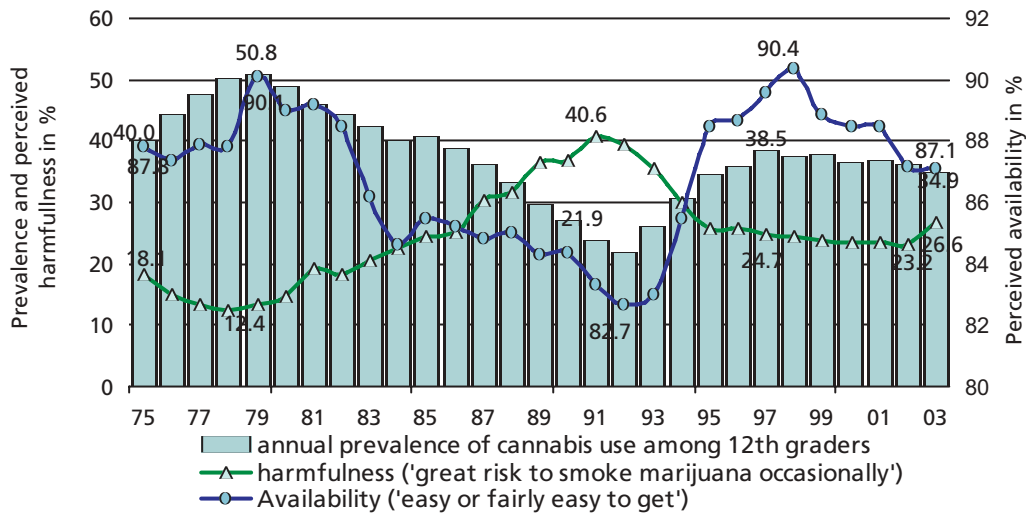
##### *Cannabis use remains largely stable in North America*

Data for the USA, the world's largest cannabis market in economic terms, showed strong increases in the 1960s and the 1970s, followed by significant declines in the 1980s and increases in the 1990s. Annual prevalence of cannabis use among the general population (age 12 and above) fell from 16.6% in 1979 to 7.9% in 1992, and rose again to 9.3% in 2001.

In 2002 11% of the US population age 12 and above consumed cannabis. This figure is not directly comparable with the results of previous years due to changes in methodology which were aimed at reducing under-reporting. Based on life-time prevalence data collected in 2002, it was found that there was some increase in life-time prevalence among those 18-25 year olds (53% in 2001 to 53.8% in 2002) and some decline among those 12-17 year olds (from 21.9% to 20.6%). This suggests that overall the level of cannabis use remained largely stable in 2002 as compared to a year earlier.

Regular high-school surveys revealed a gradual decline in cannabis consumption after 1997. Annual prevalence of cannabis use among 12th grade high-school students fell slightly from 38.7% in 1997 to 37% in 2001,

**Fig. 105: USA: cannabis prevalence, perceived harmfulness and availability among 12th graders**



Source: NIDA, *Monitoring the Future*.

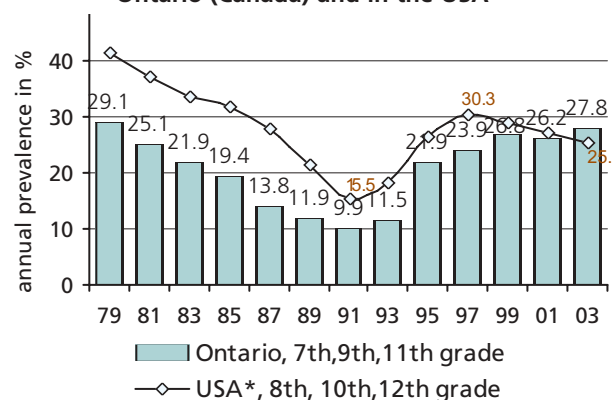
36.2% in 2002 and 34.9% in 2003. There is a strong negative correlation between perceived harmfulness ('great risk to smoke marijuana occasionally') and annual prevalence of cannabis use ( $R = -0.96$  over the 1975-2003 period) and a positive correlation between perceived availability ('easy or fairly easy to get') and annual prevalence of cannabis use ( $R = +0.67$  over the 1975-2003 period or  $+0.96$  over the 1990-2003 period). Data suggest that the decline of cannabis use in the 1980s was a consequence of a rising awareness of the negative consequences of cannabis consumption and some reductions in availability (reflecting large-scale eradications in Latin America). Similarly, the strong increase in cannabis use in the early 1990s occurred in parallel to a decline in perceptions that cannabis was harmful (as prevention campaigns of the 1980s became outdated) and a rising market supply (due mainly to a rise in domestic production). Finally, the stabilization / decline of cannabis use after 1997 took place in parallel to some reduction in availability (reflecting *inter alia* intensified domestic eradication and eradication of cannabis plant in Mexico). The downward trend in the harmfulness perceptions of the early 1990s gave way to a stabilization, following major investment into new prevention efforts. All of this led to declining levels of consumption among high-school students over the 1997-2003 period.

However, data also show that availability of cannabis remains high and that the perceived harmfulness is limited as compared to other drugs. In 2003 16% of 12th grade students considered it to be a 'great risk' to use cannabis once or twice. The corresponding ratios for considering it a 'great risk' to use amphetamines,

cocaine or heroin, once or twice, were significantly higher (37%, 46% and 58%, respectively). While 87% of the students surveyed reported that cannabis was easily available, the corresponding ratios for amphetamines, cocaine or heroin were significantly lower (55%, 37% and 28%, respectively). Probably as a consequence of this, the use of cannabis (annual prevalence of 34.9% among 12th graders in 2003) is significantly more widespread than that of amphetamines (9.9%) cocaine (4.8%) or heroin (0.8%).

In Canada's most populous province, Ontario, high-school surveys revealed a pattern largely similar to that observed in the USA: increases in the 1970's, declines in the 1980's, followed by significant increases in the

**Fig. 106: Cannabis use among high-school students in Ontario (Canada) and in the USA**



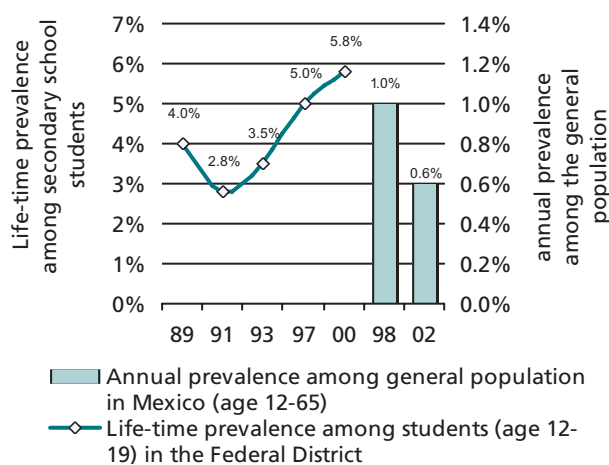
\* US data for 1979 to 1989 are estimates extrapolated from survey results of 12th grade students

Sources: Centre for Addiction and Mental Health, *Drug Use Among Ontario Students 1977-2003* and NIDA, *Monitoring the Future*.

1990s and a stabilization in subsequent years. Over the 1999-2003 period, stable to slightly increasing levels were reported from Ontario. With an annual prevalence rate of 27.8% among Ontario high-school students (7th, 9th and 11th graders), cannabis use was still lower than in the late 1970s (29.1% in 1979). However, the prevalence rate was - for the first time - higher than in the USA, mainly a consequence of the decline of cannabis prevalence rates in the USA over the 1997-2003 period (from 30.3% to 25.3% among 8th,10th,12th graders). One in ten of Ontario high-school cannabis users was found to have a dependence problem with cannabis. Annual prevalence of cannabis use among the general population affected 11.2% (age 18 and above) in Ontario in 2001, about the same level as reported from the USA and about the same level as reported a year earlier (10.8%), though up from 6.2% reported in 1992.

In Mexico, one of the largest source countries of cannabis herb, household surveys conducted in 2002 showed a decline in marijuana use following years of increase in the 1990s. Annual prevalence among the general population age 12-65 fell from 1% in 1998 to 0.6% in 2002. It continues to be significantly lower than in the USA or Canada. Cannabis use is lower in southern Mexico (lifetime prevalence of 2.2% in 2002) and in central Mexico (3%) than it is in the northern states (5.8%).

