

## 1.4 Cannabis Market

### 1.4.1 Summary Trend Overview

The cannabis market has remained basically stable overall, but is experiencing some interesting developments. While estimates for cannabis herb production are problematic in nature – it is possible to make some broad statements about the level of production. In 2006 it is estimated that production, for both herb and resin, declined.

The changes in cannabis production themselves appear to be changing the market. First, the increase in cannabis herb potency seems to be going hand in hand with a decline in some of the main markets. This could mean that risk awareness amongst consumers is growing and contributing to some declines in demand. Declines in use have been noted in North America, West and Central Europe, and Oceania, all regions where high THC cannabis is cultivated hydroponically. Use continues to increase in Mexico, Central and South America, Africa and Asia.

Second, cannabis resin production in Afghanistan has been increasing since 2003, the same year resin production in Morocco began its current downward trend. In 2007 the area under cannabis cultivation in Afghanistan was equivalent to over a third of the area under opium poppy cultivation. While the country still receives less than ten percent of “source country mentions,” and Morocco, which now produces only slightly more resin than Afghanistan, receives close to 20%, this will change if resin production continues to grow in Afghanistan. This could very well happen. There is thought to be vast over-supply of opiates, and prices could fall further any time, prompting a shift to cannabis cultivation. In addition, there is a functioning illicit drugs market in existence which may be able to accommodate another product efficiently.

These are areas of dynamism, but by and large the market retains its core characteristics year-on-year: it is the most widespread of all the illicit drug markets, it has, by far, the highest level of prevalence, and this prevalence in society tends to minimise perceptions of risk to health.

Cannabis is the biggest drug market by far and it is likely to be more organised than we think, especially in relation to hydroponically grown cannabis and distribution across large areas and borders. In contrast to other drugs, trafficking in cannabis herb continues to be mostly

intra-regional. Exceptions to this rule remain cannabis herb exports from Africa (mainly western and southern Africa) to West and Central Europe and, to a lesser extent, from southern Africa to East Asia (e.g. Hong Kong SAR China) as well as from Central Asia to East Europe (notably the Russian Federation) and some cannabis herb exports from South America (mostly Colombia) to North America, mainly the USA. In 2006 the majority of cannabis herb seizures were reported from Mexico (36%), the United States (23%), and South Africa (7%). Most seizures of cannabis resin were made by Spain (45%), followed by Pakistan (11%), Morocco (9%), France (7%), Iran (6%), the UK (5%), and Afghanistan (4%).

If production truly takes hold in Afghanistan there could be a rebound in consumption in West and Central Europe and an expansion in Eastern Europe. These are already areas which import cannabis products. This rebound could be preference or price driven. Whatever the case, the market should be closely monitored for areas of vulnerability.

## 1.4.2 Production

### Cannabis continues to be cultivated in most countries of the world

Cannabis<sup>1</sup> continues to dominate the world's illicit drug markets in terms of pervasiveness of cultivation, volume of production, and number of consumers. Cultivation and production of the drug is extremely widespread. Unfortunately some of the same qualities of this pervasiveness impede any practical and rigorous reckoning of production.

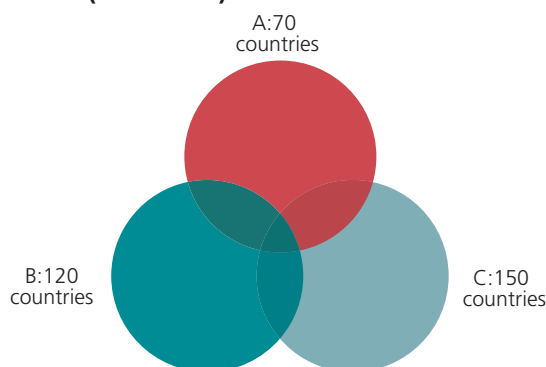
In the absence of direct measurements, UNODC relies heavily on the analysis of States Members responses to Annual Reports Questionnaires (ARQ). As part of this analysis, UNODC identifies three factors which indicate that the production of cannabis takes place: reports of domestic production in a States Members ARQ, “mentions” of the “source” or origin of a cannabis seizure in a country's ARQ, or, report of cannabis plant seizures.

Over the 1996-2006 period, 70, or just under half of all countries, provided UNODC with cannabis cultivation or production estimates. It is assumed that some cannabis cultivation takes place in the majority of the remainder as well, but that many countries simply lack the capacity to produce estimates on the extent. This assumption is partially corroborated by the fact that 127 countries were identified as the “source” or “origin” of trafficked cannabis over the 1996-2006 period. Further, assuming that it is impracticable to transport whole plants internationally and given that only some parts of the plant are useable as a drug, it is likely that when whole plants are seized they were locally produced. Seizures of whole cannabis plants were reported from 150 countries over the 1996-2006 period.

Combining these three indicative groups – cannabis production is identified in 172 countries and territories, equivalent to 90% of the countries and territories which receive UNODC's ARQ.

<sup>1</sup> A discussion of the definitions of the three basic cannabis end products of cannabis herb, cannabis resin and cannabis plant, as well as preparations involving cannabis combinations, can be found on page 96 of the UNODC World Drug Report 2007 at [www.unodc.org](http://www.unodc.org).

**Fig. 83: Number of countries/territories identified as cannabis producers (1996-2006): N = 172**



A: 70 countries/territories providing cultivation/production estimates  
B: 127 countries/territories identified as source countries for cannabis that was trafficked  
C: 150 countries reporting the seizure of whole cannabis plants

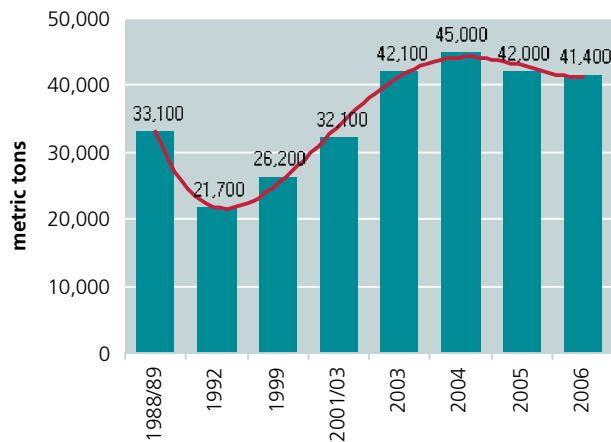
Of the cannabis produced, most is cannabis herb. The analysis of the reported source countries (ARQ, 2002-2006 period) suggests that cannabis resin production takes place in 65 countries while cannabis herb production occurs in 122 countries.<sup>2</sup>

#### 1.4.1.1 Cannabis herb production

**Global production of cannabis herb is estimated to have stabilized at around 41,400 mt in 2006**

Global cannabis herb production is estimated to have stabilized at 41,400 mt in 2006. Cannabis is produced in massively greater volumes than opium (6,600 mt in

<sup>2</sup> Production estimates for cannabis are systematically collected by UNODC from member states as part of the replies to the annual reports questionnaire (ARQ). However, the lack of clear geographical limitations of cannabis production has made it difficult, for most countries, to introduce scientifically reliable crop monitoring systems. The fact that cannabis is a plant that grows in virtually every inhabited region of the world, that it can be cultivated with little maintenance on small plots, and indoors, complicates matters further. Resulting variations in cannabis yields can also be large. The majority of current individual country estimates are based on expert opinion, rather than scientific monitoring systems. Nonetheless, the resulting global estimates should provide at least reasonable orders of magnitude of the problem. As the methodology used to arrive at the estimates has remained basically unchanged in recent years, changes in the global production estimates are likely to reflect underlying changes in cultivation and production. The fact that global cannabis production trends are more or less in line with global seizures trends, at least over longer periods, also seems to support this view.

**Fig. 84: Tentative estimates of global cannabis herb production, 1988-2006**

Sources: UNODC, Annual Reports Questionnaire Data and Govt. reports.

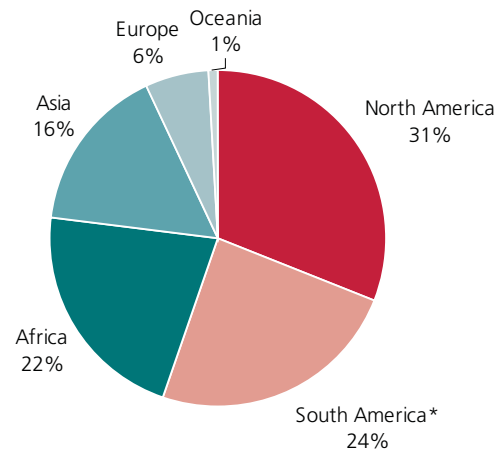
2006) heroin (606 mt in 2006) or cocaine (984 mt in 2006) combined.

With production in 2006 almost equal to that of 2005, and 8% lower to that of 2004 it does appear that the upward trend observed from the early 1990s to the first years of the new millennium has come to a halt. In fact, the decline in global cannabis seizures between 2004 and 2006 was even more pronounced. Global cannabis plant seizures declined by 63% between 2004 and 2006 and global cannabis herb seizures fell by 31% from the peak in 2004 (while remaining largely unchanged as compared to 2005). The new cannabis herb estimate suggests that 13% of cannabis herb production was seized in 2006. The cannabis herb interception rate is lower than the rate for opiates (21% in 2006) or for cocaine (42%) due to the fact that, unlike the latter two drugs, cannabis herb is typically locally produced and consumed.

The area under cannabis cultivation is estimated to have amounted to some 520,000 ha (range: 470,000 - 600,000 ha) in 2006, far more than the area under poppy cultivation (201,500 ha) or the area under coca cultivation (157,000 ha). If all the cannabis growing wild was included in the area estimates, the global surface covered by cannabis could be two to three times larger.

Cannabis yields continue to vary widely, from 5 kg/ha to 40,000 kg/ha, reflecting ranges between wild cannabis and hydroponically grown cannabis. The median cannabis yield was 770 kg/ha; the (unweighted) average yield was 2,500 kg/ha. Yields in Mexico, one of the world's largest cannabis herb producing countries, were reported to have amounted to 1,200 kg per ha in 2006.<sup>3</sup>

<sup>3</sup> Typical yields for cultivated (as opposed to wild) outdoor cannabis ranged from 470 kg/ha in areas without irrigation to 5,000 kg/ha in

**Fig. 85: Breakdown of global cannabis herb production in 2006 (N = 41,400 mt)**

\* South America, Central America and the Caribbean  
Sources: UNODC, Annual Reports Questionnaire Data and Govt. reports.

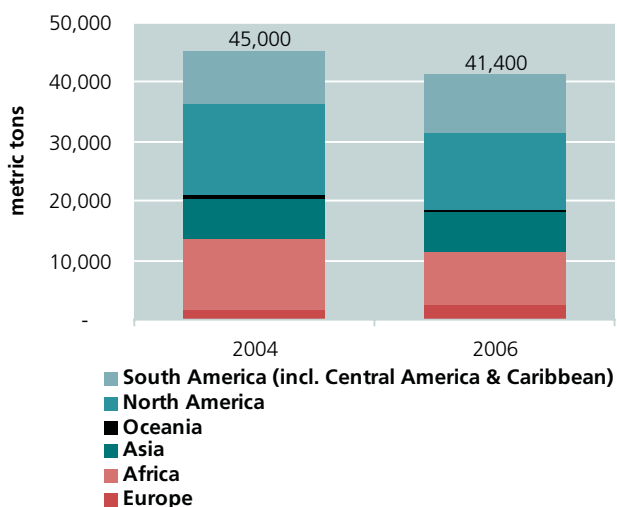
In 2006, most cannabis herb was produced in the Americas (55 %) and in Africa (22 %), followed by Asia and Europe. Countries producing for export remain limited to: a number of West, South and North African countries (including South Africa, Nigeria, Ghana and Morocco) and few East, West and Central Asian countries (including Afghanistan, Pakistan and Kazakhstan).

Cannabis herb production remains concentrated (≈12,900 mt) in North America, where the largest producers are Mexico followed by the United States of America and Canada. Production in Mexico (≈7,400 mt<sup>4</sup>) is mainly concentrated in states along the Pacific coast (Sinaloa, Michoacán, Guerrero, Jalisco, Oaxaca and Nayarit), were 60% of total cannabis eradication takes place. There is also cultivation in the Center/North region (Chihuahua and Durango), the site of 36% of eradication in 2006. Cannabis is produced throughout in the USA (≈4,700 mt; range: 2,800–6,600 mt), but it is particularly widespread in the western region (California, Washington, Oregon and Hawaii)

well tended gardens, with figures around 2,000 kg/ha to be typical for the situation in the USA (as identified through the analysis of data from court cases), and levels around 1,000 kg/ha to be typical for the situation in developing countries. In contrast, hydroponically grown cannabis were found to reach typical yield levels from 15,000 to 30,000 kg per hectare. Source: UNODC, *World Drug Report 2006*, Vol. 1, pp. 193-195.

<sup>4</sup> Gross cultivation was estimated at 36,336 ha. Eradication amounted to 30,158 ha - which is the world's largest eradication of cannabis. This left a net area under cannabis cultivation of 6,178 ha. The yield is estimated by the Mexican authorities to amount to 1,200 kg of cannabis herb per hectare. This results in a likely output of around 7,400 mt. (Source: Mexico's reply to UNODC's ARQ for the year 2006). US estimates saw the net area under cannabis cultivation in Mexico slightly higher, at 8,500 ha in 2006 which - based on higher yield assumptions - resulted in a production estimate of 15,500 mt of cannabis herb in 2006. (Source: US Department of State, Bureau of International Narcotics and Law Enforcement Affairs, *International Narcotics Control Strategy Report 2008*, March 2008).

**Fig. 86: Regional breakdown of global cannabis herb production, 2004 and 2006**



Sources: UNODC, Annual Reports Questionnaire Data and Govt. reports

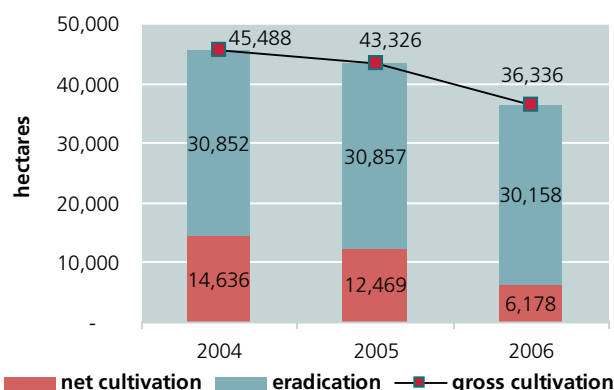
and in the Appalachian region (Kentucky and Tennessee). In 2006, the US eradicated 5,901,880 outdoor cannabis plants and 403,322 indoor cannabis plants<sup>5</sup> Cannabis production in Canada is mainly concentrated in British Columbia and Quebec, followed by Ontario.

