

SOUTH AFRICAN CENTRAL DRUG AUTHORITY

POSITION PAPER ON CANNABIS

December 2004

NOT TO BE DISTRIBUTED OUTSIDE

THE CENTRAL DRUG AUTHORITY

ACKNOWLEDGEMENTS

The contributions of all those who facilitated the completion of this document are gratefully acknowledged:

- The Department of Social Development for financial support and printing;
- Ms Evodia Mokoko of the Central Drug Authority Secretariat for facilitating and coordinating the overall process;
- The Central Drug Authority Research Sub-Committee, and in particular Prof. Dorothy Malaka (Chairperson of the Research Sub-Committee and Deputy Chairperson of the Central Drug Authority), Dr Lee da Rocha Silva, and Mr Christo Mynhardt who compiled this paper;
- The Legal Department of the Department of Social Development and Central Drug Authority members for reviewing earlier drafts of this paper, and in particular Mr David Bayever, Mr Grant Jardine, Dr Charles Parry, Prof. Solly Rataemane and Ms Bes Steyn;
- Senior students in the Department of Social Work at the University of Limpopo for assisting in the accumulation and summary of relevant literature;
- Ms Ina Stahmer for copy-editing and Ms Annemarie Booyens for technical assistance.

EXECUTIVE SUMMARY

This paper **aims** to provide a rational and coherent framework for discussion and policy development in South Africa regarding cannabis use and trade, apart from serving as an information document. The conclusions reached on the subject are based on a review of available literature on the nature, extent, effects or consequences of cannabis use as well as related government policies in South Africa and to some extent in other countries.

The paper notes that cannabis—or more specifically **Cannabis Sativa**—grows in many parts of the world, including South Africa. Legend has it that cannabis was transported into Africa by way of India and Saudi Arabia. In the pharmacopoeia it is classified as a hallucinogenic, psychodysleptic or psychomimetic that alters perceptions and emotions; and in international drug control conventions as a narcotic and more generally as part of the following groups of psychotropics: depressants (alcohol, Valium), stimulants (minor: coffee and nicotine; major: cocaine and amphetamines), disrupters (cannabis, LSD), antipsychotics and medication for mood disorders (lithium).

The main **mind-altering (psychoactive)** agent in cannabis is delta-9-tetrahydrocannabinol (THC), the concentration of which is reported to be generally high in South African crops. Although psychoactive effects generally last a couple of hours, cannabis ingested is discharged from the body at a very slow rate. Not much is known about the interaction between THC and other factors (substances; conditions of the body) when ingesting cannabis.

Historically cannabis has been cultivated for many reasons, including medical reasons. In South Africa it is **cultivated as a cash crop** for local and external consumers. It is most often prepared as a tobacco-like mixture, which is **smoked** in a pipe (using an ordinary pipe or broken-off bottle top) or rolled into a cigarette. It is frequently **mixed** with crushed methaqualone tablets, occasionally with other drugs such as cocaine, and in some cases sniffed with methylated spirits to give it a quick kick. Cannabis is metabolised more efficiently through smoking than intravenous injection or oral ingestion.

Cannabis smoke contains all the constituents of tobacco smoke (except nicotine), including carbon monoxide, bronchial irritants and carcinogens. Furthermore, unlike tobacco (nicotine) intake, the ingestion of cannabinoids can have adverse psychiatric effects and, like

alcohol intake, it is likely to result in **acute/short-term and long-term** physical and psychological **harm**. As physiologically developing persons have lower resistance, young people—especially those of child-bearing age—can experience repercussions from cannabis use not only for themselves, but also for the children they may bear.

Short-term effects of cannabis use are those that immediately follow use and occur while the psychoactive effects last. These effects are generally referred to as cannabis intoxication and divided into somatic, psychological and psychomotor effects. Somatic effects include (a) cardiovascular effects such as increased heart rate; (b) bronchopulmonary effects that are similar to those of tobacco; (c) ocular effects such as redness of eyes and conjunctival irritation; and (d) other effects such as dry mouth due to decreased saliva secretion, increased appetite due to a drop in blood sugar level and sometimes nausea, vomiting, diarrhoea and urine retention. Psychological and psychomotor effects that have been reported include mood disorders; distortion of time, space and self-image; diminished short-term memory; diminished ability to concentrate and perform complex tasks; slower reflexes and impaired coordination of movement. It has been found that cannabis products bind haemoglobin, thus limiting the amount of oxygen that can be carried to the heart tissue. This deficiency could trigger heart attacks in susceptible people. The impaired coordination and reaction time that follow cannabis intoxication can be hazardous when driving a car, operating heavy machinery, flying a plane or engaging in other activities that require good coordination and reflexes as well as quick judgement. There is evidence of a causal role of acute cannabis intoxication in motor vehicle and other accidents.

Reported long-term (adverse) effects/consequences of chronic cannabis use especially relate to the respiratory system, carcinogenicity, the immune system, the endocrine system, reproductive functions, the cardiovascular system and the risk of becoming dependent on the drug. For example, the consequences of chronic and intense cannabis use (several joints per day for several years) have been found to be similar to those of cigarettes in terms of carcinogenic risks for the respiratory tract as well as the mouth, the tongue and the esophagus. An association between chronic cannabis use and the onset or relapse of various mental disorders has also been found, e.g. psychosis and schizophrenia.

Various studies have reported that chronic users of cannabis among especially socioeconomic disadvantaged persons and offenders develop social adjustment difficulties, e.g. impaired family relationships, poor occupational and educational performance as well as

involvement in criminal activity such as trading in illicit drugs, property crime, violence (e.g. rape), and gang life. Cannabis use during the (pre-) adolescent years has also been found to contribute towards impaired (educational) performance/attainment and social development. Indeed, various studies have shown that the more intense/heavy and the earlier the age of onset of drug use—including the onset of cannabis use—the greater the likelihood that the user will “progress” to a multiple drug use lifestyle, to long-term drug/cannabis use, to drug/cannabis dependence and to a drug/cannabis-crime lifestyle.

Regarding **vulnerability** to cannabis use and particularly cannabis-associated debilities, it is important to note that in South Africa—as in various other African countries and further abroad—the cannabis consumer market has broadened and new patterns of use have come to the fore. Usage, which used to be largely reserved to males, older age groups and particular occasions, has spread to all age groups, and to being used in a variety of ways and occasions as well as for a range of reasons. An increase in cannabis-related problems is expected to accompany the increase in usage. Moreover, a complex combination of individual and environmental factors has been shown to contribute to the increase in the level of cannabis use and the expected increase in associated problems. A national study among detainees in police stations in South Africa, for example, found that (a) as population density and level of formal housing increased in a neighbourhood (e.g. magisterial district), so did the probability decrease of gender differences in cannabis consumption; and (b) greater population density in a neighbourhood increased the probability of individuals experiencing violent encounters (e.g. threats/stabbing with a knife), with these encounters, in turn, increasing the probability of the individuals concerned taking cannabis. It has also been shown that drug use (including cannabis use) and associated problems arise and are maintained within a context of limited socioeconomic opportunities, although affluence does not

necessarily provide insulation against cannabis use and associated problems. Furthermore, the “normalisation” of cannabis use has been found to contribute to increased cannabis use and associated problems, i.e. its integration into day-to-day activities and using it for reasons other than those traditionally accepted and well regulated.

This paper’s analysis of drug control in selected countries with a variable degree of restrictions regarding cannabis, highlighted the following points:

- As the use of and trade in cannabis can impair the health and socioeconomic status of individuals, communities and regions and can impede sustainable local and regional development initiatives as represented in, for example, NEPAD, measures for countering these adverse effects are essential.
- To be effective, **measures against the adverse effects** of cannabis use/trade need to be
 - comprehensive and integrated, e.g. (a) attend to cannabis within the wider context of psychoactive substance use and trade; (b) attend to the demand and supply of cannabis; and (c) operate through a multisectoral—even multiregional—and well-coordinated institutional framework;
 - research-based as well as rigorously monitored and evaluated;
 - especially attentive to young people; and
 - premised on inherently salutary principles.
- Governments that have instituted no or few legal restrictions against personal or “recreational” and medical use of cannabis experience difficulties in ensuring that provisions for the medical use of cannabis are realistic instead of “theoretical” or symbolic gestures, and in preventing the general public and young people in particular from believing that cannabis use is harmless.
- The South African Government’s National Drug Master Plan (NDMP) generally reflects a drug control strategy that takes note of lessons learnt in various other countries with regard to ways of countering cannabis-related problems. However, the following two issues have to be given (more) attention:

- o Indications in other countries that drug treatment courts lower recidivism and “criminal” labelling, indeed divert “offenders” with drug-related problems into appropriate treatment; and
- o The value of (a) wide-spread public awareness of the adverse effects of particular patterns of cannabis use, and (b) wide-spread public participation in efforts at countering cannabis-related problems.

Finally, the following statements of the Director-General of the United Nations Office on Drugs and Crime in Vienna reflects a key issue when considering cannabis policy:

“The priority the international community is attributing to ... stronger tobacco-control legislation ... is twin to global efforts to maintain strong counter-narcotics legislation ... If we apply the spirit ... of ... [the] Tobacco Control Convention (agreed by 171 member states) to cannabis, it is clear what we need to do. We need to ensure that the centre of our attention is the health and the well being of our people ... [However,] is there not a contrast ... between efforts by the international community to negotiate and agree on a Convention on Tobacco, because of the lethal consequences of its abuse, and the frequently heard calls to liberalize the production, trafficking and abuse of cannabis—a substance known to bring about even greater damage to health?”

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1. AIM

The aim of this paper is to provide a rational and coherent framework for discussion and policy development within government circles in South Africa regarding cannabis use and trade. It is also intended as an information document to stakeholders within and outside the country, e.g. members of executive committees in the various provinces of South Africa and South African embassies. As such the paper is to be submitted to Cabinet for discussion with a view to its endorsement before being distributed outside the Central Drug Authority (CDA).

The paper reviews available literature on the nature, extent, effects or consequences¹ and vulnerability to cannabis use as well as related government policies in South Africa and to some extent in other countries. Special attention is given to available comprehensive/international reviews of the subject, e.g. by Kalant (2004), the United Nations Office on Drugs and Crime (2002, 2003), the Canadian Senate Special Committee on Illegal Drugs (2002), Drugscope (2001) in the United Kingdom, the Irish Government in its National Drug Strategy of 2001-2008 (Department of Tourism, Sport and Recreation, 2001), the United Nations Office for Drug Control and Crime Prevention (1999), the World Health Organization (1997), and Du Toit (1978).

2. BACKGROUND

Although cannabis has been the subject of much research and discussion locally and abroad, it is not easy to synthesise the literature because of the **complexity** of the subject and difficulty to distinguish between “fact” and “fiction” (Canadian Senate Special Committee on Illegal Drugs, 2002). Hanson and Venturelli (1998:368), for example, comment as

¹ The Canadian Senate Special Committee on Illegal Drugs (2002:143) states the following when distinguishing between effects and consequences of cannabis use: “Most of the works consulted in pharmacology, toxicology and psychiatry speak of chronic effects. For our part, we prefer to speak of *consequences* resulting from chronic use. There are two reasons for this. First of all, because these consequences result not so much from the substance itself as from the way it is used. Therefore we are not dealing with the effects of the substance, but rather with the consequences that may arise from repeated, or even heavy, use ... We feel this distinction is fundamental because it is common, at all levels of public discussion ... to blame the substance—here cannabis, there alcohol or medications, even other illicit drugs—when in fact we must learn to distinguish between patterns and methods of use. By that we mean at-risk behaviour, which varies with the substance of course, and which does not depend solely on the intrinsic properties of the substance, but stems, in an overall approach, from the relationship between the substance and its place in society (integrated or not), from the individual’s characteristics, and from the society in which the substance is used. Of course by that it should be clear that we consider as separate, for cannabis as for alcohol, use, at-risk use and heavy use (or abuse) and that we reject the equivalency often made between use and abuse where any form of use is perceived as abuse. At the same time, we are aware of the vagueness that ... surrounds these various types of behaviour ... and that there is no clearly defined boundary, even less a universal boundary, between use, harmful use and dependence ... consequences [therefore] ... refer ... to chronic use (which then includes at-risk and heavy use).”

follows: “Perhaps no other substance has been the object of so much research and **controversy** [as cannabis]. [Emphasis added.] It is difficult to wade through the emotions, politics and rigidity found in writings on marijuana to tease out the objective clinical reality. Extreme views go back to the 1930s, when the film ‘Reefer Madness’ portrayed an after school marijuana ‘club’ for high school students in suits and ties who became hallucinatory, destructive and even suicidal after using marijuana.” (Hereafter (a) the terms “cannabis” and “marijuana” as well as (b) the terms “psychoactive substance”, “substance” and “drug” will be used interchangeably.) The difficulty of distinguishing between truth and bias in written material is however not unique to writings on cannabis. Remarking on scientific writings generally, the South African, Saliem Fakir (2004), recently noted: “What has been missing from science is not truth. Rather, the problem is the ethical disposition of scientists with commercial or political interest who latch onto every last vestige of scientific opinion so long as it proves their case.”

Research and discussions on the use of cannabis highlight various issues. Attention is drawn to indications that in the current global context cannabis is the **most widely used illicit drug**, is spreading in certain regions, and in some regions the age of onset of use is declining² (Costa, 2003; United Nations Office for Drug Control and Crime Prevention, 2000). Available research data suggest similar trends in South Africa, at least in certain communities/regions/sectors and since the early 1990s (Da Rocha Silva, 2004; Parry, Myers, Morojele, Flisher, Bhana, Donson & Plüddemann, 2004; United Nations Office on Drugs and Crime, 2003; Brook, Whiteman, Finch, Morojele & Cohen, 2002; International Narcotics Control Board, 2002; United Nations Office on Drugs and Crime, 2002; United Nations Office for Drug Control and Crime Prevention, 1999).