Fig. 107: Mexico: cannabis use, 1989-2002

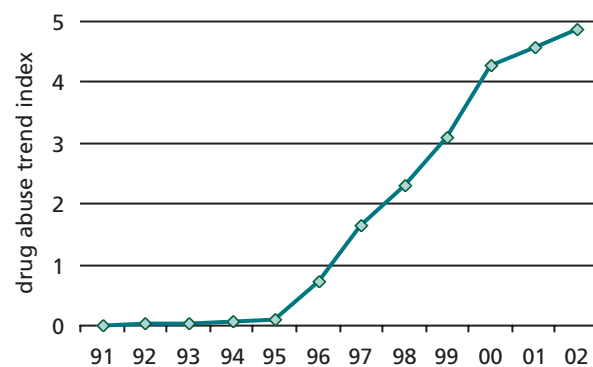


Sources: Consejo Nacional Contra las Adicciones (CONADIC), Encuesta Nacional de Adicciones 2002 y La Secretaría de Educación Pública en coordinación con el Instituto Nacional de Psiquiatría, Consumo de Drogas, Alcohol y tabaco en Estudiantes del Distrito Federal, 2000, Reporte Estadístico.

*Cannabis use continues rising in South America (incl. the Caribbean and Central America)*

In contrast to stable trends in North America, cannabis consumption (according to national experts' perceptions reflected in UNODC's Drug Abuse Trend Index) continues rising in South America (including the Caribbean and Central America). A rising trend in cannabis use across the region was observed as of the mid 1990s. In 2002 14 out of 18 reporting countries experienced a rise in cannabis use, and only one country (Chile) reported a decline.

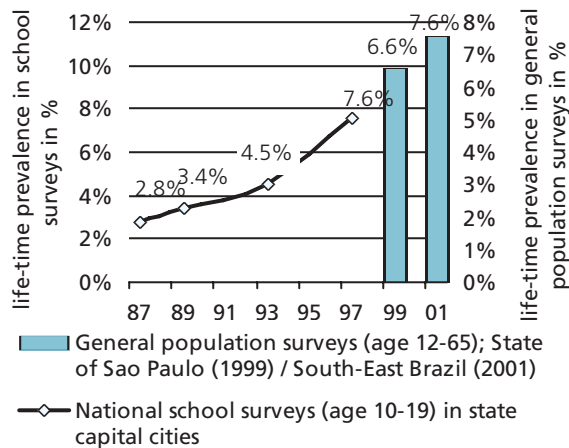
Fig. 108: South America: cannabis consumption trend based on national experts' perceptions



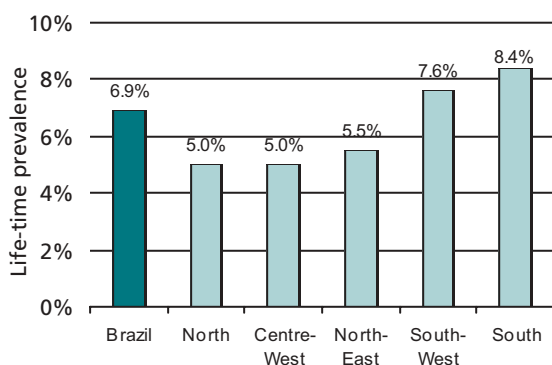
Source: UNODC, Annual Reports Questionnaire Data.

In Brazil, the largest country of South America, a national household survey was conducted in 2001. The survey revealed a life-time prevalence among the general population (age 12-65) of 7.6% in south-eastern Brazil, up from 6.6% in 1999 (state of Sao Paulo which forms part of the region of south-eastern Brazil). This confirmed the upward trend previously seen in school surveys. Annual prevalence of cannabis use was found to affect 1% of the population age 12-65 in 2001. The prevalence of cannabis use is thus clearly lower in Brazil than in the USA, but higher than in Mexico.

A regional breakdown shows that the highest levels of cannabis use are found in southern Brazil (close to the border with Paraguay, a major cannabis producer in the region), followed by the neighbouring region of south-eastern Brazil which includes the states of Sao Paulo, Rio de Janeiro, Minas Gerais and Espirito Santo. In contrast, cannabis use seems to be relatively low in the northern parts of the country.

**Fig. 109: Brazil: Life-time prevalence of cannabis use, 1987-2001**

Sources: CEBRID, *I Levantamento Domiciliar Sobre O Uso de Drogas Psicotrópicas no Brasil 2001* and CEBRID, *I Levantamento domiciliar Nacional Sobre O Uso de Drogas Psicotrópicas - Estudo envolvendo as 24 Maiores Cidades do Estado de São Paulo 1999*, CEBRID, *IV Levantamento Sobre O Uso de Drogas entre Estudantes de 1 e 2 graus em 10 Capitais Brasileiras, 1997*.

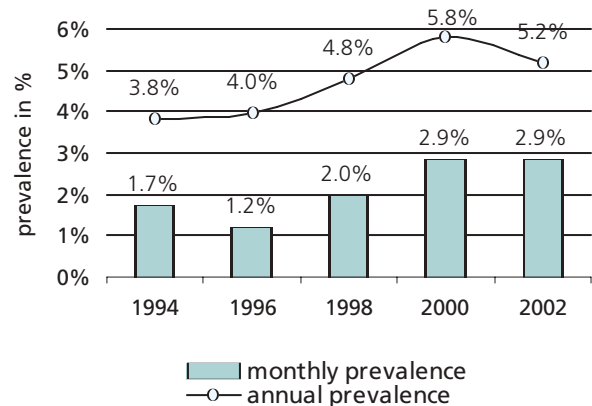
**Fig. 110: Brazil: Life-time prevalence of cannabis use among the general population (age 12-65)**

Sources: CEBRID, *I Levantamento Domiciliar Sobre O Uso de Drogas Psicotrópicas no Brasil 2001*.

Argentina reported higher levels of cannabis use than in Brazil. A national household survey conducted in 1999 found an annual prevalence rate of 3.7% and a life-time prevalence rate of 8.5% among the general population (age 16-64). Argentina reported an continuous increase of cannabis use in 2000, 2001 and 2002.

In neighbouring Chile, 5.2% of the general population (age 12-64) used (annual prevalence) cannabis in 2002, i.e. more than in Brazil or Argentina. Following

increases of cannabis consumption in the 1990s there was, however, some decline in the annual prevalence rate of cannabis use between 2000 and 2002. Yet, monthly prevalence rates of cannabis use remained stable between 2000 and 2002 suggesting that the decline affected mainly experimental users.

**Fig. 111: Chile: Cannabis use among the general population (age 12-64), 1994-2002**

Source: CONACE, *Estudio Nacional de Drogas en la Población General de Chile, 2002*, Santiago de Chile, 2003.

In Bolivia cannabis use was lower than in Chile or Argentina. A general population survey conducted in 2000 by the Centro Latinoamericano de Investigación Científica (CELIN)<sup>z</sup> found an annual prevalence rate of 2.2% among the population age 12 and above and a life-time prevalence rate of 3.7% in 2000 (which was still lower than that reported from Brazil). Cannabis use was, however, increasing in Bolivia throughout the 1990s. The monthly prevalence rate of cannabis use rose from 0.2% of the population age 12-50 in 1992 to 1.4% in 2000. School surveys, conducted in 2000 and in 2002, suggest that the upward trend continued.

In contrast, studies conducted in Peru suggest that cannabis use has remained basically stable since the mid 1990s. The life-time prevalence rate of cannabis use was 5.8% of the general population age 12-64 in 2002/2003, which was almost the same as in 1995, 1998 and 2001 (and less than in 1997). Annual prevalence of cannabis use concerned 1.8% of the population age 12-64 and was thus slightly lower than in Bolivia. In Ecuador, on the other hand, school surveys suggest

z) Centro Latinoamericano de Investigación Científica (CELIN), *El Uso Indebido de Drogas en Ciudades Bolivianas (Estudio Urbano, Año 2000, Cuadros Estadísticos*.

**Table 12: Life-time prevalence of cannabis use among secondary school students in Latin America in 2002 or latest year available**

	Year	Age group	Life-time prevalence in %	Source
St. Lucia	2002	13 - 20	27.4	UNODC, GAP
Jamaica	1997	12 - 16	26.9	UNODC, ARQ
Barbados	2002	12 - 18	23.3	UNODC, ARQ
Chile	2001	13 - 18	23	UNODC, ARQ
St. Vincent and the Grenadines	2002	13 - 19	20.6	UNODC, GAP
Belize	2002	12 - 18	20.5	CICAD
Bahamas	2002	11 - 19	14.9	UNODC, ARQ
Guatemala	2002	12 - 20	12.3	UNODC, ARQ
Uruguay	2001	13 - 17	11.9	UNODC, ARQ
Colombia	2001	10 - 24	8.9	UNODC, ARQ
Ecuador	2001/02	12 - 18	8.6	CICAD
Brazil	1997	10 - 19	7.6	UNODC, ARQ
Guyana	2002	12 - 18	7.1	CICAD
Panama	2001/02	12 - 18	6.9	CICAD
Nicaragua	2002	13 - 18	6.7	UNODC, ARQ
Bolivia	2002	12 - 21	6.4	UNODC, ARQ
Suriname	2002	12 - 16	6	UNODC, ARQ
Mexico	2000	12 - 20	5.8	UNODC, ARQ
Argentina	2001	12 - 18	5.3	UNODC, ARQ
Paraguay	2001/02	12 - 18	4.3	CICAD
Honduras	2002	15 - 25	2.7	UNODC, ARQ
Venezuela	2001	12 - 21	2.3	UNODC, ARQ
Dominican Republic	2000	12 - 20	2.2	UNODC, ARQ
Costa Rica	2001	12 - 18	1.7	UNODC, ARQ
Average: unweighted			11	
weighted by population			7.4	
Memo:	2003	13-17/18	33.3	NIDA, Monitoring the Future
USA				

Sources: UNODC, Annual Reports Questionnaire Data, UNODC, Global Assessment Programme (GAP), OAS/CICAD, Resúmen Estadístico sobre Drogas, 2003 and OAS/CICAD, Drug Prevalence Survey of Secondary School Students, 2003 - a comparison report of three Caribbean countries: Barbados, Belize and Guyana.

that cannabis use continued to rise (from a life-time prevalence of 3.9% among those 13-18 year olds surveyed in 1998 to 8.6% of those 12-18 year olds surveyed in 2001/02). Similarly, strong increases among secondary school students were reported from Panama and Guatemala.