The largest proportion of cannabis herb production in South America (≈10,000 mt) takes place in Paraguay (≈ 5,900 mt), followed at lower levels by Colombia, Brazil (for the domestic market only), the Caribbean region (notably St. Vincent & the Grenadines and Jamaica) and Central America (notably Guatemala). In Africa (≈ 8,900 mt), where cannabis herb production takes place in almost every country, the largest producers include South Africa (≈ 2,500 mt) followed in the region by Malawi, Zambia and Swaziland. In addition, Nigeria, Ghana & several other West-African countries (including Guinea, Cote d'Ivoire, Benin and Togo), produce relatively large amounts, as does the Democratic Republic of the Congo, Tanzania, Egypt, and Morocco (which is mainly known as a cannabis resin producer).

Total production of cannabis herb in Asia is estimated at around 6,700 mt. This includes production in the Near East & South-West Asia region (Afghanistan, followed by the Lebanon and Pakistan), although in all of these countries cannabis herb production is far less important than the production of cannabis resin. Important producers in South-Asia are India, Nepal and Sri Lanka; and important producers in South & South-East Asia include Indonesia and Thailand. Among the largest cannabis producers in Europe (≈ 2,500 mt excl. Central Asia; ≈ 4,850 mt incl. Central Asia) are the C.I.S countries, notably Kazakhstan, Kyrgyzstan and the Russian Federation. The largest producers of herb in West and

<sup>5</sup> US Department of Justice, National Drug Intelligence Centre, Domestic Cannabis Cultivation Assessment 2007, Feb. 2007.

**Fig. 87: Cannabis herb cultivation (in ha) in Mexico, 2004-2006**



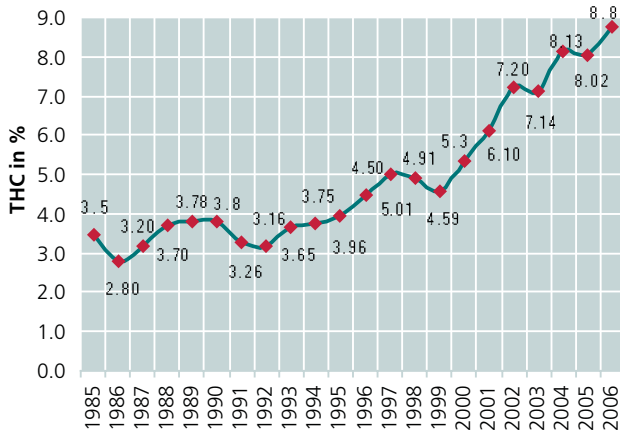
Sources: Organizacion de los Estados Americanos (OEA), Comisión Interamericana para el Control del Abuso de Drogas (CICAD), Mecanismo de Evaluación Multilateral (MEM), México, Evaluación del Progreso de Control de Drogas 2006-2006, and UNODC, Annual Reports Questionnaire (ARQ). 2006.

Central Europe are the Netherlands (22% of all European countries saw the Netherlands as their main source of cannabis herb in 2006) and Albania (7% of all European countries saw Albania as their main source country). European consumption still relies on cannabis imports. Australia is the largest cannabis herb producer in Oceania.

Changes in the regional breakdown between 2004 and 2006 suggest that cannabis production increased in Europe (offsetting some of the decline of cannabis resin exports, produced in Morocco), Asia and South America (including Central America and the Caribbean). Production appears to have declined in Africa from the peak in 2004 (though less dramatic than cannabis herb seizures which fell by 59% between 2004 and 2006 in Africa). Production also appears to have declined in North America. Official Mexican estimates show a decline in the net area under cannabis cultivation from 14,600 ha in 2004 to 6,200 ha in 2006, producing some 7,400 mt of cannabis herb.<sup>6</sup> Production estimates also declined in the USA. US estimates for the year 2002 suggested a net production of around 10,000 mt<sup>7</sup>

<sup>6</sup> See Organizacion de los Estados Americanos (OEA), Comisión Interamericana para el Control del Abuso de Drogas (CICAD), Mecanismo de Evaluación Multilateral (MEM), México, Evaluación del Progreso de Control de Drogas 2006-2006, and UNODC, ARQ, 2006. US estimates, in contrast, saw a decline in the net area under cannabis cultivation in Mexico from 7,900 ha in 2002 to 5,600 in 2005, followed by an increase to 8,600 ha in 2007. (Source: US Department of State, Bureau of International Narcotics and Law Enforcement Affairs, *International Narcotics Control Strategy Report 2008*, March 2008).

<sup>7</sup> US estimates for the year 2002 suggested that domestic cannabis herb production ranged from 5,580 to 16,730 mt with a mid-range estimate of 11,150 mt. After deduction of eradication, this would have given a net production of close to 10,000 mt in 2002. (Drug Availability Steering Committee, Drug Availability Estimates in the United States, December 2002).

**Fig. 88: Average cannabis potency (of seized material) in the USA**

Source: The University of Mississippi Cannabis Potency Monitoring Project, quoted in US Department of Justice, National Drug Intelligence Center, National Drug Threat Assessment 2008.

while production in 2006 amounted to an estimated 4,700 mt<sup>8</sup>.

The ongoing increase in THC levels of the cannabis produced is changing the market. In both Canada and the USA, where large-scale eradication efforts have been successful, the ongoing growth of the THC levels of the cannabis produced is worrying and likely reflects the ongoing shift towards indoor production of high-THC cannabis. The average THC levels of cannabis on the US market almost doubled between 1999 and 2006, from 4.6% to 8.8%.

#### 1.4.1.2 Cannabis resin production

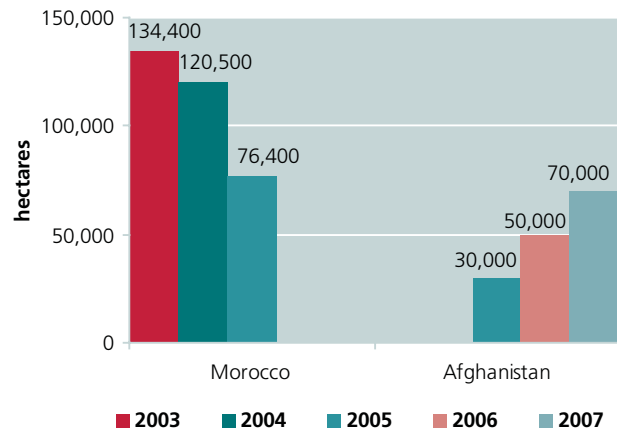
##### Morocco's importance as main source country for cannabis resin is declining

Available information suggests that Morocco is still the world's largest cannabis resin producer, supplying the illicit markets of Western Europe and North Africa. Its importance as a source country for cannabis resin has, however, declined in recent years.

The last cannabis survey conducted in Morocco was undertaken jointly by the Moroccan and UNODC. The 2005 survey reported the extent of cannabis cultivation at 76,400 ha, down from 134,000 ha in 2003.<sup>9</sup> In the absence of subsequent surveys, data from Morocco's main cannabis resin export markets suggest that the

<sup>8</sup> The 2006 gross estimates ranged from 5,650 to 9,420 mt in the United States with a mid-range estimate of 7,530 mt. Estimates of net production (after eradication) ranged from 2,830 to 6,590 mt, resulting in a mid-range estimate of 4,710 mt of cannabis herb production. (Department of Justice, National Drug Intelligence Center, Domestic Cannabis Cultivation Assessment 2007.)

<sup>9</sup> UNODC, *Morocco Cannabis Survey 2005*, Executive Summary 2005, June 2005.

**Fig. 89: Area under cannabis cultivation in Morocco and Afghanistan\*, 2003-2007**

\* data for Afghanistan refer to 2004/05, 2005/06 and 2006/07  
Sources: UNODC, 2007 Afghanistan Opium Survey (and previous years) and UNODC/Government of Morocco, Maroc, Enquete sur le cannabis 2005, Jan. 2007.

country's production of cannabis resin continues to decline. Cannabis resin seizures made in West and Central Europe fell by 17% on a year earlier in 2005 and by 29% in 2006. West & Central Europe accounted for 75% of global cannabis resin seizures in 2001. This proportion fell to 70% in 2005 and to 64% in 2006.

The decline of the importance of Morocco is also reflected in the number of countries citing Morocco as the "source" country or "origin" of the cannabis resin found on their markets. Over the 1999-2003<sup>10</sup> period 31% of countries reporting cited Morocco as the origin of the hashish found on their markets. Over the 2004-2006 period, 27% of reporting countries cited Morocco and the subsequent transit countries, Spain and Portugal, as the source country of the cannabis resin encountered on their domestic market. In 2006, Morocco mentions fell to 18%.

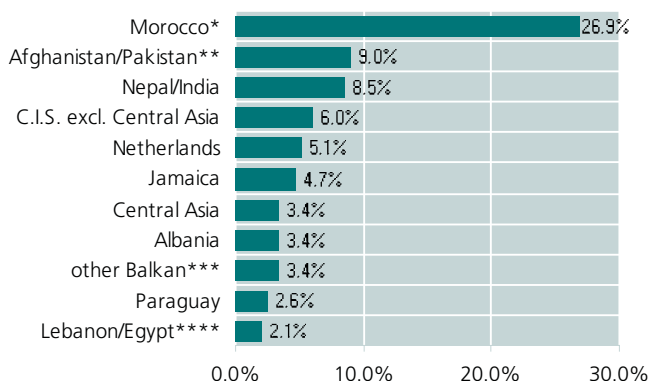
Afghanistan/Pakistan, accounted for 9% of such mentions. The extent of cannabis cultivation in Afghanistan is steadily approaching that of Morocco. (In 2007, the area under cannabis cultivation in Afghanistan was equivalent to 36% of the area under opium poppy cultivation). UNODC estimates suggest that the area under cannabis cultivation in Afghanistan increased from 30,000 ha in 2004/05 to 50,000 ha in 2005/06 and 70,000 ha in 2006/07.<sup>11</sup>

Nepal and India were mentioned by 8.5% of countries as the main source of cannabis resin on their markets, followed by the C.I.S. countries excluding Central Asia (6%). This includes mainly the Russian Federation, the Ukraine, the Republic of Moldova and Azerbaijan. Countries of Central Asia – mainly Kazakhstan, Kyr-

<sup>10</sup> UNODC, *World Drug Report 2005*, Volume I.

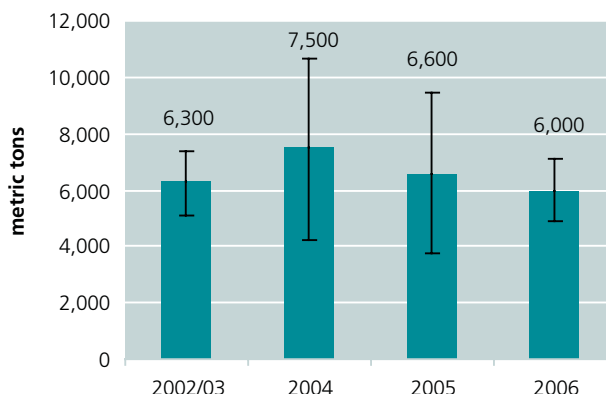
<sup>11</sup> UNODC, *Afghanistan Opium Survey 2007*, October 2007.

**Fig. 90: Main source countries of cannabis resin, 2004-2006** number of times countries were identified as source countries as a proportion of countries reporting



\* incl. mentions of transit countries Spain and Portugal;  
 \*\* incl. mentions of transit country Iran  
 \*\*\* Bosnia-Herzegovina, Serbia, Montenegro, Bulgaria;  
 \*\*\*\* including mentions of Syria  
 Source: UNODC, Annual Reports Questionnaire Data.

**Fig. 91: Global cannabis resin production estimates, 2002/03-2006**



Sources: UNODC and Govt. of Morocco, Cannabis Surveys 2003, 2004 and 2005, UNODC and Govt. of Afghanistan, Afghanistan Opium Survey 2007 (and previous years) and UNODC, Annual Reports Questionnaire Data.

guzstan and Tajikistan - are cited by 3.5% of all countries as a source of resin on local markets. The main production area in Central Asia is the Chu valley in Kazakhstan (and neighbouring Kyrgyzstan) where cannabis - for both herb and resin production - grows on some 138,000 ha.<sup>12</sup> (Cannabis resin accounts for just 3% of all cannabis seizures in Central Asia).

While the Netherlands is mentioned as a country of origin (5% of global mentions), it is not clear to what extent the cannabis resin actually originates in the Netherlands and to what extent it is smuggled into the country (from Morocco and other countries) and then re-exported. Though the Netherlands is an important producer of cannabis herb, other available information suggests that resin production is still limited. The situation is similar in Albania which accounts for 3.5% of all mentions.

Overall production (and consumption) of cannabis resin in the Americas remains limited. The most important cannabis resin producer in the Americas continues to be Jamaica (5% of global mentions), followed by Paraguay (2.5%). The latter country is mainly known for cannabis herb production.

The most important cannabis resin producers in the Near East continue to be the Lebanon and Egypt (2% of global mentions). Production in the Lebanon has drastically declined as compared to the early 1990s, following a number of successful eradication campaigns. As a result, cannabis resin from Morocco and from Afghanistan, in addition to locally cultivated cannabis, is now also trafficked to Egypt to cover local demand.

Production of cannabis resin in the Lebanon continues to be mainly concentrated in the Bekaa valley. In 2007, Lebanese police reported an increase in the area under illicit cultivation to some 6,500 ha (including areas used for the illegal cultivation of opium poppy). Given problems in maintaining the annual crop eradication activities, only 2% of the hashish crop was reported to have been effectively eradicated.<sup>13</sup>

**Global cannabis resin production estimated at around 6,000 mt**

Tentative estimates, based on Morocco's and Afghanistan's cannabis resin production estimates, global herb production estimates and seizure statistics, suggest that 6,000 mt of cannabis resin were produced in 2006 (range: 4,900 to 7,100 mt). The previous year's estimate amounted to 6,600 mt (range: 3,800-9,500) and the estimate for 2004 to 7,500 mt (range: 4,200-10,700). These estimates suggest that global cannabis resin production - after many years of uninterrupted increases - may have declined over the 2004-2006 period. A production of some 6,000 mt of cannabis resin results in a calculated global cannabis resin interception rate of 17%. This is higher than the interception rate for cannabis herb (13%) but lower than the global interception rate for opiates (22%) or cocaine (42%).

12 US Department of State, Bureau of International Narcotics and Law Enforcement Affairs, *International Narcotics Control Strategy Report 2008*, March 2008.

13 US Department of State, Bureau of International Narcotics and Law Enforcement Affairs, *International Narcotics Control Strategy Report 2008*, March 2008.

