E.M.C.D.D.A.

European Monitoring Centre
for Drugs and Drug Addiction

Guidelines for the risk assessment of new synthetic drugs

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Foreword

On 16 June 1997, concerned that differences in legislation on new synthetic drugs between the European Union Member States would lead to legal vacuums and problems of cooperation and control, the Council of the European Union adopted a joint action regarding the information exchange, risk assessment and control of new synthetic drugs [1].

The joint action establishes an early-warning system which detects and exchanges information on new synthetic drugs as soon as they arrive on the European market. Subsequently, it provides a mechanism for assessing the risks of these drugs and finally furnishes a decision-making process through which these products may be placed under control in the EU Member States.

It is to my great satisfaction that the Scientific Committee of the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA) has been assigned a key role in the information exchange and risk-assessment stages of this process under Articles 3 and 4 of the joint action. This, in turn, has enhanced the Centre's cooperation with national scientific experts as well as its relations with bodies such as the European Commission, Europol and the European Agency for the Evaluation of Medicinal Products (EMEA).

The present *Guidelines for the risk assessment of new synthetic drugs* are the end-product of work undertaken in 1998 by a steering group set up by the EMCDDA's Scientific Committee in 1997 to define the optimal means of assessing the health and social risks of new synthetic drugs. The *Guidelines* were adopted at an enlarged and multidisciplinary Scientific Committee meeting in Lisbon on 9 and 10 November 1998 [2] and will form the basis of

[1] OJ L 167, 25.6.1997. A joint action is a decision adopted unanimously by the EU Member States within the framework of the third pillar of the Treaty on European Union (cooperation in the fields of justice and home affairs). Synthetic drugs are psychoactive substances produced in laboratories and not derived from natural products. They include MDMA (ecstasy), other amphetamines, LSD, etc. A *Report on the risk assessment of MBDB in the framework of the joint action on new synthetic drugs* has been published as a companion volume to the present publication (EMCDDA, Lisbon, 1999).

[2] Attended by: the Scientific Committee members; independent experts nominated by the EU Member States and the European Commission; and representatives of the European Commission, the European Agency for the Evaluation of Medicinal Products and Europol.

all future risk-assessment procedures undertaken by the Centre within the framework of the joint action.

Synthetic drugs differ from natural substances (cannabis, cocaine, heroin) in that they are produced in clandestine laboratories in industrial countries. Particularly worrying for authorities is the fact that the possible chemical variations within each of these substances are extensive, with small chemical changes generating new drugs with widely different pharmacological properties.

The joint action underlines the 'dangers inherent in the development of synthetic drugs' and calls for rapid action by the European Union Member States. It is my sincere hope that these guidelines will play a significant role in helping to minimise the harms related to these new substances.

Georges Estievenart
Director, EMCDDA

Introduction

The task of performing risk-assessment studies under the terms of the joint action on new synthetic drugs was assigned to an 'extended' EMCDDA Scientific Committee in 1997. This task entailed assessing the possible risks — including the health and social risks — caused by the use of, and traffic in, new synthetic drugs, as well as the possible consequences of prohibition.

The extended Scientific Committee noted that the risk assessment of chemicals in the European Union was a routine procedure regarding medicines, pesticides, food additives and cosmetics. What was unique about the joint action, however, was the very fact that it went beyond mere risk assessment to consider the social repercussions of a particular drug and the potential consequences of banning it. The first task faced by the Committee, therefore, was to draft a set of principles or guidelines not only incorporating best health risk-assessment practice but also suggestions corresponding to these additional issues.

The Scientific Committee set up a five-person steering group to draft these guidelines. The group consisted of the then Chairman Carlo Perucci (Italy), Wolfgang Werdenich (Austria), Salme Ahlström (Finland), Ed Leuw (Netherlands) and myself. The steering group held a brainstorming session in April 1998 where an outline text was produced. This was later refined by Richard Hartnoll (EMCDDA) and Ed Leuw, incorporating comments from the rest of the Committee. The twin problems of lack of laboratory and sociological data for new drugs and the varying quality of existing data were extensively debated and pragmatic solutions were proposed.