In South Africa, attention has also been drawn to the wide **accessibility** of cannabis. Cannabis is generally the cheapest of available illicit drugs in South Africa (United Nations Office for Drug Control and Crime Prevention, 1999). Users can either buy it from the black market at about R5 per matchbox or R10 per bank bag; or they cultivate it themselves in any space available. The following statistics (Parry, 2002:696) underline the wide accessibility of cannabis in South Africa: Between 1991 and 2000 the “South African Narcotics Bureau

² It is important to take cognisance of the following cautionary note in the Canadian Senate Special Committee on Illegal Drugs (2002:101): “Obviously, use patterns are not immediately comparable from one country to another, not only because of cultural differences but because the systems for collecting data on use patterns do not all measure the same things in the same way, or even for the same period.”

arrested 38 814 people on charges related to the possession of cannabis and 59 539 for dealing in cannabis”. Indeed, cannabis is widely cultivated in South Africa (Ahmed, 2001; United Nations Office for Drug Control and Crime Prevention, 1999). For some South Africans the cultivation of cannabis has become a source of income, which they have to protect, even with their lives. Cannabis is grown for the local as well as overseas market. The South African Police Service, for example, reports that cannabis is exported from South Africa to inter alia the United Kingdom and the Netherlands. It is shipped out by air or by sea. Regular police raids on plantations in KwaZulu-Natal and the Eastern Cape indicate that the cultivation of cannabis is flourishing, especially in deep rural areas (Ahmed, 2001). Limited resources and the rough terrain in deep rural areas hamper efforts at detecting and stemming cultivation (United Nations Office for Drug Control and Crime Prevention, 1999).

Although various studies have confirmed the positive **medical potential** of cannabis, many scientists are adamant that alternative drugs that do not lead to dependence are equally effective and are already available in the market (Canadian Senate Special Committee on Illegal Drugs, 2002; Department of Tourism, Sport and Recreation, 2001; World Health Organization, 1997). Advocates for the medical use of smoked cannabis frequently claim that it reduces nausea associated with cancer chemotherapy; counteracts the wasting syndrome associated with AIDS; and helps in the treatment of glaucoma. However, they fail to mention the negative side effects of cannabis use, e.g. negative cardiovascular effects, negative effects on the lungs and undesirable mental and behavioural effects.

Another issue brought to the fore in discussions of cannabis is its **psychoactive** nature. Cannabis has been shown to affect perception, mood, cognition, behaviour or motor function when ingested (Kalant, 2004; Canadian Senate Special Committee on Illegal Drugs, 2002; United Nations International Drug Control Programme, 1997). Related to this issue are discussions about the **risks** that cannabis use may pose for the user and the community. In this regard, Skidelsky (2003:56) observes that, although smoking cannabis is in some respects less risky than drinking alcohol, “eating dope ... is a serious business. When cannabis is ingested, the effects are felt more intensely, last much longer and are a good deal harder to predict. In the parlance of drug-taking, losing it completely becomes a real possibility.”

In South Africa, the effects/consequences of cannabis use have raised concern in various circles. Based on a situation analysis of drug use in a low-resourced and low-income

setting in KwaZulu-Natal in South Africa, Mathe (2003:3), for example, comments as follows:

“While developed countries are concerned about more sophisticated drugs such as LSD, ecstasy, heroin and cocaine in the low-resourced settings of South Africa, cannabis is the drug that merits attention since it is the most easily available and affordable drug to the poor and it is to some extent responsible for the high failure rate, dropping out of school, unemployment and even rampant preventable diseases that lead to a high death rate.”

Although the accumulated body of knowledge on the outcomes or effects/consequences of cannabis use has facilitated certain generalisations, researchers caution against simplistic and finite generalisations and especially generalisations that characterise cannabis as necessarily or intrinsically having adverse outcomes or, for that matter, “blame” cannabis use as, for example, the “root cause” of various adverse conditions. Attention is drawn to the complexity and variability of the relationship between the use of cannabis and various (adverse) conditions or, for that matter, outcomes of such use. Generally and in line with a **public health** (PH) conception of drug use, the point is made that the outcomes of cannabis use are a function of a combination of interrelated factors such as the pharmacological nature of the drug, the psychosocial characteristics of the user and the environmental circumstances in which usage is initiated and maintained (Da Rocha Silva, 2004; Canadian Senate Special Committee on Illegal Drugs, 2002). A PH conception of cannabis use is suited to the increasing prominence that is given in South African public policy making to **preventative** (rather than reactive deterrent/punitive) and **integrated solutions** to socioeconomic “problems”. (Recent policy documents that emphasise preventative and integrated solutions include the *Reconstruction and Development Programme* of 1994, the *National Crime Prevention Strategy* (NCPS) of 1996, the 1997 *White Paper for Social Welfare, the Integrated and Sustainable Rural Development Strategy* (ISRDS) of 2002, and the 1998 *White Paper on Safety and Security*.) Moreover, the PH conception allows agencies concerned with countering adverse effects/consequences of cannabis use (such as the International Narcotics Control Board (2003), the United Nations Office for Drug Control and Crime Prevention (1999) and the New Economic Partnership for Africa’s Development (NEPAD)) to link the issue of preventative and integrated solutions to efforts towards facilitating **social development** as called for in the *White Paper for Social Welfare* (1997).

The use, production and distribution of cannabis are overseen by international conventions such as the United Nations Single Convention on Narcotic Drugs of 1961—with cannabis designated as an illicit drug. However, pressure towards a more liberal approach has mounted in countries such as Australia, Canada and the United Kingdom (Canadian Senate Special Committee on Illegal Drugs, 2002). In contrast, strong opposition towards adopting more liberal **policies** in respect of the use, production and distribution of cannabis generally prevails in African countries (International Narcotics Control Board, 2003).

Against the above background, subsequent paragraphs discuss in more detail the composition of cannabis, its cultivation and in particular the rationale behind such cultivation, methods of use, health and socioeconomic risks, vulnerability to usage and adverse effects/consequences as well as policy related to the use, production and distribution of cannabis. To facilitate perspective and comprehensiveness, available information regarding the South African context as well as selected other countries on the African continent and abroad is considered.

3. COMPOSITION OF CANNABIS

Cannabis is simply the hemp plant, *Cannabis Sativa* (Canadian Senate Special Committee on Illegal Drugs, 2002; Hanson & Venturelli, 1998; Du Toit, 1978). Cannabis is known by a large variety of names among the different ethnic groups, socioeconomic classes and locations in South Africa, e.g. “grass”, “joint”, “boom”, “zol”, “dope”, “skyf”, “weed”, “hash”, “mojat” and “poison”. A customer must know the lingua franca of the people in his/her specific location to be trusted enough as trader or customer and do business in public places.

Cannabis Sativa grows in many parts of the world. Hanson and Venturelli (1998) state that although most botanists agree that there is only one species (*sativa*) and that all the variants (*indica*, *americana* and *africana*) belong to that species, others believe that the variants are three distinct species. *Indica* is considered to have the most potent resin, but climate, soil and selective plant breeding all influence potency.

Cannabis is dioecious, which means it has male and female plants. There are more than 400 known chemicals in the cannabis plant. The Canadian Senate Special Committee on Illegal Drugs (2002:77) notes:

“Classified in the pharmacopoeia as a hallucinogenic, psychodysleptic or psychotomimetic, cannabis is a disrupter or modulator, that is to say that it alters

perceptions and emotions. Classified in the international conventions ... as a narcotic, cannabis belongs to the class of psychotropics which comprises five major groups: depressants (alcohol, Valium), stimulants, minor (coffee, nicotine) and major (cocaine, amphetamines), disrupters (cannabis, LSD), antipsychotics and medication for mood disorders (lithium).”

The main psychoactive (mind-altering) agent in cannabis is delta-9-tetrahydrocannabinol (THC). Some varieties of cannabis are less toxic than others. Furthermore, THC is most concentrated in the flowering tops and upper leaves of the female plant. The average concentration of THC is 7,5%. However, in female plants that have been bred without pollination, such as sinsemilla, one of the most potent varieties, the concentration can be 24%. Indeed, sinsemilla and other potent varieties of cannabis are particularly traded in the black market, and fetch a higher price. Conditions such as type of seed, soil moisture and fertility, amount of sunlight and temperature affect the amount of active ingredients in the plant (Hanson & Venturelli, 1998). The most potent varieties thrive better in hot upland climates. The THC content of the cannabis grown in South Africa is reported to be generally comparatively high (United Nations Office for Drug Control and Crime Prevention, 1999:24).

THC accumulates in the fatty body tissue, and readily spreads in the innervated tissues of the brain (Canadian Senate Special Committee on Illegal Drugs, 2002). It reaches a peak in the blood plasma in less than nine minutes and falls to about 5% after one hour. Psychoactive effects generally last two to seven hours after use. It is discharged from the body at a very slow rate, with traces of one “joint” remaining in the body for up to three weeks (Canadian Senate Special Committee on Illegal Drugs, 2002; Eddy, 1995). The Canadian Senate Special Committee on Illegal Drugs (2002:83) also cautions that not much is known about the interaction between THC and other factors (substances; conditions of the body) when ingesting cannabis, noting: “In all, we do not know how the effects of THC (concentration) interact with personal factors (way of smoking, health status, alcoholism or medication). However, it is likely that the same THC concentration does not have the same effect on all smokers.”

4. HISTORY OF THE CULTIVATION OF CANNABIS

The first known record of cannabis use is found in the Book of Drugs written by the Chinese emperor Shen Nung in about 2737 BC. Cannabis was prescribed for treating gout, malaria,

gas pains and absentmindedness. The Chinese were the first people to document cannabis use, as indicated in their book R-HYA, which was published in the 15th century. They referred to the cannabis plant as “ma” (“maw”), which means “valuable” or “endearing”. For thousands of years they produced fibre for clothes and medicine from it. The negative effects of the plant were also documented by the Chinese, around 500 BC. They observed that youngsters became wild and disrespectful from the recreational use of cannabis. Hence some referred to the plant as the “liberator of sin”, which led to its banning in China. However, because of rampant use, it was later legalised.

The ancient Greeks also knew about cannabis. Galen described the general use of hemp in cakes which, when eaten in excess, were narcotic. Herodotus described the Scythian custom of burning cannabis seeds and leaves to produce a narcotic smoke in steam baths. It was believed that breathing this smoke caused frenzied activity. Groups of people would stand in the smoke and laugh and dance as it took effect.

In India, cannabis formed an essential part of religious ceremonies for thousands of years. The Rig Veda and other chants describe the use of soma, which is believed to be some variety of cannabis. Early writings describe a ritual in which resin was collected from the plants. In Assyria, records reveal that by the year 650 BC, azulla (some drug) was used for making rope and cloth. Azulla was also consumed to induce euphoria.

There is no clarity as to how this drug was transported into **Africa**, but it has been suggested that it came by way of India and Saudi Arabia. It is believed that the Spaniards transported the plant to the West as a source of fibre and seed. The Canadian Senate Special Committee on Illegal Drugs (2002:112) also notes:

“Although not indigenous to Africa, the cannabis plant is part of religious, medical and cultural traditions across almost the entire continent. In Egypt, it has been grown for over a 1 000 years, while the first evidence of its presence in central and southern Africa dates back to 14th century Ethiopia where ceramic smoking-pipes containing traces of cannabis were discovered. In North Africa, cannabis influenced music, literature and even certain aspects of architecture, since in some homes a room was set aside for kif [or cannabis] where family members gathered to sing, dance and tell stories. The plant was also used as a remedy for snake bite (Hottentots), to facilitate childbirth (Sotho) and as a remedy for anthrax, malaria, blackwater fever and blood poisoning (former Rhodesia).”

The United Nations Office for Drug Control and Crime Prevention (1999:21) also comments that in various countries in Africa, including South Africa, “cannabis has probably grown wild and perhaps been cultivated and used for narcotic purposes for hundreds of years”. Du

Toit (1978) states that when whites under the Dutch East India Company settled in the Cape of Good Hope in 1652, cannabis was already being smoked by various indigenous groups, including the Khoikhoi and San. It was known as “dagga”. Furthermore, there are indications that in the KwaZulu-Natal province in South Africa cannabis has been cultivated and used by many generations since centuries ago. It is, furthermore, important to note evidence—presented at a 1998 meeting of Heads of National Drug Law Enforcement Agencies in Africa—that South Africa is one of the largest producers of cannabis in the world (United Nations Office for Drug Control and Crime Prevention, 1999).

5. RATIONALE FOR THE CULTIVATION OF CANNABIS

Cannabis is a cash crop. The United Nations Office for Drug Control and Crime Prevention (1999:27), for example, comments in a 1998 report on trafficking trends in Africa that “cannabis has become a cash crop, grown not only to supply the increasing market of the youth in major cities of the [African] continent but also for export, mainly to Europe and North America”.

The cannabis plant is a weed that requires little care. It grows well almost everywhere and thrives well in temperate regions. It resists pests and therefore requires no pesticide. It develops deep roots, and when its leaves fall off, they produce minerals and nitrogen, which are returned to the soil. It can be planted in the same soil for up to 20 years in a row without any noticeable depletion of the soil, although fertilisers and care in the cultivation of cannabis are inclined to add to its potency. Its cost-effective production and high yield make a mockery of any attempt to seek an alternative crop for the producers. Furthermore, while the nutritional value and the clothing and paper produced from the plant can be obtained from alternative products, the economic value of cannabis on the black market (where it is traded for its psychoactive effect) is generally unsurpassable. It is also generally expensive in countries such as Canada to obtain cannabis for therapeutic purposes.

Even though cannabis has been cultivated for economic purposes for many years throughout South Africa—with the main areas being KwaZulu-Natal and the Eastern Cape where it grows easily—little is known about the exact amount of cannabis that is cultivated (Ahmed, 2001; United Nations Office for Drug Control and Crime Prevention, 1999; Du Toit, 1978). It is an open secret that cannabis is illegally cultivated in some open spaces and at gravesites around townships such as Soweto and Katlehong in Gauteng. Users ever so

often use whatever space is available to cultivate cannabis—plant pots, backyards and unsuspecting employers’ gardens (among flowers and vegetables). Indeed, cannabis in urban and rural South Africa is almost as commonly available as snuff. Despite the efforts of the South African Police Service to destroy cannabis fields in South Africa, cultivators continue their cannabis production, with some being prepared to protect their fields with their lives. The following reasons for the production of cannabis have been advanced:

- **Nutritional value**

The seed serves as food. Gruel, which resembles oatmeal, can be prepared from the seed. The leaves of the plant contain much roughage, while the seeds are a good source of protein and oil without saturated fat, thus reducing the risk of heart attack.

