SAM N **AND ITS DERIVATIVES**

General Overview: The World & Turkey



REPUBLIC OF TURKEY MINISTRY OF INTERIOR TURKISH NATIONAL POLICE COUNTER NARCOTICS DEPARTMENT



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INTRODUCTION

The history of cannabis, one of the most controversial drugs of our time, goes back a long way. According to various sources, China is known to have engaged in cannabis farming and used its fibre in 2800 BCE, while in the Middle East, Egypt and Mesopotamia, cannabis was used as a medicine. Cannabis was regarded as holy in the Far East, China, India and Thailand.

In addition to its long history, cannabis is the most widely used drug among the other drugs today. The United Nations World Drug Report 2020, which was prepared with 2018 data, drew attention to the widespread use of the drug at the global level, indicating that 192 million people had used cannabis at least once in the past year¹. The same report underlined that the number of persons receiving treatment for cannabis use has increased in the last 15 years in all regions except Africa.²

Due to their addictiveness and negative impact on public health, the use of cannabis and its derivatives, except for scientific and medical purposes, was banned under the United Nations Single Convention on Narcotic Drugs in 1961. The parties to the convention categorised cannabis and its derivatives among the drugs which had to be combatted. Turkey has become a party to the convention since 1967.

Due to its narcotic effect, cannabis was already listed as a prohibited substance in Turkey prior to the United Nations Single Convention 1961, as can be seen from Article 3³ of Law No. 2313 on the Control of Narcotic Drugs, which was published in 1933. Turkey's sensitivity on this subject dates back to the days of the Ottoman Empire. Evidence that cannabis was forbidden is to be found in a *Seyahatname* penned by Evliya Çelebi and in it was issued during various periods in nizamnames (Regulations) and fetwas.

Although legislation and international conventions⁴ clearly define cannabis as a narcotic substance, its legal status and fields of use are currently a topic of debate in many quarters, ranging from scientific circles to the art world and from non-governmental organisations to international organisations.

The dramatic developments that have taken place in North America in recent years call for a scientific discussion of the subject as well as for a fuller understanding of the quasi-legal practices which have been adopted in contravention of international conventions.

The aim of this study is to provide the reader with clear information about cannabis and its derivatives within the context of international conventions, medical uses and differing practices

¹ UNODC, World Drug Report, Booklet 1, 2020, p.7

² UNODC, World Drug Report, Booklet 2, 2020, p.31.

³ "The cultivation of plants solely used to produce *esrar* (cannabis) and the exhibition, import, export and sale of *esrar* in any place whatsoever is forbidden."

⁴ United Nations Single Convention on Narcotic Drugs, Schedule 1, "Cannabis and Cannabis Resin and Extracts and Tinctures of Cannabis"

throughout the world, and to contribute to a more adequate assessment of the various speculative assertions that have arisen from a lack of information in this field.

This document has been prepared by using national and international reports, documents and sources.

KEY CONCEPTS

In this study, the phrase "**Cannabis and its derivatives**" refers to all products obtained from the cannabis plant. Cannabis products include:

- Cannabis in resin, powder, sheet, bud and liquid form of any kind known to the Turkish public as *esrar*,
- Skunk, also known as hybrid cannabis, sinsemilla or nederwiet, which generally comes to Turkey from Europe, and which is obtained by crossbreeding different cannabis seeds, and contains high quantities of THC,
- Marijuana (obtained from the flowering buds of the cannabis plant) and hashish (produced by pressing the cannabis plant to obtain resin),
- Cannabis oils,
- Concentrated cannabis extracts, and
- Edible variants (Boiling and brewing forms, cookies, chocolate, etc.).
- ✓ Cannabinoids are substances found only in the cannabis plant. There are 144 types of naturally occurring cannabinoids.⁵ The most notable cannabinoids are Tetrahydrocannabinol (THC) and Cannabidiol (CBD).
- ✓ THC is a type of cannabinoid which is particularly sought after by recreational users. It has psychoactive effects like euphoria, relaxation and exaggerated sensory experiences.
- ✓ The psychoactive effects of CBD are fewer⁶ than those of THC, but given the similar chemical characteristics of THC and CBD, it is possible to convert CBD to THC⁷.
- ✓ Synthetic cannabinoids are entirely chemical substances produced in a laboratory setting which have similar effects to THC and other cannabinoids.
- ✓ The cannabinoids licensed to be used as medicine are dronabinol, nabilone, nabiximols and CBD.
 Research on the potential uses of other cannabinoids is ongoing.
- ✓ The phrase "Medical use of cannabis" refers to the medical use of cannabis as circumscribed by the 1961 and 1971 Conventions.
- ✓ The phrase "Non-medical use of cannabis" refers to the non-medical and/or recreational use of cannabis referred to in international literature.

⁵ EMCDDA & EUROPOL, EU Drugs Markets Report, 2019, p.86.

⁶ National Academies of Sciences, Engineering, and Medicine, The Health Effects of Cannabis and Cannabinoids: The Current State of Evidence and Recommendations for Research (Washington, D.C., National Academies Press, 2017); WHO, The Health and Social Effects of Nonmedical Cannabis Use (Geneva, 2016); and Leslie L. Iversen, The Science of Marijuana, 2nd ed. (Oxford, Oxford University Press, 2008). (Cited in INCB, 2018).

⁷ Gaoni, Y. and R. Mechoulam, Hashish VII. The isomerization of CBD to THC. Tetrahedron Vol.22.1966, s. 14811488.

CANNABIS AS AN INDISPENSABLE SOURCE OF REVENUE FOR CRIMINAL ORGANISATIONS

- 1) Cannabis, generally known as *esrar* in Turkish, continues to be the most widely used drug worldwide. Contrary to the other plant-based drugs, which are concentrated in a few countries, cannabis is produced in almost all regions of the world. It is illegally cultivated and trafficked more frequently than any other drug.
- 2) Herbal cannabis, cannabis resin and liquid cannabis are the most common cannabis products found in illegal drug markets. Herbal cannabis is produced in almost all countries in the world. North Africa, particularly Morocco, has a prominent place in the production of cannabis resin. A distinct upward trend has also been detected in Libya recently.
- 3) In 2018, 4,303 tonnes of herbal cannabis and 1,307 tonnes of cannabis resin were seized, and cannabis continued to be the most seized drug on a global scale. Among the various cannabis products, herbal cannabis was the most seized in 2018, accounting for 76% of all seizures. Most seizures of herbal cannabis took place in the Americas (61 per cent): 43% of the global amount was seized in South America, and 17% was seized in North America in 2018. On a global scale, 51% of the cannabis resin was seized in Southern and Central Europe, 36% in Asia, and 8% in Northern Africa.⁸
- 4) Cannabis accounted for three-quarters of all drug seizures in Europe in 2017. The amount of herbal cannabis seized in Turkey every year between 2009 and 2017 exceeded the amount seized in any EU country.⁹ This situation is understood to have persisted in 2018 and 2019.
- **5)** Successful operations by the Turkish National Law Enforcement Agencies have led to a serious decline in the accessibility of cannabis in recent years. This trend has caused drug dealers to start trafficking in skunk to meet the domestic demand.
- 6) Skunk is a type of cannabis which generally comes to Turkey from Europe, is obtained by crossbreeding different cannabis seeds, and contains high quantities of THC. It can also be called hybrid cannabis, sinsemilla or nederwiet (Dutch cannabis). The quantity of skunk seized in Turkey in 2019 was 14 times higher than in 2017. There was a 1.5-fold increase compared to 2018.¹⁰
- 7) Illegal drug trade is a global problem encompassing the stages of production, trafficking and dealing. The fact that it encompasses different geographical areas and markets around the world and is conducted in secrecy as a global operation by criminal enterprises makes the financial dimension of drug trafficking difficult to estimate.

⁸ UNODC, World Drug Report, Booklet 3, 2020, pp.67-72.

⁹ EMCDDA, European Drug Report, 2019, p.22.

¹⁰ NDB/TUBİM, Türkiye Uyuşturucu Raporu [Turkish Drug Report], 2020, p.42.