As the document took shape, the steering group took the opportunity to discuss its contents with national experts on risk assessment. The document was then submitted to the European Commission, Europol, the EMEA and the World Health Organisation for consideration.

At a special meeting of the EMCDDA Scientific Committee in September 1998, which included an expert risk-assessment workshop, the comments of individual Committee members, along with those of the partner institutions, were incorporated into a final draft which was approved by the Committee in preparation for the formal risk-assessment meeting on 9 and 10 November 1998. This meeting, involving the Scientific Committee, scientific experts,

Europol and the EMEA, introduced a series of amendments to the document and finally adopted the 'Guidelines for the risk assessment of new synthetic drugs' as the basis for future work.

What has pleased me most about the process leading up to this first published edition of the Guidelines has been the considerable involvement of the Scientific Committee members and other partners in the drafting of texts. As a result of their commitment, the document has been greatly improved with each revision. The Guidelines constitute an organic set of formulae which will continue to be modified in the future in line with new experience and additional knowledge. This is a novel approach and, to date, has involved fruitful cooperation between the EMCDDA staff and Committee members, representing European cooperation at its best.

Dr Desmond Corrigan
Chairperson, Scientific Committee of the EMCDDA

In brief: The joint action on new synthetic drugs

* The joint action establishes a common mechanism for: exchanging information on new synthetic drugs (via an early-warning system); assessing the risks of these drugs; and providing a decision-making process through which these products may be placed under control in the EU Member States. The EMCDDA is assigned a key role in the first two stages.

* The joint action covers psychoactive substances (end-products rather than precursors) with a limited therapeutic value and relates to synthetic drugs which are not currently listed in the schedules to the UN Convention on Psychotropic Substances (Vienna, 1971) and which pose a threat to public health ([1]).

* Under Article 3 (exchange of information), the joint action identifies new synthetic drugs appearing on the market in the European Union and rapidly collects information on these substances. This information is collected by: the Reitox network ([2]), coordinated by the EMCDDA, comprising national focal points (NFPs) in each Member State which provide useful information from health and social sources; and the Europol national units (ENUs), coordinated by Europol, which provide information from law enforcement sources. These two channels interexchange and rapidly transmit the information they receive.

* Once received from the Member States, the data are exchanged between Europol and the EMCDDA and communicated to their respective networks, to the European Commission, and to the EMEA. In this first phase, the information gathered includes: a chemical and physical description of the drug, including the name under which it is generally known; details on the frequency, circumstances and/or quantities in which a new synthetic drug is encountered; and a first indication of the possible risks involved. As far as possible, information is also provided on chemical precursors, the mode and scope of established or expected use of the drug as a psychotropic substance as well as other uses of the drug.

* Once this information has been exchanged, any Member State or the European Commission may request the EMCDDA, under Article 4 of the joint action (risk assessment), to convoke a meeting of experts under the auspices of its Scientific Committee to determine the risks associated with a particular substance and the possible consequences of its prohibition. In addition to the Scientific Committee members, the experts consulted include scientific specialists nominated by the Member States and representatives of Europol, the EMEA and the European Commission.

([1]) AUN Convention covering hallucinogens, amphetamines, barbiturates, non-barbiturates, sedatives and tranquillisers.

([2]) Reitox — the European information network on drugs and drug addiction — is a network coordinated by the EMCDDA and composed of national focal points in the 15 EU Member States plus the focal point at the European Commission.

* Under Article 5, (procedure for bringing specific new synthetic drugs under control) the joint action allows the Council, on the basis of an initiative to be presented within a month from the date on which the report of the results of the risk assessment is delivered, to adopt anonymously a decision defining the new synthetic drug(s) which is(are) to be placed under control.

* This joint action meets the need to provide the EU with a more flexible and rapid mechanism for tackling synthetic drugs. However, it does not prevent any Member State from maintaining or introducing on its territory any national control measure it deems appropriate once a new synthetic drug has been identified by a Member State.

Chapter 1
Basic principles for risk assessment

In accepting its assignment to assess the risks of new synthetic drugs, the EMCDDA's Scientific Committee adopted the following basic principles.