Authorities in Colombia, Venezuela, Suriname, Argentina, Paraguay, Uruguay, Costa Rica, El Salvador, Guatemala, Barbados and Bahamas all reported rising levels of cannabis consumption in 2002.

High-school surveys conducted in recent years in Latin America show that life-time prevalence of cannabis use among secondary school students is particularly high in some of the Caribbean countries (St. Lucia, Jamaica and Barbados), where about a quarter of all students have experimented with cannabis. The highest levels of any South-American country were reported from Chile followed by Colombia. The highest levels in Central America were reported by Belize and Guatemala. Despite these high levels, cannabis use is still less prevalent than in the USA.

Approximately 11% (unweighted average) of secondary school students in Latin America experimented with cannabis. This is a third of the corresponding rate reported from the USA. However, data are not always directly comparable. In some countries the age group of students 17 years and above (which has the highest prevalence rate) is under-represented because most pupils leave the school earlier. Thus for some of the countries showing a low cannabis use prevalence, the actual reason is that older students, who would have higher prevalence rates, are under-represented in these countries.

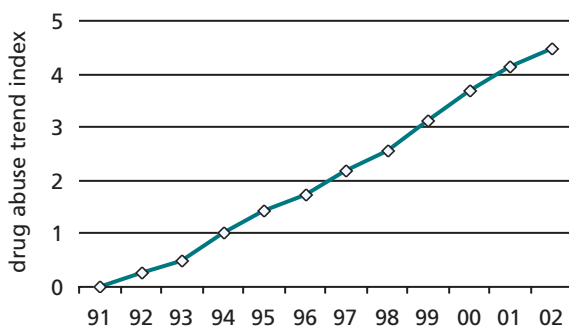
**EUROPE**

*Cannabis use continues to rise in Europe*

Cannabis use has increased in Europe throughout the last decade - as reflected in UNODC's Drug Abuse Trend Index. This is unlike the situation in North America where cannabis use stabilized or declined in recent years. During that period several European countries have been softening their drug laws with regard to cannabis.

A stabilization of cannabis consumption in Europe was reported by the Nordic countries (Finland, Norway and Sweden), the UK (following a decade of massive increases) and a few other countries. Apart from these exceptions, most countries of continental Europe continued reporting rising levels of cannabis use.

**Fig. 112: Europe: cannabis consumption trend based on national experts' perceptions**

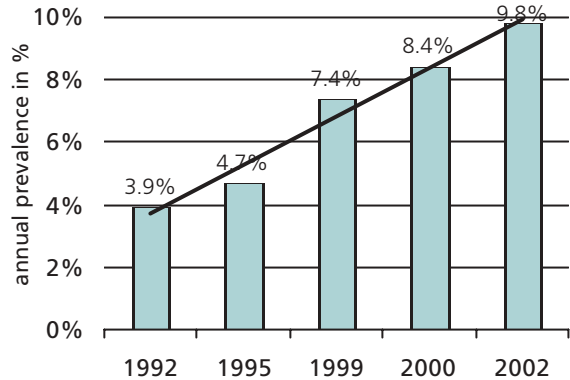


Source: UNODC, Annual Reports Questionnaire Data.

In France, for instance, annual prevalence of cannabis use more than doubled between 1992 and 2002 (from 3.9% of the population age 18-74 to 9.8% of the population age 15-64). Similarly, life-time prevalence of cannabis use among 17 year olds more than doubled

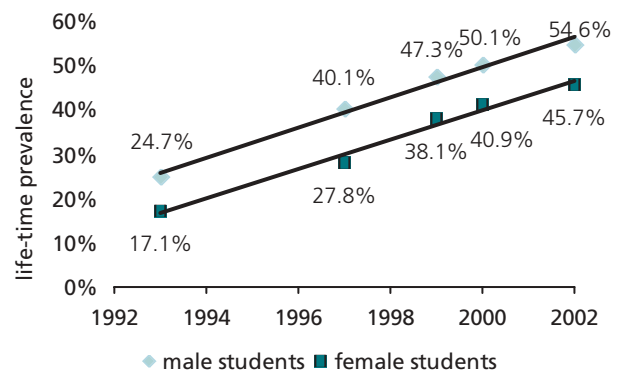
between 1993 and 2002 affecting 44.7% of all students age 17 in 2002.

**Fig. 113: France: annual prevalence of cannabis use among the general population age 15-64, 1992-2002**



Sources: EMCDDA, Data Library and UNODC, Annual Reports Questionnaire Data.

**Fig. 114: France: life-time prevalence of cannabis use among 17 year olds, 1992-2002**

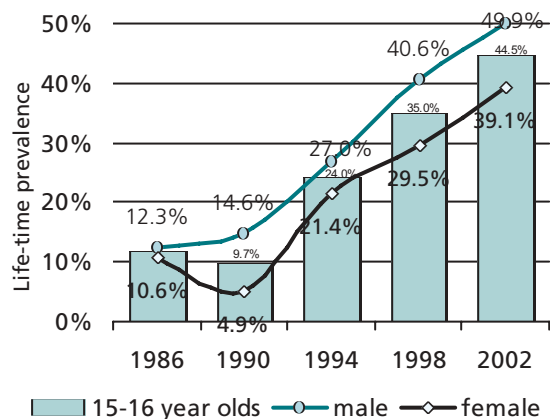


Sources: INSERM 1993, CADIS-OFDT 1997, ESPAD 1999, EESCAPAD 2000 and 2002 quoted in OFDT, *Drogues et Adolescence*, Sept. 2003.

High prevalence rates among pupils were also reported from Switzerland. School surveys conducted among 15-16 year olds revealed a life-time prevalence rate of 44.5% for 2002, signalling a four-fold increase as compared to 1990 or the mid 1980s. The prevalence of 15-16 year old students who used cannabis several times rose from 25% in 1998 to 32% in 2002 period, equivalent to a 25% increase over this period. Some of the rise can be linked to availability which is, in general, better than in several neighbouring countries. Apart from the black market, Switzerland has some 200 retail outlets across the country where a broad range of cannabis products (for decoration purposes, etc.) can be bought,

including - until recently - cannabis products that had a THC content sufficient to be suitable for smoking. Against this background and the large spread of cannabis in the country, the Swiss upper house passed a bill to fully decriminalize cannabis, including consumption, distribution and production. However, the bill was rejected by the lower house in 2003. Cannabis use in

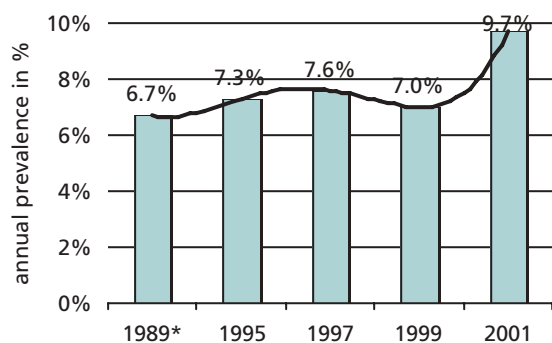
**Fig. 115: Switzerland :Cannabis use among 15-16 year olds, 1984-2002**



Source: SFA/ISPA, *Trends im Konsum psychoaktiver Substanzen von Schülerinnen und Schülern in der Schweiz*, Lausanne 2003.