**Table 8: Tentative estimates of global cannabis resin production, 2006**

	Seizures in mt (2006)	Estimated proportion of seizures related to cannabis resin originating in Morocco or Afghanistan	Potential seizures in mt related to Moroccan or Afghan cannabis resin production	Cannabis resin production estimates in mt
West & Central Europe	638	80%	510.2	
North Africa	119	90%	106.7	
Near and Middle East	217	50%	108.3	
Seizures related to Moroccan and Afghan cannabis resin			725.2	
Global seizures			1,024.8	
Cannabis resin production				
in Morocco (2004/05)				1,915
in Afghanistan (2006/07)				1,603
Sub-total				3,518
Proportion in total (based on seizures)				71%
(a) Estimate of global cannabis resin production				4,971
<b>2. Estimate based on cannabis herb production estimates and 2006 seizures</b>				
	Cannabis herb	Cannabis resin	Proportion	Cannabis resin production estimates in mt
Seizures in mt (2005)	4,958	1,025	17%	
(b) Estimate of global cannabis resin production	41,400		17%	7,092
<b>3. Combined production estimate of cannabis resin</b>				<b>6,032</b>
Combined production estimate of cannabis resin (rounded)				6,000

### 1.4.3 Trafficking

#### Seizures of both cannabis herb and resin declined over 2004-2006 period

Predictably, for such a vast illicit market: out of 170 countries and territories which reported seizures to UNODC in 2005 and 2006 more than 99% reported seizures of cannabis. Sixty five per cent of global seizures cases were cannabis related in 2006. Out of all reported global seizure cases (1.65 million) 32% were related to cannabis herb, 21% were related to cannabis resin, 11% were related to the seizures of cannabis plants and 0.4% to the seizure of cannabis oil.

Cannabis herb seizures amounted to some 5,290 metric mt in 2006; cannabis resin seizures amounted to around 1,000 metric mt. In addition, small quantities of cannabis oil were seized (1,700 litres). Both cannabis herb seizures (-27%) and cannabis resin seizures (-30%) declined over the 2004-2006 period, reversing the previous upward trend.

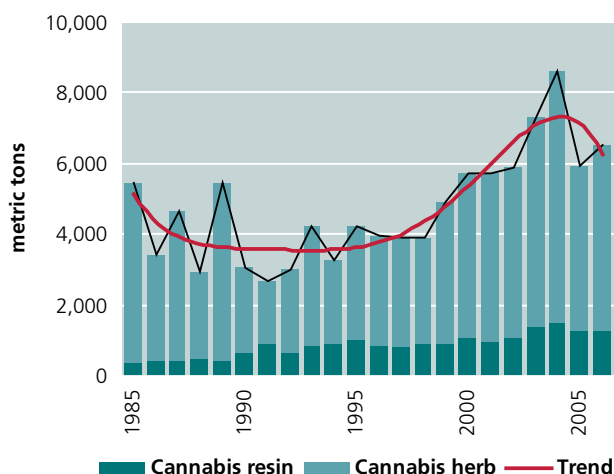
The majority of cannabis herb seizures in 2006 were reported from Mexico (36% of the world total), followed by the United States (23%), South Africa (7%), Malawi (5%), Tanzania (4%), Nigeria (4%), Brazil (3%) and India (3%). Most seizures of cannabis resin were made by Spain (45%), followed by Pakistan (11%), Morocco (9%), France (7%), Iran (6%), the UK (5%), Afghanistan (4%) and Canada (3%). Most cannabis oil seizures were made by Canada (62%), the Russian Federation (24%), and Jamaica (7%).

155 countries out of 170, or 91% of all countries that reported drug seizures to UNODC in 2005/06, reported the seizure of cannabis herb. In contrast to other drugs, trafficking in cannabis herb continues to be mostly intra-regional. Exceptions to this rule remain cannabis herb exports from Africa (mainly western and southern Africa) to West and Central Europe and, to a lesser extent, from southern Africa to East Asia (e.g. Hong Kong SAR, China) as well as from Central Asia to East Europe (notably the Russian Federation) and some cannabis herb exports from South America (mostly Colombia) to North America, mainly the USA.

#### Trafficking concentrated in North America and Africa

Once again close to 60 per cent of global cannabis herb seizures were made in North America (58%) in 2006,

**Fig. 92: Cannabis seizures, 1985-2006**



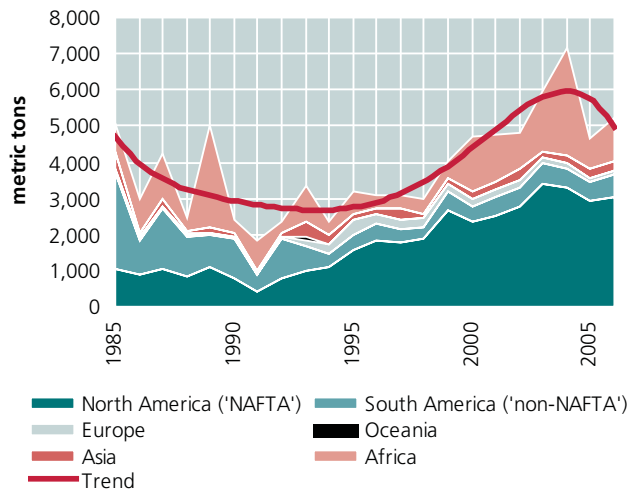
Source: UNODC, Annual Reports Questionnaire Data / DELTA

notably by the authorities of Mexico (1,893 mt), the United States (1,139 mt) and, Canada (13 mt). Seizures in North America remained basically stable in 2006 as compared to a year earlier but were 8% lower than in 2004. The illicit traffic in cannabis flows mainly from Mexico to the USA and, to a lesser extent, from Canada to the USA. Although much of the marijuana produced in Canada is intended for domestic consumption, cross-border smuggling by organized crime syndicates remains a concern. These groups typically market cannabis with very high THC levels. Law enforcement has identified a clear and growing preference for this over the last few years and there is a high frequency of seizures along the USA/Canada border.

Large cannabis herb seizures have also been made in Africa, which accounts for 23% of global seizures. The largest seizures in 2006 were reported by South Africa (359 mt), Malawi (272 mt) Tanzania (225 mt), Nigeria (192 mt) and Egypt (101 mt). While seizures reported from Africa increased year-on-year in 2006 (41%), they are significantly lower than they were in 2004 (-59%).

South America, including the Caribbean and Central America accounted for 12% of global cannabis herb seizures. The largest level of seizures in this region was reported by Brazil (167 mt), Bolivia (125 mt), Colombia (110 mt), Argentina (67 mt), Paraguay (59 mt) and



**Fig. 93: Regional breakdown of cannabis herb seizures, 1985-2006**

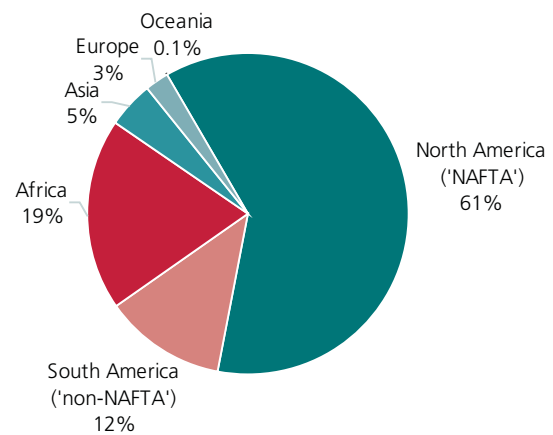
Source: UNODC, Annual Reports Questionnaire Data / DELTA.

Jamaica (37 mt). Most countries in South America, notably Brazil, Argentina, Uruguay and Chile cite Paraguay as the main source country for the cannabis resin found on their market. Seizures made by countries in South America showed a noticeable upward trend over the 2004-06 period (+24%). In contrast, seizures in the Caribbean and in Central America remained largely unchanged over the 2004-06 period.

The largest seizures made in Asia – which accounted for 4% of all seizures in 2006 - were reported by India (158 mt), followed by Kazakhstan (23 mt), Thailand (12 mt) and Indonesia (12 mt). Seizures increased by 10 % over the 2004-06 period and were 60% higher than in 1996. Cannabis herb seizures increased over the last decade in all sub-regions, except East and South-East Asia – reflecting a decline of cannabis cultivation in this part of the world.

European cannabis herb seizures - 2% of the world total – rebounded in 2006 and were 21% higher than a year earlier, though still 27% less than in 2004 and 53% lower than in 1996. The largest seizures were made by the Russian Federation (24 mt) and the UK (20 mt)<sup>1</sup>. Europe is the only region which also ‘imports’ significant amounts of cannabis from other regions. Oceania accounted for 0.1% of global cannabis herb seizures. Almost three quarters of all seizures in that region were reported by Australia.

<sup>1</sup> No UK seizure data for the year 2006 are as yet available. Data for the UK refer to the year 2005.

**Fig. 94: Distribution of global cannabis herb seizures in 2006 (N=5230 metric mt)**

Source: UNODC, Annual Reports Questionnaire Data / DELTA

### Trafficking in cannabis resin

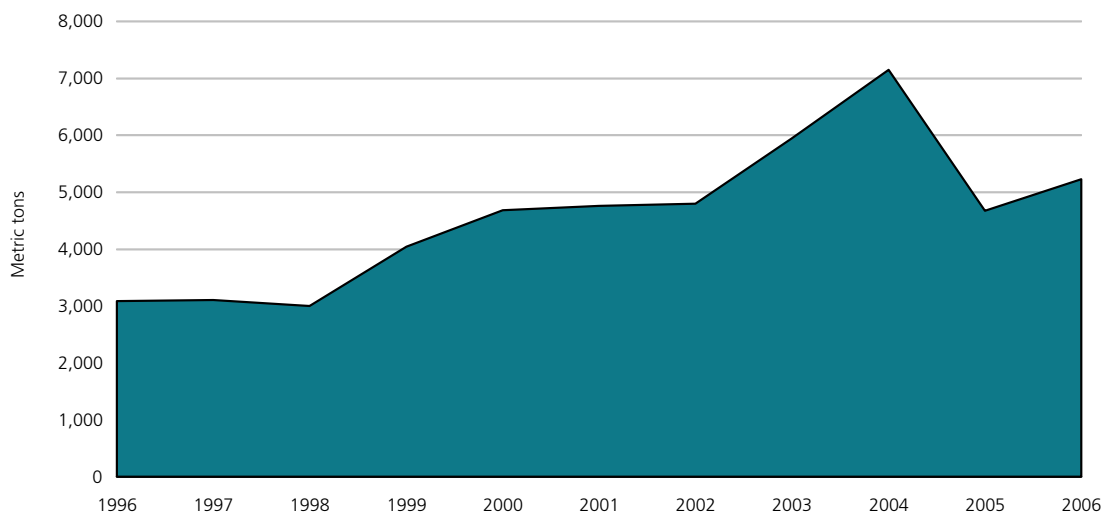
Seizures of cannabis resin<sup>2</sup> were reported in 115 countries over the 2005-06 period: 68% of all countries reporting seizures to UNODC. Cannabis resin is the second most widely trafficked illicit drug after cannabis herb, it accounted for 350,000 seizure cases or 21% of all seizures in 2006. One thousand mt of resin were seized in 2006.

### Global cannabis resin seizures continue declining in West and Central Europe

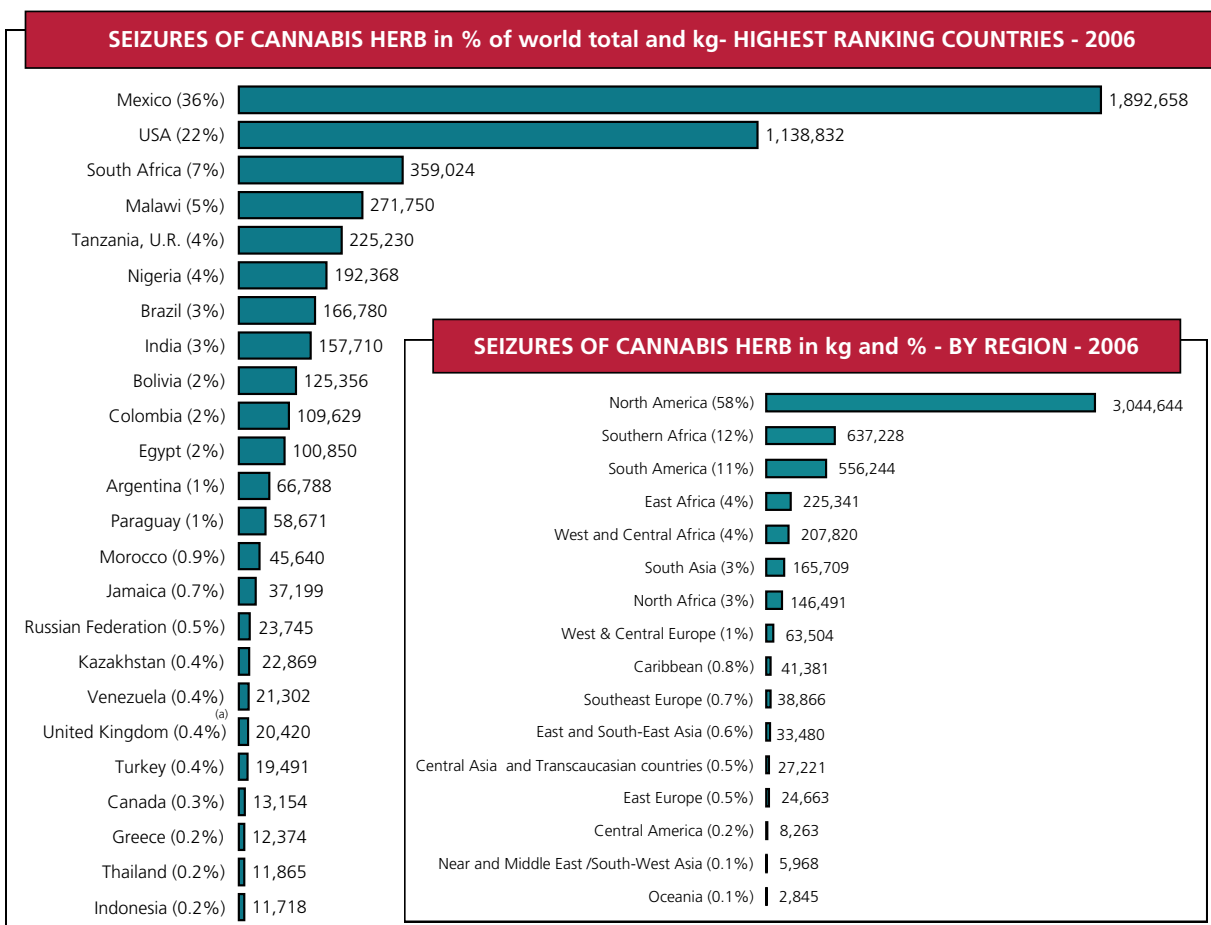
In 2006, global cannabis resin seizures declined by 20 % year on year and by 30% as compared to 2004. Most of the decline was due to a fall in the level of seizures reported by countries of West & Central Europe (-29% in 2006 and - 41% over the 2004-06 period). This was linked to the decline of cannabis resin production in Morocco in 2004 and 2005, and there were no indications of a ‘revival’ in 2006. Cannabis resin seizures reported by Spain fell by 31% between 2005 and 2006; by France -19%, by Italy -17% and seizures in the Netherlands fell by 62%. Cannabis resin seizures reported from Africa declined by 9%, including a 5% decline reported by Morocco.