1. Consider a dual definition of 'risk'

The concept of 'risk' should be understood in its dual sense, which includes both the element of probability that some harm may occur (usually defined as 'risk') and the degree of seriousness of such a harm (usually defined as 'hazard'). If possible, both elements should be evaluated in the final phase of the risk-assessment process. In addition, and where feasible, a risk-benefit ratio should be assessed for each candidate drug.

2. Consider the risks of a drug, independently of its legal status

The first phase of the scientific risk assessment of a particular drug should be carried out independently of its legal status.

3. Consider a wide range of options for control

Consideration of appropriate measures and possible consequences of controlling new synthetic drugs should cover a wide range of options and should not necessarily imply prohibition and law enforcement.

4. Consider scientific evidence on a new synthetic drug in relation to better-known drugs

Since scientific evidence on *new* synthetic drugs will, by definition, often be limited, it will thus be necessary to evaluate the possible risks of these drugs with reference to similar known drugs. Consistent with principle 2 above,

such comparisons need not be restricted to illegal drugs but may include legal substances with similar chemical characteristics, pharmacological actions or psychological and behavioural effects, or which offer relevant insights into the social risks presented by the drug. Similarly, when assessing the possible consequences of prohibition, taking note of principle 3, it may be appropriate to examine relevant examples of control models involving legal or illegal substances. Considerer weighting separately the issues of reliability and relevance.

In the final evaluation, the issues of reliability of information (quality) as well as the relevance of the specific risk issues involved (health and social risks and consequences of prohibition) should be weighted separately. The final policy consequences of risk assessment should be decided within the framework of national or local drug policy priorities.

Chapter 2
A conceptual framework for risk assessment

Risks related to any psychoactive drug, whether legal or illegal, medical or recreational, can originate from several sources and assume many shapes and forms. For both analytical and pragmatic purposes (social control options), it is essential to clarify both the type and origin of drug-related risks as they manifest themselves in society.

The following framework presents a conceptual structure within which elements of drug-related risk may be located and evaluated in terms of relevant control options. The framework is built on the distinction between the sources from which drug hazards emanate (Box 1) and the type of hazardous effects that may be caused by drug use (Box 2).

1. Sources of hazards

Within the social reality of drug use, harmful effects may emanate from several domains which may exist independently of each other. Cannabis will serve as an example. Possible harmful consequences of use may be 'caused' by the drug's pharmacological effects (properties of the substance), for instance when acute intoxication impedes the ability to drive a car and hence increases the chance of traffic accidents. Possible long-term effects on memory functions may be another case in point.

Careful and moderate use of cannabis may not coincide with any apparent undesirable psychological or somatic effect. However, harmful effects could emanate from moral stigmatisation or criminalisation of use of cannabis which, for instance, could result in the dismissal of cannabis users from school (measures of social control). In other cases, the undesirable effects might be contingent on the specific 'style' and context of drug use.

Box 1
Sources of hazard

Sources of hazard emanating from:
* properties of the substance (pharmacology and toxicology)
* measures of social control (regulatory policies and informal norms)
* modalities of drug use (patterns, context of use)
* individual characteristics of users (age, gender, genetic, personality)

For clear examples, drugs other than cannabis will need to be considered. Some of the well-known harmful effects of MDMA (ecstasy) are contingent on the context of 'rave' parties: prolonged and intensive dancing in badly ventilated, crowded areas which accentuate a pharmacological effect on body temperature. A well-known case of 'style' as a source of drug hazard is the relationship between intravenous drug use and HIV infection. The high prevalence of HIV infection in populations of drug addicts has less to do with the drugs themselves and more to do with lifestyles (modalities of drug use).

There may also be interaction between the different sources of hazard themselves and this must also be taken into account. For example, whether or not pharmacological tolerance of opioids leads to injection is influenced by factors such as cultural setting, economic factors, formal policies and informal norms. Distinguishing domains from which the harmful effects of drugs originate has obvious consequences for the drug policy options to be taken after the risk-assessment procedure.