Spain was stable during the 1990s but increased significantly over the 1999-2001 period (from 6.8% to 9.9% among the general population age 15-64) to levels slightly higher than in France. School surveys also confirmed an upward trend of cannabis use over the 1998-2000 period. Given the existence of good prevention programmes, the increase can possibly be explained as the result of larger supply - probably due to the

**Fig. 116: Spain: annual prevalence of cannabis use among the general population age 15-64, 1989-2001**

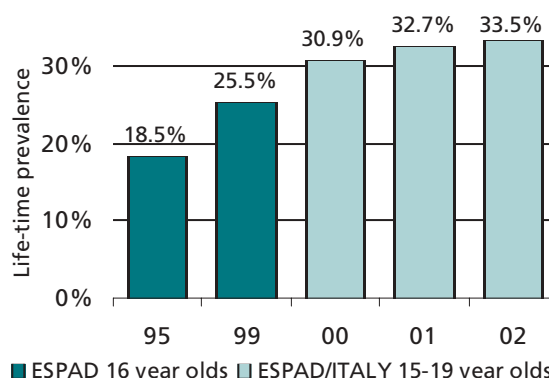


\* municipality of Madrid.

Sources: Ministerio del Interior, *Observatorio Español sobre Drogas, Informe No 6 Nov. 2003* and UNODC, Annual Reports Questionnaire Data.

increases of cannabis production in neighbouring Morocco and the role of Spain as a major transshipment location. Cannabis prevalence rates above the national average were reported - inter alia - from the Balears (18.3%), the Basque region, located close to France (13.7%) and Madrid (12.7%).

**Fig. 117: Italy: Life-time prevalence of cannabis use among secondary school students, 1995-2002**



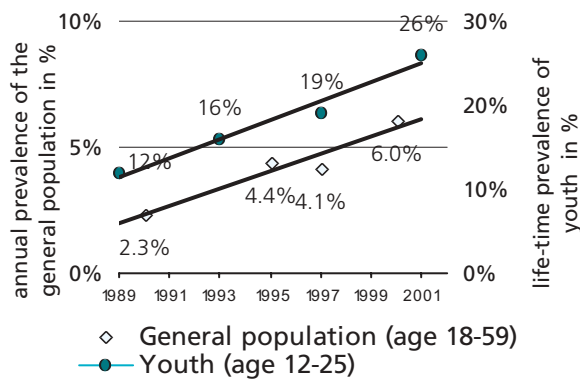
Sources: Council of Europe, The 1995 ESPAD Report and The 1999 ESPAD Report, and Ministero del Lavoro e delle Politiche Sociali, *Relazione Annuale al Parlamento sullo Stato delle Tossicodipendenze in Italia 2002*.

In Italy, most of the increase in cannabis use took place in the second half of the 1990s (1995-1999). Some (minor) increases in cannabis use occurred between 2000 and 2002. A general population survey conducted in 2001 found an annual prevalence of 6.4% among the population age 15-44, suggesting that cannabis use in Italy is less widespread than in Spain or France.

Both general population surveys and youth surveys in Germany showed a clear upward trend of cannabis use over the last decade. The annual prevalence of cannabis use among the general population and life-time prevalence among youth more than doubled. Most of the increase took place in the 'new provinces' (former East Germany). A continuation of this upward trend was also reported by the German authorities for the year 2002. Nonetheless, data also show that cannabis use in Germany (annual prevalence of 6% among the population age 18-59 in 2000) is lower than amongst its neighbours - France, Switzerland and the Czech Republic - and lower than in the UK or Spain.

Some increase in cannabis use was also reported from the Netherlands between 1997 and 2001 (from 5.5% to 6.1% of the population age 15-64). In Amsterdam, the city with the highest cannabis use levels in the Netherlands (more than twice the national average), annual

**Fig. 118: Germany: Cannabis use among the general population and among youth, 1989-2001**

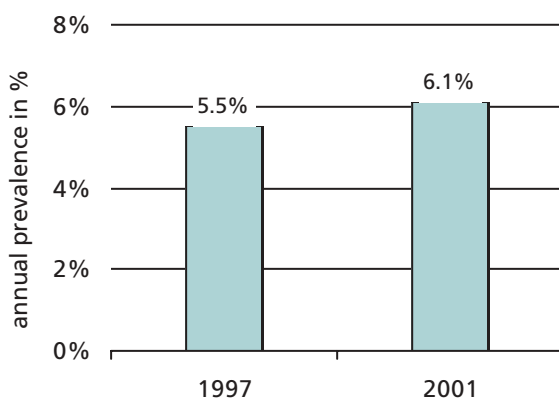


\* estimate for 1989 based on overall prevalence of illegal drug use in West Germany.

Sources: UNODC, Annual Reports Questionnaire Data, Ministry of Health, *Repräsentativerhebung Drogen* 1995, 1997 and 2000, BZgA, *Die Drogen-affinität Jugendlicher in der Bundesrepublik Deutschland* 1997 and 2001.

prevalence of cannabis use rose from 9.5% of the population age 12 and above in 1987 to 13.2% in 1997. It remained basically unchanged over subsequent years (13.1% in 2001)<sup>aa</sup>. Over the same period stricter regulations led to an (approximately) 20% decline in the number of 'coffee shops' in Amsterdam (from 340 in 1997 to 280 in 2001 and 270 in 2002)<sup>ab</sup>. Some 40%

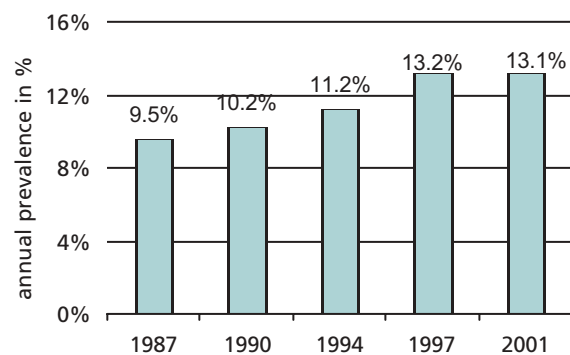
**Fig. 119: Netherlands: Cannabis use among the general population age 15-64**



Source: EMCDDA, Data Library.

of the cannabis in the Netherlands is bought by the end-consumers in such 'coffee shops' (ranging from 37% of the 12-17 year old cannabis users to 47% of cannabis users age 18 and above)<sup>ac</sup>. Increases in cannabis use over the 1997-2001 period, in contrast, were reported from Rotterdam, one of the main cannabis transshipment locations, and several other locations<sup>ad</sup>. The Dutch authorities reported a stabilization of cannabis use in 2002 (ARQ).

**Fig. 120: Amsterdam (Netherlands): Annual prevalence of cannabis use (age 12 and above), 1987-2001**



Source: *Licit and Illicit Drug Use in Amsterdam, 1987-2001*

Strong increases in cannabis use over the last decade were reported from Belgium. Life-time prevalence among 15-16 year olds rose in the Flemish part of the country from less than 15% in 1994 to about 25% in 2002. Following increases in the 1990s, life-time prevalence among 15-16 year olds continues to be higher among the 'French community' than among the 'Flemish community'. In the French community it continued rising from 27.9% in 1997/98 (HBSC study) to 29% in 2002 (ARQ). Among young adults in the French speaking community, life-time prevalence of cannabis use rose by some 70% (from 17.8% in 1996/97 to 30.9% in 2000 among the population age 18-34) and was thus similar to levels reported from former West Germany (30.8%) or the Netherlands (31.5% among those 15-34), though still less than in Spain (35%), France (35.7%) or the UK (43%) in 2000. (Percentages for the latter countries refer to the age group 15-34). Belgium introduced a new law in 2003 which partially decriminalizes cannabis use and de-facto allows for the

aa) CEDRO, *Licit and Illicit Drug Use in Amsterdam, 1987-2001*.

ab) The decline in the overall number of coffee shops in the Netherlands over the 1997-2002 period was even more important: from 1179 to 782. (Trimbos Instituut, *National Drug Monitor*2003).

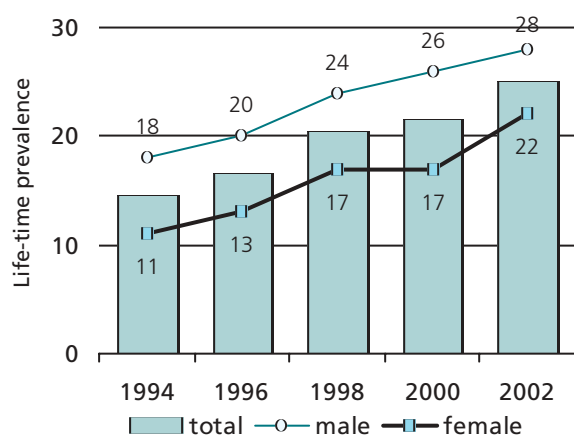
ac) CEDRO, *Licit and Illicit Drug Use in the Netherlands 2001, Amsterdam 2002*.

ad) Trimbos Instituut, *National Drug Monitor*2002 and 2003.

possession of small amounts of cannabis (less than 5 grams). Smoking in public places and in the presence of minors, however, is still prohibited. For 'problematic use' or if a 'public nuisance' is created, prosecutions continue to take place. No retail outlets ('coffee shops') are allowed.