- **Production of clothes**

The fibre of the hemp plant can be woven into any kind of cloth. Much of the cotton material used for clothing in Canada is produced from hemp. In fact, the first Levis blue jeans were produced from hemp. However, as it takes much manual labour to convert the hemp into usable fibre, and fishnets and other equipment used in the process tend to be in short supply, alternative fibres have come to replace the cannabis plant.

- **Production of paper**

The stalk of the hemp/cannabis plant has two parts, namely the bast (fibre) and the hurd (pulp). The first “paper” to be produced in ancient China was from hemp. Fibre paper is thin, tough and a bit rough, whereas pulp paper is less strong than fibre paper but easier to make, softer, thicker and preferable for most everyday purposes (Spruit & Van Laar, 1997).

- **Medical/therapeutic use**

Cannabis has a long history of medical use in various countries (Grinspoon & Bakalar, 1993). Cannabis was used to treat a variety of human ills in folk and formal medicine for thousands of years in Turkey, South America, Egypt, India, the Malays, Burma and Siam (Hall & Degenhardt, 2003; Mechoulam, 1986; Anslinger & Cooper, 1937). In the early 1800s, United States physicians used cannabis extracts to produce a tonic for both medicinal and recreational purposes. However, in 1937 its use as an intoxicant was prohibited by the

Marijuana Tax Act. Nevertheless, in the same year tinctures of cannabis were still cited in the United States Pharmacopeia and National Formulary's list of therapeutic drugs.

Until 1937 a nerve tonic produced from the cannabis plant was legally retailed in South Africa. For many years, mankind here attached medicinal value to the cannabis plant and used it for many ailments such as epilepsy, asthma, heart attack, multiple sclerosis and cancer (Spruit & Van Laar, 1997). Some religious groups such as the Rastafarians refer to it as the holy plant that induces calmness and inner peace. Some traditional healers (e.g. *ngakaya malopo*) and some indigenous religious leaders in South Africa also assert that cannabis helps people to "see into the future" and to "hear voices" of prophecy. This is in keeping with Hanson and Venturelli's (1998:372) statement: "A subjective euphoric effect associated with marijuana use is the ongoing social psychological experiences incurred while intoxicated with marijuana. It includes both the user's altered state of consciousness and his or her perceptions while intoxicated." The following therapeutic benefits have been listed with regard to cannabis use:

o AIDS-related wasting

Drocannabinol is used to stimulate appetite and to assist AIDS patients to gain weight (Beal, Olson, Laubenstein et al., 1995). Hall and Degenhardt (2003), however, point out that some patients do not like the psychoactive effects of drocannabinol; they find it difficult to titrate their oral dose because of the delayed onset and prolonged duration of its effects.

o Glaucoma

Glaucoma is caused by elevated intra-ocular pressure (IOP), which produces blindness if untreated. Drocannabinol taken orally or intravenously reduces IOP by 25%, but this effect lasts only for three to four hours (Hall & Degenhardt, 2003). Cannabis lowers glaucoma-associated IOP, even though it does not cure the condition or reverse blindness.

o Anti-asthmatic effect

Cannabis smoke results in bronchodilation. This means that it dilates the air passages and thus achieves an anti-asthmatic effect. Some researchers have observed that short-term smoking of cannabis improves the breathing of asthma patients.

o Muscle-relaxant effect

Some studies have shown that muscle spasms are relieved when patients with muscle disorders, such as multiple sclerosis, use cannabis (Pertwee, 2002). While several other studies have provided some support, Hall and Degenhardt (2003:691) state: “There are too few clinical trials to evaluate efficacy.”

o Anti-seizure effect

Cannabis has both convulsant and anti-convulsant properties. It has been considered in the prevention of epileptic seizures.

o Anti-depressant effect

Cannabis and the synthetic cannabinoid synthexyl have been used successfully in Great Britain as specific euphoriant for the treatment of depression.

- **Analgesia**

A small number of controlled trials in humans suggest that drocannabinol and other cannabinoids have analgesic effects in acute post-operative and chronic pain, being equivalent to 60 mg codein (Hall & Degenhardt, 2003; Bagshaw & Hagen, 2002; Campbell, Tramer & Carrol, 2001). However, according to these authors, some patients report adverse psychotropic effects from these cannabinoids. Hanson and Venturelli (1998) also note that the pain-relieving potency of cannabis has not been carefully studied and compared with the pain-relieving properties of other analgesics such as the narcotics or aspirin-type drugs. Indeed, various researchers have emphatically stated that cannabis and related products must be rigorously tested for toxicity and therapeutic effectiveness, a process which is “time-consuming, expensive and not worthwhile if other drugs are already available that offer therapeutic efficacy comparable to, or better than, the marijuana substances. In addition, concerns about the abuse potential and the social stigma associated with marijuana need to be considered” (Hanson & Venturelli, 1998:385).

- o **Anti-nausea effect**

Cannabis (THC) or related drugs have often been used for the symptomatic relief of extreme nausea and vomiting that tend to accompany cancer chemotherapy (Hall & Degenhardt, 2003). In Canada, in the late 1970s and early 1980s, for example, cannabis was used medically by hundreds of patients (mainly in the form of synthetic tetrahydrocannabinol) in state projects for the treatment of nausea and vomiting in cancer chemotherapy. This practice was, however, discontinued “because each state program had to comply with an enormous federal paperwork burden that was more than the physicians and administrators involved could bear” (Grinspoon, 1998:386).

Hall and Degenhardt (2003) further state that newer anti-emetics, such as ondansetron, appear to provide better control over nausea and vomiting than drocannabinol, with fewer adverse effects. There may be value in exploring the efficacy of combining ondansetron and drocannabinol to manage poorly controlled or delayed vomiting (Hall & Degenhardt, 2003).

6. METHODS OF USE

The United Nations Office for Drug Control and Crime Prevention (1999:19-20) notes that in Africa cannabis is most commonly smoked, although it is also

“processed into cannabis paste (by pounding the plant and adding water), ‘hashish’ (by scraping the resin off the leaves and then compressing) and cannabis oil (distilled from the seeds). Processed cannabis derivatives are added to various foods and beverages ... including local gin ... [and in some African countries] cannabis can also be taken as an infusion ... [and] smoked in a mixture with cocaine, crack cocaine or heroin ... [In] South Africa it is also mixed with crushed methaqualone tablets—known as ‘white pipe’...”

De Miranda (1998) observes that in South Africa cannabis is most often prepared as a tobacco-like mixture, which is smoked in a pipe or rolled into a cigarette. Ordinary tobacco pipes are sometimes used, but broken-off bottle tops, sometimes known as “green pipes”, are more common. The mouths of these pipes are blocked with tightly coiled silver paper from cigarette packs. Other pipes used for cannabis are quite bizarre, with some taking the same shape as bottlenecks but are made of leather, copper and many other materials, including ornamental wood. Cannabis can also be eaten in cakes, or taken in liquid form as some type of tea. Some youths in the rural areas in South Africa add methylated spirits to the drug in order to give it a quick kick. When used in the latter form, it is sniffed.

7. HEALTH AND SOCIOECONOMIC RISKS OF CANNABIS USE

Views and research findings on the health and socioeconomic risks of cannabis use—or, for that matter, adverse effects/consequences—are varied and even conflicting on occasion. In the late 1930s, for example, cannabis was classified as a narcotic in the United States. It was declared a killer drug that also causes insanity. But by 1944 scientists from the New York Academy of Medicine declared that cannabis was not the killer that many thought it to be. In 1992 Abood and Martin wrote: “Cannabis was mistakenly considered a narcotic, like opium, and legal authorities treated it as such” (Hanson & Venturelli, 1998:368). Whereas Solomon, as cited by Hanson and Venturelli (1997:365), found that those who had been smoking cannabis for years “showed no mental or physical deterioration that may be attributed to the drug”, Abood and Martin (1992) found that an acute dose of cannabis could produce adverse reactions, ranging from mild anxiety to panic and paranoia in some users.

The varying quality of cannabis and the fact that “it is impossible to know the amount of drug taken without analyzing the original material and the leftover stub, or ‘roach’” are some of the factors that complicate research and decisions regarding the health and socioeconomic risks of cannabis (Hanson & Venturelli, 1998:370). Indeed, the effects of cannabis use are mediated by the **dose and concentration** of the THC ingested. The Canadian Senate Special Committee on Illegal Drugs (2002) in Canada also notes the following complicating factors in discussions about the effects of cannabis: First, while the effect of THC—the main active component in cannabis—on the central and peripheral nervous system has been established fairly clearly, there is uncertainty as to the effects of the **other chemicals** in cannabis. Second, research on the effects of cannabis tends to be based on **experiments with animals** and molecules extracted for experimental purposes. Third, decisions regarding the effects of cannabis generally do not go beyond identifying a **statistical association** between cannabis and other factors, which association does not necessarily indicate a causal relationship. Fourth, the **complexity of the human body**, and in particular the interactive relationship between various aspects of the body and between the human body and the environment in which it operates, make it difficult to go beyond making arbitrary or fragmentary decisions about the effects/consequences of cannabis use. Fifth, the effects of cannabis use are also influenced by a number of other factors such as the length of time cannabis has been taken, the route of **administration**, the frequency of use, the user’s experience and **expectations** concerning the use of cannabis and other drugs, the **age of onset** of use, the **context** of use, and whether **other drugs** are used in combination with the cannabis.

Concern has, consequently, been expressed about indications that present-day cannabis can be “about 20 times more potent than the marijuana on the street in the 1960s and 1970s” (Hanson & Venturelli, 1998:365). (The Canadian Senate Special Committee on Illegal Drugs (2002:81), however, cautions against glib conclusions about the potency of present-day cannabis, noting that “the main change has been in maximum concentrations obtained as a result of sophisticated cross-breeding and cultivation methods, whereas average concentrations have not significantly changed over the past 30 years”.) The concern about the concentration of present-day cannabis particularly relates to indications that comparatively high concentrations of cannabis smoke contain all the constituents of tobacco

smoke (except nicotine), including carbon monoxide, bronchial irritants and carcinogens. Furthermore, unlike tobacco (nicotine) intake, the ingestion of cannabinoids can have adverse psychiatric effects and, like alcohol intake, it is likely to result in acute/short-term and long-term physical and psychological damage. As physiologically developing persons have lower resistance, the harm that young people—especially those of child-bearing age—can experience from cannabis use, can have repercussions not only for them, but also for the children they may bear (Kalant, 2004).

Notwithstanding various factors complicating research and decisions about the effects/consequences of cannabis use, a review of the available literature on the subject—and in particular literature on the adverse effects/consequences—points to various generalisations or consistencies that will be discussed in the following paragraphs. The complexity and variability of the subject across time, place and individuals, however, caution against a finite interpretation of these generalisations, indeed accentuate the importance of on-going and progressively more rigorous research.

7.1 SHORT-TERM OR ACUTE EFFECTS OF CANNABIS USE

When cannabis smoke is inhaled, THC, the psychoactive ingredient, rapidly leaves the blood through metabolism and is taken up in the tissues. THC (which is fat soluble) and its metabolites tend to combine with proteins in the blood and remain stored in body fats for long periods. Whereas it may take up to 30 days to completely eliminate THC after a single dose, measurable levels of THC in the blood of chronic users have been detected weeks after they have taken the last dose. When cannabis is smoked, THC absorption in the lungs and its transportation to the brain are rapid. THC reaches the brain within as little as 14 seconds after inhalation. Cannabis is metabolised more efficiently through smoking than through intravenous injection or oral ingestion. It is also more potent (Hanson & Venturelli, 1998).

The Canadian Senate Special Committee on Illegal Drugs (2002:139) describes the acute or short-term effects of cannabis as “those that are produced immediately after use and while the psychoactive effects are being experienced”. These effects correspond to what has been described as cannabis **intoxication** and are generally divided into somatic, psychological and psychomotor effects. Somatic effects include (a) cardiovascular effects such as increased heart rate; (b) bronchopulmonary effects that are similar to those of

tobacco; (c) ocular effects such as redness of eyes and conjunctival irritation; and (d) other effects such as dry mouth due to decreased saliva secretion, increased appetite due to a drop in blood sugar level and sometimes nausea, vomiting, diarrhoea and urine retention. Psychological and psychomotor effects that have been reported include diminished short-term memory, disturbances in psychomotor performance such as diminished ability to concentrate, slower reflexes and reaction time, impaired coordination of movements, and diminished ability to perform complex tasks. At comparatively high doses and in the case of users who are unfamiliar with the effects of cannabis, unpleasant experiences are reported such as anxiety, panic, delusions, hallucinations, depression, paranoia and even acute psychosis (Hall & Degenhardt, 2003; Canadian Senate Special Committee on Illegal Drugs, 2002; Rey & Tennant, 2002; Hall, Degenhardt & Linskey, 2001; Drugscope, 2001). Cannabis intoxication generally consists of two phases: A “high” phase followed by a “coming down” phase.

A user becomes “**high**” after forcibly holding cannabis smoke in the lungs for a few minutes. Being “high” entails experiencing various changes, including changes in mood and intellectual/cognitive functioning as well as sensory and physical/somatic changes. (It is important to note, though, that in his review of research findings on the effects of cannabis use Kalant (2004) observes that although cognitive impairments of various types are readily demonstrable during acute cannabis intoxication, there is no suitable evidence for concluding that long-lasting functional losses can result from chronic and comparably heavy cannabis use during a person’s adult years.) Changes in mood may include feelings of euphoria, well-being, being carefree and calm. Hilarity/gaiety, talkativeness, sociability and greater interpersonal empathy have also been observed. Changes in intellectual functions generally include increased self-confidence, a feeling of being able to perform tasks more easily, and distortion of time, space and self-image. Sensory changes may entail increased sensory perception (e.g. of colour and sound) and stronger tactile impressions. Physical changes that manifest may include a dry mouth, elevated heartbeat, loss of coordination and loss of a sense of balance, coupled with slower reaction times. The accelerated heartbeat could trigger anxiety and panic attacks, palpitations, reduced exercise tolerance in persons with heart conditions and even contribute to the development of heart problems in persons who are predisposed to heart problems. In fact, in humans, cannabis causes both vasodilation (enlarged blood vessels) and an increase in heart rate related to the amount of THC consumed (Abood & Martin, 1992). The vasodilation is responsible for reddening the eyes, which is

often seen in cannabis smokers. When vasodilation is caused by cannabis use, an abnormally low blood pressure can occur when one is standing; and if the user stands up quickly after smoking, light-headedness or fainting may result. It has been found that cannabis products bind haemoglobin, thus limiting the amount of oxygen that can be carried to the heart tissue. This deficiency could trigger heart attacks in susceptible people (Palfai & Jankiewics, 1991). The effect of cannabis on people with heart rhythm irregularities is not yet known.