2. Hazardous effects

The harmful effects of drugs and the drugs market can be conceived as having an impact on the user, the social environment of drug use and on society in general. In this case, it is inappropriate to assume that different hazardous effects are independent of each other.

Harmful effects on the user (biological, psychological, behavioural) tend to be directly linked to harmful effects on the social environment of drug use (family, neighbourhood and community, society at large) making dividing lines difficult to draw. Similarly, it is hard to make a clear distinction between the different 'levels' of harms caused to the user or to the social environment.

Somatic effects will often have obvious consequences for psychological functions which, in turn, are also relevant for social behaviour. The example of alcohol illustrates this point: toxic effects on the central nervous system may cause cognitive dysfunction which, in turn, may lead to irresponsible social behaviour. Nevertheless, for analytical purposes and policy options, it is still useful to distinguish between different categories of harm.

Three aggregate levels can be distinguished in the social environment: the micro level (family); the meso level (neighbourhood and community); and the macro level (society at large). Particularly on the meso and macro levels, it is advisable to take note of the consequences of the drug distribution system separately. Independent of the properties of the substance, the nature of the illicit market may cause harmful effects, such as problems of public order and security on the streets. On the macro level, the drug trade may be harmful for the integrity of economic or law-enforcement institutions.

The risk assessment of new synthetic drugs should include a strategy for deciding the different weights and priorities of both the sources and the effects of drug hazards for the final evaluation.

Box 2
Hazardous effects of drugs

(a) On the user
- * biological (toxicity, dependence)
- * psychological (functional impairment, effects on personality)
- * behavioural (neglect of social roles, violence, etc.)

(b) The social environment
- * family — micro level (disruption, neglect, violence)
- * neighbourhood and community — meso level (public order and safety)
- * society at large — macro level (economy, public health and judicial systems)

Chapter 3
Quality of information for risk assessment

As implied by the very nature of the assignment at hand (i.e. to assess the risks of *new* synthetic drugs), it will often be impossible to base the risk assessment on the evaluation of sound (reliable and valid) scientific knowledge. Pharmacological and socio-scientific knowledge will accumulate in time and will have to be assembled over a period of social experience with the drug phenomenon. In the interim, risk assessment will have to be based on a broad range of available evidence. The (scientific) quality of this evidence should be appraised according to the two criteria outlined below.

1. Methodological characteristics of the available evidence

From a methodological point of view, evidence for risk assessment may be produced by more or less rigorous scientific procedures.

Detailed biomedical data, based on systematic pharmacological and toxicological studies, will rarely be available for new synthetic drugs.

In the case of socio-scientific data, evidence from preliminary, impressionistic accounts may be more available than evidence from methodologically more rigorous and objective studies, such as surveys or panel studies.

2. Sources of available evidence

The risk-assessment procedure should include a strategy for using data from sources of different quality. Evidence is likely to originate from sources with a wide range of reliability: from peer-reviewed publications in prominent scientific journals, through reports by youth workers or psycho-medical institutions, to unsubstantiated newspaper or Internet reports. A possible method of classifying this information is to use the type of ranking listed in Box 3.

A differential strategy as regards the acceptance of information may be the most sensible approach. In the first instance, the identification and collection

of available data will involve accepting a wide range of information — including information that may be useful for signalling phenomena of possible relevance — and then applying different weights based on a hierarchy of data quality when screening the evidence to be considered in the final evaluation process.

Box 3
Classification of information sources

Ia	Indexed, peer-reviewed scientific publication, 'high' impact factor
Ib	Indexed, peer-reviewed scientific publication, 'low' impact factor
II	Official reports of governments or international agencies
IIIa	Non-indexed, peer-reviewed scientific publications
IIIb	Other reports or scientific publications
IV	Other sources (media, individual reports, unofficial publications)

Chapter 4
Headings for risk assessment

In any risk-assessment procedure, a number of headings are recommended under which the information may be organised in a 'checklist' manner. These headings, as outlined below, include: a description of a new synthetic drug and its actions; health risks; social risks; options for control and the possible consequences of prohibition; and weighting the criteria ([1]).