- 8) Nevertheless, the Transnational Crime and Developing World Report published in 2017 estimated the retail market value of major drugs such as cannabis, cocaine, opioids and amphetamines in 2014 at between USD426 billion and USD652 billion.¹¹ According to this report,
 - Cannabis has a market share of USD183-287 billion.
 - Cocaine has a share of USD94-143 billion.
 - Opioids have a share of USD75-132 billion.
 - Amphetamine Type Stimulants (ATS) have a share of USD74-90 billion.
- 9) According to the EU Drug Markets Report published in 2019, estimates based on 2017 data put the value of the European retail drug market at a minimum of EUR30 billion.¹² The shares of the various drugs in this market are as follows:
 - 39% cannabis
 - 31% cocaine
 - 25% heroine
 - 5% ATS
- **10)** It is worth noting that the above estimates were made retrospectively (for the years 2014 and 2017), and that they do not include the retail values of new psychoactive substances such as synthetic cannabinoids and synthetic cathinones, which have become a global threat in the past ten years. Even so, the estimates show that cannabis ranks first in terms of volume, both on a global scale and in Europe.
- **11)** When all these factors are taken into consideration, it is clear that any effort to estimate the current size of the global market would arrive at gigantic sums for all drugs in general and for cannabis trafficking in particular.
- 12) A market as big as this is a natural focus of attention for organised crime. For example, according to the Serious and Organised Crime Threat (SOCTA) Report¹³ published in 2017, there are 5,000 organised crime syndicates in Europe. One third of these groups are directly concerned with drug trafficking.
- **13)** The drug trafficking activities of organised crime syndicates need to be addressed within a complicated web of relationships. These syndicates participate in all stages of the local and international production, trafficking and sale of drugs. While in some cases multiple

¹¹ Global Financial Integrity (GFI), Transnational Crime and the Developing World report, 2017, p.3.

¹² EMCDDA & EUROPOL, EU Drugs Markets Report, 2019, p.28.

¹³ EUROPOL, Serious and Organised Crime Threat Assessment (SOCTA) report, 2017, p.14.

criminal groups may cooperate and act together, cases of rivalry and conflict among different groups are also observed.

- 14) Due to its global volume, the drugs market and hence the trafficking of cannabis, which accounts for the largest market share have attracted the attention not only of organised crime syndicates but also of terrorist organisations.
- **15)** In this area, the kind of cooperation that has been observed among organised crime syndicates can also be encountered among terrorist organisations, and even between the criminal groups and the terrorist organisations.
- **16)** Organised crime syndicates and terrorist organisations may form strategic partnerships in order to expand their illegal activities further. They may also form partnerships for purposes such as procuring weapons, financing terrorist activities through the shipment and distribution of drugs, and infiltrating financial markets.¹⁴
- 17) It is clear that terrorist organisations are closely involved in the drugs trade today, both independently and in cooperation with other terrorist and criminal groups. The links between terrorism and illegal drug trafficking have reached an alarming level¹⁵. Given its place in the drug market and its potential to be produced in almost all regions of the world, cannabis is an indispensable product for financing the unlawful activities of all kinds of illegal entities, whether organised crime syndicates or terrorist organisations. Legalising cannabis will not transfer its economic power into the monopolies of states. Rather, a going rate will be set for the price of cannabis, which is currently set spontaneously in the market, and once again it will be the organised crime syndicates and terrorist organisations that benefit.

MEDICAL, SCIENTIFIC AND RECREATIONAL USE OF CANNABIS AND CANNABINOIDS

- 18) Due to its addictive characteristics and negative impact on public health, cannabis is one of the drugs included in the annex of the United Nations Single Convention on Narcotic Drugs 1961, as amended by the 1972 protocol¹⁶. Due to their addictive characteristics and the public/social problems they have created, basic cannabinoids with psychoactive characteristics notably THC and its isomers and stereochemical varieties were included in Table 1 of the Convention on Psychotropic Substances of 1971¹⁷.
- **19)** Some countries have legislative regulations and programmes regarding the medical use of cannabis. Some of these programmes are incompatible with international drug conventions, have negative effects on public health, and lead to the use of cannabis for

15 Ibid

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¹⁴ EMCDDA & EUROPOL, EU Drugs Markets Report, 2019, p.32.

¹⁶ United Nations, Treaty Series, vol. 976, No. 14152.

¹⁷ United Nations, Treaty Series, vol. 1019, No. 14956.

non- medical purposes. The poor medical cannabis programmes organised by some countries and the low risk perceptions which they engender are also in conflict with international conventions.

- 20) The negative effects of the consumption of cannabis on public health include the possibility of motor vehicle accidents, mental illnesses like psychosis, poor cognitive and educational performance, irregular adolescent development and irregular development of the foetus¹⁸ ¹⁹ The use of cannabis can negatively affect brain development, particularly during the sensitive period of adolescence.
- **21)** In its 2017 report ²⁰, the International Narcotics Control Board (INCB) reassessed its terminology regarding the medical use of cannabinoids. Accordingly, in its 2018 report, the term "medical cannabinoids" was used. This term refers to cannabinoids which are plant-based or synthesised from plants and have been clinically tested for their safety and effectiveness, and licensed to be used as medicine.
- **22)** Inadequate control programmes for the medical use of cannabinoids can have negative impacts on public health. Such inadequate programmes can increase the non-medical consumption of cannabis among adults. By weakening the public perception of the risks of cannabis consumption, they can also contribute to legislative regulations which pave the way for non-medical consumption. There are examples of this situation in many countries.

CANNABIS, ITS DERIVATIVES AND INTERNATIONAL NARCOTICS CONTROL CONVENTIONS

- **23)** Article 4, paragraph (c) of the 1961 Single Convention limits the use of cannabis and its derivatives to medical and scientific purposes only. Pursuant to the convention, cannabinoids may be used in controlled clinical studies to determine their medical benefits and risks.
- 24) International conventions have also determined the conditions under which the contracting parties may permit the use of cannabis and its derivatives for medical purposes. Articles 23 and 28 of the 1961 Convention, for example, oblige the contracting parties to monitor production for medical purposes, and to form a National Cannabis Agency in order to regulate the cannabinoid supply. The national agency should form a monopoly to license the producers, to purchase and stock the product and to sell it on the wholesale market. This agency is also obliged to inform the INCB annually about the quantities of narcotics used for medical purposes, and the number of patients receiving treatment with these

¹⁸ Development of the foetus: development of the baby in the mother's womb.

¹⁹ WHO Expert Committee on Drug Dependence 41st Meeting, (12 –16 November 2018).

²⁰ E/INCB/2017/1.

substances. All programmes for the medical use of cannabinoids must be developed and implemented under the full authority and control of the states concerned.

- **25)** According to the provisions on the control of cannabis set out in Article 28 of the 1961 Convention, all contracting parties are obliged to take necessary precautions against the illegal planting of cannabis and to destroy illegal planting areas in order to prevent the misuse and trafficking of cannabis.
- 26) International conventions have made it obligatory to take effective legislative action to prevent cannabis and its derivatives from being diverted to use for non-medical purposes. In countries where the medical use of cannabis is allowed, the need for the patient to use it has to be demonstrated by evidence and the specialist may only prescribe it in the light of this evidence.
- 27) Cannabinoids can be licensed for medical use much like other drugs after conducting controlled clinical studies and proving their quality, effectiveness and safety by scientific evidence. Cannabinoids which have been licensed as medicines by official health authorities such as the European Medicine Agency (EMA) or the US Food and Drug Administration (FDA) may only be prescribed by a specialist, and must be obtained from pharmacies. States must also implement a programme whereby prescribing specialists, pharmacies and patients can be monitored in order to prevent the non-medical use of cannabinoids.
- **28)** The INCB has continually reiterated that the personal growth of cannabis for medical use and the resulting increased risk of non-medical use are incompatible with the 1961 Convention.²¹ Granting permission for individuals to grow cannabis for their own medical use can cause additional health risks. The amounts consumed and the levels of THC which they contain may differ from those of cannabis prescribed for medical use. The use of highly-concentrated THC and extracts for medical purposes has added to the concerns of the INCB about the risk of diversion to non-medical use.