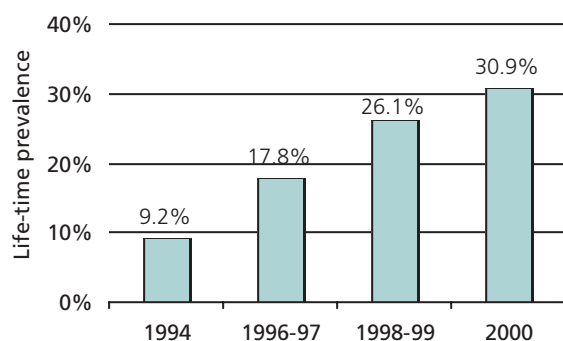
In the United Kingdom, Europe's largest cannabis market, strong increases in cannabis use in the early

**Fig. 121: Belgium (Flemish community) Cannabis use among 15-16 year old**



Source: Universiteit Gent, *Health Behaviour in School Aged Children, Jongeren en Gezondheit, Resultaten voor 2002*.

**Fig. 122: Belgium - French Community: Life-time prevalence of cannabis use among population 18-34**



Source: EMCDDA, Data Library.

1990s were followed by a de-facto stabilization at high levels. Overall 10.9% of those age 16-59 in England & Wales admitted to having consumed cannabis in 2002/03, a similar proportion as reported from the USA. If potential error margins are taken into account, annual prevalence rates of cannabis use have remained basically stable over the last few years: 1998: 10.3%, 2001/02: 10.6% and 2002/03: 10.9%. Regularly con-

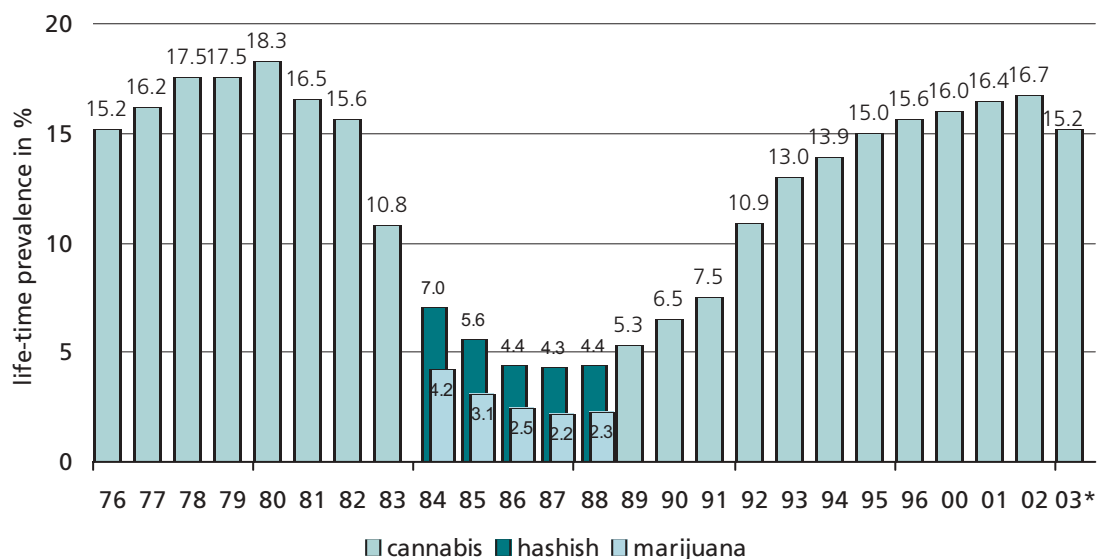
ducted school surveys in England confirm that cannabis use is widespread, even among low age groups (annual prevalence of 13% among those age 11-15 in 2003). These surveys also indicate that cannabis use has stabilized over the last few years. Nonetheless, overall cannabis use among the general population is now twice as high as in the early 1990s and five times as high as in the early 1980s.

The UK Government re-classified cannabis from a class B to a class C drug as of January 2004, to enable enforcement authorities to focus their resources on fighting other drugs which have a stronger harm potential. It will be interesting to see whether intensified prevention activities will be able to reduce cannabis consumption, or whether the reduced levels of control will entail a further rise - from existing high levels - over the next couple of years.

In Sweden regular surveys among (male) military recruits (age 18) found a significant decline of cannabis use in the 1980s, reflecting - *inter alia* - the decisive anti-drug policies pursued by the Government. The same policies, however, could not prevent cannabis use from rising strongly among youth in the 1990s. Increases in youth unemployment and budget cuts, affecting *inter alia* subsidized leisure time activities for youth, may have contributed to this. However, in line with economic recovery, a decline in youth unemployment and a strengthening of prevention activities, the upward trend flattened over the last few years and in 2003 the survey showed - for the first time in a decade - a net decline in cannabis use (as well as for drug use in general). Despite the increase of cannabis among young males in the 1990s, Sweden still has one of the lowest levels of cannabis consumption among the general population in Europe. General population surveys conducted in 1998 and in 2000 found an annual prevalence of cannabis use of 1% among the population age 15-64, equivalent to 1/10th of the level currently reported from the UK.

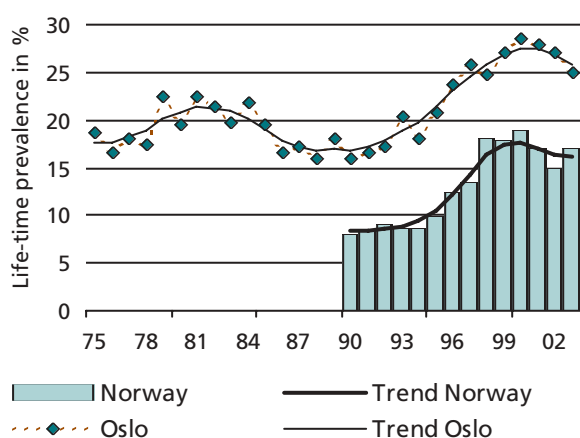
Similar to the situation in Sweden, youth surveys regularly conducted in Norway revealed a decline in cannabis use in the 1980s, an increase in the 1990s and a stabilization/decline over the 2000-2003 period. However, the decline of cannabis use in the 1980s - as compared to Sweden - was less pronounced, and so was the subsequent increase of cannabis use in the 1990s. Also, while in Sweden prevalence rates remained slightly below the levels of the late 1970s, prevalence rates in Norway (Oslo) clearly exceeded the rates observed in the late 1970s. The overall level of cannabis use among

Fig. 123: Sweden: Life-time prevalence of cannabis use among male military conscripts, age 18, 1976 - 2003



Source: Swedish Council for Information on Alcohol and other Drugs (CAN), *Drogutvecklingen i Sverige - Rapport 2003*.

Fig. 124: Norway: Cannabis use among youth (age 15-20)



Source: Norwegian Institute for Alcohol and Drug Research, *Alcohol and Drugs in Norway, 2003*.

the general population (age 15-64) amounted to 4.5% in 1999 and was thus significantly higher than in Sweden (1% in 2000) or Finland (2.2% in 2000) but lower than in Denmark (6.2% in 2000) and several other European countries.

### General upward trend of cannabis use in Eastern Europe

Various school surveys conducted over the last decade in Eastern Europe showed that the increase in cannabis use in the 1990s (although starting from low levels) was significantly stronger than in Western Europe, both in the first and in the second half of the 1990s. In most East European countries the ESPAD school surveys<sup>ae</sup>, conducted under the auspices of the Council of Europe, found a doubling of life-time prevalence rates among 15-16 year olds between 1995 and 1999. Thus cannabis use (as well as drug use in general) showed a trend toward convergence with drug use levels observed in Western Europe. Cannabis use in the Czech Republic, for instance, was found to have been already as high as in France or the UK (life-time prevalence of 35% among 15-16 year olds) in 1999 and cannabis use in Slovenia (25%) was already as high as in Italy. Rather high levels were also reported from Moscow (22%), the Ukraine (20%), the Slovak Republic (19%), Latvia (17%) and Croatia (16%). Relatively low levels, in contrast, were still reported from Romania (1%), the Former Yugoslav Republic of Macedonia (8%), Hungary (11%) and Bulgaria (12%).

ae) Council of Europe (Pompidou Group), *The 1999 ESPAD Report, Alcohol and Other Drug Use Among Students in 30 European Countries*, Stockholm, December 2000.