As outlined in Chapter 1, the probability (risk) and seriousness of the adverse consequences of a substance (hazard) should be taken into account at the beginning of the risk-assessment procedure. Under all headings, the specific drug should be studied in terms of its similarities to, and differences from, other relevant psychoactive substances, especially those for which established scientific literature exists. As also stated in Chapter 1, other relevant substances should be selected on the basis of their chemical and/or pharmacological resemblance to the drug concerned, or with regard to the insights they offer concerning social risks. This selection should not necessarily be restricted to illegal drugs.

In assessing the risks of a particular drug, five key variables likely to affect the hazards and risks related to that drug should be taken into consideration as outlined in Box 4.

Box 4
Key variables

* Dose and frequency of use
* Short-term and especially long-term effects
* Interactions with other substances (including alcohol and medicaments)
* Individual characteristics
* Characteristics of the social environment

([1]) A protocol setting out headings for the risk-assessment process in more detail is appended to this publication as a series of technical annexes.

The information gathered in any risk-assessment process is likely to be based on different types of evidence as outlined in Box 5.

Box 5
Types of evidence

* Laboratory evidence, either *in vitro* or *in vivo* (mainly animals)
* Evidence of effects on humans (physical, mental)
* Epidemiological evidence
* Social and criminological evidence

In evaluating the consistency between laboratory-based and population-based evidence, special account must be taken of social context factors, and of the selection of population groups and individual users as potential sources of bias when inferring the social and health risks of a specific drug.

1. Description of a new synthetic drug and its actions

The description of a new synthetic drug and its actions should include the elements set out in Box 6.

Box 6
Descriptive elements

* Name of the drug, physical description, chemical composition, pharmacological effects in animal and human studies, known uses, and similarity to other relevant substances
* Its actions on the central nervous system
* Its actions on other organs and systems
* Its psychological and behavioural effects on humans (cognition, mood, personality, behaviour, motor function)

2. Health risks

Possible health risks include both the risks to individual health, resulting from the use of a new synthetic drug, and the public health risks, affecting the broader community. There is not always a clear dividing line between individual and public health risks, nor between public health risks and social risks. Most of the health risks, especially the individual health risks, are likely to be the consequences of the use of the drug. However, some of the public health consequences may also be linked to the nature of the production and trafficking of the drug (e.g., the purity and quality of the drug on the market).

Individual health risks

Assessment of the individual health risks of a new synthetic drug should cover physical and psychological, short-term and long-term aspects and should include the elements listed in Box 7. Dose, frequency, route of administration and interactions with other drugs are important factors to consider.

Box 7
Elements for assessing individual health risks

* Acute toxicity
* Chronic toxicity
* Dependence potential (physical and psychological)
* Psycho-social dysfunction
* Similarities and differences to other reference drugs

Public health risks

Assessment of the public health risks of a new synthetic drug should include epidemiological and other evidence as listed in Box 8.

Box 8
Elements for assessing public health risks

* Availability and quality of the drug on the market (purity, adulterants, etc.)
* Availability of information, degree of knowledge and perceptions amongst users concerning the drug and its effects
* Extent, frequency and patterns of use of the drug
* Characteristics and behaviours of users (including risk factors, vulnerability, etc.)
* Nature and extent of health consequences (e.g., acute emergencies, poisonings, road traffic accidents)
* Long-term aspects
* Conditions under which the drug is obtained and used, including context-related effects and risks (e.g., continuous dancing in hot environments, other drugs used)

3. Social risks

Some public health risks (e.g., road traffic accidents) could also be listed under the heading of social risks. Apart from such examples, social risks include the following elements.

Box 9
Elements for assessing social risks

* Individual social risks
* Possible effects on family (neglect, violence, etc.)
* Possible effects related to the cultural context, for example marginalisation
* Possible attractiveness of a drug to specific populations within the general population
* Impact on the production, trafficking and distribution of other drugs, including existing synthetic drugs as well as new synthetic drugs
* Drug-related crime linked to use of the drug
* Effects associated with production, trafficking and distribution of the drug, including the involvement of organised crime
* Impact on social groups and local communities (public order and safety)
* Economic costs

4. Options for control and the possible consequences of prohibition

As noted in the basic principles set out in Chapter 1, assessment of the possible consequences of prohibition has been set within the broader context of assessment of the possible consequences of different control options, including, but not restricted to, prohibition and law enforcement.

