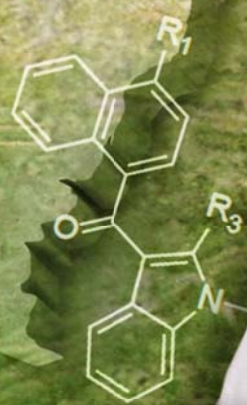
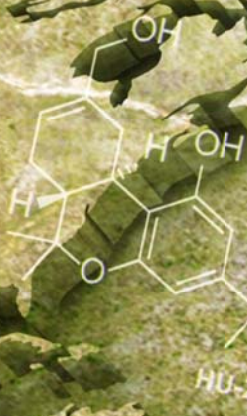


Formula:  $C_{24}H_{28}N_2O_2$   
 Mol. Mass: 376.2 g/mol

1-(2-methyl-4-methylpiperidyl)-  
 3-(2-methoxyphenylacetyl)indole

The structure was confirmed by <sup>1</sup>H- and <sup>13</sup>C-NMR









## National action plan for the prevention of distribution of New Psychoactive Substances and demand on the internet

September 2013

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This Action Plan also is associated with the publication:

"New Drugs. Nuove Sostanze Psicoattive (NSP). Schede tecniche relative alle molecole registrate dal Sistema Nazionale di Allerta Precoce." ["New Drugs. New Psychoactive Substances (NPS). Data sheets relative to molecules recorded under the National Early Warning System." - 2013 Edition

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## 1. Introduction



In recent years the United Nations and the European Union, but also renowned international research centres, have repeatedly reported the appearance, on the illicit narcotics market, of new psychoactive substances (NPS) of synthetic origin, with particularly dangerous features under pharmacological and toxicological tests.

Since 2009 the National Early Warning System for drugs Drug Policy Department has closely monitored the situation in Italy for about 280 new circulating substances. This market primarily uses the Internet for the promotion of multiple offers of new psychoactive substances, to collect orders and electronic credit payments and take advantage of the regular postal couriers for home delivery. The new market of NPS goes hand in hand with that of counterfeit drugs or illegal sales that now populate the Internet with offerings equally dangerous to public health. In Italy, the National Early Warning System has detected approximately 70 cases of acute intoxication related to intake of NPS which have needed intensive care at the emergency room. Noteworthy, in addition, is the increasing spread of date-rape drugs, affecting mainly the female population.

Therefore, the phenomenon is assuming public health relevance, flanking and often overlapping (even in terms of simultaneous use of several substances) with that of traditional drugs such as heroin, cocaine, cannabis and the family of amphetamines. The phenomenon is even more worrisome when the pervasive infiltration of offerings on the Internet is considered, particularly in social networks, specifically frequented by the younger generations. At the same time, the intake of new psychoactive substances eludes conventional clinical laboratory tests due to the lack of analytical reference standards and of technical and scientific knowledge and appropriate technologies for its determination. Substantial psychiatric problems and various organ disorders exist, particularly cardiac, renal and respiratory, which are constantly aggravated due to the joint use of alcohol and other drugs.

There is a need for knowledge, monitoring but also prevention and early intervention, thus, is definitely real and cannot be postponed. The Anti-drug Policies Department, pursuant to the guidelines of the United Nations, and specifically to resolutions 56/4 of March 2013 and 55/1 of March 2012 and the EU Action Plan on Drugs (2013-2016), adopted by the Council on June 6, 2013, has promoted the creation of this first summarized update on the main characteristics of the NPS identified, in addition highlighting a series of strategic directions, objectives and actions to begin to build an integrated and coordinated response between all the administrations and organizations involved for various reasons, in order to deal with this emerging issue which I hope will be able to find adequate consideration and support at all levels. All this in order to prepare and integrate in the existing response system the guidelines contained within this National Action Plan on New Psychoactive Substances that otherwise would continue to spread in an uncontrollable and detrimental manner to public health.