<sup>2</sup> In contrast to trafficking in cannabis herb, trafficking in cannabis resin is not only intra-regional but, to a significant degree, inter-regional, typically affecting neighbouring regions. This applies, in particular, to trafficking of cannabis resin from North Africa (Morocco) to West and Central Europe. Individual drug seizures reported to UNODC in 2005 and 2006 suggest that about three quarters of the cannabis resin seized in Europe originated in Morocco. Inter-regional trafficking can be also found for trafficking of cannabis resin from Central Asia to East Europe (notably the Russian Federation) and from the Caribbean (notably Jamaica) to North America (notably Canada) as well as from the Near and Middle East (via Pakistan) to North America (Canada).

**Fig. 95: Global seizures of cannabis herb, 1996-2006**

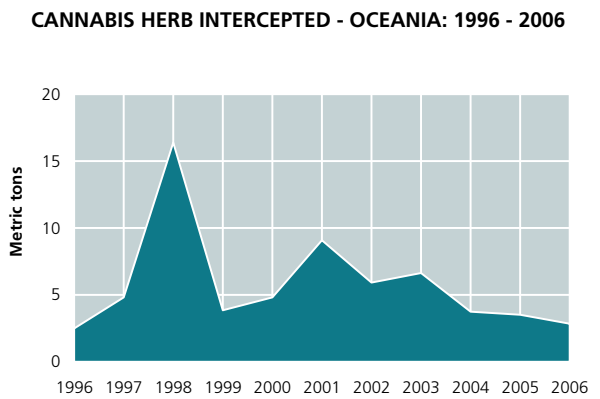
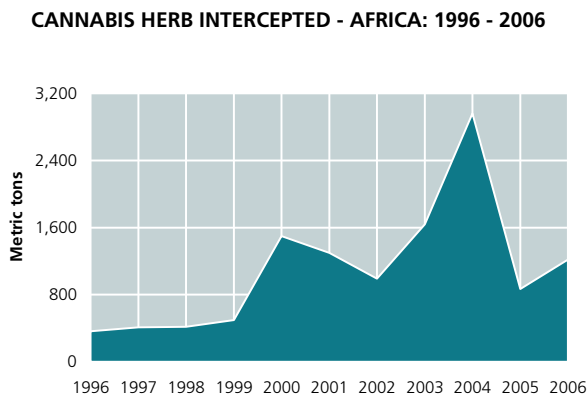
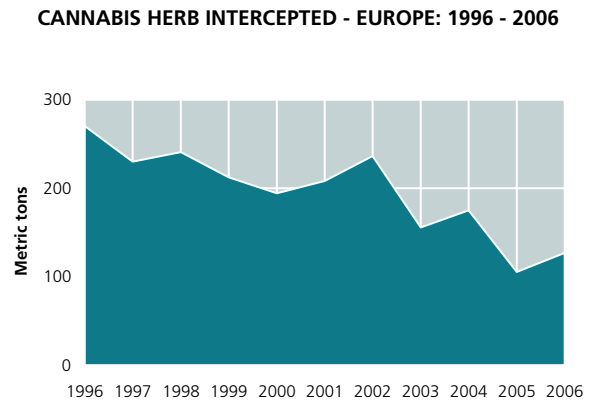
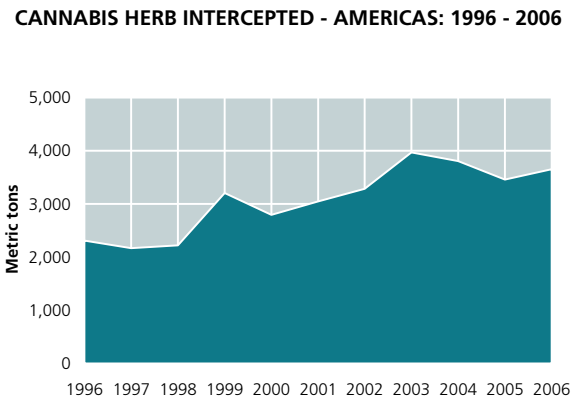
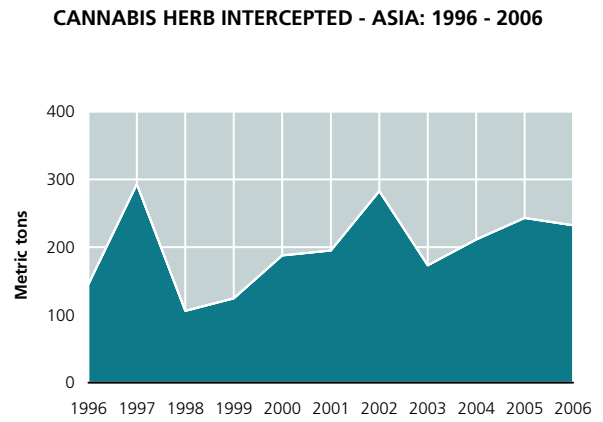
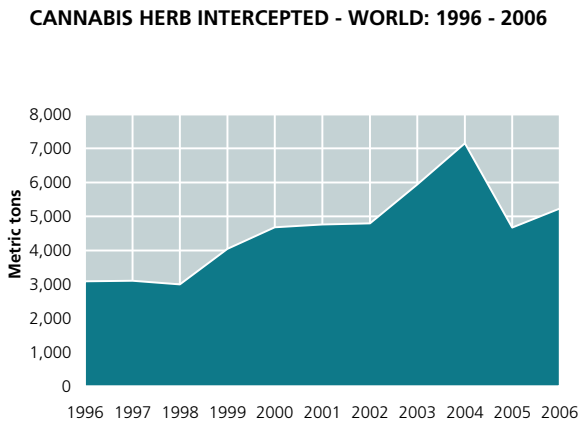


Year	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Metric tons	3,090	3,105	2,998	4,042	4,680	4,758	4,798	5,941	7,152	4,674	5,230



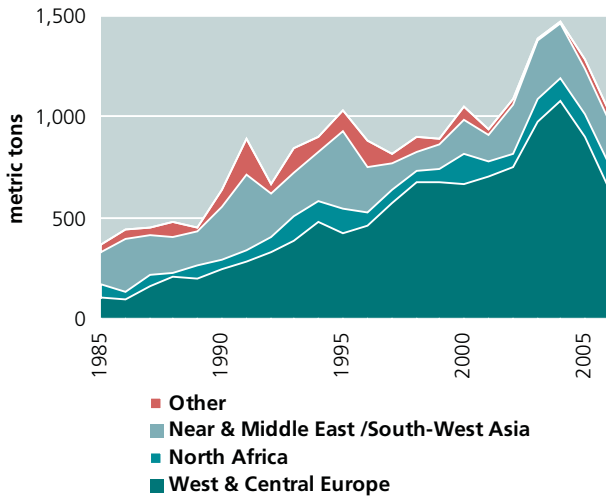
<sup>(a)</sup> Data refer to 2005 England and Wales only.

**Fig. 96: Global seizures of cannabis herb, 1996-2006**





**Fig. 97: Global cannabis resin seizures, 1985-2006**



Source: UNODC, Annual Reports Questionnaire Data/ DELTA.

**Afghanistan/Pakistan related trafficking appears to be increasing**

More than a fifth of global cannabis resin seizures take place in South-West Asia. Growing production in Afghanistan is thought to have pushed up resin seizures in Pakistan, where they increased by 23% in 2006. Even stronger increases (more than 60-fold) were reported from North America (Canada). This was due to the interception of a few large cannabis resin shipments from (or via) Pakistan to Canada. North America accounts now for 3% of global cannabis resin seizures.

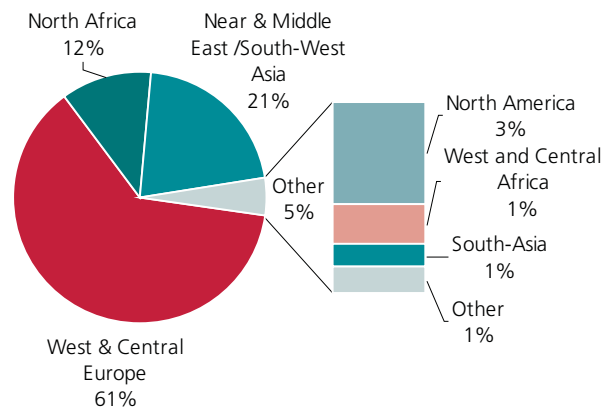
In addition, resin seizures more than doubled in South-Asia, mainly due to growing seizures reported by Nepal, the main cannabis resin producer in this sub-region. South-Asia accounts for 1% of global cannabis resin seizures.

**West and Central Europe remains the main destination of cannabis resin**

West and Central Europe, where 62% of global resin seizures took place in 2006, remained the world's largest cannabis resin market. Spain accounted for 45% of global seizures, ahead of France (7%), the UK (5%), Italy (2%), Belgium (1.4%) and Portugal (0.8%). Spain, located along the main trafficking route from Morocco towards Europe, continued to play a key role in limiting the supply of cannabis resin for the European market. Europe as a whole accounted for 63% of global resin seizures.

Seizures in South-West Asia accounted for 21% of the world total in 2006, up from 18% in 2005. The largest seizures were reported by Pakistan (11%), followed by Iran (6%) and Afghanistan (5%). Shipments of Afghan cannabis resin have been increasingly identified in the

**Fig. 98: Global cannabis resin – regional distribution, 2006 (N = 1,025 metric mt)**

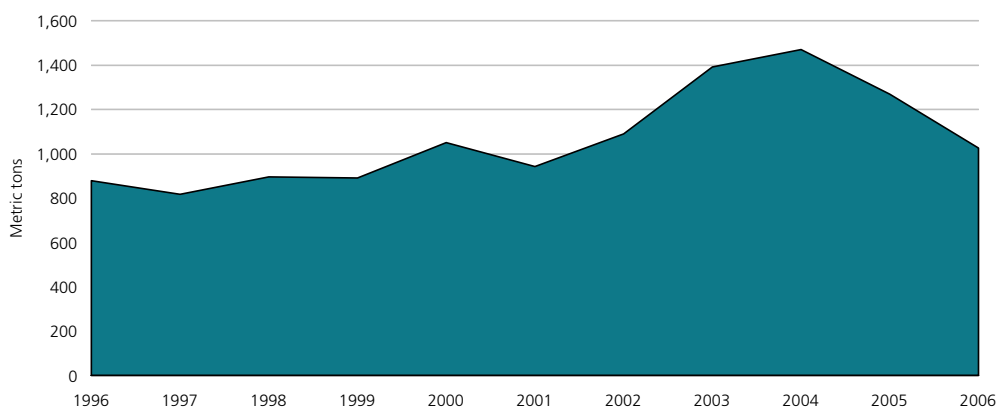


Source: UNODC, Annual Reports Questionnaire Data / DELTA.

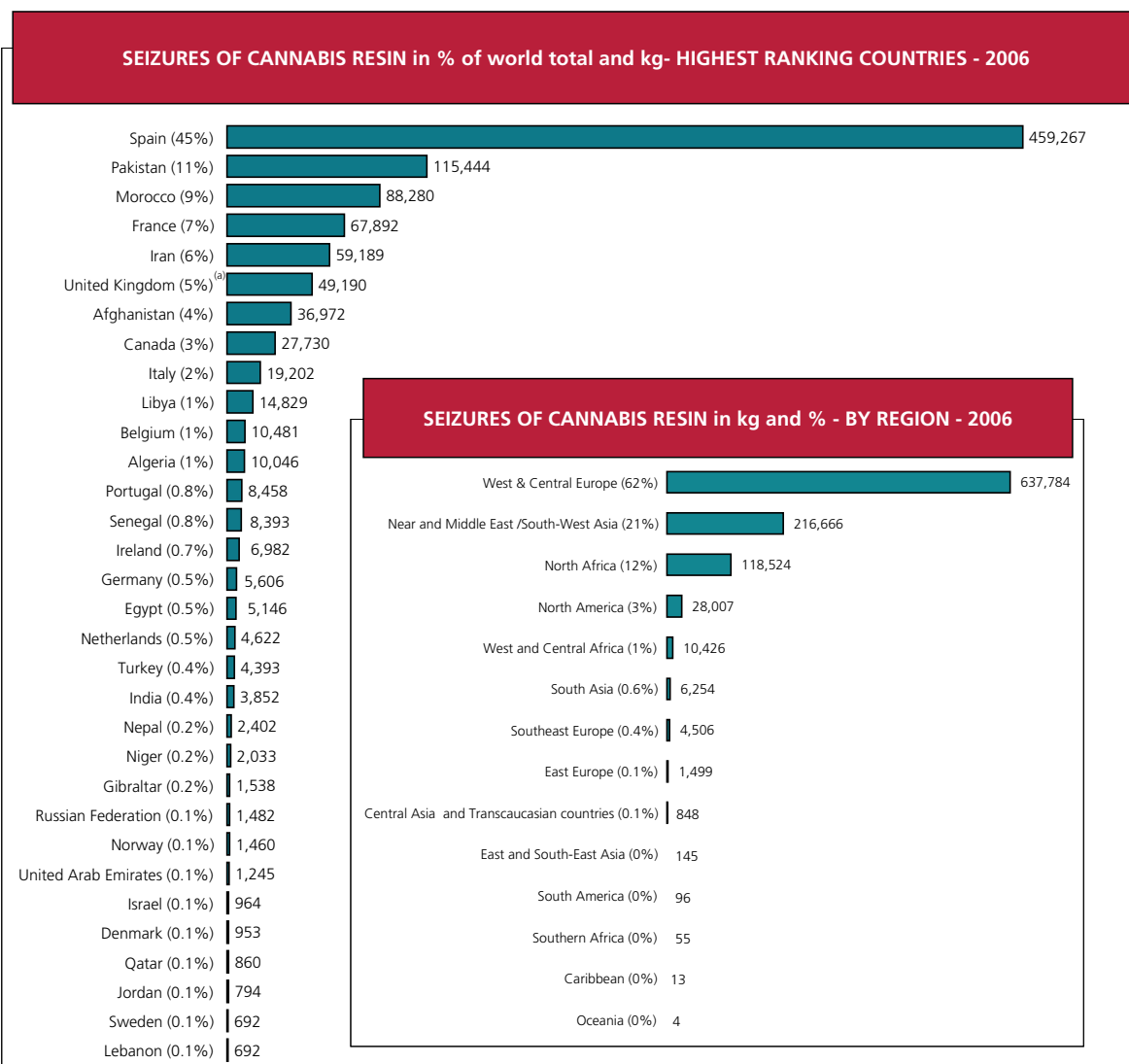
Near East, partially replacing cannabis resin exports from the Lebanon. In addition, shipments of cannabis resin via Pakistan to Senegal were reported, probably intended for onward shipment to Europe. Shipments of cannabis resin were seized in several countries along the coast of Africa for final destination in Canada.