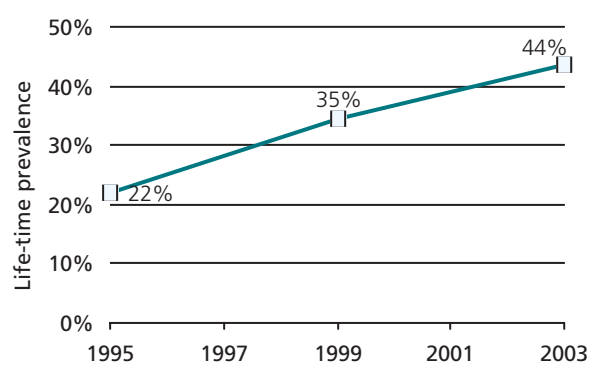
High levels of cannabis use in the Czech Republic were also confirmed in a national survey, conducted in 2002, which revealed an annual prevalence of cannabis use among the general population (age 15-64) of 10.9%, the same level as reported from England & Wales and marginally higher than in France or Spain. Cannabis use in the Czech Republic is thus far more widespread than in neighbouring Slovakia (3.6% of the general population age 15-64 in 2002), Poland (2.4% of the population age 16 and above in 1999) or in Hungary. While the Czech Republic reported a life-time prevalence rate of cannabis use of 21.1% among the general population, the corresponding rate in Hungary amounted to 5.7% in 2001.

There are, however, some positive trends. While cannabis use continues to increase in rural areas (characterized by low prevalence rates), in several larger towns, where cannabis use levels already reached high levels, consumption levels stabilized or declined. (This appears to be the case in Warsaw and some cities in Hungary and in the Czech Republic).

Nonetheless, national school surveys conducted among 15-16 year old students in the Czech Republic continue to show a clear upward trend. Life-time prevalence of cannabis use among this age group rose from 22% in 1995 to 35% in 1999 and reached almost 44% in 2003 (ESPAD). This is definitely one of the highest rates and could turn out to be among the highest cannabis prevalence rates among students across Europe in 2003.

Increases in cannabis use have been also reported from other countries in the region, notably from countries

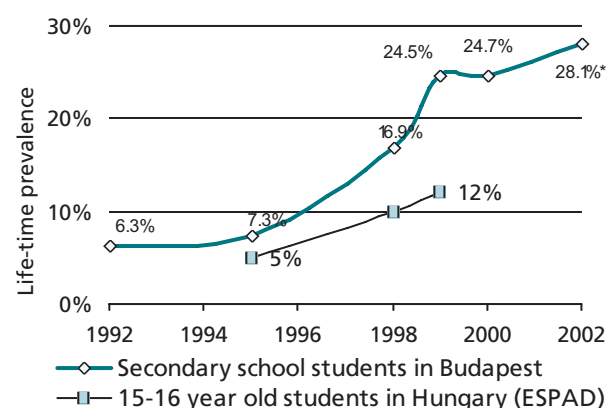
**Fig. 125: Czech Republic, Cannabis use among 15-16 year olds**



Source: Psychiatrické Centrum Praha, ESPAD 03, The European School Survey on Alcohol and Other Drugs - The Czech Republic 2003

which, so far, have had low prevalence rates. Thus, the ESPAD studies showed a rising trend of cannabis use in Hungary: life-time prevalence of 5% among 15-16 year olds in 1995 (or 7% among secondary school students in Budapest), rising to 12% in 1999 among 15-16 year olds (or 25% among secondary school students in Budapest), and increasing to 28.1% among 16-17 year old Hungarian students in 2002. Though there are differences in the age groups analysed, it can be assumed

**Fig. 126: Hungary: Cannabis use among high-school students, 1992-2002**



\* data for 16-17 year old students in Hungary in 2002.

Sources: Council of Europe, *The 1995 and 1999 ESPAD Reports, National Report Hungary 2001* and UNODC, *Annual Reports Questionnaire 2002*.

that overall cannabis use continued increasing among Hungarian students over the 1999-2002 period. Similarly, a school survey conducted in 2001-2002 in the capital of Romania, Bucharest, already found a prevalence rate of cannabis use of 34% among 14-17 year old students (ARQ 2002) while the 1999 ESPAD study, conducted across Romania, found a lifetime prevalence rate of cannabis use among 15-16 year old students of just 1%. Even taking into account that prevalence rates in capital cities are, in general, larger than in the country as a whole and that the age groups investigated were not identical, reported differences were so large that one can take it for granted that cannabis use increased significantly among high-school students in Romania over the 1999-2002 period.

Increases in cannabis use also took place in Bulgaria. The 1999 ESPAD study found a life-time prevalence rate of 12% among 15-16 year olds. A study conducted in 2001 in Sofia found the life-time prevalence rate of cannabis to have increased to 26.9%<sup>af</sup>.

af) EMCDD, *The State of the Drugs Problem in the Acceding and Candidate Countries to the European Union*, Lisbon 2003.

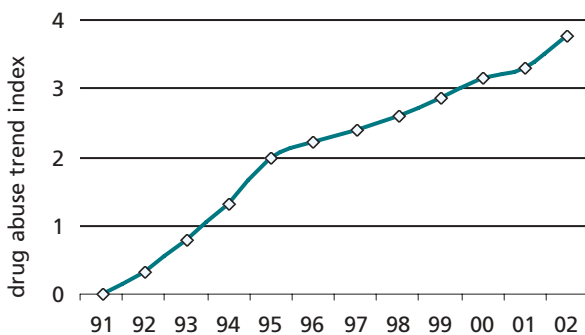
## AFRICA

### *Cannabis use continues to increase ...*

Cannabis is the main drug of concern in Africa. It is easily available and is the primary drug associated with treatment demand in Africa. In most African countries, for which information is available, cannabis also accounts for the bulk of arrests for drug trafficking and use.

Cannabis consumption in Africa has been increasing steadily over the last decade. This is reflected in UNODC's Drug Abuse Trend Index. If it were not for limited levels of reporting UNODC's Drug Abuse Trend Index would show even stronger increases for Africa. Throughout the 1992-2002 period, 50% to 100% of countries reporting saw rising levels of cannabis use. Out of 19 countries reporting in 2002, 16 countries (84%) reported rising levels of cannabis use. Large increases in cannabis use in 2002 were reported by Morocco in North Africa as well as by Malawi and Zimbabwe in Southern Africa, by Tanzania and Somalia in Eastern Africa, and by Côte d'Ivoire in Western Africa.

**Fig. 127: Cannabis consumption trend in Africa based on national experts' perceptions, 1991 - 2002**

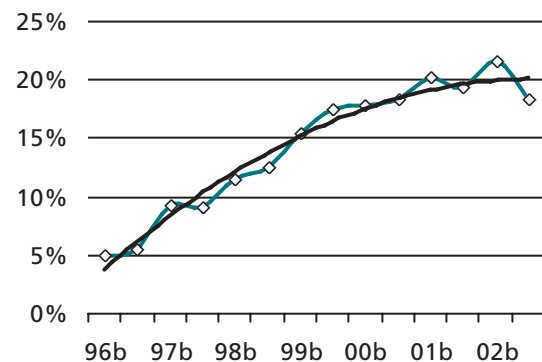


Source: UNODC, Annual Reports Questionnaire Data.

The only comprehensive time series data available are for South Africa. According to data collected by the South African Community Epidemiology Network on Drug Use (SACENDU) the proportion of people in treatment for cannabis abuse in South Africa rose from around 5% in 1996 to around 20% in 2002. Above average proportions have been reported from Gauteng (Johannesburg and Pretoria: 23% in 2002) and from Durban (24%). The number of people treated for cannabis abuse rose more than 3-fold in Cape Town, more than 6-fold in Durban over the 1996-2002 period, and - over the 1998-2002 period - by a factor of 2.4 in Gauteng. There are more people in treatment for

cannabis abuse in South Africa (and most other African countries) than for any other substance, except alcohol. The next most frequently encountered substance in South Africa is Mandrax (a methaqualone preparation) in combination with cannabis. Among adolescents (age 20 or less) cannabis is the main substance leading to treatment demand, ahead of alcohol (on average 54% in first half of 2003.) For the first half of 2003 some declines in the number of people treated for cannabis abuse were observed in Cape Town, Durban and Gauteng, though increases continued in Mpumalanga, located close to the border with Mozambique.

**Fig. 128: South Africa\*: Proportion of people in treatment for cannabis abuse, 1996-2003**



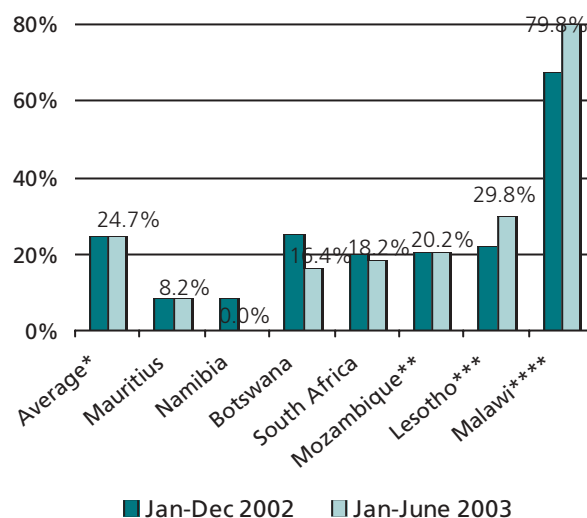
\* Average from Cape Town, Gauteng (Johannesburg/ Pretoria), Durban and Mpumalanga.