LICENSING AND PRESCRIPTION REGULATIONS

29) In order to license drugs which contain cannabinoids, mandatory quality requirements should be set, and the safety and effectiveness of the drug should be established by randomised controlled clinical research.²²

²¹ Ibid, para. 177

²² "Pharmaceutical regulation: the role of Government in the business of drug discovery", in Social Aspects of Drug Discovery, Development and Commercialization, Odilia Osakwe and Syed A. A. Rizvi, eds. (London, Elsevier, 2016); and Lembit Rägo and Budiono Santoso, "Drug regulation: history, present and future", in Drug Benefits and Risks: An International Textbook of Clinical Pharmacology, revised 2nd ed., Chris J. van Boxtel, Budiono Santoso and I. Ralph Edwards, eds. (Uppsala, Sweden, Uppsala Monitoring Centre, 2008). (Cited in INCB, 2018).

- **30)** Once the medicine is licensed, clinical practice guides are usually prepared by the relevant specialisms. These guides are prepared to help the prescribing specialists to include the medicine in their clinical practices in the best way possible.
- **31)** Information about the safety of the medicines in question is rather limited at the licensing stage. This is due to factors such as the limited numbers of volunteers participating in clinical research, restrictions on the age and gender of the research population, the relatively short period for which the volunteers are exposed to the medicines and the relatively short monitoring period. As a result, many of the risks related to the use of the medicines can only be discovered and defined after the licensing. For this reason, side effects need to be monitored after the medicines have been licensed in order to define their safety profiles more accurately.²³
- **32)** When determining the potential of a controlled substance to be used for medical purposes, every effort should be made to ensure that the therapeutic²⁴ advantages provided by the said substance cannot be provided by another uncontrolled substance with no or little addictive potential.²⁵
- **33)** Marketing and advertising cannabis as a "herbal drug" or "food supplement", or by any similar classification, is contrary to the 1961 and 1971 Conventions.
- **34)** The consumption of cannabis in the form of cigarettes is not a medically acceptable method. Since each cannabis plant has different components, the intake of the standard dose of cannabinoids cannot be ensured, and the inhaling of the carcinogens and toxins contained in cannabis smoke creates health risks.²⁶
- **35)** Pharmaceutical grade cannabinoids should be licensed for specific medical uses which are clearly defined by countries' regulatory health authorities. In order to prevent usage in cases where evidence is insufficient about the benefits, the pharmacological specifics of the cannabinoid used for treatment should be indicated. Medical use in areas where there is no clear scientific proof should be avoided.²⁷

²³ İyi Farmakovijilans Uygulamaları (İFU) Kılavuzu Modül VI-Risk Yönetim Sistemleri, Türkiye İlaç ve Tıbbi Cihaz Kurumu, 2015 [Good Pharmacovigilance Practices Guide Module 6 – Risk Management Systems by the Turkey Pharmaceuticals and Medical Equipment Board, 2015].

²⁴ Therapeutic = 1. pertaining to therapy; 2 healing, treating.

²⁵ Martin, Bonomo and Reynolds, "Compassion and evidence in prescribing cannabinoids". (Cited in INCB, 2018).

²⁶ United States of America, National Academies of Sciences, Engineering and Medicine, The Health Effects of Cannabis and Cannabinoids: The Current State of Evidence and Recommendations for Research (Washington, D.C., National Academies Press, 2017). (Cited in INCB, 2018).

²⁷ Jennifer H. Martin, Yvonne Bonomo and Adrian D. B. Reynolds, "Compassion and evidence in prescribing cannabinoids: a perspective from the Royal Australasian College of Physicians", Medical Journal of Australia, vol. 208, No. 3 (February 2018). (Cited in INCB, 2018).

MEDICAL USE OF CANNABINOIDS

- **36)** Cannabinoids are not the first option to be used in the treatment of diseases.²⁸
- **37)** A rather wide range of preparations containing considerable quantities of cannabinoids are being administered in various dosages and concentrations and by various methods in many areas of the world. Despite the lack of evidence attesting to their safety and effectiveness, these preparations are being used in the belief that they relieve symptoms. It is usually unclear which cannabinoid these preparates contain, how they can best be administered or what their exact side effects are.²⁹
- **38)** Some controlled clinical studies indicate that some cannabinoids can alleviate the symptoms of some diseases. However they do not eliminate the underlying cause of the disease.³⁰ In principle, these types of cannabinoids may only be used in combination with other medicines and in situations where the patient does not respond to other valid treatments. They are not the first-choice treatment. Medicines containing cannabinoids are used in some countries for the following medical conditions:
 - Neuropathic pain and spasticity associated with Multiple Sclerosis (MS),
 - Treatment-resistant childhood epilepsy,
 - Nausea and vomiting in cancer patients due to chemotherapy,
 - Anorexia associated with weight loss in AIDS patients.

SHORT-TERM SIDE EFFECTS OF MEDICAL USE OF CANNABINOIDS

39) An analysis of 79 randomised clinical studies on the side-effects of the medical use of cannabinoids referred to in Article 38 showed that patients who are given cannabinoids were three times more likely to exhibit side-effects than patients who are given a placebo, and 40 % more likely to report serious side effects. The most common side effects reported by patients who use medical cannabinoids are **dizziness, dryness of the mouth, disorientation, euphoria, mental confusion and drowsiness.**³¹

²⁸ Penny F. Whiting and others, "Cannabinoids for medical use: a systematic review and meta-analysis", Journal of the American Medical Association, vol. 313, No. 24 (June 2015), pp. 2456–2473. (Cited in INCB, 2018).

²⁹ Martin, Bonomo and Reynolds, "Compassion and evidence in prescribing cannabinoids". (Cited in INCB, 2018).

³⁰ Vincenzo Di Marzo and Luciano De Petrocellis, "Plant, synthetic, and endogenous cannabinoids in medicine", Annual Review of Medicine, vol. 57 (2006), pp. 553–574; Institute of Medicine, Marijuana and Medicine: Assessing the Science Base (Washington, D.C. National Academies Press, 1999); The Health Effects of Cannabis and Cannabinoids. (Cited in INCB, 2018).

³¹ Whiting and others, "Cannabinoids for medical use". (Cited in INCB, 2018).

LONG-TERM SIDE EFFECTS OF CANNABIS AND ITS DERIVATIVES

- **40)** The side effects of short- and long-term use of non-medical cannabis are shown in Table 1 However, there is limited information on the side effects that may occur as a result of the medical use of cannabinoids for longer periods of time.³² The long-term consumption of cannabinoids for medical purposes will likely result in cannabis addiction. Experience with other medicines suggests that the risk of addiction is high for patients taking cannabinoids over a period of time and on a daily basis.
- **41)** Long-term cannabis smoking is associated with a high risk of chronic bronchitis. Nonmedical use of cannabis increases the risk of respiratory tract diseases.³³
- **42)** Long-term and daily use of non-medical cannabis is associated with poor memory, lack of concentration and poor decision-making and planning capacities in adolescents and young adults.³⁴
- **43)** Long-term use of cannabis and cannabinoids may increase cardiovascular risks especially in adults with previous diseases. ³⁵
- 44) Daily use of cannabis may lead to psychotic symptoms and disorders in young people.³⁶

³² Tongtong Wang and others, "Adverse effects of medical cannabinoids: a systematic review", Canadian Medical Association Journal, vol. 178, No. 13 (June 2008), pp. 1669–1678. (Cited INCB, 2018).

³³ Wan C. Tan and others, "Marijuana and chronic obstructive lung disease: a population-based study", Canadian Medical Association Journal, vol. 180, No. 8 (April 2009), pp. 814–820. (Cited in INCB, 2018).