*Giovanni Serpelloni*  
*Chief of Department of Anti-drug Policies*  
*Presidency of the Council of Ministers*



## 1.1 The functions of the Anti-drug Policies, Presidency of the Council of Ministers (DPCM [Presidential Decree of the Council of Ministers] of 20 June 2008 and DPCM of 20 November 2012)

The Department is the support structure that relies on the President of the Council of Ministers or other political authority delegated by him, for the promotion and coordination of government anti-drug policy.

Specifically, the Department proceeds to promote, direct and coordinate the Government's actions to counter the spread of narcotics use, drug addiction and related alcohol addiction, referred to in the consolidated text approved by Presidential Decree no. 309 of 9 October 1990, as amended, and to promote and implement activities in collaboration with the competent authorities in the specific sector, therapeutic communities, associations, centres active in the field of prevention, treatment, rehabilitation and reintegration, providing for the collection of documentation on drug addiction, the definition and updating of methodologies for the collection, storage and processing, assessment and external transfer of data and information about drug addiction.

The Department is responsible for defining and monitoring the national anti-drug action plan, consistent with the European direction on this topic, at the same time, defining and planning the forms of coordination and intervention strategies with the regions, the autonomous provinces and accredited private social organizations, also promoting understandings within the Joint Conference. In addition, it oversees institutional information and communication of the Government on anti-drug policies.

Through early warning systems, as required by European direction, it proceeds to highlight risks and the activation of prevention activities and the potential consequences relevant to health and mortality of the population resulting from narcotics in circulation, providing to the supervision and testing of the progression of the phenomenon and ensuring the normal flow of data required by the European structures and competent authorities in the field and by the regions and Central Government as well as by other international bodies.

Provides for the preparation and drafting of the report to Parliament on the subject of addictions. Promotes, supports and coordinates activities of study, research and prevention in the area of road accidents related to the use of drugs and alcohol.

Provides support to ensure the presence of the government in the international institutions relevant to drug policies, for this purpose, promoting this interministerial coordination, international activities on anti-drug policies and cooperation agreements with foreign countries, also through the promotion of shared European and international projects, in cooperation with the Ministry of Foreign Affairs.

The permanent National Monitoring Centre on drugs and drug addiction operates within the Department, pursuant to Art. 1 of Presidential Decree No. 309 of 1990 and subsequent amendments, which oversees and coordinates the centralized data collection, data flow from the central competent authorities, storage, processing and interpretation of statistical-epidemiological data, clinical- pharmacological, psychological-social and documentation on use, dealing and the trafficking of narcotics and psychotropic substances and actions to prevent and contrast; provides information and documentation requirements.

## 2. Why a National Action Plan on the New Psychoactive Substances (NPS)

In recent years a whole new phenomenon has revolutionized the trend of youth behaviours regarding to the use of drugs. A substantial amount of new substances have been added to the traditional substances (cannabis, cocaine, heroin, amphetamines, etc.), that are mainly built in the laboratory. Some of these molecules are derived from the planning of potential drugs for therapeutic use; however, none of these ever reached the pharmaceutical development phase. On the other hand, others are specifically created to be used as actual drugs for discretionary purposes.

**The new  
synthetic  
drugs**

Due to the highly experimental nature and extremely limited clinical use, data relative to toxicity resulting from human use of these substances is rarely available: often, generic preclinical toxicology information does not even exist. Therefore, there is a real risk as a result of taking these substances, that unknown and unexpected effects may occur, even including serious acute toxic effects, particularly affecting the state of consciousness or psychological-physical performance, as found in numerous cases of intoxication detected in Italy and abroad. The progression of the phenomenon led to the identification by international organisations engaged in regular monitoring of the supply of drugs, of the appearance on the market of cannabinoids and synthetic cathinones, as well as other molecules proving to be particularly harmful to consumer's health. Just in the last year, there are 73 NPS that have been identified in the EU (41 in 2010), 166 at the end of 2009, 251 in mid-2012, the NPS reported by member countries to UNODC. The number of NPS has already exceeded the total number (234) of substances under international control. The National Early Warning System for drugs, since 2009, monitors the emergence of new psychoactive substances within Italy.