Countries of North Africa seized 12% of global resin seizures in 2006. The largest seizures were reported by Morocco (9% of global cannabis resin seizures). The prime destination remains Western Europe. However, markets in the region are also developing. Despite the declines in cannabis production in Morocco, seizures in the other North African countries rose in 2006, reflecting growing shipments of cannabis resin from Morocco towards Egypt and other countries in North Africa. Nascent sub-Saharan routes (which include Mauritania, Mali, Niger and Chad), potentially related to these new markets, are also thought to be developing.

**Fig. 99: Global seizures of cannabis resin, 1996-2006**

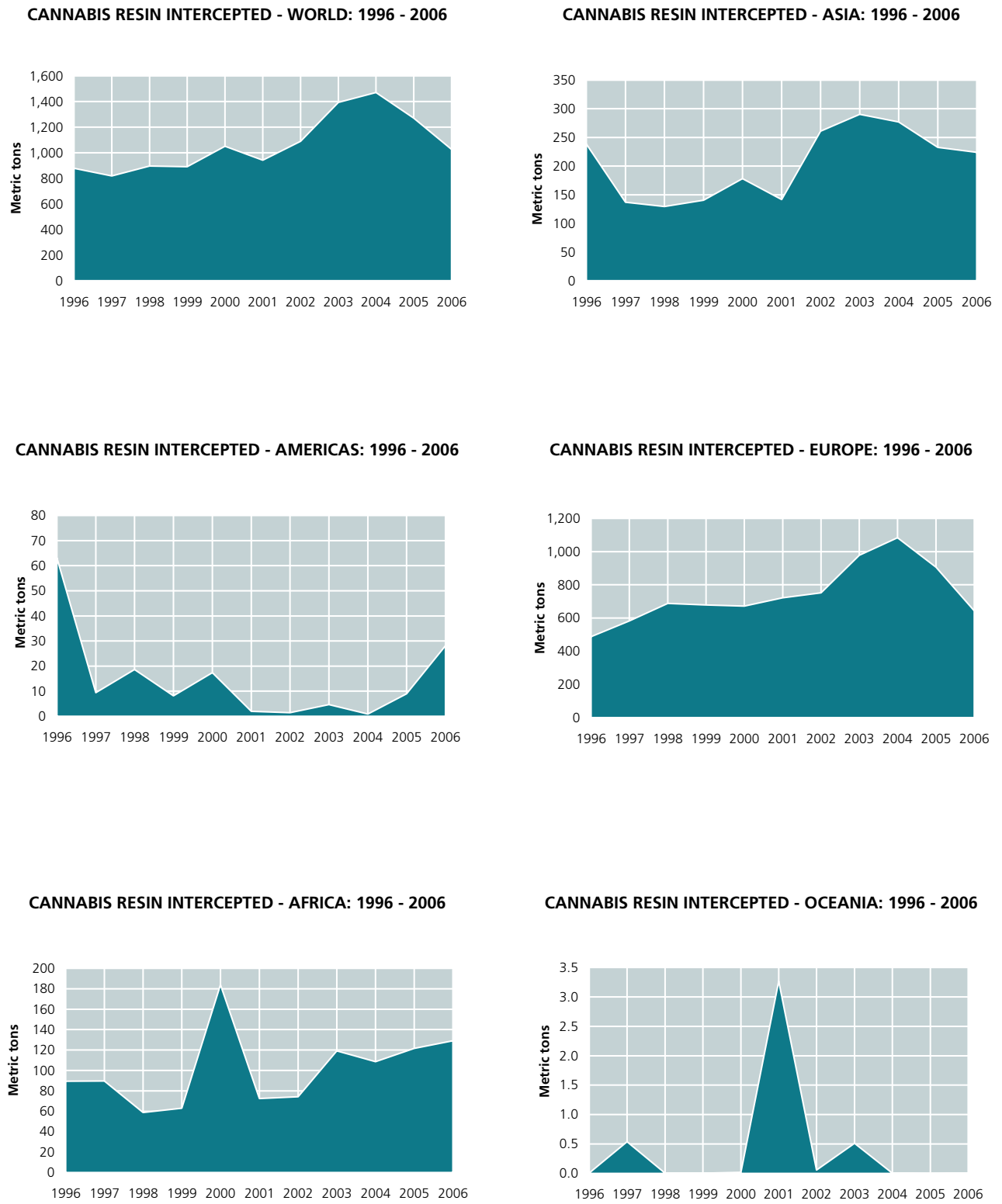


Year	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Metric tons	878	818	896	891	1,051	942	1,088	1,392	1,471	1,270	1,025

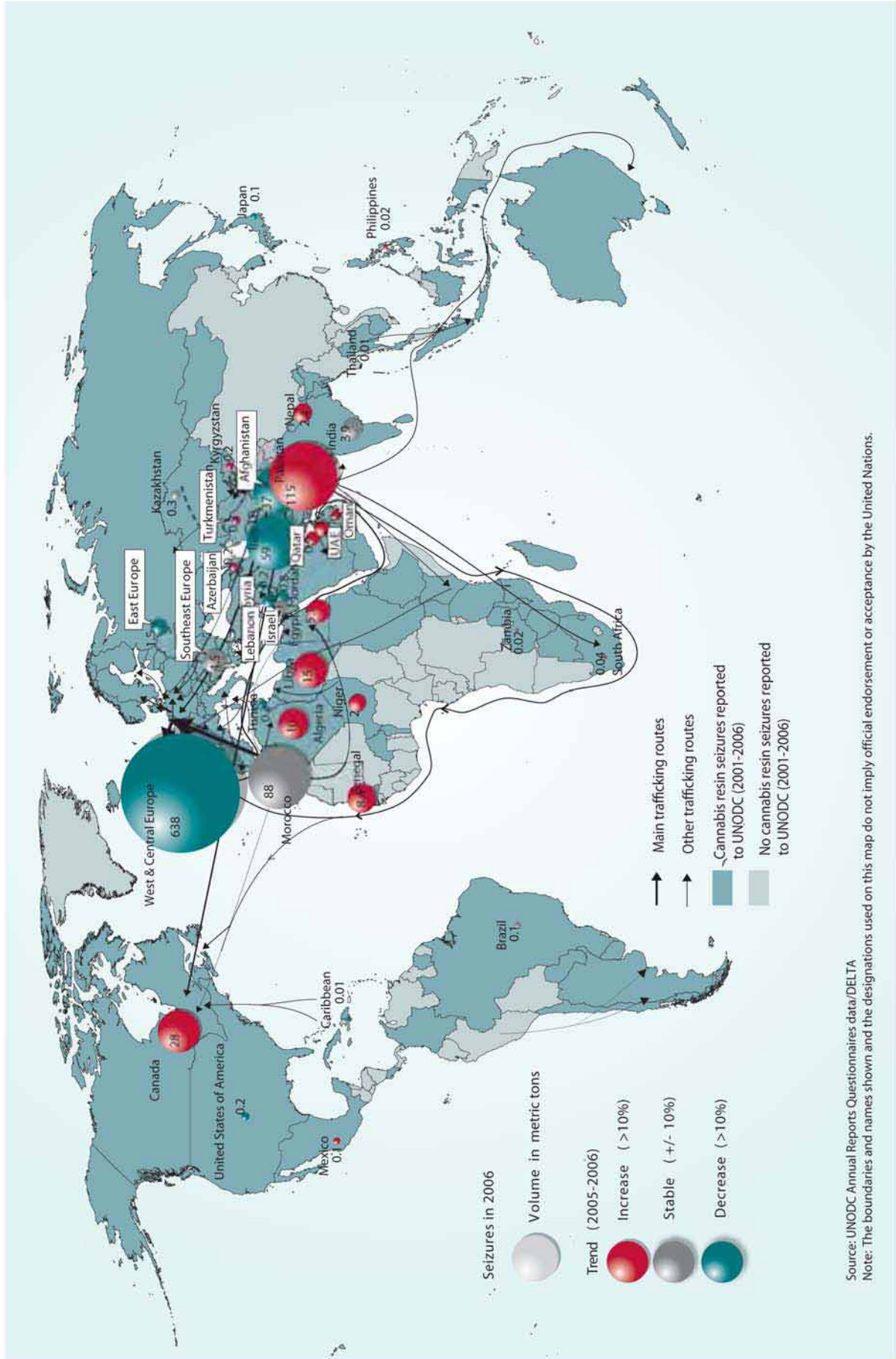


<sup>(a)</sup> Data refer to 2005 England and Wales only.

**Fig. 100: Global seizures of cannabis resin, 1995-2005**



Map 16: Trafficking in cannabis resin, 2006 (countries reporting seizures of more than 10 kg)



Source: UNODC Annual Reports Questionnaires data/DELTA  
 Note: The boundaries and names shown and the designations used on this map do not imply official endorsement or acceptance by the United Nations.



### 1.4.4 Consumption

#### Though the number of cannabis users increases, global cannabis prevalence rates remain stable

Cannabis is the most commonly used drug in the world. In 2006, UNODC estimates that 166 million people, or 3.9 percent of the global population age 15-64, used cannabis. The total number of cannabis users has increased steadily over the 1997/98 to 2006/07 period. However, the stability of the prevalence rate suggests that the number of cannabis users has not outpaced overall population growth, or growth in the number of non-cannabis users, during the same period.

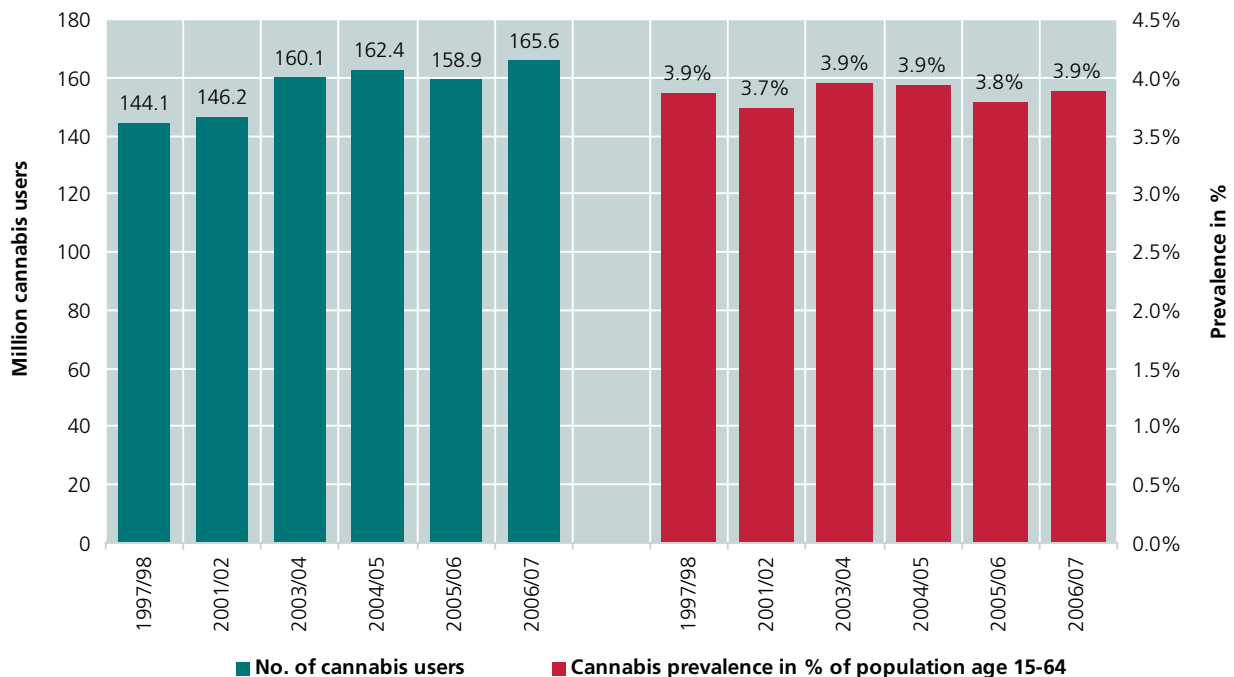
The prevalence rates are highest in the Oceania region (14.5% of the population age 15-64), followed by North America (10.5%) and Africa (8%). The highest rates in Africa are found among the countries of West and Central Africa (12.6%) and the countries of southern Africa (8.4%). The average prevalence rate in West and Central Europe amounted to 6.9%.

Asia has the lowest prevalence rate (2% on average), reflecting the low levels of cannabis use reported from East and South-East Asia (0.9%). An average prevalence rate of 3.2% is estimated for South Asia; 3.6% for the Near and Middle East and 4.2% for Central Asia.

As compared to the estimates provided in the *World Drug Report 2007*, cannabis use declined in the Oceania region, in West & Central Europe and in North America. Use increased in South America (Non-NAFTA countries), Africa and Asia.

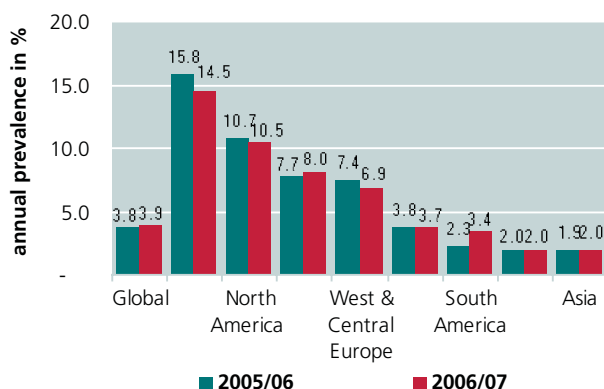
Although Asia has the lowest prevalence rate, UNODC estimates suggest that Asia contains the greatest number of cannabis users (some 51 million), almost a third of the estimated total, ahead of Africa (42 million) and the Americas (41 million) which account for a about a quarter each of the total number of cannabis users. Europe, with about 29 million users, accounts for less than a fifth of global cannabis use and the Oceania region for about 2%.