³⁴ Rebecca D. Crean, Natania A. Crane and Barbara J. Mason, "An evidence-based review of acute and long-term effects of cannabis use on executive cognitive functions", Journal of Addiction Medicine, vol. 5, No. 1 (March 2011), pp. 1–8; and Nadia Solowij and others, "Cognitive functioning of long-term heavy cannabis users seeking treatment", Journal of the American Medical Association, vol. 287, No. 9 (2002), pp. 1123–1131. (Cited in INCB, 2018).

³⁵ Wayne Hall and Rosalie Liccardo Pacula, Cannabis Use and Dependence: Public Health and Public Policy, reissued ed. (Cambridge, Cambridge University Press, 2010). (Cited in INCB, 2018).

³⁶ Louisa Degenhardt and Wayne Hall, "Is cannabis use a contributory cause of psychosis?", Canadian Journal of Psychiatry, vol. 51, No. 9 (August 2006), pp. 555–565; The Health and Social Effects of Nonmedical Cannabis Use; and The Health Effects of Cannabis and Cannabinoids. (Cited in INCB, 2018).

The short-term side effects of cannabis use are:

- Intoxication caused by impairment of consciousness, cognition and perception, the uncontrolled release of emotions and the distortion of behavioural and psychophysiological functions.
- Panic attack, hallucinations, vomiting.
- Malfunction while driving motor vehicles.
- Possibility of triggering coronary diseases in younger users.
- Side effects of cannabis on the foetus during pregnancy.

Long-term psychosocial effects of cannabis use are:

- Addiction.
- More severe and permanent negative consequences in adolescents than in adults.
- Psychotic symptoms and schizophrenia in young adults.
- Risk of dropping out of school, cognitive disorders, illegal use of other drugs, emergence of depressive symptoms, increase in suicidal thoughts and behaviours.

Long-term physiological risks of regular use of cannabis also include:

- Chronic acute bronchitis and damage to the bronchi.
- Myocardial infarction and stroke in young cannabis users.
- Increase in risks of cancer and other respiratory tract diseases when used with tobacco.
- Testicular cancer.

SIDE EFFECTS OF MEDICAL CANNABIS PROGRAMMES ON PUBLIC HEALTH

- **45)** Some researchers and politicians are concerned that poorly-regulated medical cannabis programmes could increase the non-medical use of cannabis among young people in the United States of America. In response to these concerns, comparative studies are being conducted in US states where the medical use of cannabis has been legalised and states where it has not been legalised.
- **46)** The use of cannabis by adults over the age of 21 has increased in US states where cannabis use has been legalised.³⁸ Cannabis use, abuse and addiction are higher among adults in states where medical cannabis has been legalised than in the states where it has not been legalised. The number of male users applying for treatment due to misuse of cannabis has increased in states where medical cannabis has been legalised.³⁹
- **47)** There is varying evidence about the effects of medical cannabis regulations on motor vehicle accidents. While some studies find that the rate of cannabis in the blood of drivers involved in fatal car accidents increased after the cannabis regulations, other studies point

³⁷ WHO, The Health and Social Effects of Nonmedical Cannabis Use (Geneva, 2016). (Cited in INCB, 2018).

³⁸ INCB 2018 report p.6.

 ³⁹ Yu-Wei Luke Chu, "The effects of medical marijuana laws on illegal marijuana use", Journal of Health Economics, vol. 38 (December 2014), pp. 43–61. (Cited in INCB, 2018).

to a decrease.⁴⁰ A comparative study conducted in Colorado and 34 states without medical cannabis regulations between 1994 and 2011 showed that there was a serious increase in cannabis-related fatal accidents in Colorado after 2009.⁴¹

MEDICAL USE OF CANNABINOIDS LICENSED AS MEDICINAL DRUGS

48) The medical use of cannabinoids (Table 2) is permitted in many countries, particularly in Europe and North America. For example, the United States Food and Drug Administration has approved some cannabinoids for medical use. The agency approved dronabinol (Marinol), a synthetic THC used in the prevention of vomiting in cancer patients receiving chemotherapy, in 1985. Nabilone (Cesamet), a synthetic cannabinoid with similar effects to THC, was approved for use in capsule form to increase the appetites of AIDS patients with weight loss problems in 1992.⁴² The same agency also approved a CBD product (Epidiolex) to be used for the treatment of patients aged two years and older with Lennox-Gastaut and Dravet syndromes in June 2018.⁴³

⁴⁰ D. Mark Anderson, Benjamin Hansen and Daniel I. Rees, "Medical marijuana laws, traffic fatalities, and alcohol consumption", Journal of Law and Economics, vol. 56, No. 2 (May 2013), pp. 333–369. (Cited in INCB, 2018).

⁴¹ Stacy Salomonsen-Sautel and others, "Trends in fatal motor vehi- cle crashes before and after marijuana commercialization in Colorado", Drug and Alcohol Dependence, vol. 140 (July 2014), pp. 137–144. (Cited in INCB, 2018).

⁴² Marijuana and Medicine; and Douglas C. Throckmorton, Deputy Director for Regulatory Programs, Center for Drug Evaluation and Research, Food and Drug Administration, Department of Health and Human Services, "Researching the potential medical benefits and risks of marijuana", statement to the Subcommittee on Crime and Terrorism, Committee on the Judiciary, United States Senate, 13 July 2016. (Cited in INCB, 2018).

⁴³ INCB 2018 report p. 6.

CANNABINOID	INGREDIENTS	COMMERCIAL NAME	FORM OF USE	INDICATIONS	SOME SERIOUS SIDE EFFECTS
Dronabinol	Synthetic delta- 9-THC	Marinol	Oral Capsule	Anorexia related to weight loss in AIDS patients Treatment of chemotherapy related nausea and vomiting in patients who do not respond to conventional antiemetics	Neuropsychiatric, cardiovascular and gastrointestinal side effects Changes in haemodynamic parametres, seizure ⁴⁴
Nabilone	Synthetic cannabinoid	Cesamet	Oral Capsule	Anorexia related to weight loss in AIDS patients Treatment of chemotherapy related nausea and vomiting in patients who do not respond to conventional antiemetics	Psychiatric, neurological, cardiovascular and gastrointestinal side effects ⁴⁵
Nabiximols	Cannabinoid extract with equal doses of THC and CBD	Sativex	Oral Mucosal Spray	Spasticity and pain in MS patients	Psychiatric, neurological, cardiovascular and gastrointestinal side effects ⁴⁶
CBD	CBD extract obtained from the cannabis plant	Epidiolex	Oil for oral usage	Treatment of seizures in patients 2 years and older with LennoxGastaut and Dravet syndromes	Liver damage, sedation, sleepiness, increase in frequency of seizures, suicidal thoughts and behaviour, haematological anomalies, an increase in creatinine ⁴⁷

Table 2. Pharmaceutical Cannabinoids Approved for Medical Use

- 49) Dronabinol and nabilone are not commonly used in the USA. This is because patients are unable to benefit from the desired therapeutic effects without experiencing side effects. The side effects of THC are delayed when it is taken orally. For this reason, patients often do not take enough THC to achieve a therapeutic effect; alternatively, they take too much of it and experience side effects.⁴⁸
- **50)** Nabiximol (Sativex) has been licensed for use in the treatment of muscle spasms in MS patients in some countries, but it is not commonly used.⁴⁹

⁴⁴ FDA Highlights of Prescribing Information: https://www.accessdata.fda.gov/drugsatfda_docs/label/2017/018651s029lbl.pdf.

⁴⁵ FDA Highights of Prescribing Information: https://www.accessdata.fda.gov/drugsatfda_docs/label/2006/018677s011lbl.pdf.

⁴⁶ United Kingdom Medical Product Information: https://www.medicines.org.uk/emc/product/602.

⁴⁷ FDA Highights of Prescribing Information:

https://www.accessdata.fda.gov/drugsatfda_docs/label/2018/210365s002lbl.pdf.

⁴⁸ Grotenhermen, "Cannabinoids for therapeutic use"; and Leslie L. Iversen, The Science of Marijuana, 2nd ed. (Oxford, Oxford University Press, 2007). (Cited in INCB, 2018).