Until 2011 almost all new psychoactive substances (NPS) were available in smart shops located in various Italian cities. The faster updates to the tables of narcotics, which made several new psychoactive molecules illegal and enforcement activity conducted by law enforcement, have currently significantly reduced the presence of these drugs in such places.

**Availability in  
smart shops  
and by  
Internet**

However, the new psychoactive substances are still widely available on the Internet through which their marketing and sale takes place quickly and easily, due to the difficulty to monitor and thwart a constantly moving environment and development such as the web. To counter and at least curb this phenomenon, the Anti-drug Policies Department, through its National Early Warning System, as well as informational/educational projects, has also enabled a specific web monitoring unit for finding sites that sell new drugs.



The data relative to the supply of drugs by Internet, and to the acute intoxication and seizures of NPS shows a growing phenomenon in our country that, if not properly and promptly countered, may develop further and create conditions and situations very dangerous to public health. Therefore, a coordinated and effective joint effort is necessary to organize an effective response to this new market. Hence, the need is created to have a strategy and a National Action Plan - New Psychoactive Substances, which integrates and completes the National Drug Action 2010 -2013, and tracks the routes for all Administrations concerned and involved in reduction of demand activities and curbing the supply (proceeding primarily to the addition of narcotics to the Tables) of also these kinds of substances.

**Need to  
address an  
expanding  
phenomenon**

In the light of these observations and recommendations of the United Nations and the European Union, then, it is believed that the appearance of new psychoactive substances of synthetic origin on the market can be deemed a very complex phenomenon to be taken into serious consideration, especially for possible unpredictable future developments, that has been shown to cause very serious consequences in terms of public health both in Italy and in the rest of the world. At the international level and for individual countries, there is a real and urgent need to implement specific targeted actions, arranged and coordinated to deal with new situations related to the circulation and use of NPS.

**The PAN-NPS**

The National Action Plan - New Psychoactive Substances [PAN-NPS] is addressed to those who work in the field of prevention of drug use, those who work in the fight against dealing trafficking and dealing of narcotics, laboratory staff that is authorized to recognize and identify NPS, as well as healthcare staff to intervene in cases of intoxication. The PAN-NPS identifies objectives and concrete actions that, for each area of intervention identified, will support operators and institutions involved in the management of the phenomenon, in the protection of public health and law.

### 3. The United Nations, European Union and the national guidelines to the phenomenon of New Psychoactive Substances (NPS)

Strategic guidelines have been given on the topic of new psychoactive substances (NPS) both internationally, through the United Nations International Narcotics Control Board (INCB) and the World Health Organization (WHO), both at the European and national levels, in order to support Countries in the development and maintenance of adequate responses to an ever more rapidly changing phenomenon which therefore, requires *ad hoc* measures to be tackled effectively. This National Action Plan on NPS represents an addendum to update the National Action Plan and has been drafted in accordance with the provisions set forth by the international and European institutional bodies and what is already included, albeit in a reduced but still representative manner, in the National Action Plan on Drugs 2010-2013 of the Anti-drug Policies Department, in order to ensure cohesion and continuity with the existing direction.

#### 3.1 International Guidelines

In order to define strategies for dealing with the phenomenon of growing of NPS locally, it was necessary to look at the provisions of United Nations Conventions on the subject. In fact, there are three drug-related treaties as a reference for programmes of UNODC: the single Convention on Narcotic Drugs of 1961, as amended by the 1972 Protocol, the Convention on psychotropic substances of 1971 and the United Nations Convention against illicit traffic in narcotic drugs and psychotropic substances of 1988. The three treaties for drug control are to be considered complementary. The purpose of the first two is to codify the control measures applicable internationally, in order to ensure the availability of narcotic drugs and psychotropic substances for medical and scientific purposes and to prevent their diversion to illicit channels. They also include general measures on traffic and abuse of drugs.