Source: SACENDU, *Research Brief*, Vol. 6. 2003.

Increases in cannabis use over the last decade were also reported for the countries forming part of the Southern African Development Community (SADC). However, in the first half of 2003 the overall proportion of people in treatment for cannabis abuse appears to have remained rather stable as compared to 2002. Increases reported from Malawi, a major cannabis producing country in the region (from 67% to 80% of all treatment demand) were offset by declines reported from South Africa, Namibia and Botswana. For other countries in the region the levels of people treated for cannabis abuse remained basically unchanged. The highest proportions of people in treatment for cannabis abuse are found in Malawi (80%), followed by Lesotho. Overall around 25% of treatment is cannabis related (unweighted average of country results).

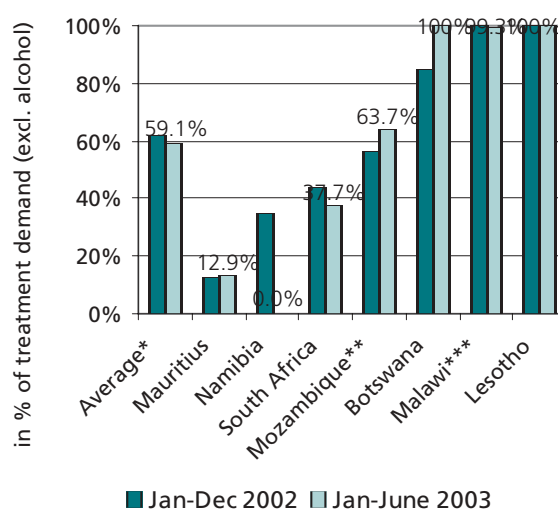
Excluding alcohol, cannabis accounts for some 60% of treatment demand. In Lesotho, Malawi and Botswana

**Fig. 129: Proportion of people in treatment for cannabis abuse in countries of southern Africa, 2002 and 2003**



\* unweighted average \*\* 2002 data for Mozambique refer to Oct.-Dec. 2002 period; '2002 data' for Lesotho refer to July 2001-Dec. 2002 period; 2002 data for Malawi refer to Jul-Dec. 2002 period.

**Fig. 130: Proportion of people in treatment for cannabis abuse in countries of southern Africa, 2002 and 2003**



\* unweighted average \*\* 2002 data for Mozambique refer to Oct.-Dec. 2002 period; \*\*\* 2002 data for Malawi refer to Jul-Dec. 2002 period.

Source: Southern African Development Community Epidemiology on Drug Use (SENDU), January - June 2003.

practically all drug treatment was cannabis-related in 2002 and 2003. In Zambia the proportion amounted to 70% (2002) and in South Africa to around 40% (2002/03). In Mauritius, in contrast, which suffers from significant levels of heroin abuse, cannabis only accounts for some 13% of drug treatment. The overall largest number of people seeking treatment for cannabis abuse are found in South Africa.

Similarly, practically all of the countries forming part of the East Africa Drug Information System (EADIS) reported rising levels of cannabis use<sup>ag</sup> and most of the countries also reported high proportions of people in treatment for cannabis abuse. High proportions of people in treatment for cannabis abuse were reported by countries located in the Indian Ocean such as Madagascar (88% in 2001)<sup>ah</sup> or the Seychelles where practically all drug treatment was cannabis related (though the authorities of the Seychelles reported that in 2002 - for the first time - some of the cannabis users had also consumed ecstasy, benzodiazepines and cocaine).

High proportions of people in treatment for cannabis abuse have been also encountered in most West African countries. In Nigeria, for instance, 92% of all drug treatment demand (excl. alcohol) was linked to cannabis abuse in 2002, in Ghana 86% in 2002 and in Togo 77% in 2001 (ARQ).

The overall numbers of people receiving treatment in Africa for substance abuse are, however, small (a few hundred people in the larger countries and a few dozen in the smaller countries; only in South Africa the number of people receiving treatment for substance abuse (incl. alcohol) amounted to some 12,000 persons in 2002). This is not a consequence of low levels of treatment demand in Africa but of a limited availability of treatment facilities. Many people in Africa receive treatment outside the clinical system, or their cases are dealt with in a psychiatric ward which is not recorded as treatment.

ag) Djibouti, Ethiopia, Kenya, Madagascar, Mauritius, Seychelles, Uganda, United Republic of Tanzania (UNODC, GAP - East Africa Drug Information System, EADIS Second Annual Meeting, Nov. 2002.)

ah) UNODC, GAP, op. cit.

## ASIA

### *Increases in cannabis use less pronounced than in other regions ...*

UNODC's Drug Abuse Trend Index found some increase of cannabis use in Asia over the last decade. The increase was, however, less pronounced than in Africa, Europe or the Americas. There was some increase over the 2000-2002 period.

This was mainly the result of large increases reported by the two most populous countries, China and India. In China prevalence of cannabis use still ranks only third (after opiates and ATS). In India, in contrast, cannabis is the most widely used illegal substance. A national household survey conducted in India in 2001 found a monthly prevalence of cannabis use of 3% among males (age 12-60)<sup>ai</sup>, significantly more than for opiates (0.7%) or for any other substance and equivalent to more than 80% of all illegal drug use (3.6%). India has thus apparently a lower cannabis prevalence rate than the USA (monthly prevalence of 8.9% of the male US population in 2001) or several West European countries, but a higher total number of male cannabis users than any other country in the world (8.8 million male cannabis users in India versus 7.6 million male cannabis users in the USA in 2001). In terms of treatment demand (incl.

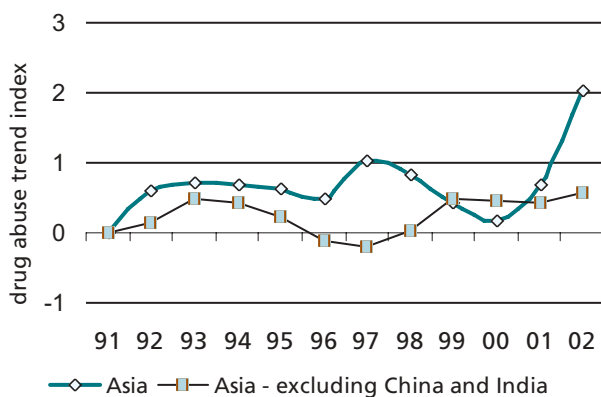
alcohol), 11.6% was cannabis related in India (2000), less than alcohol (43.9%) but more than heroin (11.1%), opium (8.6%) or any other drug. The highest proportions of cannabis related treatment were reported from the states of Uttar Pradesh (20%) and Bihar (19%) in northern India, bordering Nepal (a significant cannabis producer) and from the state of Kerala (16%) in southern India.

Excluding data for China and India, which have a strong weight for UNODC's Drug Abuse Trend Index, data for the rest of Asia show a basically stable trend over the 1999-2002 period.

### *... mainly due to falling levels of cannabis use in South-East Asia*

While increases were reported from Pakistan and Iran, reflecting Afghanistan's growing hashish production, South-East Asia (with the exception of China) was characterized by declining levels of cannabis consumption. Falling levels of cannabis use in 2002 were reported by Indonesia (just 1.4% of new drug users identified by the authorities in Indonesia in 2002 were cannabis users), the Philippines and Myanmar. Cannabis consumption levels remained stable in Brunei Darussalam. Bangladesh and Nepal reported stable levels of cannabis consumption. Stable levels of cannabis use were also reported from the Republic of Korea. Authorities in Japan, in contrast, reported some increase. Cannabis use in Japan, however, continues to remain limited (annual prevalence of 0.1% of the population age 15 and above in 2002; life-time prevalence: 1%).

**Fig. 131: Cannabis consumption trend in Asia based on national experts' perceptions**



Source: UNODC, Annual Reports Questionnaire Data.