The impaired coordination and reaction time that follow cannabis intoxication can be hazardous when driving a car, operating heavy machinery, flying a plane or engaging in other activities that require good coordination and reflexes as well as quick judgement. The intensity of these effects varies, based on the dose and concentration of THC and whether other drugs such as LSD and/or psychedelic (“magic”) mushrooms are used together with the cannabis (Hanson & Venturelli, 1998; World Health Organization, 1997). (In his review of the literature on the effects of cannabis use, Kalant (2004) draws attention to evidence of a causal role of acute cannabis intoxication in motor vehicle and other accidents. The South African Medical Research Council has also reported that a laboratory screening for cannabis of patients presenting at five trauma units in three cities in South Africa over three years (1999-2001) showed that between 24,1% and 42,7% of the patients tested positive. Across sites and over time between 33,0% and 54,5% of male trauma patients tested positive for at least one drug (excluding opiates) which was mostly cannabis and/or methaqualone.)

The state of euphoria resulting from the “high” phase in cannabis intoxication is usually mild or short-lived. A typical high from one joint may last two to three hours. The “**coming down**” phase tends to be characterised by a feeling of sluggishness and drowsiness that disappears gradually.

7.2 LONG-TERM EFFECTS/CONSEQUENCES OF CANNABIS USE

Reported long-term (adverse) effects/consequences of chronic—or, for that matter, comparatively intense/heavy—cannabis use generally relate to especially the respiratory system, carcinogenicity, the immune system, the endocrine system, reproductive functions, the cardiovascular system and the risk of becoming dependent on the drug (Hall & Degenhardt, 2003; Canadian Senate Special Committee on Illegal Drugs, 2002; Swift & Hall,

2002). Socioeconomic (adverse) consequences have, however, also been reported, especially in comparatively poor socioeconomic contexts.

- **Effects on the respiratory system**

Inhalation of smoke can cause serious damage to the lungs. Smoke is a mixture of tiny particles suspended in gas, mostly carbon monoxide. These solid particles combine to form a residue called tar. Because cannabis smoke is inhaled more deeply than tobacco smoke, even more tar residue may be retained (Hanson & Venturelli, 1998; Consroe & Sandyk, 1992). The Canadian Senate Special Committee on Illegal Drugs (2002:144) notes that “the percentage of tar deposited in the lungs is higher after smoking cannabis (>80%) than after inhaling tobacco (64%) and the deposits are even greater for cannabis with a lower concentration of THC, probably because smokers draw on the joint more”.

The National Institute of Health (1999) in the United States further mentions that laboratory and clinical evidence have shown that cannabis use can result in cellular changes and contribute to respiratory problems such as laryngitis, pharyngitis, bronchitis, asthma-like conditions, coughing, hoarseness and dry throat. Evidence suggests that many year-old smokers of both cannabis and tobacco have lung damage comparable to that found in long-term tobacco smokers. However, although it is clear that the tar from cannabis and tobacco respectively has damaging effects, it is not clear whether smokers who use both cannabis and tobacco suffer synergistic or additive effects (Hanson & Venturelli, 1998; Jones, 1980).

- **Carcinogenic and immune system effects**

Cannabis smoke has been found to increase the risk of cancerous tumours, although the need for more rigorous research into the issue is emphasised (Canadian Senate Special Committee on Illegal Drugs, 2002). This risk is associated with inter alia the fact that cannabis smoke contains carcinogenic ingredients such as benzopyrene, and in higher concentration than in the case of tobacco smoke (Canadian Senate Special Committee on Illegal Drugs, 2002). Indeed, Drugscope (2001) notes that cannabis smoke has been shown to be a “more important risk factor than tobacco and alcohol use in the early development of respiratory cancers”.

Furthermore, although THC itself does not seem to be carcinogenic, it has been found to alter the function of certain cells such as macrophages that attack foreign bodies. The Canadian Senate Special Committee on Illegal Drugs (2002:146), for example, notes: “The data available seems to indicate that the consequences of chronic and intense cannabis use

(several joints per day for several years) are similar to those of cigarettes in terms of carcinogenic risks for the respiratory tract as well as the mouth, the tongue and the esophagus.” Kalant (2004) further notes that chronic inflammatory and precancerous changes in the airways have been demonstrated in cannabis users. Because THC can change the function of cells that neutralise foreign bodies (e.g. bacteria), it has been suggested as having an immunosuppressive effect on the human body, although in some experimental studies on animals it has been shown to stimulate the immune system (Canadian Senate Special Committee on Illegal Drugs, 2002).

- **Effects on sexual performance and reproduction**

Drugs (including cannabis) may alter sexual behaviour, affect fertility and damage the chromosomes of germ cells in both male and female users. The first scientific report that refers to cannabis in this respect was written by the Indian Hemp Commission. It states that cannabis has a sexually stimulating effect, like alcohol, yet is used by Asian Indian ascetics to diminish sexual appetite. This apparent discrepancy may be a dose-related effect, because when used occasionally over the short term, cannabis may act as an aphrodisiac by releasing the central nervous system inhibitions. Furthermore, under the influence of cannabis one’s perception of time is often altered and this could make the pleasurable sensations appear to last longer than they actually do. Cannabis affects the sympathetic nervous system, increasing vasodilation in the genitals and thus delaying ejaculation. Cannabis, however, has several effects on semen. The total number of sperm cells and the concentration of sperm per unit volume are decreased during ejaculation. Moreover, there is an increase in the proportion of sperm with abnormal appearance. These qualities are usually associated with lower fertility and a higher probability of producing an abnormal embryo should fertilisation take place. High doses over a period of time lead to depression of libido and impotence, possibly due to the decreased amount of testosterone, the male sex hormone (Hanson & Venturelli, 1998).

Various studies have shown that cannabis use during pregnancy can result in intra-uterine growth retardation (Kalant, 2004; Nahas & Latour, 1992; Fernandez-Ruiz et al., 1992). Indeed, in his review of research on the health effects of cannabis use, Kalant (2004) draws attention to the growing body of evidence that indicates subtle but seemingly permanent effects on memory, information processing and executive functions in the offspring of women who used cannabis during pregnancy.

- **Mental health effects**

A number of studies have noted an association between cannabis use and various mental disorders such as mood disorders and depressive episodes, anxiety disorders, personality disorders and conditions such as psychosis and schizophrenia (Kalant, 2004; Arseneault et al., 2002; Canadian Senate Special Committee on Illegal Drugs, 2002; Rey & Tennant, 2002). The length of time cannabis is used and the dose ingested are said to mediate the relationship between cannabis use and mental disorders.

More recently, Kalant (2004) points to several studies that ascribe a causal role to cannabis in the onset or relapse of schizophrenia. Arseneault et al. (2002), furthermore, underline that a number of studies have shown that early-adolescent cannabis use represents a greater risk for schizophrenia outcomes than later cannabis use.

- **Dependence**

The Expert Committee on Drug Dependence of the World Health Organization (WHO) defines drug “dependence” as follows (Canadian Senate Special Committee on Illegal Drugs, 2002:153):

“A state, psychic and sometimes also physical, resulting from the interaction between a living organism and a drug, characterized by behavioural and other responses that always include a compulsion to take the drug on a continuous or periodic basis in order to experience its psychic effects, and sometimes to avoid the discomfort of its absence. Tolerance may or may not be present. A person may be dependent on more than one drug.”

In terms of this definition and his review of the literature since 1996, Kalant (2004) concurs with reviews by, for example the WHO (1997) and the Canadian Senate Special Committee on Illegal Drugs (2002) that some cannabis users develop a cannabis dependence syndrome.

- **Socioeconomic consequences**

Various studies in South Africa and abroad report that chronic users of cannabis among especially socioeconomic disadvantaged/marginalized persons and offenders develop social adjustment difficulties, e.g. impaired family relationships, poor occupational and educational performance as well as involvement in criminal activity such as trading in illicit drugs, property crime, violence (e.g. rape), and gang life (Da Rocha Silva, 2004; Flisher et al., 2003; World Health Organization, 1997). They also draw attention to research findings

showing that poor occupational performance and social interactional difficulties can accompany cannabis dependence.

Cannabis use during the (pre-) adolescent years has been shown to contribute towards impaired (educational) performance/attainment and social development. Indeed, various studies have shown that the more intense/heavy and the earlier the age of onset of drug use—including the onset of cannabis use—the greater the likelihood that the user will “progress” to a multiple drug use lifestyle, to long-term drug/cannabis use, to drug/cannabis dependence and to a drug-crime lifestyle (Da Rocha Silva, 2004; Lynskey, Coffey, Degenhardt, Carlin & Patton, 2003; World Health Organization, 2003; Brook et al., 2002; Canadian Senate Special Committee on Illegal Drugs, 2002; Guthrie et al., 2000; United Nations Office for Drug Control and Crime Prevention, 2000; World Health Organization, 1997). The progression from the onset of cannabis use to outcomes such as multiple drug use and a drug-crime lifestyle has, however, been found to be a function of a complex interaction between inter alia the availability of various drugs, the characteristics of the individuals and the environment concerned (Da Rocha Silva, 2004; Canadian Senate Special Committee on Illegal Drugs, 2002; World Health Organization, 1997).

8. VULNERABILITY TO CANNABIS USE AND ASSOCIATED ADVERSE EFFECTS/CONSEQUENCES

Du Toit (1978) reports that, initially, South African whites associated cannabis smoking primarily with the indigenous African populations and secondarily with a lower socioeconomic lifestyle devoid of Christian values and characterised by degradation and escapism in the form of mind-altering experiences. By the early 1970s, however, researchers observed the extensive use of cannabis among the youth of all racial groups in South Africa. Du Toit (1978) notes that it was not unusual for young South Africans of whatever ethnic background to smoke cannabis at parties. He further comments that while American students were heartily experimenting with uppers and downers and LSD, their white South African counterparts were cautiously breaking the cannabis barrier; and while state legislatures and the highest office in the United States were talking of legalising the use of cannabis, in South Africa it was classified with heroin, opium and LSD as an illegal dependence-producing drug.

Available research suggests that in South Africa—as in various other African countries—the cannabis consumer market has broadened and new patterns of use have come to the fore. Usage, which used to be largely reserved to males, older age groups and particular occasions, has increasingly spread to all age groups, and to being used in a variety of ways and occasions as well as for a range of reasons (Da Rocha Silva, 2004; Flisher et al., 2003; Southern African Development Community, 2002; United Nations Office for Drug Control and Crime Prevention, 1999). It also cuts through all socioeconomic classes, from the poor to the wealthy. While the poor tend to use it in its purest form as “green pipe”, people from other socioeconomic classes tend to use it together with other drugs such as methaqualone (Mandrax), in which case it is referred to as “white pipe”.

The increase in the general level of cannabis use can be expected to be accompanied by a general increase in associated problems (World Health Organization, 1993). The 2002 annual report of the Southern African Development Community (SADC) Regional Drug Control Programme, for example, notes that the increase in cannabis use among young people “has created a new situation in which cannabis abuse is seen as a serious threat to the well-being of the youth in the region”. In addition, the Medical Research Council’s South African Community Epidemiology Network on Drug Use (SACENDU) has observed with regard to admissions to drug-related treatment centres in Gauteng and Cape Town that persons admitted for problems related to cannabis use between 2000 and 2002 tended to be younger than 20 years, rather than older.

Various studies have shown that a complex combination of individual and environmental factors contributes to an increase in the level of cannabis use and associated problems in a community (Da Rocha Silva, 2004; United Nations Office for Drug Control and Crime Prevention, 1999). A national study among detainees in police stations in South Africa, for example, found that (a) as population density and level of formal housing increased in a neighbourhood (e.g. magisterial district), so did the probability decrease of gender differences in cannabis consumption; and (b) greater population density in a neighbourhood increased the probability of individuals experiencing violent encounters (e.g. threats/stabbing with a

knife), with these encounters, in turn, increasing the probability of the individuals concerned taking cannabis (Da Rocha Silva, 2004). Furthermore, a number of studies on the African continent have shown that drug use (including cannabis use) and associated problems *inter alia* arise and are maintained within a context of limited socioeconomic opportunities, although affluence does not necessarily provide insulation against cannabis use and associated problems (Da Rocha Silva, 2004; United Nations Office for Drug Control and Crime Prevention, 1999).

On the level of the individual, emphasis is placed on, for example, the “normalisation”³ of cannabis use as a contributor to increased cannabis use and associated problems, i.e. integrating it into day-to-day activities and using it for reasons other than those traditionally accepted and well regulated (Canadian Senate Special Committee on Illegal Drugs, 2002; Calafat, 2000). A study of drug use in ten African countries (United Nations Office for Drug Control and Crime Prevention, 1999:73) notes in this respect that

“a weakening of social norms against drug ... [including cannabis use has been occurring and this process is] driven by the functional use of drugs ... Historically, in the countries covered, cannabis consumption has been principally a male practice, though this is starting to change ... with consumption now reaching increasingly into different gender, age and religious groups ... at least part of the expansion of consumer groups is due to the rise in ‘functional’ ... use of cannabis. The ‘functional’ use includes ... [use] by:

- Those doing physically demanding or dangerous work.
- Those confronting social danger, which applies to work that involves transgression of taboos ...
- Those wishing to escape conditions of social and/or personal misery.”

When cannabis is cultivated at home—whether for trading, consumption or religious and/or personal reasons—there is very little chance of preventing the onset of cannabis use among children and postponing the age of first use. Street children, irrespective of their age, have also been found to be particularly at risk of using cannabis. Researchers have also observed that children under the age of 16 who smoke cigarettes also tend to use cannabis. Other illicit

³ The Canadian Senate Special Committee on Illegal Drugs (2002:110) notes that “a ‘trivialization’ of cannabis consumption ...[has been noticed and imputed] to a reduction in the perception of cannabis-related risks ... and greater availability. Aside from ‘trivialization’, there is also an acculturation aspect, the idea that cannabis will eventually be considered a psychoactive substance akin to alcohol and tobacco, whose risks we learn to recognize and manage.”

drugs are almost never used by youths unless they have first used cannabis (World Health Organization, 1997). Using cannabis places the youth in the company and under the influence of those who use and/or deal with illicit drugs. It may also result in other dangerous and illegal activities.