Fig. 101: Global cannabis use, 1997/98 – 2006/07



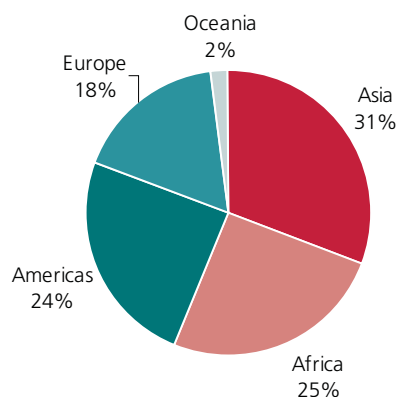
Sources: UNODC, Annual Reports Questionnaire Data, UNODC Field Offices, UNODC’s Drug Abuse Information Network for Asia and the Pacific (DAINAP), UNODC, Global Assessment Programme on Drug Abuse (GAP), Govt. reports, EMCDDA, CICAD, HONLEA reports, local studies, UNODC estimates.

**Fig. 102: Cannabis prevalence rates per region, 2005/06 and 2006/07**



Sources: UNODC, Annual Reports Questionnaire Data, UNODC Field Offices, UNODC's Drug Abuse Information Network for Asia and the Pacific (DAINAP), UNODC, Global Assessment Programme on Drug Abuse (GAP), Govt. reports, EMCDDA, CICAD, HONLEA reports, local studies, UNODC

**Fig. 103: Cannabis consumption in 2006 – regional breakdown (N = 165.6 million)**



Sources: UNODC, Annual Reports Questionnaire Data, UNODC Field Offices, UNODC's Drug Abuse Information Network for Asia and the Pacific (DAINAP), UNODC, Global Assessment Programme on Drug Abuse (GAP), Govt. reports, EMCDDA, CICAD, HONLEA reports, local studies, UNODC estimates.

**Table 9: Annual prevalence of cannabis use, 2006 or latest year available**

	No. of users	in % of population 15-64 years
EUROPE	29,200,000	5.3
West & Central Europe	22,100,000	6.9
South-East Europe	1,700,000	2.0
Eastern Europe	5,400,000	3.7
AMERICAS	40,500,000	6.9
North America ("NAFTA")	30,600,000	10.5
South America ("Non-NAFTA")	9,900,000	3.4
ASIA	51,100,000	2.0
OCEANIA	3,200,000	14.5
AFRICA	41,600,000	8.0
GLOBAL	165,600,000	3.9

Above global average



Below global average

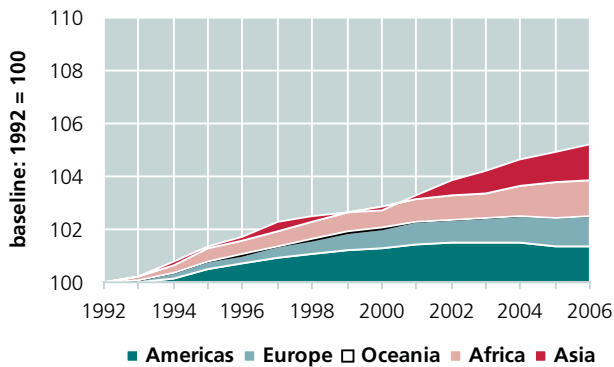


Around global average



Sources: UNODC, Annual Reports Questionnaire Data, UNODC Field Offices, UNODC's Drug Abuse Information Network for Asia and the Pacific (DAINAP), UNODC, Global Assessment Programme on Drug Abuse (GAP), Govt. reports, EMCDDA, CICAD, HONLEA reports, local studies, UNODC estimates.

**Fig. 104: Cannabis use trends as perceived by experts: regional contribution to global change, 1992-2006**



Sources: UNODC, Annual Reports Questionnaire Data, UNODC Field Offices, UNODC's Drug Abuse Information Network for Asia and the Pacific (DAINAP), UNODC, Global Assessment Programme on Drug Abuse (GAP), Govt. reports, EMCDDA, CICAD, HONLEA reports, local studies, UNODC estimates

**Analysis of expert perceptions indicates the same trend**

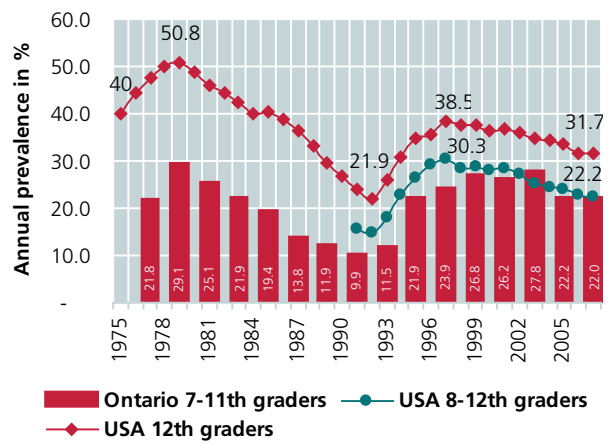
An assessment of expert perceptions provided by States Members through the ARQ reports suggests that the total number of cannabis users continued to increase in 2006. The regional breakdown of expert opinions suggests that cannabis use increased strongly in the 1990s across most regions except Asia. Over the last few years, experts perceive cannabis use as stabilizing or falling slightly in the industrialized countries of North America, West and Central Europe and the Oceania region. Experts perceive cannabis use continuing to rise in many developing countries of Africa, South America and Asia.

**Cannabis use stabilizing/declining in North America**

In 2006/07 cannabis use stabilized in North America as compared to year earlier, but the mid-term trend shows a declining rate of growth. Between 1997 and 2007, cannabis use in the USA declined by 27% among 8th-12th graders, and by 18% among 12th graders. As compared to its peak in 1979, annual prevalence among 12th graders showed a large decline (38%). A significant decline in cannabis use was also reported among high-school students in Ontario, Canada, between 2003 and 2007 (-21%). Between 2005 and 2007 cannabis use remained basically unchanged.

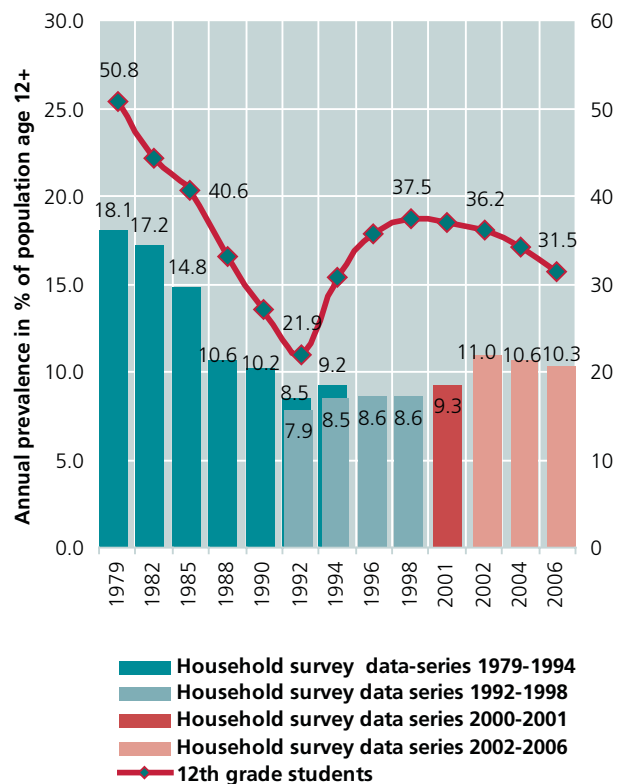
The prevalence of cannabis use also stabilized among the general population in the USA (10.3% in 2006). Over the 2002-2006 period, data show a small decline (from 11% to 10.3%). Cannabis use has fallen substantially over the last three decades in the United States.

**Fig. 105: Annual prevalence among high-school students in the USA and in Ontario, Canada, 1975-2007**



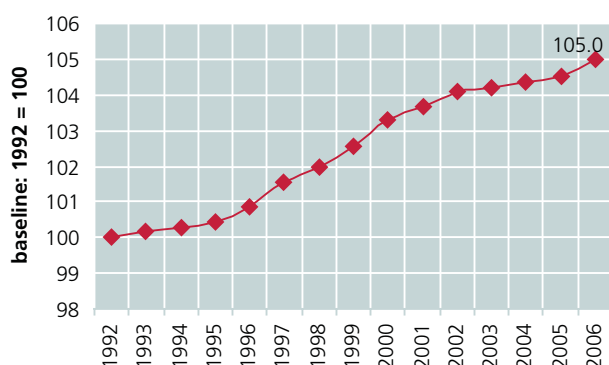
Sources: NIDA, *Monitoring the Future*, 2007 and CAMH, *Ontario Drug Use Survey* 2007.

**Fig. 106: USA: cannabis use among the general population, age 12 and above, 1979-2006**



Sources: SAMHSA, *2006 National Survey on Drug Use & Health* and previous years (1994, 1998 and 2001). Note: methodological changes in the household surveys may affect the accuracy of direct comparisons, however, broad statements about trends are likely possible.

**Fig. 107: Cannabis use trends as perceived by experts in Latin America and Caribbean region 1992-2006**



Sources: UNODC, Annual Reports Questionnaire Data, UNODC Field Offices, UNODC, Global Assessment Programme on Drug Abuse (GAP), Govt. reports, CICAD, HONLEA reports, local studies, UNODC estimates.

### Use increases in Latin America

Increases in cannabis use continue to be reported from countries in Latin America. Expert perceptions gathered for the ARQ's in nine countries of Latin America and the Caribbean reported cannabis use increasing in 2006 (up from seven countries in 2005 and five countries in 2003). Stable trends were recorded for 11 countries. Perceptions of increase for the year 2006 were reported from Argentina, Uruguay, Paraguay, Peru, Venezuela, Jamaica, the Dominican Republic, Honduras and Mexico.

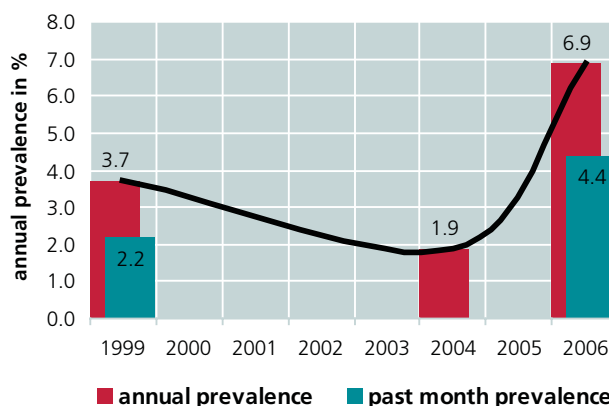
The most significant increase in 2005 was reported from the continent's largest country, Brazil, reflecting a rising availability of cannabis products from neighbouring Paraguay. The annual prevalence of cannabis use has more than doubled in Brazil, from 1% in 2001 to 2.6% in 2005.<sup>1</sup>

A new household survey conducted in Argentina showed an even stronger increase in the annual prevalence rate of cannabis use, rising from 1.9% of the population age 16-64 in 2004 to 6.9% of the population age 12-64 in 2006 - reversing a previous downward trend. Cannabis use in Argentina now takes place at levels similar to those reported in West and Central Europe. Most of the cannabis consumed in Argentina is reported to originate in neighbouring Paraguay, where cannabis production is expanding.

Uruguay has also experienced an increase of use. Following rather modest growth in the 1990s, the annual

<sup>1</sup> CEBRID, Il Levantamento Domiciliar sobre o Uso de Drogas Psicotrópicas no Brasil: Estudo Envolvendo as 108 Maiores Cidades do País, 2005, Sao Paulo 2006 and CEBRID, Il Levantamento Domiciliar sobre o Use de Drogas Psicotrópicas no Basil: Estudo Envolvendo as 107 Maiores Cidades do País, Sao Paulo 2002.

**Fig. 108: Cannabis use in Argentina among the population age 12-65, 1999-2006**



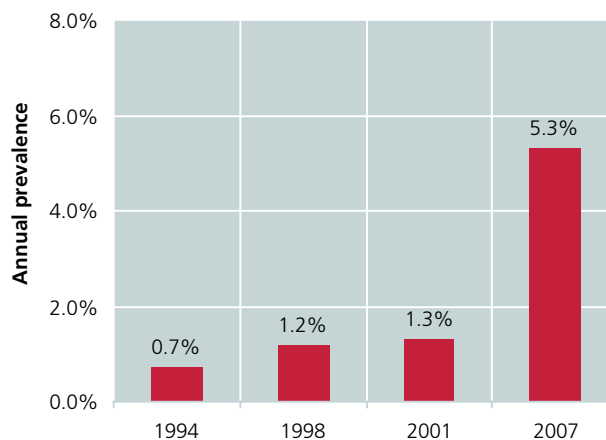
Sources: SEDRONAR, *Estudio Nacional en Población General sobre Consumo de Sustancias Psicoactivas 2006*, Buenos Aires 2007 and previous years.

prevalence of cannabis use quadrupled among the population age 15-65, from 1.3% in 2001 to 5.3% in 2007.

### Use also rising in Africa, though at a slower pace

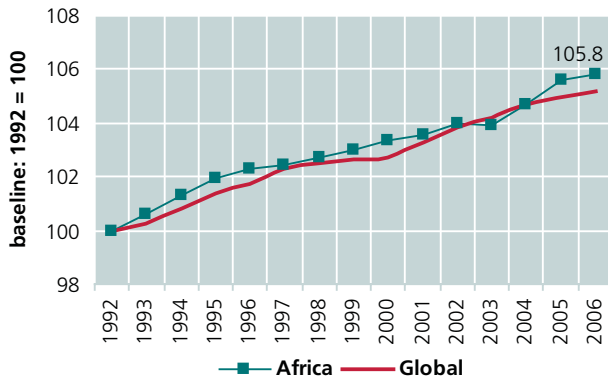
Over the 1998-2006 period, the cannabis use trend for Africa increased more strongly than the trend at the global level. However, the expansion of cannabis use in Africa may be losing its momentum. A total of 12 countries reported rising levels of cannabis use in 2006, 9 countries perceived the situation to have stabilized and 2 reported a decline. In 2005 and 2004, 16 countries, respectively, reported increases in use.

**Fig. 109: Cannabis use in Uruguay among the population age 15-65, 1994-2007**



Sources: Observatorio Uruguay de Drogas (OUD), *Encuesta Nacional en Hogares sobre Consumo de Drogas 2007* and Secretaría Nacional de Drogas y Junta Nacional de Drogas, *Encuesta Nacional de Prevalencia del Consumo de Drogas 2001*.

**Fig. 110: Cannabis use trends as perceived by experts in Africa, 1992-2006**



Sources: UNODC, Annual Reports Questionnaire Data, UNODC Field Offices, UNODC's Drug Abuse Information Network for Asia and the Pacific (DAINAP), UNODC, Global Assessment Programme on Drug Abuse (GAP), Govt. reports, EMCDDA, CICAD, HONLEA reports, local studies, UNODC estimates.