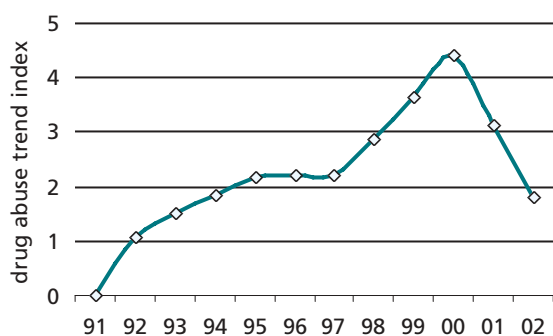
## OCEANIA

### *Characterized by falling levels of cannabis use in recent years*

UNODC's Drug Abuse Trend Index showed strong increases in the Oceania region over the 1991-2000 period. Over the 2000-2002 period, however, a similarly sharp decline was reported.

ai) UNDCP, *National Survey on Extent, Pattern & Trends of Drug Abuse in India, National Report 2002.*

**Fig. 132: Cannabis consumption trend in Oceania based on national experts' perceptions**

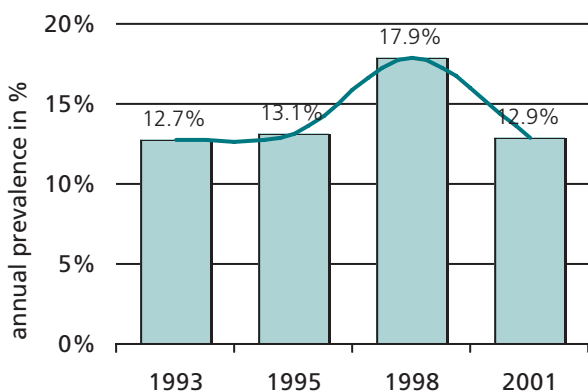


Source: UNODC, Annual Reports Questionnaire Data.

The index for the Oceania region reflects primarily reported cannabis consumption in Australia. Annual prevalence of cannabis use, as reflected in household surveys, rose slightly between 1993 and 1995 and significantly between 1995 and 1998, but fell between 1998 and 2001 by 28% to 12.9% among those age 14 and above. The rate is thus still marginally higher than in the USA (11% of those age 12 and above in 2002) or the UK (10.9% of those age 16-59 in 2002/03), but the differences are far less significant than they used to be in the late 1990s. Studies conducted among school students, age 15-16, revealed a life-time prevalence rate of cannabis use of 20.6% in 2001 (ARQ) less than the results of previous UN surveys. Similarly, drug tests among detainees showed declines in cannabis use over the 1999-2001 period. For 2002, however, there were no indications that the downward trend continued.

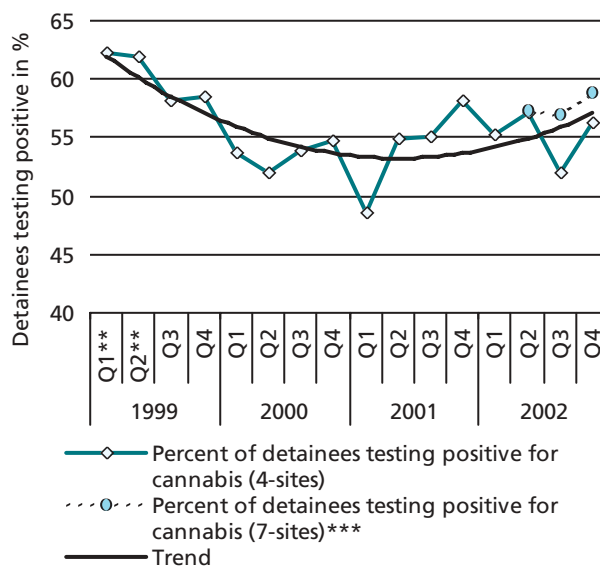
In New Zealand the annual prevalence in cannabis use increased slightly over the 1990-1998 period and

**Fig. 133: Australia: Cannabis use in % of population age 14 and above**



Source: AIHW, *Statistics on Illicit Drug Use in Australia 2002*

**Fig. 134: Australia: Percent testing positive for cannabis among male police detainees\*, 1999-2002**

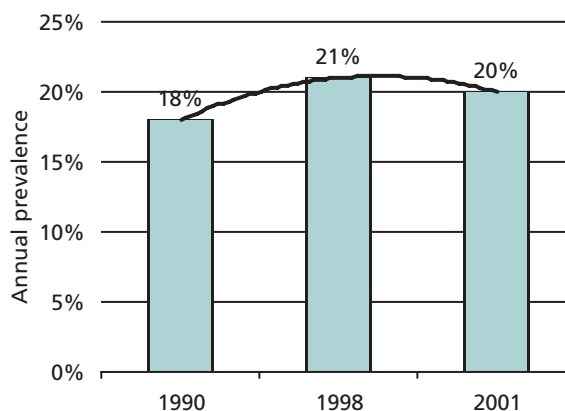


\* unweighted average of results from Bankstown, Parramatta, South Port and East Perth.  
 \*\* unweighted average of results from South-Port and East Perth only.  
 \*\*\* 4 sites mentioned above plus Adelaide, Brisbane and Elizabeth

Source: Australian Institute of Criminology, Drug Use Monitoring in Australia (DUMA).

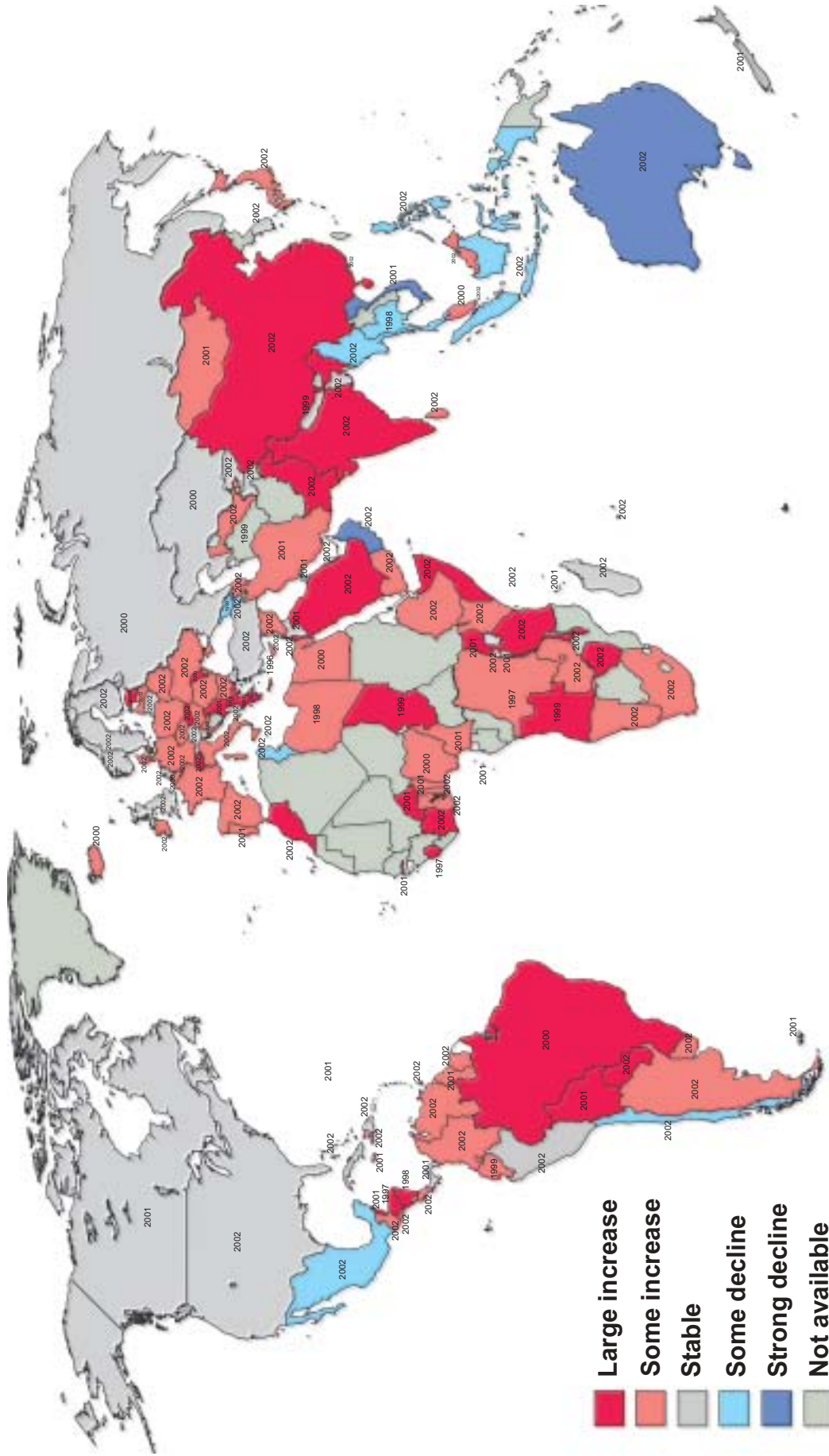
remained basically stable over the 1998-2001 period. With an annual prevalence rate of 20% among those age 15-45 in 2001, the prevalence rate in New Zealand was largely the same as the prevalence of cannabis use in Australia for this age group.

**Fig. 135: New Zealand: Cannabis use among 15-45 year olds**



Sources: APHRU, *Drugs in New Zealand, Drug Use in New Zealand Comparison Surveys 1990-1998* and APHRU, *Drug Use in New Zealand: National Surveys Comparison 1998 & 2001, May 2002.*

Map 19: Changes in use of cannabis, 2002 (or latest year available)



Source: UNODC Annual Reports Questionnaire Data and national reports.