⁴⁹ Iversen, The Science of Marijuana; and Ethan Russo and Geoffrey W. Guy, "A tale of two cannabinoids: the therapeutic rationale for combining tetrahydrocannabinol and cannabidiol", Medical Hypotheses, vol. 66, No. 2 (2006), pp. 234–246. (Cited in INCB, 2018).

POORLY REGULATED MEDICAL CANNABIS PROGRAMMES IN NORTH AMERICA

- **51)** Current clinical studies on medicines containing cannabinoids have generated:
 - Moderate evidence on the use of Nabiximols (Sativex) for the treatment of muscle spasms and neuropathic pain in MS patients.
 - Moderate evidence on the use of CBD for reducing the frequency of treatmentresistant epileptic seizures in children.
 - Weak evidence on the use of Dronabinol for the treatment of nausea and vomiting in cancer patients.
- **52)** In some states in the USA and in Canada, cannabis programmes allow patients to buy cannabis to assist them with their various health problems from commercial companies under minimal medical supervision. This poor regulation of medical use causes cannabis to be used for non-medical purposes. Some people also believe that is facilitates the legalisation of the non-medical use of cannabis in some states of the USA. The general characteristics of these programmes are listed in the table⁵⁰ below, and more details are given in the following paragraphs.

Table 3. General Characteristics of Poorly Regulated Medical Cannabis Programmes

- They allow the consumption of cannabis in cigarette form for medical purposes.
- They permit a wide range of medical use of cannabis despite the lack of evidence of safety and effectiveness obtained from controlled clinical studies.
- They allow non-standardised cannabis products to be procured with minimum medical supervision, and permit products to be used in return for payment after being prescribed by doctors with insufficient knowledge and experience.
- They allow patients to grow their own cannabis or obtain it illegally.
- **53)** As of 2020, medical use of cannabis is permitted in Washington D.C. and 33 states. The programmes which allow the medical use of cannabis may differ from state to state. In some states, the term "medical use" is used broadly and commercial businesses can sell cannabis to individuals while giving them medical advice. In some other states, the use of cannabis is limited to medical purposes and commercial businesses are prohibited from selling cannabis.⁵¹

⁵⁰ Beau Kilmer and Robert J. MacCoun, "How medical marijuana smoothed the transition to marijuana legalization in the United States", Annual Review of Law and Social Science, vol. 13 (2017), pp. 181–202. (Cited in INCB, 2018).

⁵¹ Rosalie Liccardo Pacula and Rosanna Smart, "Medical marijuana and marijuana legalization", Annual Review of Clinical Psychology, vol. 13 (2017), pp. 397–419. (Cited in INCB, 2018).

- 54) The patient profile in medical cannabis programmes in California provides an indication of just how loosely defined the state's regulations are. Between 2001 and 2007, 88% of 4,117 patients in the San Francisco Bay area started using cannabis before the age of 19, and 90 % of them are daily users.⁵² Another study points out that only 7% of adults use cannabis for medical purposes in California.⁵³ While the 18-24 age group accounts for the highest share of consumption (10%), the lowest level of consumption is observed among individuals over the age of 65 (1.5%). These indicators contradict the views of supporters of the medical use of cannabis.⁵⁴
- **55)** Many of the medical cannabis programmes practised in the USA are incompatible with international drug control conventions or the United States' own national laws. Scientific evidence supporting the medical use of cannabis for the purposes for which it is ostensibly used is either seldom encountered or no such evidence exists. There are very few monitoring mechanisms to control the medical use of cannabis.
- **56)** Any specialist in Canada is permitted to prescribe the use of cannabis to patients with an extensive range of conditions who are believed to benefit from it.⁵⁵ Persons who are permitted to use cannabis for medical purposes can grow the amount of cannabis that they need, or authorise another person to grow it on their behalf. The implementation of successive court decisions in Canada has resulted in the emergence of a medical cannabis programme which conflicts with international conventions on significant points.⁵⁶

LEGALISATION OF THE NON-MEDICAL USE OF CANNABIS

57) Groups supporting the legalisation of cannabis have drawn on the medical cannabis programmes in operation in some states of the USA to promote the legalisation of the recreational use of cannabis. The tolerance of the law in this respect has resulted in the development of a quasi-legal cannabis market in the states in question.⁵⁷

⁵² Thomas J. O'Connell and Ché B. Bou-Matar, "Long term mari- juana users seeking medical cannabis in California (2001–2007): demographics, social characteristics, patterns of cannabis and other drug use of 4117 applicants", Harm Reduction Journal, vol. 4, No. 16 (2007). (Cited in INCB, 2018).

⁵³ Suzanne Ryan-Ibarra, Marta Induni and Danielle Ewing, "Prevalence of medical marijuana use in California, 2012", Drug and Alcohol Review, vol. 34, No. 2 (March 2015), pp. 141–146. (Cited in INCB, 2018).

⁵⁴ INCB 2018 report. p. 9.

⁵⁵ Benedikt Fischer, Sharan Kuganesan and Robin Room, "Medical marijuana programs: implications for cannabis control policy observations from Canada", International Journal of Drug Policy, vol. 26, No. 1 (January 2015), pp. 15–19. (Cited in INCB, 2018).

⁵⁶ INCB 2018 report. p. 10.

⁵⁷ Kilmer and MacCoun, "How medical marijuana smoothed the transition to marijuana legalization in the United States". (Cited in INCB, 2018).

- **58)** The spread of poorly regulated, low-impact or ineffective medical cannabis programmes in the United States has led to growing public support for the legalisation of non-medical cannabis.⁵⁸
- 59) The tobacco industry in the United Stated is taking a close interest in the process of legalisation of cannabis. Cigarette companies are involved in providing financial support for campaigns to raise public support for the legalisation of the non-medical use of cannabis.⁵⁹
- **60)** The decline in the perceived risks of using cannabis and the social marketing carried out by the cannabis industry to this effect constitute the main threats to efforts to prevent the use of cannabis among young people. Unsubstantiated claims about the health benefits of cannabis create the perception among young people in the USA that the use of cannabis does not entail any risk.⁶⁰ The use of cannabis by adults in states where non-medical cannabis is legalised encourages adoloscents to use the drug at a time in their lives when their brains are particularly vulnerable to it.⁶¹
- **61)** The consumption of cannabis increased significantly among high school students in the USA in 2017 by comparison ith 2016. The percentage of users increased from:
 - 9.4% in 2016 to 10.1% in 2017 among eighth graders,
 - 23.9% in 2016 to 25.5% in 2017 among tenth graders, and
 - 35.6% in 2016 to 37.1% in 2017 among twelfth graders.⁶²
- **62)** According to the UNODC 2019 World Drug Report, cannabis use is increasing with legalisation in North America. This increase is particularly apparent for the non-medical use of cannabis. For example, number of previous-year cannabis users increased by 60 between 2007 and 2017. The number of cannabis users doubled every day, or almost every day. This group of regular users account for most of the cannabis consumed.⁶³
- **63)** The same report indicates that the variety of cannabis products and the levels of THC in these products have increased. Between 2014 and 2017, the amounts of THC contained in

⁵⁸ Kilmer and MacCoun, "How medical marijuana smoothed the transition to marijuana legalization in the United States". (Cited in INCB, 2018).

⁵⁹ Marilyn Huestis, "The Great US Cannabis Experiment, Short and Long-term Consequences of Cannabis Medicalization and Commercialization", Third Regional TIAFT Meeting in Turkey, The International Association of Forensic Toxicologists, Drug Abuse & Crime Symposium, 18-20 October 2018, Cappadocia, Nevşehir, Turkey.

⁶⁰ Hannah Carliner and others, "Cannabis use, attitudes, and legal status in the U.S.: a review", Preventive Medicine, vol. 104 (November 2017), pp. 13–23. (Cited in INCB, 2018).

⁶¹ INCB 2018 report. p.11.