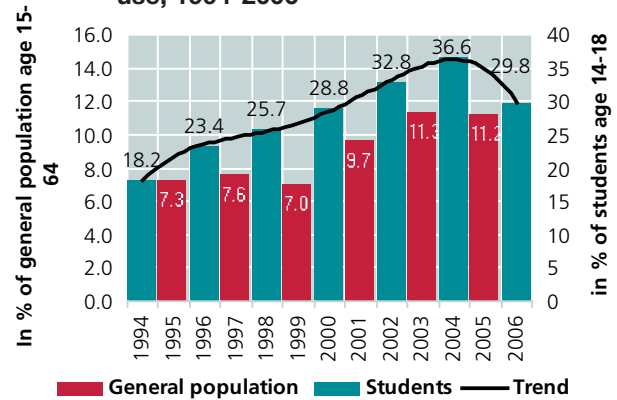
**Cannabis use in major markets of Western Europe shows a stabilization or decline**

Experts in the majority of countries in West and Central Europe (16) perceived cannabis use levels to have stabilized in 2006 (up from 14 in 2005 and 12 in 2004). Eleven countries reported an increase in cannabis use. More recent data suggests that in several of the main cannabis markets of West and Central Europe, consumption of cannabis started to decline. It is possible that there is an increase in risk-awareness associated with cannabis use in some of these countries and that this, combined with an improvement or increase in prevention activities, is leading to a stabilization. While the effect of this is difficult to gauge, there has been some media focus on the rising potency of cannabis in Western Europe and its health consequences.

Lower availability of cannabis exports due to the downturn in production in Morocco could also have had a positive impact. The best example here is Spain, located on the main trafficking route between Morocco and the rest of Europe. Following years of increase, household survey data for Spain indicated a stabilization of the cannabis market over the 2003-2005 period. Spain reported annual prevalence rates among the general population age 15-64 of 11.3% and 11.2% in 2003 and 2005 respectively. Subsequent surveys done amongst high-school students (age 14-18), found an 18 % decline of cannabis use over the 2004-2006 period. Cannabis use among students is now back to the levels recorded at the beginning of the new millennium.

Data for France also show a stabilization of cannabis use, where annual prevalence of cannabis use fell from 9.8% in 2002 to 8.6% in 2005. Cannabis use in France is almost back to the levels reported at the beginning of the

**Fig. 111: Spain: annual prevalence of cannabis use, 1994-2006**

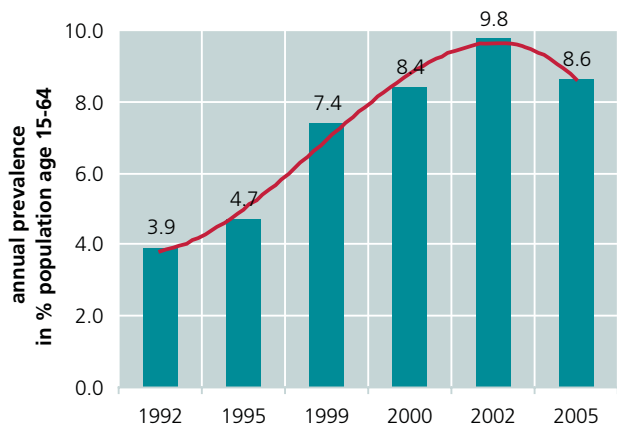


Sources: Ministerio de Sanidad y Consumo, Secretaría, General de Sanidad, Delegación del Gobierno para el Plan Nacional sobre Drogas, Informe de la Encuesta Estatal sobre Uso de Drogas en Estudiantes de Enseñanzas Secundarias, 2006-2007, EMCDDA Statistical Bulletin and UNODC, Annual Reports Questionnaire Data.

new millennium. The decline in cannabis consumption paralleled a growing risk perception of the potential dangers associated with cannabis use.<sup>2</sup>

Cannabis use continues declining in the United Kingdom. Cannabis use fell among the general population in England and Wales from 10.9% in 2002/03 to 8.2% of the population age 16-59 in 2006/07 - a cumulative decline of almost 25%. Cannabis use among those 16-24 year olds fell from 28.2% in 1998 to 20.9% in 2006/07, equivalent to a decline of 26%. The decline in youth use began shortly after 1998, as the UK drug prevention

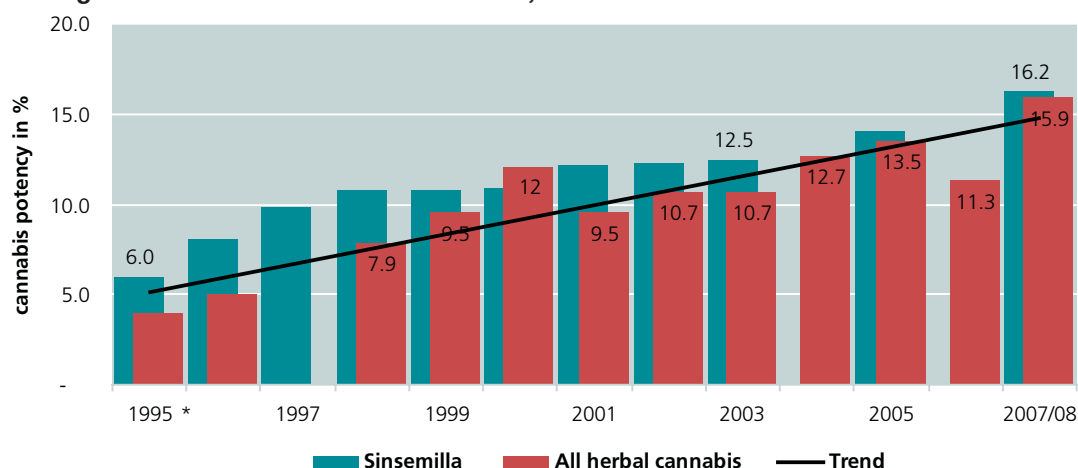
**Fig. 112: France: annual prevalence of cannabis use among the general population (age 15-64), 1992-2005**



Source: EMCDDA, Statistical Bulletin and UNODC, Annual Reports Questionnaire Data

<sup>2</sup> A study done by Eurobarometer in France suggested that the perception that occasional use of cannabis was harmless fell among those 15-24 year olds between 2002 and 2004 from 48% to 30%, which was the strongest such change across Europe. (European Commission, Eurobarometer, *Young people and drugs*, Brussels, June 2004).

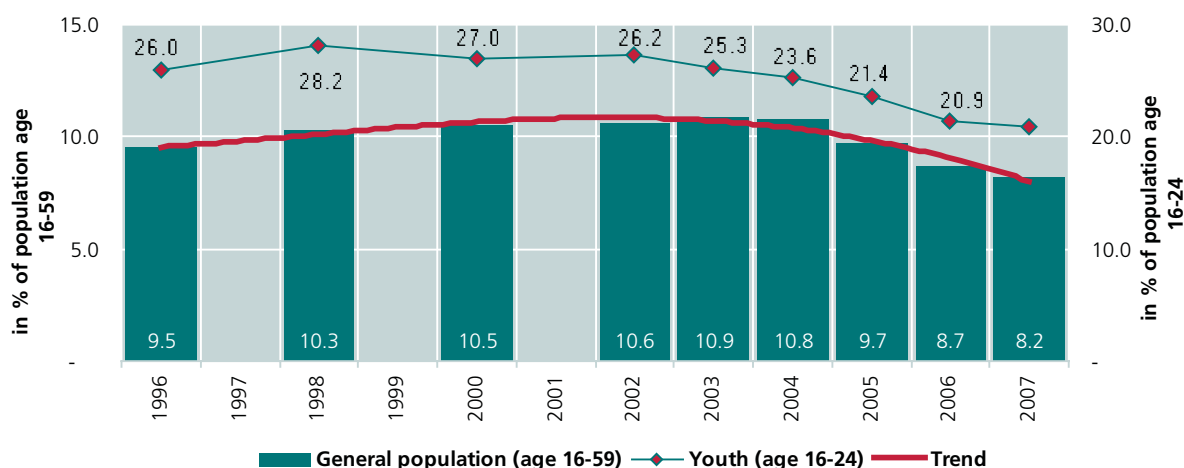
**Fig. 113: England & Wales: THC level of cannabis, 1995-2007/08**



\* herbal cannabis data for 1995 and 1996 refer to imported cannabis only; \*\* Sinsemilla data shown for 2005 refer to the median results of samples selected over the 2004/05 period (14%); the median potency for sinsemilla for 2007/08 amounted to 15%.

Sources: EMCDDA, An overview of cannabis potency in Europe, Lisbon 2004, EMCDDA, Statistical Bulletin on Drugs, 2004-2007, UK Focal Point on Drugs, 2007 National Report to the EMCDDA, David J. Potter, Peter Clark, and Marc B. Brown, "Potency of D9-THC and other Cannabinoids in Cannabis in England in 2005: Implications for Psychoactivity and Pharmacology", Journal of Forensic Science, January 2008, Vol. 53, No. 1, UK Home Office, Home Office Cannabis Potency Study 2008, London 2008.

**Fig. 114: England & Wales: annual prevalence of cannabis use, 1996-2007**



Source: UK Home Office, British Crime Survey, 2006/07, London 2007.

budget was expanded and a number of new prevention activities targeting youth became operational.

The decline of cannabis use in the UK has also occurred parallel to an increase in the potency of the drug. In 2008, the UK Government reclassified cannabis from a Schedule C to a Schedule B drug. This will take effect in 2009.

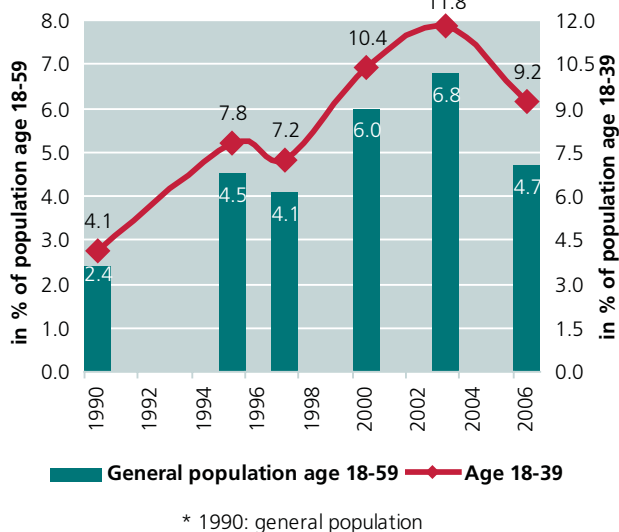
The average potency of cannabis herb in England and Wales doubled over the last decade, from approximately 8% in 1998 to 16% in 2007/08. Two factors were responsible for this:

- shift away from traditional overseas cannabis herb imports from the Caribbean, West Africa and Asia to more potent European (mainly British or Dutch)

hydroponic cannabis grown from selected seed varieties and propagation of female plant cuttings. This material, also known in the UK as 'skunk' or 'sinsemilla'<sup>3</sup>, consists mostly of the flowering tops of female plants and is easily distinguished from the traditionally imported material from overseas markets. In 2002 about half the cannabis herb in the UK was thought to have consisted of traditional imports and the other half of *skunk* or *sinsemilla*. By early 2008, the proportion of the more potent *sinsemilla* had increased to more than 90% of samples seized.<sup>4</sup>

<sup>3</sup> The term *sinsemilla* refers to female plant cuttings. It does not necessarily have to be grown indoors.

<sup>4</sup> The results are based on 2,921 samples submitted in early 2008 by

**Fig. 115: Germany: annual prevalence of cannabis use, 1990-2006**

Sources: German Ministry of Health, EMCDDA, Institute for Therapy Research (IFT) and UNODC, Annual Reports Questionnaire Data. ( General population estimate for 1990 extrapolated from 18-39 age group)

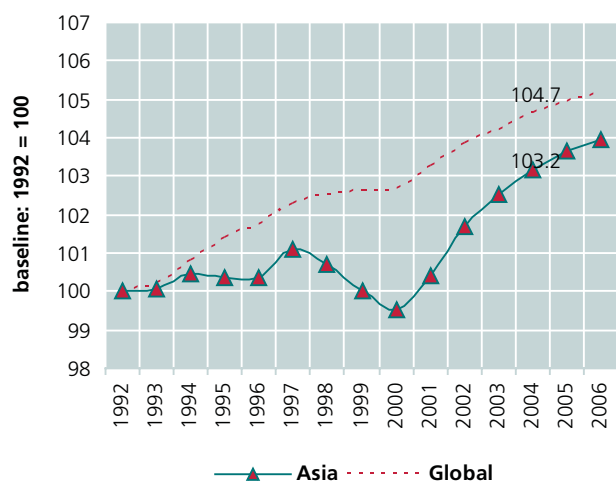
- The THC content of *sinsemilla* found on the UK market increased by about 50% between 1998 and 2007/08 and more than doubled between 1995 and 2007/08. (from 6% to 16.2%: range 4.1 to 46%). The potency of 'imported cannabis herb' increased from around 4% in 1995 to 8.4% in 2007/08: range 0.3 to 22%.

Contributing to increased average potency is the fact that there have been shifts away from cannabis resin to cannabis herb. While cannabis resin used to be more potent than cannabis herb, it is now, at 5.9% in 2007/08 (range 1.3 to 27.8%) much lower than the 16% average cannabis herb potency. There are no indications of an increase in the THC content of cannabis resin. Cannabis resin accounted for 70% of the UK cannabis market in 2002 and has declined, probably due to the declines in resin production in Morocco, to 16% in 2007/08. In parallel, the *sinsemilla* share in the UK cannabis market rose from 15% in 2002 to 55% in 2004/05 and 81% in 2007/08, according to the latest UK home office study.<sup>5</sup>

Data for Germany also show a decline in cannabis consumption. A recently released study on drug use in Germany indicates a strong decline (-30%) in cannabis use amongst the general population age 18 – 59 between 2003 and 2006. The prevalence rate of cannabis con-

twenty-three Police Forces in England and Wales, who were requested to submit samples confiscated from street-level users. UK Home Office, *Home Office Cannabis Potency Study 2008*, London 2008.