**International  
treaties  
relative to  
drugs**

The control mechanism provides for the establishment by the Secretariat of the United Nations (INCB) of three lists of substances:

**INCB lists of  
substances**

1. yellow list: narcotics;
2. green list: psychotropic substances;
3. Pink list: drug precursors.

The acceding countries to the Conventions must implement control of substances added into these tables with measures defined by national legislation (or European, for drug precursors). In practice, the production, sale of any type and possession of narcotics must be authorized by the Competent National Authority,



otherwise it will be deemed as illegal traffic or possession of narcotics.

For Italy, the laws on ratification of international conventions on narcotic and psychotropic substances subject to control are:

**Laws on  
ratification  
in Italy**

- Law of 5 June 1974, no. 412. (G.U. [Gazzetta Ufficiale - Italian Official Journal] n. 236 of 10 September 1974) - Ratification and implementation of the single Convention on narcotic drugs, adopted in New York on 30 March 1954 and the Protocol of amendment, adopted in Geneva on March 25, 1972 (psychotropic substances);
- Law of 25 May 1981, no. 385 (G.U. no. 202 of 24 July 1981) - Compliance to the convention on psychotropic substances, adopted in Vienna on 21 February 1971, and its implementation;
- Law of 5 November 1990, no. 328 (G.U. No. 267 of 15 November 1990) - Ratification and implementation of the United Nations Convention against illicit traffic in narcotic drugs and psychotropic substances, with annex, final document and related recommendations, made in Vienna on 20 December 1988.

The Single Convention on Narcotic Drugs of 1954, signed by 183 countries, is the international treaty that bans the manufacturing and supply of specific drugs and pharmaceutical drugs with similar effects except under a licence for these specific purposes, such as for example medical treatment and research. Art. 2 of this Convention specifically references the control measures that each country can and should apply relative to drug trafficking.

**The UN  
Conventions,  
1954 and 1971**

The Convention on psychotropic substances of 1971, in addition to Art. 16, specifies the importance of providing information to the United Nations on new trends identified, on the amounts, on the sources where acquired and methods used by traffickers for their marketing.

Despite having highlighted the emergence of new psychoactive substances already in the first half of the 2000 decade, as a phenomenon of interest to the international community and that, as such, requires encouraging the exchange of information between the various countries on emerging trends (Resolution 48/1 March 2005, Resolution 53/11 March 2010), by Resolution 55/1 of March 2012 the Commission on Narcotic Drugs (CND), the central body of the UNITED NATIONS system for drug control for international policy-making on the subject, arranges for the promotion of international cooperation in response to the challenges posed by the phenomenon of new psychoactive substances.

**UN Resolution  
55/1  
March 2012**

In particular, the resolution highlights the importance of monitoring emerging on the composition, production and distribution of new psychoactive substances and to share that information with other Member States, with the United Nations Office on Drugs and Crime (UNODC), the World Health Organization (WHO) and the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA). It

made clear the need to adopt appropriate measures, including emergency and temporary measures, nationwide to reduce the demand and supply of NPS and the importance of improving the ability to search and identify both at the analytical toxicological level, and by providing monitoring system that involve, among other monitoring areas, also the internet.

More noticeably, Resolution 56/4 of March 2013 aims to strengthen international cooperation on identifying and reporting new psychoactive substances. To reflect the importance of sharing of information on emerging trends relative to the use and trafficking of such substances (previously also highlighted by Resolution 48/1 March 2005), this document encourages Member States to adopt a comprehensive approach, coordinated and integrated for the detection, analysis and identification of new psychoactive substances, also in collaboration with agencies for the protection of consumer's health, government offices, law enforcement and the judicial sector. Gathering of information is extended to the negative consequences and risks that these substances pose to the population.