⁶² United States, National Institute on Drug Abuse, "Trends in Prevalence of Various Drugs", Monitoring the Future Study(revised December 2018). Available at www.drugabuse.gov/trends-statistics/monitoring-future/ monitoringfuture-studytrends-in-prevalence-various-drugs. (Cited in UNODC, World Drug Report, 2019).

⁶³ UNODC, World Drug Report, Executive Summary, p.14.

cannabis plants and concentrated cannabis products increased in Colorado⁶⁴. Concentrated cannabis products are a growing market, and the demand for these products is rising⁶⁵.

EMPHASIS ON INTERNATIONAL DRUG CONTROL

- **64)** In 2013, the government of Uruguay ratified Law No: 19172 on the cultivation, production, distribution and use of cannabis for non-medical purposes. The law allows persons who are over the age of 18 to obtain non-medical cannabis via the National Institute for the Regulation and Control of Cannabis using one of the options below:
 - Purchase of authorised pharmacies,
 - Membership of a cannabis club,
 - Personal cannabis cultivation.
- The amount of cannabis that can be obtained using one of these three channels is limited 65) to 480 grams per person per year. In the first year of legalisation, the Uruguayan government set the amount of THC at 2%, and the amount of CBD at 6-7%. In 2017, the amounts of THC and CBD were set at 9% and 3% respectively.⁶⁶ The implementation of legislative arrangements in the country is generally slow and staggered. For example, 34,696 registered individuals were obtaining non-medical cannabis from 16 authorised pharmacies as of February 2018. In February 2019, there were 115 registered cannabis clubs with 3,406 members, while 6,965 individuals were registered for domestic production. These numbers show that approximately 45,000 people have access to the legally regulated cannabis market, constituting only a small proportion of the total number of cannabis users in the country. Research conducted by the Uruguay Drug Regulation Centre in 2014 showed that the rate of annual cannabis use was 9.3% (12.5 % among men, 6.4% among women). This ratio corresponds to 162,000 $people^{67}$. A separate study conducted in 2017 shows that the rate of annual cannabis use in the 15-64 age group is 15%. Between 2014 and 2017, the increase in the use of cannabis was particularly noticeable among both men and women in the 19-24 age group⁶⁸.
- **66)** The rate of use of cannabis in Canada was stable at 9% among the population of 15 years and older over the long-term period between 2004 and 2011. Subsequently, however, previous-year cannabis use increased by 40% between 2013 and 2017. This increase was

⁶⁴ The THC values in 2017 were 20% for the cannabis flower and 69% for concentrated products.

⁶⁵ UNODC, World Drug Report, Executive Summary, p.14.

⁶⁶ John Hudak, Geoff Ramsey and John Walsh, "Uruguay's cannabis law: pioneering a new paradigm", (Washington D.C., Centre for Effective Public Management, Brookings Institution, March 2018). (Cited in UNODC, World Drug Report, 2019).

⁶⁷ Uruguay, Sixth national household survey on drug use (National Drug Observatory and National Drug Council, 2016). (Cited in UNODC, World Drug Report, 2019).

⁶⁸ Clara Musto and Gustavo Robaina, "Evolucion del consumo de cannabis en Uruguay y mercados regulados", Monitor Cannabis Uruguay, 2018. (Cited in UNODC, World Drug Report, 2019).

a result of the national debate about the non-medical use of cannabis and the decline in the perceived risks of using cannabis.⁶⁹

- **67)** As of 2020, Uruguay, Canada and the USA (11 states and Washington D.C.) had adopted legislation on the non-medical use of cannabis.
- **68)** The legislation adopted in all these countries permits the production and sale of cannabis for non-medical purposes. However, the arrangements made for the non-medical use of cannabis are not uniform in practice. Accordingly, the practices adopted will have different effects on the development of the cannabis market, the prevalence of the non-medical use of the drug and public health and safety in each of the said countries and regions.⁷⁰
- **69)** The legalisation of the non-medical use of cannabis is a violation of international drug control conventions. The legalisation of the non-medical use of cannabis in Canada, Uruguay and the United States of America puts the universal implementation of the conventions at risk. It also encourages other countries to develop similar practices.
- **70)** The legalisation of the non-medical use of cannabis may make cannabis cheaper, more addictive, more common and more accessible, thereby increasing consumption among adult users. Legalisation measures are likely to cause an increase in the number of new users among adolescents and adults in the decades ahead. Moreover, experience with alcohol and tobacco shows that the legalisation will cause a decline in the social rejection of cannabis among adults and in their perceptions of the risk of using it, leading to a shift in the use of cannabis towards persons who have reached the minimum legal age for its purchase and use.⁷¹
- **71)** People who support the legalisation of the non-medical use of cannabis claim that it will prevent minors from accessing cannabis. Experience from Washington State raises serious concerns about this claim. The authorities report that a significant number of cannabis outlets sell cannabis to minors, and that the fines for this offence are low.
- **72)** Across Europe, arguments for changing the cannabis regulations can be heard in the media and public discussion. However, national governments have concerns about the effects of the use of cannabis on the public health, and generally object to its legalisation and to the decriminalisation of recreational use. Nevertheless, medical and scientific

⁶⁹ Anna McKiernan and Katie Fleming, *Canadian Youth Perceptions on Cannabis* (Ottawa, Canadian Centre on Substance Abuse, 2017). (Cited in UNODC, World Drug Report, 2019).

⁷⁰ UNODC, World Drug Report, Booklet 5, p.25.

⁷¹ Rosalie Liccardo Pacula and others, "Developing public health regulations for marijuana: lessons from alcohol and tobacco", American Journal of Public Health, vol. 104, No. 6 (June 2014), pp. 1021–1028. (Cited in INCB, 2018).

research on cannabis and its derivatives might result in a change in the situation in one direction or another.⁷²

- **73)** In the Netherlands, drugs policies are not centralised but are coordinated by a "tripartite meeting" between the mayor, the chief prosecutor, and the chief of police in each province. Policies concerning "coffee shops" are also determined through these talks. Decisions about the numbers of coffee shops or whether or not to permit them are taken within the framework of the tripartite meetings. The sale of all types of drugs is punishable by law in the Netherlands. For cannabis, the amount sold is critical. Sales of no more than six grams per person per day in coffee shops are not actively investigated, but a serious struggle is waged against the sale of larger quantities for trading purposes. Sales which take place in places other than coffee shops, such as hotels, restaurants and bars, on the street or in homes are actively investigated. In coffee shops, stocks of up to 500 grams are not interfered with. Coffee shops can be closed upon the orders of the mayor if they exceed the daily amount of six grams per person, sell other drugs, participate in commercial drugs trading, disturb the public order, allow persons under the age of 18 on the premises or sell cannabis to such persons.⁷³
- **74)** Attempts to develop systems such as the coffee shops or cannabis social clubs in the Netherlands where the supply of recreational cannabis is not penalised have made little progress. There are fewer coffee shops and cannabis social clubs in the Netherlands today than there were 15 years ago and they are more strictly controlled. Although the cannabis social clubs the activities of which are partially tolerated in many European countries have attracted much attention, none of them hold a legal status⁷⁴.
- **75)** Any increase in the use of non-medical cannabis will also increase the side effects of cannabis on public health. The most likely effects will be increases in traffic accidents, cannabis addiction and abuse, psychosis and other mental disorders and psychosocial disorders in young adults.
- **76)** The legalisation of the non-medical use of cannabis will make it more difficult for neighbouring countries to continue to follow policies that are in line with the international conventions. For example, it will be harder to prevent the trafficking of cannabis across borders in cases where the supplier country has legalised the non-medical use of cannabis.

⁷² EMCDDA, Cannabis Legislation in Europe: An Overview (Luxembourg, Publications Office of the European Union, 2018), p. 4.

⁷³ The Netherlands Foreign Ministry, "Frequently Asked Questions about Narcotic Substances", Dutch Narcotic Substances Policy, June 2008. p. 14-15.

⁷⁴ EMCDDA, Cannabis Legislation in Europe: An Overview (Luxembourg, Publications Office of the European Union, 2018), p. 27.