5 UK Home Office, *Home Office Cannabis Potency Study 2008*, London 2008.

**Fig. 116: Cannabis use trends as perceived by experts in Asia, 1992-2006**

Sources: UNODC, Annual Reports Questionnaire Data, UNODC Field Offices, UNODC's Drug Abuse Information Network for Asia and the Pacific (DAINAP), UNODC, Global Assessment Programme on Drug Abuse (GAP), Govt. reports, EMCDDA, CICAD, HONLEA reports, local studies, UNODC estimates.

sumption fell from 6.8% in 2003 to 4.7% in 2006. In parallel, the availability of cannabis appears to have deteriorated<sup>6</sup>. The decline in cannabis use is also reflected in cannabis related consumption offences which declined by 16% between 2004 and 2006. Offences related to the import of large quantities of cannabis fell by 50% between 2002 and 2006.<sup>7</sup> Police data suggest that the downward trend in cannabis consumption also continued in 2007. The number of cannabis herb related seizures fell by 7% and those related to cannabis resin fell by a further 17%. Police data suggest that cannabis use is particularly declining for cannabis resin, less so cannabis herb which is increasingly being produced domestically<sup>8</sup>.

Most of the stabilization or decline in use rates in Europe was observed in larger cannabis markets. However, there has been also a stabilization among the Nordic countries, including in countries where prevalence rates are still low. Cannabis use did not grow significantly in Finland, Norway, Denmark or Iceland.

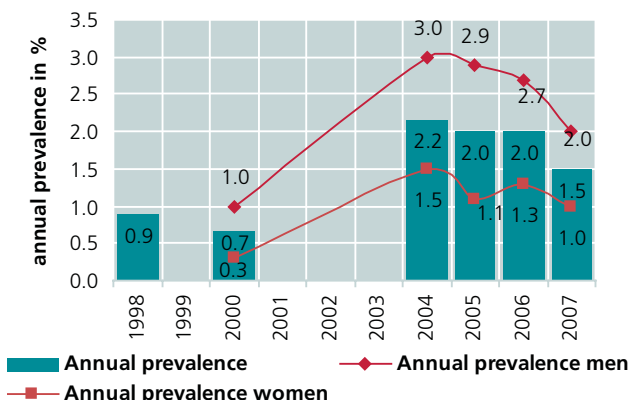
In Sweden, the results of one survey, officially reported to UNODC, suggested an annual prevalence rate of cannabis use of 3.1% in 2006 among the general population aged 16 – 64. However, ongoing monitoring of

6 Cannabis resin prices increased by 7% at the retail level (on a year earlier) and cannabis herb prices rose by 14% in 2006DBDD, 2007 National Report to the EMCDDA by the REITOX National Focal Point Germany.

7 Bundeskriminalamt, *Bundeslagebild Rauschgift, 2006 Tabellenanhang*, Wiesbaden 2007.

8 Bundeskriminalamt, *Rauschgift, Jahreskurzlage 2007*, Wiesbaden 2008.

**Fig. 119: Sweden: annual prevalence of cannabis use among the population age 16-64\*, 1998-2007**



\* data for 2004 refer to age group 18-64.  
 Sources: Statens Folkhälsoinstitut, *Den nationella folkhälsoenkäten Hälsa på lika villkor*, Östersund, 2007 and previous years and EMCDDA, *Statistical Bulletin 2007*.

cannabis use by the Swedish National Institute of Public Health (Statens Folkhälsoinstitut), using the same methodology and the same survey instrument over time, found that cannabis consumption remained stable in 2006 at 2%. For 2007, the survey prepared by the Statens Folkhälsoinstitut reported that cannabis use fell to 1.5% of the population age 16-64. If this is compared to the peak rate of 2.2% in 2004, it would be equivalent to a 30% decline in cannabis use over the 2004-2007 period. A decline in cannabis use was also observed amongst high-school students and military recruits in 2007.

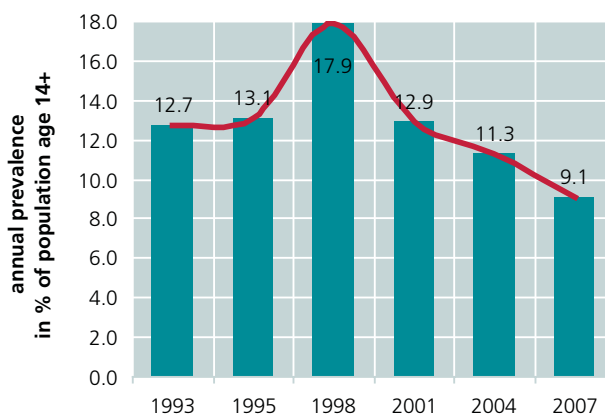
Increasing use is being perceived by experts in several countries of central and eastern Europe. Cannabis use is reported to have increased in 2006 in Ukraine, Belarus, Poland, Slovakia and Hungary. In the Czech Republic, which has the highest prevalence rates of cannabis use of all the new EU countries, the market was reported to have stabilized. Cannabis use was also reported to have stabilized in Austria and Slovenia.

Stabilization of use was reported for most countries of South-East Europe, notably Croatia, Romania, Bulgaria and Turkey. Increases in 2006 were reported in Albania.

**The overall prevalence of cannabis use is rising in Asia**

UNODC's cannabis trend indicator, weighted by the cannabis using population, showed clear upward trend for Asia for the year 2006. Using the year 2000 as a baseline, recent annual increases in Asia has been stronger than the increase at the global level. The number of Asian countries reporting cannabis consumption to have increased rose from 8 in 2005 to 10 in 2006. In parallel, the number of Asian countries reporting a decline in cannabis use fell from 10 to 7 in 2006. Seven Asian

**Fig. 117: Australia: annual prevalence of cannabis use among the population age 14 and above, 1993-2007**



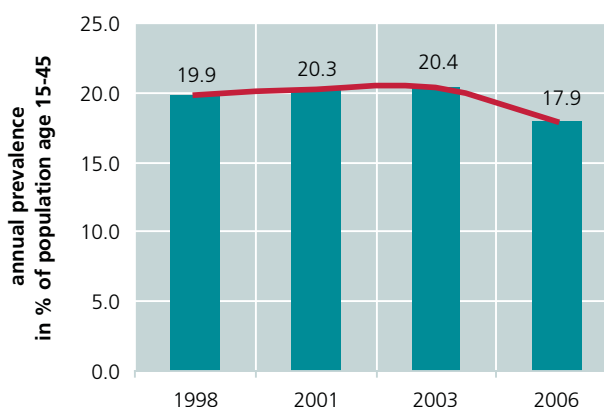
Source: Australian Institute of Health and Welfare, *2007 National Drug Strategy Household Survey*, April 2008.

countries saw cannabis use stabilize in 2006.

**Overall prevalence rates fall again in Oceania**

The decrease in cannabis use in the Oceania region continued. In Australia, the annual prevalence of cannabis use fell almost 20%, to 9.1% of the population age 14 and above, between 2004 and 2007. The 2007 rate was close to 50% lower than the rate of use in 1998. The decline in cannabis use between 2004 and 2007 was strongest amongst the 14-19 year olds, amongst whom use fell by 28%, indicating that prevention activities in schools played an important role in lowering cannabis use. (School surveys seem to confirm this). There was a 20% decline in use in the 20 to 29 age group, a 24% decline in the 30 to 39 age group and 5% decline in the 40 to 49 age group.

**Fig. 118: New Zealand: annual prevalence of cannabis use among the population age 15-45, 1998-2006**



Source: Centre for Social and Health Outcomes Research and Evaluation, *Trends in drug use in the population in New Zealand: Findings from national household drug surveying in 1998, 2001, 2003 and 2006*, Auckland 2007.

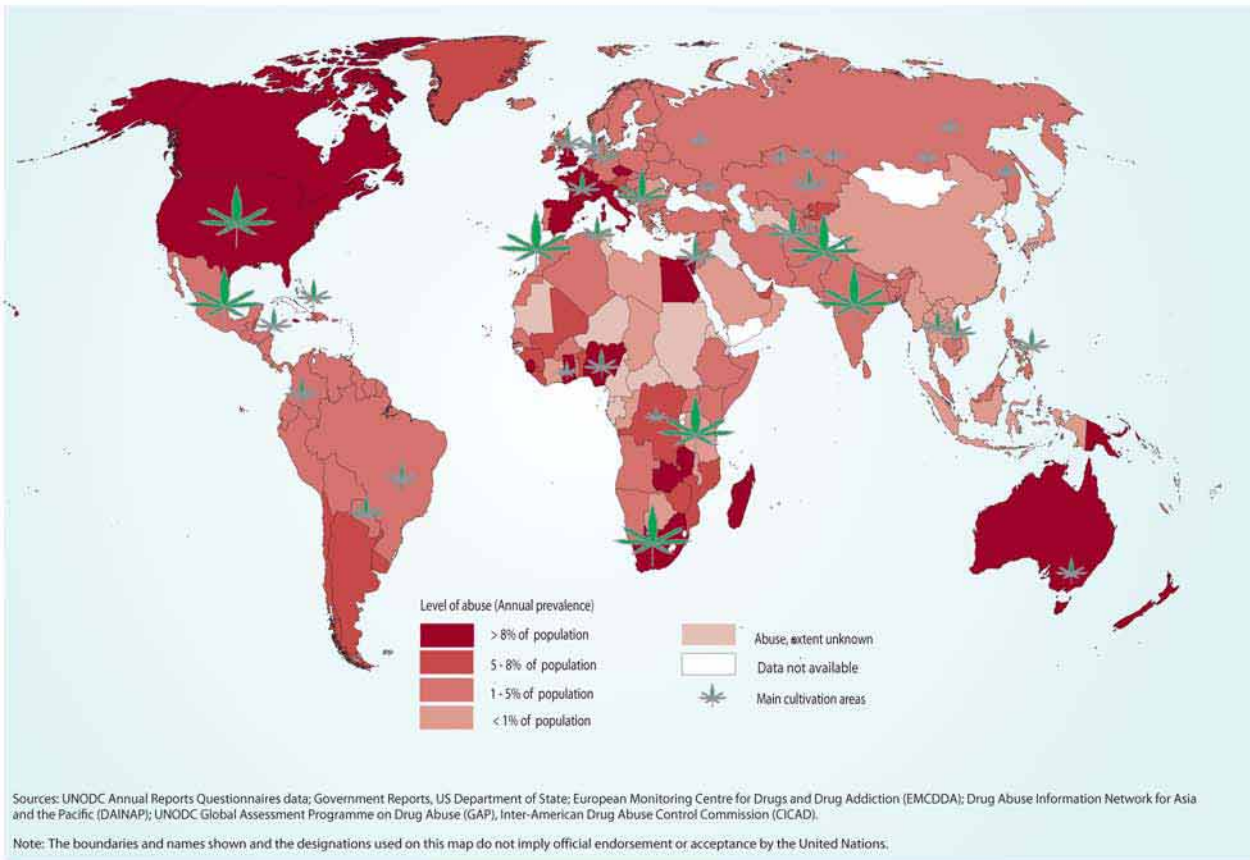


The overall fall in cannabis use in Australia occurred in parallel to some decline in availability, although this could be unrelated to the reduction in use. The proportion of people who had been offered cannabis fell from 21% in 2004 to 17% in 2007.

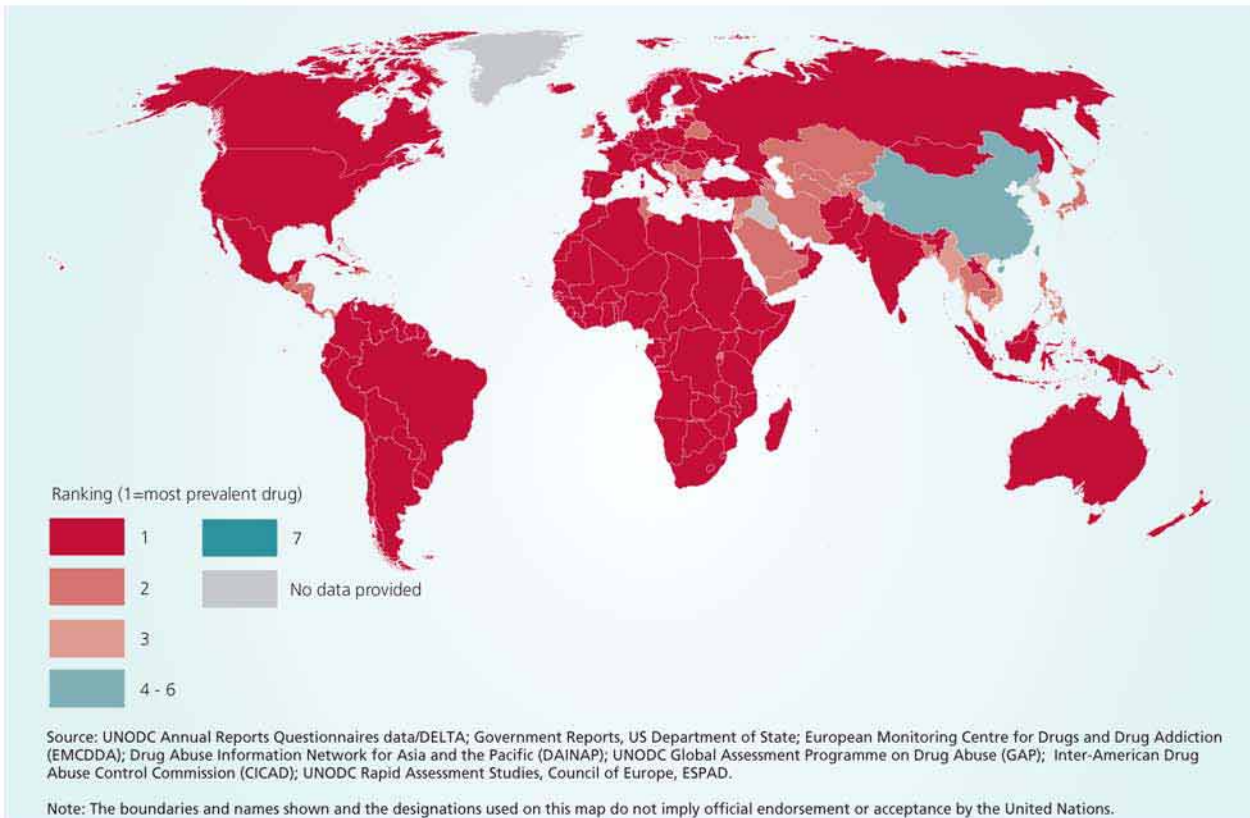
The attitude towards cannabis use seems to be changing. Support for the legalization of cannabis fell from 27% in 2004 to 21% in 2007. In 2004 still 23.2% of Australians considered it to be 'acceptable' to regularly consume cannabis. This proportion declined to 6.6% in 2007. Support for higher penalties for cannabis traffickers rose from 58% in 2004 to 63% in 2007.

Household survey data from New Zealand also showed a decline of cannabis use in recent years. The annual prevalence of cannabis use fell 12% from 20.4% among the population age 15-45 in 2003 to 17.9% in 2007. The perceived availability of cannabis declined also declined.

**Map 17: Use of cannabis 2006-2007**



**Map 18: Ranking of cannabis in order of prevalence in 2006**



Map 19: Changes in the use of cannabis 2006, (or latest year available)