In assessing the possible consequences of prohibition, it is appropriate to examine a range of control models (e.g., administrative or public health regulatory frameworks for alcohol, tobacco, medicines or poisons). The assessment should examine the consequences of different control options on the factors listed in Box 10.

Box 10
Elements for examining the consequences of control options

* Production, trafficking and organised crime
* Distribution and availability
* Quality and price of the drug on the market
* Impact on the market in, and use of, other drugs (including the likelihood of alternative new drugs emerging)
* Prevalence and patterns of use of the drug
* Health consequences
* Social consequences
* Other uses of the drug in pharmaceutical research, medicine, industry, trade, etc.
* Existing legislation, law enforcement, judicial and other control systems
* Specific cost implications (e.g., the additional costs of product testing or forensic analysis)

5. Weighting the criteria

When evaluating the available evidence and assessing the possible risks of a particular drug, it will be necessary to decide how, and in what form, the results should be presented. For example, it may be necessary to consider whether (and, if so, how) to give different weights to the different possible effects and consequences.

It is clear that these aspects need to be further refined. In order to estimate the risks of a substance, more or less quantitative methods could be used or developed. In order to weigh the evidence, data on a new synthetic drug could be compared with data for existing legal or illegal substances. For this purpose, a multidimensional reference system could be developed.

Technical Annex A
Pharmacotoxicological evidence

A1. Chemical, pharmaceutical information

A1.1. Chemical description (including methods of synthesis, precursors, impurities if known — type and level)

A1.2. Legitimate uses of the product

A1.3. Pharmaceutical form (i.e., powder, capsules, tablets, liquids, injectables, cigarettes. Any distinctive markings, logos, etc., to be noted)

A1.4. Route of administration and dosage (e.g., oral, inhalation, intravenous, etc.)

A2. Toxicology and pharmacology in animals

A2.1. Pre-clinical safety data

A2.1.1. Single-dose toxicity
A2.1.2. Repeated-dose toxicity
A2.1.3. Reproduction function
A2.1.4. Embryo-foetal and perinatal toxicity
A2.1.5. Mutagenic and carcinogenic potential

A2.2. Pharmacodynamics

A2.2.1. In vitro *tests (data from enzyme, receptor binding, immunomodulatory and hormonal tests)*
A2.2.2. In vivo *tests*
* effects on central nervous system
* effects on cardiovascular system
* effects on respiratory system
* effects on gastrointestinal system
* effects on liver, kidneys, genitourinary system
* behavioural studies

A2.2.3. Pharmacokinetics in animals

* absorption
* distribution
* metabolism
  (including major metabolising enzymes and metabolites)
* excretion (including elimination half-life)
* pharmacokinetic interactions

A3. Human pharmacology

A3.1. Laboratory studies in volunteers

A3.1.1. Effects on cognition and behaviour
A3.1.2. Cardiovascular effects
A3.1.3. Respiratory effects
A3.1.4. Gastrointestinal effects
A3.1.5. Effects on liver, kidneys, genitourinary system
A3.1.6. Effects on immune system
A3.1.7. Interactions with other drugs and medicines
A3.1.8. Effects on ability to drive and use machinery
A3.1.9. Effects of overdose

A3.2. Pharmacokinetics in humans

A3.2.1. Absorption
A3.2.2. Distribution
A3.2.3. Metabolism (including major metabolising enzymes and metabolites)
A3.2.4. Excretion (including elimination half-life)
A3.2.5. Pharmacokinetic interactions

A4. Clinical experience

A4.1. Studies on street users

A4.2. Dependence potential in humans

A4.2.1. Tolerance
A4.2.2. Abstinence symptoms
A4.2.3. Drug-seeking behaviour

A4.3. Clinical safety (see Annex D, Section D5).