The following categories of young people have also been identified as being most vulnerable to cannabis use:

- Young people from poverty-stricken families. These are children who use cannabis as a means of escaping conditions at home such as hunger, fights, etc.
- Young people from abusive families. Cannabis is a hallucinogen, which provides an escape from reality and a temporary solution to one's problem/trouble.
- Young people from homes where parental discipline is lacking. Among these are homes where parents work far from home and are therefore not in a position to monitor their children's behaviour, as well as in families where parents do not care about the whereabouts of their children.
- Young people who bow to peer pressure. Persons who are susceptible to peer pressure may smoke cannabis in order to be acceptable to their peers.
- Young people who attend private schools. Such persons have been found to have easy access through teachers who supply them with drugs (e.g. cannabis). They are also often from wealthy families, get big allowances and thus have ample money to spend on drugs.

The Canadian Senate Special Committee on Illegal Drugs (2002:166) concludes that "because of its potential effects on ... cognitive and psychosocial functions, any use [of cannabis] in those under age 16 is at-risk use ... [and for] those between the ages of 16 and 18, heavy use is not necessarily daily use but use in the morning, alone or during school activities". (Available research in South Africa suggests that lone and/or morning use of cannabis may not be uncommon among young people (Da Rocha Silva, 2004).)

9. POLICY ON CANNABIS IN SELECTED COUNTRIES

Over the past decade, arguments in favour of "liberating" certain patterns of cannabis use from legal sanctions have been mounting in many countries, including in Africa. To make an informed decision about the approach to be adopted locally regarding cannabis, this section

reviews existing policies on cannabis within the wider global context. In fact, the section first notes the key elements in existing international drug control measures—as represented in the United Nations conventions/treaties on narcotic (e.g. cannabis) and psychotropic substances—before reviewing drug policy in Africa and more particularly in South Africa, as well as in selected other regions and countries⁴ with variable restrictions on cannabis.

9.1 KEY UNITED NATIONS CONVENTIONS ON NARCOTIC AND PSYCHOTROPIC DRUGS

A key United Nations convention/treaty concerning the regulation of drugs (including cannabis) is the Single Convention on Narcotic Drugs of 1961. The primary aim of this treaty is to achieve worldwide co-operation in the fight against drug abuse and drug trade for purposes other than medical and scientific purposes (Spruit & Van Laar, 1997). Article 28 of the convention, which deals with the control of cannabis, stipulates the following:

- If a party permits the cultivation of cannabis for the production of cannabis resin, it shall apply thereto the system of controls as provided in Article 23 in respect of the control of the opium poppy.
- This convention shall not apply to the cultivation of the cannabis plant exclusively for industrial purposes (fibre and seed) or horticultural purposes.
- The parties shall adopt such measures as may be necessary to prevent the misuse of, and illicit traffic in, the leaves of the cannabis plant.

Following this convention, the plenary meeting of the United Nations 6th Convention on narcotic and psychotropic drugs, which was held on 19 December 1988, adopted the following resolutions (United Nations Convention Against Illicit Traffic in Narcotic Drugs and Psychotropic Substances, 1988): “Member states –

- were deeply concerned by the magnitude of and rising trend in the illicit production of, demand for and traffic in narcotic drugs and psychotropic substances, which pose a serious threat to the health and welfare of human beings and adversely affect the economic, cultural and political foundation of society;

⁴ Practical constraints with regard to available time and literature influenced the choice of countries included in this analysis.

- were deeply concerned by the steadily increasing inroads into various social groups made by illicit traffic in narcotic drugs and psychotropic substances, and particularly by the fact that children are used in many parts of the world as an illicit drug-consuming market and for purposes of illicit production, distribution and trade in narcotic drugs and psychotropic substances, which constitute a danger of incalculable gravity;
- recognised the links between illicit traffic and other related organised criminal activities that undermine the legitimate economies and threaten the stability, security and sovereignty of states;
- recognised that illicit traffic is an international criminal activity, the suppression of which demands urgent attention and the highest priority;
- were aware that illicit traffic generates large financial profits and wealth, enabling transnational criminal organisations to penetrate, contaminate and corrupt the structures of government, legitimate commercial and financial business and society at all levels;
- were determined to deprive persons engaged in illicit traffic of the proceeds of their criminal activities and thereby eliminate their main incentive for so doing;
- desired to eliminate the root causes of the problem of abuse of narcotic drugs and psychotropic substances, including the profits derived from illicit traffic;
- concluded that measures are necessary to monitor certain substances, including precursors, chemicals and solvents, which are used in the manufacture of narcotic drugs and psychotropic substances, the ready availability of which call for international co-operation in the suppression of illicit traffic by sea;
- recognised that eradication of illicit traffic is a collective responsibility of all states and that, to that end, coordinated action within the framework of international co-operation is necessary;
- reaffirmed the guiding principles of existing treaties in the field of narcotic drugs and psychotropic substances and the system of control which they embody;
- recognised the need to reinforce and supplement the measures provided in the Single Convention on Narcotic Drugs, 1953, and the 1971 Convention on Psychotropic

Substances, in order to counter the magnitude and extent of illicit traffic and its grave consequences;

- recognised the importance of strengthening and enhancing effective legal means for international co-operation in criminal matters to suppress the international criminal activities of illicit traffic; and
- desired to conclude a comprehensive, effective and operative international convention that is directed specially against illicit traffic and that considers the various aspects of the problem as a whole, in particular those aspects not envisaged in the existing treaties in the field of narcotic drugs and psychotropic substances.”

According to a 2002 report of the International Narcotics Board (2003), 179 member states of the United Nations signed the Single Convention on Narcotic Drugs of 1961 and 166 member states signed the United Nations Convention Against Illicit Traffic in Narcotic Drugs and Psychotropic Substances of 1988.

9.2 Southern African Development Community (SADC) and the African Union (AU)

In 2001 the Drug Control Committee of the SADC communicated the following position regarding the production of cannabis to the SADC Council of Ministers:

“The SADC Drug Control Committee of representatives from SADC Member States, as instituted by the SADC Protocol on Combating Illicit Drugs [of 1996], strongly denounces and rejects the movements to legalise or decriminalise cannabis and the cultivation of Indian hemp. Communities are urged to mobilise themselves in protest against the production, abuse and trafficking of cannabis or hemp, and illicit drugs and to develop legal frameworks, drug supply reduction training ... [as well as] drug demand reduction activities ...”

This position was upheld in subsequent meetings in 2002 and 2003. Indeed, a recent review of drug-related policies in the SADC region concluded that little support for the decriminalisation of cannabis use seems to prevail (United Nations Office on Drugs and Crime, 2003). However, this does not mean that the issue has not been thoroughly debated. A 1998-2002 review of the SADC Drug Control Programme, for example, states that although total legalisation or decriminalisation of illegal drugs (including cannabis) has never been considered in discussions, the issue of provisional legalisation has been debated but found

inappropriate for the following reasons: First, the limited regulatory capacity of most member states made provisional legalisation of illegal drugs and cannabis in particular impractical. Second, member states argued that a lenient attitude towards illegal drugs in (some) member states would attract producers, traffickers and users from other regions/countries, thus increasing the strain on already heavily burdened health, welfare and security structures. Third, the SADC Drug Control Protocol and United Nations drug control conventions restrict member states from implementing measures that legalise illegal drugs (e.g. cannabis) in some form or the other.

The Heads of National Drug Law Enforcement Agencies and other relevant bodies on the African continent have also pointed out that no country in the SADC region has the capacity and/or resources to provide control measures to subvert the anticipated problem of cannabis being cultivated alongside Indian hemp. According to the SADC Drug Control Committee, law enforcement emphasised that trafficking in and “abuse” of cannabis pose a “threat ... to security, health and socio-economic development in Africa” and should thus be countered (United Nations Office on Drugs and Crime, 2003:17). At the 46th Session of the Commission on Narcotic Drugs in 2003, Ambassador Antonio, head of the delegation of the Commission of the African Union, emphasised a need for upholding prevailing legal sanctions regarding cannabis and stated:

“Cannabis remains ... [the] main concern in Africa. The issues ... revolve around illicit cultivation, trafficking, and abuse ... As a result of the permissive use and open sale by some countries in Europe and some [other] countries, illicit cultivation of cannabis in Africa is on the increase ... [and an] increase in illicit cultivation of cannabis in Africa will surely have a ripple effect on development matters in Africa. The world can ill-afford to have a weak link in the global fight against narcotic drugs, including cannabis. Failure in addressing the cannabis problem in Africa is the failure of the whole world” (African Union, 2003).

9.3 South Africa

Current South African law classifies cannabis as an illegal and dependence-producing drug, with a number of acts providing a legal framework for controlling the demand and supply of (illegal) drugs (including cannabis) (Department of Welfare and Population Development, 1999). These acts include:

- The Medicines and Related Substances Control Act 101 of 1965. (The act supports the processes set out in the major United Nations conventions on drug control and provides a conceptual framework for drug control policy in South Africa.)
- The Drugs and Drug Trafficking Act 140 of 1992. (The act specifies as an offence the supply of substances to anyone while knowing/suspecting they will be used for the manufacture of illegal drugs; prohibits any person from converting property that he/she knows/suspects to be gained from the proceeds of drug trafficking; specifies possession of illegal drugs and dealing in illegal drugs as offences, with the former punishable by a jail sentence of up to 15 years and the latter by a jail sentence of up to 25 years.)
- The Prevention and Treatment of Drug Dependency Act 20 of 1992, as amended. (The act inter alia provides for the establishment of (a) the Central Drug Authority (CDA) as the statutory body responsible for overseeing the implementation of the government's national drug strategy, i.e. National Drug Master Plan (NDMP), as well as (b) programmes for the prevention and treatment of drug dependence.)
- The Criminal Procedure Act 51 of 1977.
- The Extradition Act 67 of 1962 and the Extradition Amendment Act 77 of 1966.
- The International Co-operation in Criminal Matters Act 75 of 1996.
- The Proceeds of Crime Act 76 of 1996.
- The Financial Intelligence Centre Act of 2001.
- The Institute for Drugs-Free Sport Act 14 of 1997.
- The Road Transportation Act 74 of 1977.

Based on the 1994 Reconstruction and Development Programme of the first democratically elected government in South Africa, various policy documents directly and indirectly underline the need for comprehensive and integrated counteraction regarding harm related to the use of legal and illegal drugs, including cannabis. These documents include the *National Crime Prevention Strategy* (Department of Safety and Security, 1996), *White Paper for Social Welfare* (Department of Welfare and Population Development, 1997), *National Youth Policy* (National Youth Commission, 1997), *Drug Abuse Policy Framework* (Department of

Education, 2002), and in particular the *National Drug Master Plan* (Department of Welfare and Population Development, 1999).

In fact, the National Drug Master Plan (NDMP)—adopted by the South African Parliament in February 1999—constitutes the general framework in terms of which the government aims to counter drug-related harm and in particular “build a drug free society together and make a contribution to the global problem of substance abuse”. To facilitate wide-ranging collaborative efforts, the NDMP provides for the establishment of provincial drug forums and local drug action committees, comprising government and non-government stakeholders. The plan emphasises the institution of actions that

- give balanced attention to decreasing the supply of drugs (control and law enforcement) and the demand for drugs (prevention, treatment and rehabilitation), apart from considering ways of reducing the harm associated with drug use;⁵
- divert more resources/activities to historically neglected regions/sectors;
- divert—where appropriate and possible—a person (e.g. a young person who has engaged in “once-off experimentation with drugs”) who has moved into the criminal justice system into appropriate “treatment, after-care, rehabilitation and social reintegration”; and
- prioritise initiatives that (a) counter drug-related crime, (b) protect young people, (c) support community health and welfare, (d) ensure appropriate communication on drug-related issues in all regions and sectors of the South African population, and (e) encourage involvement in international initiatives at countering drug-related harm.

The Central Drug Authority (CDA)—comprising senior governmental officials and non-governmental experts—was established in 2000 by virtue of the Prevention and Treatment of Drug Dependency Act 20 of 1992 (as amended) to oversee the implementation of the NDMP in collaboration with different government departments.

In terms of regional and international co-operation, South Africa is (a) a signatory to the 1996 Protocol on Combating Illicit Drug Trafficking in the Southern African Development Community, which was ratified by Parliament in 1998, and (b) a member of the Southern African Regional Police Chiefs Cooperation Organization. The government is also

⁵ The *National Drug Master Plan* (Department of Welfare and Population Development, 1999:18-19) notes: “Harm reduction should not be confused with arguments about drug legalization or decriminalization. As spelt out in an International Council on Alcohol and Addictions (ICAA) policy discussion paper, the focus of harm reduction is to reduce and prevent the harmful effects of the use of alcohol and other drugs ... [and] this goal can be pursued with many strategies including those focused on drug-free living. Because it is unlikely that a totally ‘drug-free’ society would ever be attainable, approaches to harm reduction do not presume abstinence in the short-term ...”

active in international agencies concerned with drug control, apart from being a signatory to international conventions on drug control (e.g. Single Convention on Narcotic Drugs of 1961; United Nations Convention Against Illicit Traffic in Narcotic Drugs and Psychotropic Substances of 1988).

9.4 North America: United States of America and Canada

Because of the comprehensiveness of policy developments in the USA and these developments reflecting to some extent policy developments in Canada, this section will discuss policy developments in the USA in more detail than in the case of Canada.

United States of America

The Canadian Senate Special Committee on Illegal Drugs (2002) observes that issues related to illegal drugs represent a core and complex element in the internal and even external affairs of the USA government. (The USA government is, for example, known to play a role in United Nations efforts at negotiating and enforcing international drug control conventions.) Although the general approach to drug issues in the USA tends to be prohibitive to the extent of reflecting a “war on drugs”, states and even cities in the USA vary considerably in terms of the extent to which the production, distribution and use of drugs (including cannabis) are prohibited. The USA has also not always imposed restrictions on drugs. The use and sale of drugs were, for example, legal and common in the USA from the mid-19th century to the end of the 19th century. Since the beginning of the 20th century, progressively more restrictive drug policies and actions were introduced in the USA. These measures varied across states/cities notwithstanding federal government efforts to counter differences, e.g. to avoid policy/action in one state/city impacting negatively on policy/action in others.