POLICY AND PRACTICE IN TURKEY

- **77)** Turkey is a signatory country to the 1961 Single Convention on Narcotic Drugs, the 1971 Convention on Psychotropic Substances and 1988 the United Nations Convention Against Illicit Traffic in Narcotic Drugs and Psychotropic Substances. Turkey complies strictly with the international conventions.
- **78)** According to Article 3 of Law No. 2313 on the Control of Narcotic Drugs, "The cultivation of plants solely used to produce *esrar* (narcotics) and the exhibition, import, export and sale of *esrar* in any place whatsoever is forbidden".
- **79)** It is a crime to produce, carry, use, trade or encourage the use of cannabis and its derivatives. Article 23 of Law No. 2313 states that a person who cultivates cannabis for the purpose of procuring *esrar* shall be sentenced to a prison term of four to twelve years and a judicial fine of five hundred to ten thousand days. In cases of cannabis abuse, action can also be taken according to articles 188, 190 or 191 of the Turkish Penal Code (Law No. 5237).
- **80)** The production and consumption of medical cannabis are prohibited in Turkey. However, the cannabis plant is produced for industrial and agricultural purposes. Its sowing and cultivation are subject to permission. The Ministry of Agriculture and Forestry allows cannabis to be grown within the framework of the "Regulation on the Cultivation of Cannabis and its Control" which took effect in 2016.
- 81) Article 5 of the regulation identifies the regions in which permission can be granted for the cultivation of cannabis. Cannabis may be cultivated in 19 provinces and districts thereof namely, Amasya, Antalya, Bartın, Burdur, Çorum, İzmir, Karabük, Kastamonu, Kayseri, Kütahya, Malatya, Ordu, Rize, Samsun, Sinop, Tokat, Uşak, Yozgat and Zonguldak.
- **82)** Farmers who wish to grow cannabis for its fibre, seeds, stalks or similar purposes must apply for permission from the highest administrative authority of the place in which they intend to cultivate between January 1st and April 1st. In licensed cultivation, residues like the branches, leaves and buds of the cannabis plant are disposed of immediately after the harvest in order to prevent them from being used to produce narcotic substances. The places where the cultivation of cannabis is permitted are continuously monitored throughout the period from sowing to harvesting by technical staff from the provincial or district directorates to establish whether the plant is being cultivated for the intended purpose.

In the following chapter, it will be useful to share data from the study of drug use prevalence in Turkey's general population conducted in 2018 and from the NARCO-LOG Project in order to be able to draw sounder comparisons between findings obtained at the international level and the situation in Turkey.

RESEARCH ON TOBACCO, ALCOHOL, DRUG AND SUBSTANCE USE PREVALENCE IN THE GENERAL POPULATION: FINDINGS ABOUT CANNABIS

- **83)** A survey⁷⁵ on the attitudes and behaviour of households towards tobacco, alcohol, drug and substance use was conducted in 2018 by a face-to-face interview method, using a sample selected as a cross-sectional representation of Turkey in the cities designated by the TUBİM (Turkish National Monitoring Centre for Drugs and Drug Addiction) General Population Survey (GPS) Workshop and at addresses obtained from Turkish Statistical Institute (TÜİK).
- 84) From the 100,000 samples obtained from TÜİK, successful interviews were conducted with 42,754 persons. The survey results show that 3.1% of the participants stated that they had used drugs (lifetime prevalence).⁷⁶
- **85)** The findings of the survey were published in the 2019 Turkish Drug Report. The survey determined that the most frequently-used substance was cannabis *(esrar)*. Since the use of other substances was found to be very low, only the findings for cannabis will be shared here.
- 86) General Findings Regarding the Use of Cannabis,

According to the GPS, the percentage of persons who have used drugs at least once in their lifetime is 3.1%. When this graph is disaggregated by the type of substance used, 2.7% of those surveyed are found to have used cannabis at least once in their lifetime (lifetime prevalence). Thus cannabis accounts for 81.7% of the drug use prevalence rate.

Male users constitute 95.5% of this population, while female users constitute 4.5 %



Graph 1. Use of Cannabis-Distribution by Gender (%, GPS)

⁷⁶ Ibid.

⁷⁵ NDB/TUBİM, Türkiye Uyuşturucu Raporu [Turkey Drug Report], 2019, Genel Nüfusta Kullanım Yaygınlığı Araştırması (General Population Survey/GPS), pp.91-94.

• The age group in which the use of cannabis (as well as the use of any substance) is most concentrated is the 15-34 age group, with 64.7%.



Graph 2. Cannabis – Distribution by Age Group (%, GPS)

- The average age of first use of cannabis is 19.8. The median value is 19.
- Of those who have used cannabis at least once in their lifetime, 20.6% are primary school graduates, 18.6% are middle school graduates, and 29.3% are high school graduatesThe highest level of use is found among high school graduates. Of those who have used cannabis, 4.3% are currently high school students, and 9.2% are currently university students.

	Number	Percentage
No level of schooling complete (illiterate)	42	3.6
No level of schooling complete (literate)		
Primary school graduate (4 years in the new system, 5 years in the old)	240	20.6
Middle school/Primary education graduate (8 years)	217	18.6
Secondary education (high school) student (grades 9-12)	50	4.3
General high school graduate	262	22.5
Vocational high school graduate	79	6.8
University student	107	9.2
Vocational college graduate (2 years further education)	39	3.3
Open university graduate (4 years)	21	1.8
University graduate (4 years)	102	8.8
Higher degree/Doctorate	6	0.5
Total	1,165	100.0

Table 4. Use of Cannabis – Di	stribution by Level	of Education (GPS)
	Stribution by ECVC	or Education (. UI 37

• When analysed by marital status, 54.5% of those who have used cannabis at least once in their lifetime are observed to be unmarried.



Graph 3. Use of Cannabis – Distribution by Marital Status (%, GPS)

Of all the cannabis users in the survey, 40.8% had used cannabis in the last year and 27.78% in the last month. Cannabis users mostly obtain cannabis from the cannabis plant (buds, flowers, grass), and use it by mixing it with tobacco. 30.2% of cannabis users stated that they use cannabis regularly, and 22.2% of regular cannabis users were found to use it daily. They obtained the cannabis they used most recently from a group of friends or from the street.

87) The findings of the survey regarding the perceptions of cannabis users are as follows:

- 14.2% of cannabis users stated that their use of the substance is always out of their control, 16.1% stated that skipping even one dose would create anxiety, 18.5% stated that they continuously experience anxiety about cannabis use, and 44.7% stated that they constantly want to quit using the drug.
- 88.7% of cannabis users state that they are intoxicated for 1 to 4 hours a day after using it.
- 4.4% of cannabis users stated that they cannot stop using cannabis every day, 5% stated that they do not fulfil the functions that are expected from them in normal everyday situations, 2.1 % stated that they use cannabis again to be able to start the day every day, 15.6% stated that they experience regret daily, and 40% stated that they have difficulty concentrating.
- 14.6% of cannabis users are found to inflict damage upon themselves or others after using cannabis. 38.1% of cannabis users had been advised to reduce their intake or to quit by relatives, friends or doctors.

NARCO-LOG PROJECT FINDINGS

- **88)** The 'NARCO-LOG' project has produced interesting information about the addictive potential of cannabis and its derivatives, their importance in the transition to other addictive substances and the development and persistence of crime.
- **89)** The Narco-Log Project started to be implemented in June 2018. Under this project, the Provincial Counter-Narcotics Divisions in all of Turkey's 81 provinces implement surveys on a voluntary basis with persons who have been prosecuted for drugs offences. The surveys were conducted with 6,143 people in 2018 and 21,268 people in 2019. Out of the 21,268 people who were surveyed in 2019, 15,328 (75.7%) stated that they had used substances at least once in their lifetime
- **90)** 82.8% of these 15,328 individuals stated that they started their substance use with cannabis.
- **91)** As seen in graph 4, among those who started their substance use with cannabis:
 - The mean age of first use is 20.2,



• The most common age of use (mode) is 18 and the median is 19.