**UN Resolution  
56/4  
March 2013**

Particular attention is given to the detection of new psychoactive substances, encouraged also by the control of postal systems, control of sales outlets and the Internet. In the document, the CND urges Member Countries to include information about possible negative consequences and risks to health and safety on the use of new psychoactive substances in prevention strategies, especially to dispel widespread erroneous belief amongst young people, that substances not placed under control can be considered safe. On the legislative front, it promotes the idea of response measures to the phenomenon that might include new rules, regulations and restrictions, in addition to what is already provided for in national legislation.

As reported by the UNODC World Drug Report in 2013, the multitude of new psychoactive substances and the speed with which these have emerged in all regions of the world represent one of the most important drug market trends over the past five years. While the current system of international control is able to cope with the emergence of new substances which pose a threat to public health, it is necessary to provide an appropriate response to their unprecedented rapid progression. Some countries have adopted innovative approaches to curb the increase in these substances within their borders, but the global nature of the problem requires a single response for general coverage, based on international cooperation. In addition, UNODC recommends that to strengthen the international control system, a systematic assessment of the suitability and effectiveness of the approaches adopted be implemented at the national level to deal with the phenomenon, in order to understand the real effectiveness of the actions carried out.

**UNODC  
World Report  
2013**

Considering how the detection and identification of new psychoactive substances is fundamental in the assessment of potential health risks, the UNODC also encourages the collection, updating and dissemination, among countries, of



scientific, epidemiological, forensic and toxicological information, also through early warning mechanisms and tools that can support the defining and development of evidence-based responses at national level.

As a response to the problem of new psychoactive substances of synthetic origin, the UNODC has developed the Global SMART Programme (Global Synthetics Monitoring: Analyses, Reporting and Trends Programme). The program aims to strengthen the capacity of Member States and the authorities, especially in specific regions of the world, to generate, manage, analyze and report on the consumption of such substances and information to define political strategies and effective intervention programs. The Global Smart Programme aims to provide accurate and valid information on synthetic substances, including the traffic and use modalities, and the targeted support to the Member States to create, manage, analyze, communicate and use the information and mechanisms to identify and report on emerging trends.

**Global Smart Programme**

Relative to the collection and sharing of information, on April 2013, the expert panel of the G8 Rome-Lyon, consisting of representatives from Italy, Canada, France, Germany, Japan, New Zealand, Poland, Russia, Sweden, the United Kingdom and the United States also expressed an opinion, pledging to develop global approaches, coordinated and integrated detection, analysis and identification of New Psychoactive Substances with a view to and integrated approach that addresses the problem of NPS from the point of view of both demand and supply reduction. The Declaration of intent signed by the above-mentioned representatives aims to collect and share information available on the risks that the NPS can pose to public health, at an individual or collective level, the pharmacological data and research regarding the NPS and the prevalence of use of NPS with this information being meant to be the necessary basis for the adoption of evidence-based strategies. According to the statement, such information will be shared between State signatories and with the Global Smart Programme in order to create more and more collaboration and cooperation on the topic at the international level.

**The G8 declaration of intent**

### 3.2 The European Guidelines

The recent European recovery strategy by the EU Action Plan on Drugs (2013-2016), which defines the priorities in terms of drug policies for the 2013-2020 period and that will be the basis for two European four-year Action Plans, considers the emergence and spread of new psychoactive substances one of the new challenges identified at European and international level in recent years for which it is important to give effective responses that preserve the health and safety of the population.