More specifically, with the enactment of the Harrison Narcotic Act in 1914 the foundation of the USA government’s “war on drugs” was laid. This act required (a) anyone selling drugs to be licensed and keep a record of sales, and (b) users to obtain prescriptions from physicians for medical reasons, excluding efforts “to keep ‘addicts’ comfortable or maintain their ‘addiction’”. In combination with successful prosecutions of narcotic suppliers (e.g. physicians and pharmacists), these restrictions resulted in difficulties in accessing legal supplies of drugs. Matters worsened with the enactment of the 1970 federal Controlled Substances Act that categorised drugs in terms of the degree to which restrictions were

imposed on production, distribution, possession and use. Cannabis was identified as a Schedule I drug that could only be possessed for research purposes that were licensed by the federal government. The Anti-Drug Abuse Amendment Act of 1988, furthermore, raised federal penalties for drug (including cannabis) offences. In the 1990s more severe legislative measures against drug dealing were proposed by the USA Congress, e.g. to impose civil liability on drug dealers for the harm caused by the use of controlled substances, to increase penalties for drug dealers who involve children in the drug trade and in particular who use children under 18 years to distribute controlled drugs in or near schools or locations such as playgrounds and video arcades.

Notwithstanding petitions to the USA Congress to loosen restrictions on the possession of cannabis, it remained a federal crime, e.g. on the ground that (a) cannabis had a high potential for “abuse”, and that (b) individuals tended to take cannabis in amounts hazardous to their own and others’ health and safety. Although the Uniform Controlled Substances Act of 1994 set out the prohibited activities in detail to facilitate some legislative consistency across the nation, specific fines and sentencing were left to the discretion of individual states/cities. Indeed, the federal government could not enforce federal laws at state/city level. As a result, legislative and sentencing discrepancies developed, with some states experimenting with extremely harsh penalties and others cutting sentences and repealing mandatory minimum sentences for various non-violent offences in order, for example, to lessen the cost of drug control on the criminal justice system.

Moreover, since the late 1970s medical-related cannabis laws were increasingly enacted in states, e.g. laws providing for “therapeutic research programmes”, laws allowing patients access to cannabis for medical purposes and laws that recognised the medical value of cannabis symbolically. Indeed, under the Investigational New Drug (IND) programme the USA federal government allowed eight patients with a limited range of medical conditions compassionate access to cannabis over the period 1978-1992 (Pacula, Chiriqui & Reichman, 2002). A number of individual states also passed legislation that allowed the use of cannabis for medical purposes under conditions similar to those specified in the federal IND programme, all of which required federal government approval and oversight. By December 2001, 32 states allowed the medical use of cannabis, 22 allowed the medical use of cannabis in a therapeutic research programme, and 9 allowed physicians to prescribe cannabis (Hall & Degenhardt, 2003; Pacula et al., 2002).

Medical use of cannabis was, however, complicated by various factors: The federal Controlled Substances Act's prohibition of manufacturing and distributing cannabis inhibited legal access to cannabis. The Canadian Senate Special Committee on Illegal Drugs (2002) notes in this respect that "since pharmacies ... [did] not sell marijuana, some distribution centres called 'buyers clubs' ... emerged ... [but] have been hampered by federal law enforcement ... [Indeed,] federal enforcement efforts have not, thus far, targeted individuals who possess or cultivate small amounts for medical use. Only the buyers' clubs also known as 'compassion clubs') have been targeted." Furthermore, although some state laws allowed physicians to prescribe cannabis, physicians were hesitant to do so because of the possibility of (a) prosecution by the federal government, and (b) legal liability for any harm that may be caused to patients for whom they prescribed cannabis. It is thus not surprising that available data suggest that relatively few patients in the USA use cannabis for medical purposes, even in the states with the most liberal laws (Hall & Degenhardt, 2003).

Developments with regard to USA policy and law, however, do not relate to supply reduction only. In fact, and as noted by the Canadian Senate Special Committee on Illegal Drugs (2002), national drug-control policy in the USA emphasises prevention, education, treatment, research and supply reduction activities. The 2001 annual report of the Office of National Drug Control Policy, for example, states: "Through a balanced array of demand-reduction and supply-reduction actions, we strive to reduce drug abuse and availability by half and the consequences of drug abuse by at least 25% by 2007." (The Office of National Drug Control Policy (ONDCP) was established in the late 1980s through the National Narcotics Leadership Act of 1988. The ONDCP oversees drug control activities in the USA, with a number of federal government departments participating (the Department of Justice being the key role player). These departments are expected to co-operate with local government agencies and non-governmental agencies (e.g. community and professional groups).) Strategic goals set by the ONDCP include (Canadian Senate Special Committee on Illegal Drugs, 2002):

- "Educate and enable America's youth to reject illegal drugs as well as alcohol and tobacco."
- "Increase the safety of America's citizens by substantially reducing drug-related crime and violence."
- "Reduce health and social costs to the public of illegal drug use."

- “Shield America’s air, land, and sea frontiers from the drug threat.”

Finally, it is important to note the development of drug courts in the USA. As observed by James and Sawka (2000) in their review of the drug court movement in various countries, this movement “began in the late 1980s [in the USA] in response to rising rates of drug-related court cases and the inability of traditional law enforcement and justice policies to reduce the supply and demand for illegal drugs”. It spread to all 50 states, and at the beginning of 2000 there were 700 of these courts. Reviews of evaluations suggest that drug courts generate cost savings and lower recidivism, although researchers caution that more in-depth and rigorous analysis is needed to make definitive conclusions about the cost and benefits of drug courts (James & Sawka, 2000).

USA drug courts focus on diverting “drug-involved” offenders—especially first offenders and juveniles and generally not those charged with drug trafficking—into appropriate drug-related treatment programmes. James and Sawkes (2001) note: “[Drug courts] are designed to deal with non-violent offenders who are offered an opportunity to complete a drug treatment program in return for a dismissal of charges (diversion or pre-sentencing model) or reduction in custody or probation time (post-sentence model).” In the case of juvenile courts, special attention is given to:

- comprehensive intake assessment;
- intervention strategies that (a) counter unconstructive peer influences and gang involvement, (b) assess and attend to family functioning, (c) involve the relevant offender’s family members, and (d) incorporate an outreach or home visit component;
- immediate sanctions for non-compliance and rewards for progress; and
- information sharing between court and treatment agents while complying with confidentiality requirements.

Canada

As in the USA and since the beginning of the 20th century, drug policy in Canada tended to largely focus on supply reduction (Canadian Senate Special Committee on Illegal Drugs, 2002). With the establishment in the late 1980s of the National Drug Strategy—and in 1992 of the Canadian Drug Strategy (CDS)—calls for “a balanced approach to reducing both the

demand for drugs and their supply” were made. An analysis of the work of the CDS by the Canadian Senate Special Committee on Illegal Drugs in 2002 concluded as follows:

- “Canada ... [needed] a comprehensive and coordinated national drug strategy for which the federal government ... [had to provide] sound leadership ...
- Any ... national drug strategy ... [had to] incorporate all psychoactive substances, including alcohol and tobacco.
- To be successful, a national drug strategy ... [had to] involve partnership with all levels of government and also with non-governmental organizations.
- ... intermittency of funding ... diminished the ability to coordinate and implement the strategy ...
- Clear objectives for the strategy ... [had to] be set out, and comprehensive evaluations ... [were] required ...
- There ... [was] a need for an independent organization ... to conduct national surveys at least every second year ...
- Canada’s Drug Strategy ... [had to] adopt a balanced approach ...
- Coordination at the federal level ... [had to] be given to a body that is not an integral part of one of the partner departments.”

Commissions of enquiry—in particular the Le Dain Commission (1969-1973)—and legislative initiatives strengthened calls for a more balanced and rational or research-based approach to drug control, focusing on supply as well as demand reduction while considering the benefits of cannabis (e.g. medical use). The Canadian Senate Special Committee on Illegal Drugs (2002) draws, for example, attention to the following key findings of the Le Dain Commission:

“[Since], in addition to health problems, cannabis use entails significant costs to the family, to society and to the economy ... the state has a responsibility to restrict the availability of harmful substances—and in particular to prevent the exposure of the young to them—... such a restriction is a proper object of the criminal law ... [However, the] criminal law should not be used for the enforcement of morality without regard to potential for harm ...”

Another example is Section 10 of the Controlled Drugs and Substances Act that came into effect in 1996, which stated that the purpose of sentencing was “to contribute to the respect for the law and the maintenance of a just, peaceful and safe society while encouraging

rehabilitation and treatment ... of offenders and acknowledging the harm done to victims and to the community” (Canadian Senate Special Committee on Illegal Drugs, 2002).

In 2001 the Canadian government passed the Marihuana Medical Access Regulations (MMAR), which provided for compassionate access to cannabis for seriously ill patients while research regarding its therapeutic value continued. The cannabis could be supplied by the government (who sourced it from a commercial supplier) or grown under licence by the patient or by a person designated by the patient. In order to protect the consumer, safe and efficient measures for the production and distribution of seeds and dried cannabis were considered. To obtain compassionate access to cannabis an applicant had to obtain a declaration from a medical practitioner indicating that the recommended use of cannabis would mitigate the applicant’s symptoms and that the benefits from the use would outweigh the risks. Only physicians who had signed the MMAR would be asked to supply the seeds and the dried cannabis to their patients. The following broad categories of patients would be eligible for the scheme: (1) those with a terminal illness and a life expectancy of less than 12 months; (2) patients with multiple sclerosis, spinal cord injury or disease, cancer pain, AIDS, arthritis or epilepsy; and (3) patients with symptoms associated with a serious medical condition other than those described in categories 1 and 2 where, among other things, conventional treatments have failed to relieve symptoms of the medical condition (Health Canada Office of Cannabis, 2002).

By April 2002, only some applications for compassionate access had been approved and no patients had been supplied with cannabis under the government programme. In August 2002, the new Minister for Health delayed the full operation of the scheme until clinical trials had demonstrated the safety and efficacy of cannabis in treating the indicated disorders (Abraham, 2002). According to Abraham (2002), this decision was based on the fact that the Canadian Medical Association and the Canadian Medical Protective Association both advised physicians not to prescribe cannabis, as there was no firm clinical evidence that cannabis was effective for most of the indications for which it could be prescribed. The two associations further claimed that practitioners who prescribed cannabis would be legally liable for any adverse effects experienced by patients for whom they prescribed it (Hall & Degenhardt, 2003).

In conclusion, the Canadian Senate Special Committee on Illegal Drugs (2002) notes:

“The MMAR are not providing a compassionate framework for access to marihuana for therapeutic purposes and are unduly restricting the availability of marijuana to patients who may receive health benefits from its use ... Changes are urgently needed with regard to who is eligible to use cannabis for therapeutic purposes and how such people gain access to cannabis. Research on the safety and efficacy of cannabis has not commenced in Canada because researchers are unable to obtain the product needed to conduct their trials.”

9.5 Australia and New Zealand

As in the case of the earlier analysis of policy and action in the USA and Canada, this section focuses largely on drug policy in Australia. The reason is again the fact that New Zealand largely emulated developments in Australia.

Australia

Before the 1960s cannabis was little known and used in Australia. Pre-1970 efforts to regulate its use, however, prohibited its cultivation, possession and use (Canadian Senate Special Committee on Illegal Drugs, 2002). Pressure towards a less prohibitive approach developed after the 1979 report of the South Australian Royal Commission into the Non-Medical Use of Drugs that recommended that legal sanctions against small-scale cannabis use be removed.

With the introduction in 1985 of the National Campaign Against Drug Abuse, the National Drug Strategy (NDS) in 1993 and the National Drug Strategic Framework in 1998/1999, a focus on public health and harm minimisation materialised. The emphasis was on supply reduction, international co-operation, evaluation and accountability. Indeed, special features of the NDS included the following (Canadian Senate Special Committee on Illegal Drugs, 2002):

- A recognition of the complexity of drug issues;
- The need for attending to licit as well as illicit drugs;
- The need for balanced intervention that considers (a) supply as well as demand reduction, and (b) a wide range of intervention options based on evidence-based practice;⁶

⁶ Based on the concept of harm minimisation, options could range from “abstinence-oriented interventions to programs aimed at ameliorating the consequences of drug use among those who cannot be reasonably expected to stop using drugs at the present time”.

- The need for intervention sectors (e.g. health, law enforcement, education, non-governmental organisations and private industry) to work in partnership; and
- The need for providing effective institutional support to intervenors.

The focus on demand reduction as well as supply reduction relates to evidence of the cost involved in drug production and trafficking. The Canadian Senate Special Committee on Illegal Drugs (2002) notes in this respect:

“A cost of making cannabis illegal is the exposure of cannabis buyers to a range of other potentially more harmful illicit drugs which are available for sale. Another cost is the involvement of organized crime in large scale cannabis production and distribution ... Finally, the illicit drug market generates a sizeable cash economy ... [and] some police officers become involved in corrupt activities such as drug use, drug dealing, protection of drug dealers, theft of drugs and/or money and presentation of false evidence in court.”

Examples of the infrastructural intervention systems that developed in Australia were (a) the Intergovernmental Committee on Drugs (including officers in inter alia health, law enforcement, education and customs in each Australian jurisdiction), and (b) the Australian National Council on Drugs (consisting of people with “relevant expertise from the government, non-government and community-based sectors to provide policy advice”). These structures were tasked to develop “National Drug Action Plans which ... specify priorities for reducing the harm arising from the use of licit and illicit drugs, strategies for taking action on these priorities, and performance indicators”.

Although responsibility for making and enforcing drug laws rests primarily with state governments in Australia, national government is responsible for overarching legislation. As such the federal government, for example, ratified the three major international treaties on illicit drugs, and instituted the obligations under these treaties in terms of various federal laws. Although cannabis possession is regarded as a criminal offence in all the states, legislative restrictions and specifically penalties vary across states. For example, in some Australian jurisdictions adults charged with “simple cannabis offences” (shown to possess a “small” quantity of cannabis for private use rather than for trafficking purposes) could be issued an expiation notice, and offenders would be able to avoid prosecution by paying the specified fee. A system of cautions for minor cannabis offenders exists in certain states. “Diversionary” drug courts that emphasise harm minimisation/reduction of drug use have also been established in some Australian jurisdictions.