- Graph 4. Age of First Use of Cannabis (NARCO-LOG Project)
- 92) As seen in Graph 5, 32.2% of the 12,696 people who started their substance use with cannabis consume substances regularly.Among the regular users:

- The average age of starting regular use is 22.1
- The most common age (mode) is 20 and the median is 19.
- From this it can be concluded that persons who have started using cannabis become regular users in two years.



Graph 5. Starting Age of Regular Use of Cannabis (NARCO-LOG Project)

- **93)** As seen in graph 6, when the history of substance use is observed from the first usage up to the present, out of the 12,696 people who started their substance use with cannabis:
 - 24.6% do not use substances other than cannabis,
 - 75.4% also use other substances.

In other words, three out of four people who started their substance use with cannabis are observed to use different narcotic substances together with cannabis.



Graph 6. Use of Substances Other Than Cannabis (NARCO-LOG Project)

• 3,124 people who claimed only to use cannabis were searched after being arrested to check if they were carrying other substances. Various other narcotics were seized from 16.4 % of this group.

94) The NARCO-LOG Project data indicates that drug use generally starts with cannabis, that cannabis can be used as a step to switch to hard drugs, that cannabis use starts under the influence of a person's social environment, and that users who live in such an environment are liable to abuse of all kinds of drugs.

CONCLUSIONS AND RECOMMENDATIONS

- **95)** Cannabis and its derivatives are defined as narcotic substances by international conventions.
- **96)** Apart from its long history, cannabis is the most widely used of all narcotic substances today. The United Nations World Drug Report of 2020, which was prepared using 2018 data, drew attention to the widespread use of the drug at the global level, indicating that 192 million people had used cannabis at least once in the past year. The same report underlined that there has been an increase in the number of persons receiving treatment for cannabis use in the last 15 years in all regions except Africa.
- **97)** Any effort to estimate the size of the current global market in drug trafficking would arrive at gigantic graphs for all drugs in general and for cannabis trafficking in particular
- 98) Due to its global volume, the drugs market and especially the trafficking of cannabis. Which has the largest market share – has become a centre of attention not only for organised crime syndicates but also for terrorist organisations.

- 99) Current assessments of the results of clinical research data show that there is:
 - Poor evidence on the use of Dronabinol for the treatment of nausea and vomiting in cancer patients.
 - Moderate evidence on the use of Nabiximols for the treatment of muscle spasms and neuropathic pain in MS patients, and
 - Moderate evidence on the use of CBD in reducing the frequency of treatmentresistant epileptic seizures in children.

None of the conditions above requires cannabinoids to be used as the first line of treatment for the diseases concerned.

- **100)** Smoking cannabis is not a medically acceptable method of taking standard doses of cannabinoids. There are two reasons for this. First, the fact that cannabis plants may differ in composition makes it difficult to prescribe a definite dose. Secondly, inhaling cannabis smoke, which contains carcinogens and toxic materials, exposes the aptients to additional health risks.⁷⁷
- 101) Poorly regulated medical cannabinoid programmes have a high potential for side effects on public health. By changing public perceptions, these programmes can increase the nonmedical use of cannabis among adults, and can pave the way for the legalisation of the "recreational" use of cannabis.
- **102)** The poorly regulated cannabis programmes that exist in some countries, particularly Uruguay, Canada and the United States, are contrary to international conventions.
- **103)** In Europe, people who support the non-medical use of cannabis argue that it is less dangerous than other substances. These persons hold up the case of the USA, Uruguay and Canada as examples. However, European statistics reveal that the THC level of cannabis has been increased by hybridizing, and that the demand for treatment for cannabis use has increased.⁷⁸
- 104) European countries are not making any effort to legalise the recreational use of cannabis as in the USA and Uruguay. However, they may not clamp down heavily on such illegal use. Some European countries which allow cannabis to be produced legally for medical purposes keep a close watch on the issue and have very strict regulations.⁷⁹

⁷⁷ Ibid.

⁷⁸ EMCDDA, Cannabis Legislation in Europe: An Overview (Luxembourg, Publications Office of the European Union, 2018), p. 27.

⁷⁹ Ibid.

- 105) It is difficult to detect a common approach in the legal regulations concerning cannabis in force in European countries. These countries implement many different regulations and penalties for the use and trade of cannabis.⁸⁰
- 106) While most European countries combat narcotic substances by similar means under similar laws, some identify cannabis crimes as a less serious legal problem, while others can implement penalties that are much more severe.⁸¹
- 107) The debate on changing cannabis policies in Europe is heading in the direction of imposing lower penalties. Within the past years, proposals to fully legalise the use of cannabis have been submitted to parliaments, mainly by opposition parties. However, many of these proposals have already been rejected. No national government in Europe is in favour of legalising cannabis. In the Netherlands, however, cannabis policies are determined locally by the mayors, and the policies adopted have effectively legalised the use and sale of cannabis.⁸²
- **108)** Suporters of the legalisation of the medical use of cannabis also favour the liberalisation of the non-medical use of cannabis. This position is in contradiction with international conventions.
- **109)** Countries which permit the medical use of cannabinoids need to develop strict systems for monitoring programmes. These systems should be used to keep data on the numbers of patients using cannabinoids, the conditions under which cannabinoids are used, and the side effects observed during use. Countries should take special care to monitor the medical use of cannabis among minors, and to determine whether it is being diverted for non-medical purposes, and if so to what extent.
- **110)** Turkey is a traditional cannabis producer. Turkey engages in the controlled production of cannabis for agricultural and industrial purposes in accordance with international conventions. This type of production is carried out under the supervision of the Ministry of Agriculture and Forestry and within the framework of relevant legislation. Medical cannabis production is prohibited in Turkey. It is not possible to use medical cannabis products in Turkey except under special foreign drug permits obtained from the Ministry of Health for drugs from cannabis plants that have been approved by FDA and EMA. The policies and legislation in force in Turkey with regard to cannabis are in accordance with international conventions.
- **111)** Intensive efforts are being made by the law enforcement authorities in Turkey to combat cannabis and its derivatives. The amount of cannabis (herb) seized in Turkey every year between 2009 and 2017 exceeded the amount seized in any EU country.

⁸⁰ Ibid.

⁸¹ Ibid.

⁸² Ibid, p5.

- 112) A total of 80,707 kg of cannabis was seized in 2018, and 90,579 kg of cannabis in 2019. The amount of cannabis seized in Turkey showed a 12.2% increase in 2019 by comparison with the previous year.⁸³
- 113) The number of incidents involving cannabis was 65,172 in 2018 and 69,709 in 2019. There was a 7% increase in such incidents in 2019 compared to the previous year. In 2019, 68.5 % of the 148,821 incidents involving drugs in Turkey were incidents involving cannabis.⁸⁴
- **114)** The arrangements that currently exist in Turkey and the stance which Turkey has taken in this area are exemplary when compared to the situation existing in those countries where, contrary to international conventions, medical cannabis programmes have been put into effect as a first stage and then non-medical cannabis programmes have started to be implemented as a second stage.
- **115)** Farmers who wish to grow cannabis for economic reasons are licensed to do so by the Ministry of Agriculture and Forestry within the framework of the "Regulation on the Cultivation of Cannabis and its Control".
- **116)** In medicine, the therapeutic effect of cannabis has not yet been fully demonstrated for any disease. Its addictive nature and its negative effects on public health have been acknowledged by the World Health Organisation. It is also classified as a narcotic substance in international conventions. The type of cannabis known as Skunk is highly addictive and can cause psychotic disorders as it contains four or five times more THC than normal.
- 117) It is highly likely that debates about cannabis and its derivatives which take no account of the steps described above and are based on completely speculative information will weaken the existing social consensus in this field, and that they will even orient people towards production, consumption and trade by contributing to the formation of a mistaken view that the substance can be of benefit to human health or create an economic miracle, thus leading to many undesirable legal and medical consequences.

⁸⁴ Ibid.

⁸³ NDB/TUBİM, Türkiye Uyuşturucu Raporu [Turkish Drug Report], 2020, s.36.

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