Technical Annex B
Psychological risk assessment (cognition, mood and mental functioning)

B1. Acute effects

B1.1. Effects on cognitive functioning (neuropsychological assessment)

B1.2. Effects on intelligence (multifactorial intelligence tests)

B1.3. Effects on emotional status, behavioural patterns and personality (psychological instruments, rating scales)

B1.4. Effects on psychopathological status — psychiatric comorbidity (psychological and psychiatric assessment)

B2. Chronic effects

B2.1. Effects on cognitive functioning (neuropsychological assessment)

B2.2. Effects on intelligence (multifactorial intelligence tests)

B2.3. Effects on emotional status, behavioural patterns and personality (psychological instruments, rating scales)

B2.4. Effects on psychopathological status — psychiatric comorbidity (psychological and psychiatric assessment)

B3. Psychological effects of drug-using careers

B4. Psychological factors that increase the probability of harm (e.g., mood and anxiety conditions leading to self-medication, sensation seeking)

Technical Annex C
Sociological/criminological evidence

C1. Social consequences for the user

C1.1. Primary relations and/or family problems

C1.2. Education and employment problems

C1.3. Marginalisation

C2. Consequences on the social behaviour of the user

C2.1. Drug-related disorderly conduct

C2.2. Drug-related acquisitive crime

C2.3. Drug-related violence

C2.4. Drug-related traffic offences

C3. Other social consequences

C3.1. Presence or absence of major value conflicts surrounding the use of the drug

C3.2. Implications for social institutions (school, labour, recreational, etc.) and community services

C4. Wholesale production and distribution

C4.1. Violence in connection with wholesale production and distribution

C4.2. Money-laundering aspects

C4.3. Involvement of (international) organised crime

C5. The retail market

C5.1. Non-commercial 'private' consumption market among users

C5.2. Semi-public subcultural consumption market (discos, etc.)

C5.3. Existence and characteristics of street markets

C5.4. Violence, public order and nuisance implications of the retail market

C5.5. Entrepreneurial criminal suppliers

C6. Social factors that increase the probability of harm

Technical Annex D
Public health risks: epidemiological evidence

D1. Availability and quality of product on the market

D1.1. Availability at consumer level (extent/quantities)

D1.2. Sources (at consumer level)

D1.3. Trends in availability

D1.4. Average dose and degree of variability

D1.5. Purity levels and presence of adulterants

D1.6. Other active ingredients

D1.7. Typical prices and range

D2. Knowledge, perceptions and availability of information

D2.1. Availability of scientific information on product

D2.2. Availability of information on effects of product

D2.3. Level of awareness of product amongst drug consumers in general

D2.4. Level of knowledge of product, effects and perceptions among consumers of product

D2.5. General population

D3. Prevalence and patterns of use

D3.1. Extent of use of product

D3.2. Frequency of use

D3.3. Route(s) of administration

D3.4. Other drugs used in combination with product

D3.5. Geographical distribution of use

D3.6. Trends in prevalence and patterns of use

D4. Characteristics and behaviour of users

D4.1. Age and gender of users

D4.2. Social groups where product available/used

D4.3. Risk behaviours associated with use

D4.4. Special concerns about vulnerable groups

D4.5. Trends in characteristics/behaviours of users

D5. Indicators of health consequences

D5.1. Hospital emergencies

D5.2. Deaths (direct and indirect)

D5.3. Traffic accidents

D5.4. Requests for treatment/counselling

D5.5. Other health indicators

D6. Context of use

D6.1. Risk factors linked to circumstances and rituals of consumption

D7. Implications for the non-using population

Practical information

Addres
European Monitoring Centre for Drugs and Drug Addiction
Rua da Cruz de Santa Apolónia 23-25, P-1149-045 Lisbon

Tel. (351-1) 811 30 00/813 13 18

Fax (351-1) 813 17 11

E-mail: info@emcdda.org

Website: http://www.emcdda.org

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BELGIQUE/BELGIË

Jean De Lannoy
Avenue du Roi 202/Koningslaan 202
B-1190 Bruxelles/Brussel
Tél. (32-2) 538 43 08
Fax (32-2) 538 08 41
E-mail: jean.de.lannoy@infoboard.be
URL: http://www.jean-de-lannoy.be

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