Finally, it is important to note that in August 1999, the New South Wales premier appointed a working party to advise on whether cannabis and cannabinoid substances had any medical uses; and if they did, how these substances could be used for medical purposes without decriminalising “recreational” cannabis use. In its report the working party confirmed that dracannabinol was useful in treating HIV, cancer-related wasting and nausea caused by cancer chemotherapy. It also noted evidence that dracannabinol may relieve painful muscle spasms in patients with neurological disorders and pain who do not respond to conventional analgesics. It recommended further research on the therapeutic use of cannabis and cannabinoid drugs in all of these conditions (Hall & Degenhardt, 2003).

New Zealand

Cannabis has been shown to be the third most commonly used drug in New Zealand, after alcohol and tobacco, with the number of joints tending to be particularly high in the age group 15-17 years. Indeed, young people have been identified as a high-risk group, particularly members of disadvantaged groups (Maori youth) and those who have pre-existing problems. On the whole, high-risk groups also include people with mental disorders, polydrug users and pregnant women.

The New Zealand Health Committee recommended in 2003 that more research on cannabis and the harm it causes be conducted, and emphasised the need for government to provide harm reduction information designed to minimise lung damage resulting from the smoking of cannabis. The committee also recommended that the government take a leading role in promoting the message that young people should not use cannabis, and that it develop a policy to reverse the trend of heavy use among 15-24-year-old young people. The committee raised concern about the fact that about 3% of the New Zealand population was at serious risk of a cannabis dependence disorder. Cannabis dependence was reportedly more likely to occur among users who were also dependent on alcohol. Of significance among the committee’s recommendations was also that all suicide referrals should be tested for traces of illegal drugs (especially cannabinoids) as well as alcohol in order to further investigate the relationship between cannabis use and suicide. The committee found a strong association between cannabis use and excessive use of alcohol as a major cause of road accidents and subsequently recommended that a mechanism by which impairment by cannabis could be

detected be included, and also that all people killed in road accidents be tested for traces of all illegal drugs and alcohol, including cannabinoids.

Although 52.3% of submissions to the New Zealand Health Committee were in favour of selective legalisation of cannabis use, and in accordance with a parliamentary discussion on the issue, the government has undertaken not to introduce legislation to change the legal status of cannabis. The majority of submissions to the committee were completely opposed to any change in the law that would allow under-18-year-olds to use cannabis. It was recommended, however, that the law contain options for dealing with minor cannabis use that avoid criminalisation, such as:

- cautioning for first offenders;
- diversion to education programmes or health treatment; and
- fines for repeat offences, with flexible payment options, or compulsory education.

9.6 Europe: the Netherlands, the United Kingdom, Switzerland and Sweden

As in earlier sections, the drug policies of some of the countries under consideration in this section are reviewed in more detail than the drug policies in the other countries of concern.

Netherlands

Drug policy in the Netherlands is generally quite liberal compared to other countries, particularly with regard to cannabis. This liberal approach makes sense, considering—as observed by the Canadian Senate Special Committee on Illegal Drugs (2002)—the emphasis in Dutch culture on the well-being of all citizens, on individual freedom, and on the state remaining reserved in religious and moral matters. Also of importance are (a) the pragmatism that underlies Dutch culture, (b) the country's long trading history, and (c) the state's involvement in the drug trade in the former Dutch colonies.

Current Dutch drug policy, however, leans to a large extent on the recommendations of a commission of enquiry that was established in 1968 by the National Federation of Mental Health Organisations. With regard to cannabis the commission recommended the following:

- Removal of the use and possession of “small” quantities of cannabis from criminal law statutes and in time doing the same in respect of other drugs;
- Classification of charges related to the production and distribution of cannabis as “misdemeanours” instead of criminal offences; and
- Provision of drug treatment opportunities to people in need.

The commission based its recommendations on the view that (Canadian Senate Special Committee on Illegal Drugs, 2002)

“illicit drugs can be used in a controlled and limited way and that marginalizing drug-using subcultures has significant negative repercussions. Specifically, becoming a member of the ‘drug scene’ may familiarize a cannabis user with other drugs and patterns of use ... [and] one kind of drug user (e.g. heroin user) will contaminate another kind of drug user (e.g. cannabis user) when the two are forced into one marginalized subculture ... [Furthermore,] once started, drug policing would have to be constantly enlarged to keep pace with the never-ending escalation of drug use ... [Indeed,] the criminal law option of opposing drug use ... [can be described as] inadequate and ‘extremely dangerous’ ... [and can be expected to] boost polarization between the different parts of ... society and can result in increased violence.”.

The Dutch approach to drug/cannabis control has not insulated the country against drug problems. Social approval and use of cannabis have progressively increased, especially among young people. Furthermore, according to the Canadian Senate Special Committee on Illegal Drugs (2002), a 1995 report entitled *Drugs Policy in the Netherlands: Continuity and Change* pointed out that the

“Dutch population ... [face] internal difficulties in connection with the nuisances caused by [cannabis] coffee shops for Dutch citizens and neighbouring countries ... as a result of narco-tourism ... [Furthermore, the Dutch system] is also faced with the problem of supplying coffee shops with cannabis and cannabis derivatives, which is still entirely illegal ... [In addition, from] a theoretical standpoint, the very principle of de facto legalization is debatable. It fosters arbitrary action and, in particular, leaves the field open to trafficking ... [In fact,] the legalization of trafficking prevents any control ... In practical terms ... the main criticism is that the Dutch policy has not reduced the use of drugs ... Nor has ... [it] eliminated the risks associated with drug abuse.”.

More specifically, since the late 1970s drug policy in the Netherlands was developed in terms of the following premises (Canadian Senate Special Committee on Illegal Drugs, 2002):

- A “harm reduction” approach to drug control that (a) focuses on preventing and/or alleviating social and individual risks related to drugs, (b) ensures a rational relationship

between risks and control measures, and (c) prioritises repressive measures against drug trafficking;

- A “normalisation” approach that views “social control ... [as being] achieved through depolarisation and the integration of deviant behaviour rather than isolation and removal ... [while viewing] drug problems ... as normal social problems rather than unusual concerns requiring extraordinary treatment”;
- A “market separation” approach that classifies and deals with drugs according to the risks posed, distinguishing between “soft” drugs (Schedule II drugs that include traditional hemp products such as cannabis and hashish), and “hard” drugs (Schedule I drugs that are regarded as presenting an unacceptable risk to Dutch society).

Indeed, while Dutch policy allows for the use of “soft” drugs (e.g. cannabis), “hard” drugs are prohibited unconditionally, and the authorities strive relentlessly to stop trafficking and inform the public of the risks of drug taking. The sale and advertisement of all types of drugs are prohibited. Yet small quantities of cannabis are easily available at “coffee shops”, with authorities turning a blind eye to such trading. The “coffee shops”, however, may neither advertise nor sell hard drugs or admit anyone under the age of 18 years. It is also important to note that the Netherlands imposes only maximum penalties for drug offences. Furthermore, the law criminalises possession, trafficking, cultivation, transportation, manufacturing, import and export of drugs, including cannabis and cannabis derivatives.

United Kingdom

Drug policy and in particular the Misuse of Drugs Act of 1971 (as amended) in the United Kingdom prohibit the cultivation, production, possession or supply of cannabis to another person. Although maximum penalties for cannabis are comparatively severe, there is considerable discretion in how the law is applied, and in many cases the police only issue cautions (e.g. in the case of persons found in possession of comparatively small amounts of cannabis and persons who are first offenders). Debate has, however, for some time been taking place on the need to loosen prohibitions with regard to issues such as (a) the medical use of cannabis, (b) the decriminalisation or legalisation of cannabis for “recreational” use, and (c) the cost of drug control (Canadian Senate Special Committee on Illegal Drugs, 2002).

It is also important to note that in 1998 the newly elected Labour government adopted a ten-year drug strategy, particularly relating to illegal drugs and including cannabis. The focus is on (a) young people, (b) drug-related crime, (c) increased access to drug treatment, and (d) restricting access to drugs, especially in respect of children 5–16-years-old (Canadian Senate Special Committee on Illegal Drugs, 2002). Because of the complexity of the drug problem, many different departments and organisations are involved in the implementation of the strategy. The strategy has the following objectives:

- “To help young people resist drug misuse in order to allow them to achieve their full potential ...
- To reduce levels of repeat offending among drug-misusing offenders, by giving the opportunity to take appropriate treatment ...
- Acknowledging that ... the supply of treatment services is well below demand, the government plan provides for the creation of a National Treatment Agency which will be responsible for the provision of drug treatment and the delivery of high-quality services. Harm reduction strategies will be increased.”.

The medical use of cannabis has a long history in the United Kingdom, having been prescribed as medicine until 1973. Since the late 1990s the issue came again strongly to the fore in (non-) governmental debate. For example, in 1998 the Science and Technology Committee (SCOST) of the House of Lords tabled a comprehensive report on the history of the medical use of cannabis and its pharmacology, concluding that the

“advent of a host of new and better synthetic drugs led to the abandonment of many ancient herbal remedies, including cannabis ... [and although cannabis] is not in the premier league of dangerous substances, new research tends to suggest that it may be more hazardous to health than might have been thought only a few years ago.”

SCOST, however, conceded that cannabis has medical applications in treating the painful muscular spasms and relieving other symptoms of multiple sclerosis and other forms of pain (Hall & Degenhardt, 2003; Moffat, 2002). It recommended clinical trials of cannabis in the treatment of these conditions and research into “alternative” modes of administration (e.g. sub-lingual, rectal) that would retain the benefit of smoking without its adverse effects. (The government has since permitted a pharmaceutical company to grow cannabis in order to develop a cannabis-based medicine, and the Medical Research Council has also funded

clinical trials of cannabis preparations to test their efficacy (Hall & Degenhardt, 2003; Moffat, 2002).)

SCOST also recommended that medical practitioners be allowed to prescribe cannabis-based preparations as “unlicensed medicine and on the named-drug basis”, with medical professional bodies providing guidance and safeguards against improper practices. However, SCOST stressed that it would be inappropriate to prescribe cannabis-based medicine to pregnant women, people predisposed to schizophrenic illness and people with cardiovascular conditions, and that it was essential to warn users of possible negative side-effects.

Regarding possession and (“recreational”) use of cannabis, various studies called for reforming legislation, particularly in the case of comparatively small amounts and personal (“recreational”) use of cannabis (Trace, Klein & Roberts, 2004; Canadian Senate Special Committee on Illegal Drugs, 2002). The studies recommended the re-classification of cannabis from a Class B to a Class C (i.e. a “least harmful”) drug.⁷ Trace, Klein and Roberts (2004:2) observe that consideration has, for example, been given to

- “growing recognition that arresting cannabis users was not having any overall impact on the level of its use;
- growing recognition of the costs to the taxpayer of all these arrests, the majority of which resulted in nothing more than a caution ...
- concern at the impact that a cannabis caution or conviction for an otherwise law-abiding citizen could have on their future career or travel plans;
- concern at the wide variation in arrest and prosecution practice around the country;
- pressure on police managers to concentrate their resources on offences that are of more concern to the public;
- the broadly successful implementation of a scheme piloting the concept of not arresting cannabis users ...
- a public and political debate that recognised the differential harms caused by different patterns of drug use.”

⁷ The main act on drugs in the United Kingdom is the Misuse of Drugs Act of 1971, which categorises controlled drugs into Class A, Class B and Class C to reflect the degree of “harm they are considered to cause to the individual or society when misused”, with Class A as the “most harmful” and Class C as the “least harmful” drugs (Canadian Senate Special Committee on Illegal Drugs, 2002).

Pressure to re-classify cannabis was successful and on 29 January 2004 cannabis and its derivatives were moved to Class C in terms of an amendment to existing legislation (Trace et al., 2004). Measures were also taken to counter potential negative consequences of the re-classification such as (a) the media presenting the re-classification as an “admission of defeat in the battle against drugs”, and (b) the general public and young people in particular being led to believe that the possession/use of cannabis has been legalised. These countermeasures included the following (Trace et al., 2004):

- “It was decided that the possession of cannabis would still be an arrestable offence following reclassification ...
- It was decided that the maximum penalties for supply of cannabis should remain highly punitive ...
- The Association of Chief Police Officers (ACPO) ... issued guidance that made it clear that there will be a general presumption against arrest for cannabis possession. But there are circumstances in which individuals may be arrested if their action is seen to extend beyond ‘simple possession’. This will apply
 - if people are smoking in public and flouting the law;
 - if they are 17 or under;
 - if they are caught in possession of cannabis in or around places where children congregate; and
 - if people are known locally to be repeatedly in breach of the law.”

Concern about the wisdom of the re-classification of cannabis is, however, continuing, as observed by Trace et al. (2004):

“Expert opinion in the field ... [is] divided. Some express concerns about the danger of sending a more tolerant message to young people. Others worry about the consequences of introducing a wider margin of police discretion—and even greater potential for inconsistency—than existed before. [In this respect it is important to note that] critics have pointed out that the legal position for police officers is essentially unchanged—they still have wide discretion on whether to arrest, and possible penalties range from no further action to a period of imprisonment.”

Switzerland

In line with the complex political and cultural context of the country, drug policy is quite complex and diverse in Switzerland. (The country constitutes a confederation of 26 cantons with a diversity of linguistic, ethnic and denominational communities.)

The cantons developed their first drug policy when the general level of drug use increased in the late 1960s, focusing on the repression of drug use and trafficking, the prevention of drug use among especially young people, and abstinence-based treatment. Concern about HIV/AIDS and the miserable state of drug dependants in the “open drug scenes” in various Swiss cities, resulted in the development of treatment services (e.g. needle exchange programmes) that sought to assist drug dependants to protect themselves against HIV/AIDS and hepatitis. An increase in the level of drug-related problems further resulted in the introduction of comprehensive harm reduction measures in the 1990s, notably the “ProMeDro” federal programme.

The objectives of the 1991 ProMeDro programme were “to decrease the number of new drug users and to prevent people from becoming drug dependent; to help users to overcome their addiction (through treatment and social integration); to improve the living conditions and the health of drug users, to reduce harm and ... [facilitate] their social integration” (Canadian Senate Special Committee on Illegal Drugs, 2002). Indeed, a four-pillar approach—prevention, law enforcement, treatment and harm reduction—was adopted, which translated into the implementation of

- “primary and secondary prevention measures aimed at young people and awareness campaigns to prevent them from experimenting with drugs;
- patient management and treatment to help users overcome their addiction;
- harm reduction, AIDS prevention and social integration measures to help addicts cope with their dependency in the best possible health conditions and to ensure that the door to a drug-free life remains open;
- ongoing training and development programs for professionals (including those working in the areas of sentencing, programs and social services, as well as hospital workers, pharmacists and family doctors) and for people acting as mediators (such as teachers, youth group facilitators, business personnel and parents);

- the development, coordination and regular publication of scientific research on drugs;
- the evaluation of [programmes] ... to ... identify ... gaps or shortcomings [and] ... to pinpoint ... progress achieved;
- the development of new documentation and information services ...;
- the coordination of measures adopted ...”.

Against the background of the violence on the “open drug scenes” making headlines in the international media, the “open drug scene” in Zurich was closed. In addition, provision was made for prison space for drug traffickers, increased access to heroin-assisted treatment, and the creation of treatment centres for “hard core” drug users. In October 1998 the ProMeDro federal programme was transformed into a 1998-2002 strategy with the following priorities (Canadian Senate Special Committee on Illegal Drugs, 2002):

- “[T]o strengthen ... commitment to primary and secondary prevention and early intervention to prevent addiction;
- to consolidate the range of treatments in a coordinated system ... [as well as] harm reduction and social integration measures;
- to establish and operate effectively a national epidemiological monitoring centre based on the ... model of the European Monitoring Centre for Drugs and Drug Addiction;
- to forward, in an effective manner, the findings of epidemiological studies, scientific research and evaluations to experts and decision makers;
- to implement a process to foster quality management throughout the entire ProMeDro program ...
- to ensure optimum coordination and organization for various commissions and forums.”

The 1998-2002 strategy retained the four-pillar approach to drugs and set the following objectives with regard to the respective pillars: Prevention was to focus on especially children and young people; “spilling over” or spreading of drug problems across individuals and sectors of society was to be countered; and individuals were to be prevented from progressing from “casual” to more intensive drug use. Treatment was to be directed at assisting “addicts” to break their habit, socially reintegrate and achieve “better physical and mental health”. Harm reduction programmes would include projects such as needle exchanges for “addicts”, injection sites, offers of employment and housing, support for women involved in commercial sex work to maintain their drug use, and consultation services for children of

“drug-addicted” parents. Law enforcement methods included (Canadian Senate Special Committee on Illegal Drugs, 2002):

- “focusing enforcement activities on the manufacturing of drugs, trafficking and money laundering;
- assigning more officers to the ‘drug police’ and making greater use of specialists from other sectors (finance professionals);
- intercantonal and international cooperation (agreements with police forces from neighbouring countries);
- accelerating and improving the processing of information (networking systems and access to the police department networks from many European countries);
- improving cooperation between the police and the private sector (banks, chemical industries, etc);
- improving police effectiveness and making greater use of front-line liaison workers;
- strengthening the legal structure (for example policing legislation, witness protection).”

It is also important to note that narcotics legislation in Switzerland has been closely tied to international conventions/treaties. Indeed, the Narcotics Act of 1924 was enacted to enable Switzerland to align itself with the International Opium Convention of 1912. The act was accordingly revised at regular periods. Since 1996 dependence-producing substances and preparations with morphine, cocaine or cannabis have been considered under the revised Narcotics Act. Currently, the act *inter alia* prohibits the cultivation, importation, manufacturing and selling of smoking opium, heroin, hallucinogens (e.g. LSD) and hemp for the extraction of narcotics or hash. The act also contains criminal provisions that apply to anyone who unlawfully cultivates, manufactures, extracts, processes or prepares narcotics; anyone who (unless authorised) stores, ships, transports, imports, exports, provides, distributes, sells, buys, holds, possesses or otherwise acquires narcotics; and anyone who finances illicit traffic in narcotics, acts as an intermediary or encourages consumption. Offenders are liable to imprisonment, a fine or a “reprimand” depending on the seriousness of the act committed.

Finally, and with regard to cannabis in particular, it is important to note that a major revision of existing legislation is under consideration, specifically to relax legislative restrictions, and based on similar arguments presented in other countries.

Sweden

Drug policy in Sweden has been characterised as restrictive compared to that in other countries in the European Union. Indeed, the Canadian Senate Special Committee on Illegal Drugs (2002) observes that in Sweden “the drug phenomenon is considered one of the most serious social problems (if not the most serious) and drugs are viewed as an external threat to the country ... and ... as jeopardizing Sweden’s traditional values ... [Indeed,] the vision of a drug-free society is so widely accepted that it is not questioned in the political arena or the media.” Furthermore, almost all forms of involvement with narcotics (including cannabis) are prohibited in terms of the Narcotics Criminal Act of 1968 as amended. The Canadian Senate Special Committee on Illegal Drugs (2002) also notes that in Sweden “cannabis ... is viewed as a dangerous drug and its use ... as the beginning of a career in drugs.”

Recent drug policy is embedded in the 2002-2004 national strategy or action plan, directed at (a) reducing the number of new recruits to “drug abuse” (e.g. through preventive actions focused on young people), (b) encouraging more drug users to give up the habit (e.g. through treatment support), and (c) reducing the supply of drugs through law enforcement measures. While the plan provides for the establishment of a national anti-drugs coordinator, responsibility for implementation of the plan largely resides with municipalities. With regard to prevention, emphasis is on drug education in schools, starting early and repeating regularly throughout the school curriculum. In terms of treatment, it is important to note that a stated goal of the drug strategy is to rehabilitate/treat a drug user rather than to punish him/her by way of the criminal justice system. For this reason special emphasis is placed on diverting drug users who enter the criminal justice system into drug treatment. Offenders may be given a drug-related treatment sentence, comprising, for example, a probationary sentence combined with institutional treatment.

Finally, a key finding of the Commission on Narcotic Drugs, which the government established in 1998 to evaluate drug policy in Sweden (Canadian Senate Special Committee on Illegal Drugs, 2002), stressed a need for measures to strengthen demand reduction and supply reduction. Indeed, the commission asserted that “for preventive measures to succeed, they must be included in a system of measures restricting availability, and there must be clear rules which include society’s norms and values, as well as effective care and treatment”. Law enforcement has to be allocated more resources, and so also drug-related research in order to improve the knowledge base to counter drug-related problems.

10. PREVENTION

This section focuses on preventive premises noted in South Africa. Particular attention is given to the premises that have been extracted from South African research on drug/cannabis use, e.g. national and sentinel surveillance projects (e.g. Parry, 2002; Rocha Silva, 1998).

In fact, the South African researcher, Parry (2002:697), maintains that, given the negative health consequences experienced by some cannabis users, a shift in cannabis policy in South Africa would require a detailed and adequately resourced public health response focusing on cannabis users at high risk of harm or engaging in harmful patterns of use. “Such an approach would need to include education (e.g. on the dangers of cannabis use and driving, and on the relationship between cannabis and mental health) and treatment of persons dependent on cannabis” (Parry, 2002:697).

More generally—and in line with the preventive premises noted in the previous section in respect of various countries—Rocha-Silva (1998) argues that

- risk reduction seems to be a realistic preventive philosophy, considering that preventive efforts have as yet not been able to claim risk elimination; and
- the multifaceted public health approach to risk reduction presents itself as a viable option in the face of wide disillusionment with unidimensional emphases in prevention.

A public health preventive approach, furthermore, requires the following emphases (Rocha-Silva, 1998; World Health Organization, 1980):

- Strategies and actions that are oriented towards goals that are inherently positive and salutary.
- An integrated focus on the individual, on the environment in which the individual lives and on the use of drugs (e.g. cannabis).
- Strategies and actions that reach out to individuals not as objects to be acted upon but as subjects who can contribute ideas and actions on their own, who make their history although not as they please.
- Strategies and actions that rest on a firm support base within the (wider) community within which they are applied.

- A balanced combination of demand reduction (e.g. through education, socioeconomic upliftment) and supply reduction (e.g. through control/law enforcement). (Special note must be taken that unidimensional preventive efforts in other countries (e.g. the United States of America) have not quite borne the expected fruit. Courtwright (1991:395), for example, states that the “uneven and often disappointing results of the drug war have led several commentators to question the wisdom of what they call the prohibition policy”. Reservations about the sensibleness of “diluted” or “liberalised” law enforcement strategies regarding illicit drug/cannabis use, namely “decriminalisation” or “controlled legalisation”, have also been voiced from various corners (Courtwright, 1991; McBride & McCoy, 1993). Indeed, expectations that the legalisation of the sale of certain substances (e.g. cannabis) under certain conditions would “neutralise” drug/cannabis-crime connections have been shown to be too optimistic. McBride and McCoy (1993:273), for example, point out that the decriminalisation philosophy seems to “ignore psychopharmacological aspects of the [drugs/cannabis-crime] relationship ... [and] findings that [criminal behaviour and drug/cannabis use] ... arise from similar etiological variables and act in a mutually reinforcing manner”.)
- A multilevel approach to prevention, i.e. an approach that operates on a primary, secondary and tertiary level. Primary prevention is directed at reducing initial individual/environmental risks of developing drug/cannabis-related problems. Secondary prevention involves early detection of risk-proneness with regard to the development of drug/cannabis-related problems. Tertiary prevention (usually called “treatment”) focuses on arresting intensification and perpetuation of drug/cannabis-related problems. In fact, the importance of restraining the “recruitment of ‘not-yet-users’ ... while also providing a means to encourage existing users to take up treatment options at an earlier stage than they might otherwise have done” is stressed (Courtwright, 1991:16-17).
- A community-oriented or broad-brush approach to prevention, i.e. an approach that recognises that prevention/treatment “involves a large number of very different people with very different problems who [need to be attended to] ... in a variety of ways by a diverse group of therapists ... [indeed, that] the effective reduction of the burden of [drug] ... problems cannot realistically be viewed as the sole responsibility of specialized ... programs. Rather, the reduction of ... [drug/cannabis-related] problems must be a much more broadly disseminated responsibility, involving a great many different personnel in a large number of

different human service arenas, all of whom must learn to recognize such problems and intervene effectively” (Commentaries, 1991:840).

In line with the above premises, Rocha-Silva (1998) proposes with regard to **demand reduction** and in respect of the **individual** the following preventive goals:

- The promotion of healthy lifestyles through inter alia culturally sensitive and targeted multimedia information campaigns, and the provision of generally accessible and appropriate skills-training programmes for risk avoidance/reduction.
- The promotion of (a) partnerships between preventive agents in the public and private sector; (b) “grassroot” representation/participation (including those targeted in programmes) in preventive planning; (c) involvement of service providers in as many fields as possible (especially those in primary health care, in generic welfare services and in specialised drug-related and treatment/preventive services) as well as (where feasible) those who have recovered from drug-related problems.
- The targeting of persons of all ages, especially historically disadvantaged groups, the youth, offenders and persons experiencing drug-related problems (e.g. persons in treatment).

With regard to **demand reduction** on the level of the **environment** Rocha-Silva (1998) suggests the following preventive goals:

- Community development/work and in particular (a) the setting up/strengthening of (in)formal social control structures in communities; (b) the setting up/strengthening of non-risky/healthy leisure time activities; and (c) redressing socioeconomic conditions (e.g. socioeconomic disintegration/deprivation), which are conducive to the development of drug-related problems.
- Service delivery and in particular (a) specialised alcohol/drug-related prevention/treatment facilities; (b) drug-related services at primary health clinics (e.g. detoxification services, biological, psychological and social screening for risk-proneness to drug-related problems, and a referral system with regard to specialised service needs, as well as a detailed information system that monitors the drinking/drug-taking practices and needs of users of services); and (c) a detailed user-friendly and widely accessible register of national, provincial and municipal drug-related prevention/treatment services.

In respect of **availability reduction** Rocha-Silva (1998) suggests the formulation and implementation—in collaboration with stakeholders in the public and private sector—of legal and other control measures that limit access and exposure to drug use.

11. CONCLUSION

The following conclusions seem appropriate, considering the reviewed literature:

- Cannabis is a psychoactive drug, i.e. a substance that can modify the perception, mood, cognition, behaviour or motor function of the person who ingests it.
- Cannabis use/trading is a public health issue in which the drug, its individual user, its trader and the context in which it is used or traded are complexly interrelated.
- Use of and trade in cannabis can impair the health and socioeconomic status of individuals, communities and regions, and impede sustainable local and regional development initiatives as represented in, for example, NEPAD.
- Measures against the adverse effects of cannabis use/trade need to be
 - comprehensive and integrated, e.g. by (a) attending to cannabis within the wider context of psychoactive substance use and trade; (b) attending to the demand and supply of cannabis; and (c) operating through a multisectoral—even multiregional—and well-coordinated institutional framework;
 - research-based as well as rigorously monitored and evaluated;
 - especially attentive to young people; and
 - premised on inherently salutary principles, e.g. a life of quality for all individuals.
- Governments that have instituted no or few legal restrictions against personal or “recreational” and medical use of cannabis experience difficulties in ensuring that provisions for the medical use of cannabis are realistic instead of “theoretical” or symbolic gestures, and difficulties in preventing the general public and young people in particular from believing that cannabis use is harmless.
- The South African Government’s National Drug Master Plan (NDMP) generally reflects a drug control strategy that takes note of lessons learnt in various other countries with

regard to ways of countering cannabis-related problems. However, the following two issues have to be given (more) attention:

- o Indications in other countries that drug treatment courts lower recidivism and “criminal” labelling, indeed divert “offenders” with drug-related problems into appropriate treatment; and
- o The value of (a) wide-spread public awareness of the adverse effects of particular patterns of cannabis use, and (b) wide-spread public participation in efforts at countering cannabis-related problems.

Finally, the following statements of the Director-General of the United Nations Office on Drugs and Crime in Vienna, Austria, underlines a key issue to be considered in the discussion of cannabis policy:

“The priority the international community is attributing to ... stronger tobacco-control legislation ... is twin to global efforts to maintain strong counter-narcotics legislation ... If we apply the spirit ... of ... [the] Tobacco Control Convention (agreed by 171 member states) to cannabis, it is clear what we need to do. We need to ensure that the centre of our attention is the health and the well being of our people ... [However,] is there not a contrast ... between efforts by the international community to negotiate and agree on a Convention on Tobacco, because of the lethal consequences of its abuse, and the frequently heard calls to liberalize the production, trafficking and abuse of cannabis—a substance known to bring about even greater damage to health?”

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