Starting from this assumption, in the context of strategies for the reduction of demand, the Council of the European Union establishes the need to increase and develop effective measures to reduce demand according to multi-drug use, prescription drug abuse and the emergence of new psychoactive substances. In addition, in the area of supply reduction, the European strategy also provides for special attention to be paid to new technologies in the area of communication which play a significant role in facilitating the production, marketing and supply of drugs, including new psychoactive substances, in several countries where there are still not under control. Relative to information strategies, research, monitoring and assessment, aimed at improving knowledge of the drug phenomenon and the impact of measures taken, the European institutions, bodies and Member States are encouraged to improve their ability to detect, assess and quickly and effectively respond to the emergence of new psychoactive substances that can pose risks to public health and safety. This can also be achieved by reinforcing European legislation, mechanisms for the exchange of information, knowledge and best practices. In addition, also promoted are scientific research, including that applied on new psychoactive substances, and cooperation and coordination between networks at a national and European level to increase the knowledge on the phenomenon, also in collaboration with the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA). Lastly, it is stated that Member States should pay particular attention to the development of analytical and toxicological tests on new psychoactive substances, as well as to improve the availability of epidemiological information on the topic.

In addition, acknowledging that the specific dangers linked to the development of new psychoactive substances required fast action by Member States, the Council of the European Union established, by decision 2005/387/JHA 10 May 2005, a mechanism for the rapid exchange of information on new psychoactive substances and for the assessment of risks associated with these new substances, so that the measures applicable in the Member States for the control of narcotics and psychotropic substances would also be applicable to new psychoactive substances. With this document it was established that each EU Member Country ensured that Europol and the EMCDDA would receive information on the manufacture, traffic and use, including medical use, of new psychoactive substances and of preparations containing these substances.

**European  
strategy on  
drugs 2013**

**2005/387/GAI  
Decision of  
the Council  
and EU**



However, many States have shown how this tool for information exchange, risk assessment and control of the NPS is not sufficiently capable of providing an adequate response to this phenomenon. In fact, it does not allow for quickly withdrawing the NPS harmful to health, nor does it provide responses in proportion to the level of risk inherent to the substance. Moreover, all proceeds based on an extremely slow procedure (even 24 months can elapse before the EU places an NPS under control) and the potential of adopting insufficient restrictive measures (European Commission-MEMO/13/790 17/09/2013).

**The criticism  
on the  
Decision**

Therefore, recently (17 September 2013), the European Commission has proposed to make the NPS illegal under a new procedure that will update the one previously stated in Decision 2005/387/GAI of the Council of Europe, making it faster and more effective (IP/11/1236). The proposal arises from the proposals of the EU's Drugs Agency and the European Monitoring Centre and the need to strengthen the existing European mechanisms to address the phenomenon of NPS. The new system will allow an approach by which substances that pose a moderate risk will sustain permanent restrictions to the consumer market, while those that pose a high risk, will be completely restricted. Only the most harmful substances, which pose a severe risk to consumer's health, will be subject to criminal type provisions.

**New proposal  
of the  
European  
Commission**

With this instrument, the European action to identify, assess and withdraw the NPS from the market will become much faster:

**Temporary  
measures vs  
permanent  
measures**

1. If the NPS proves to be an immediate risk, within weeks throughout the EU, for a period of one year, measures will be introduced that limit the sale to consumers (temporary measures)
2. In the case of serious risk, within ten months, permanent measures will be introduced to prevent the sale of NPS, and also restrict their use in industry (permanent measures).

Specifically, if an NPS raises concerns at the European level due to health, social and safety risks that could result, the European Monitoring Centre and Europol shall draft a joint report on the substance. On the basis of that report, the Commission shall decide whether there are grounds for requiring a real risk assessment. If the joint report shows that the substance presents an immediate risk to public health (i.e., it is highly toxic and has caused fatal incidents in Europe), the Commission shall also submit the substance to temporary market restriction. This will prevent the sale of the substance to consumers for one year, but its legitimate uses will not be affected by the measure. In this manner, it can be determined that consumers will be protected during the risk assessment of the substance, while its industrial, commercial or scientific use will not be hampered.

**The new  
procedure**

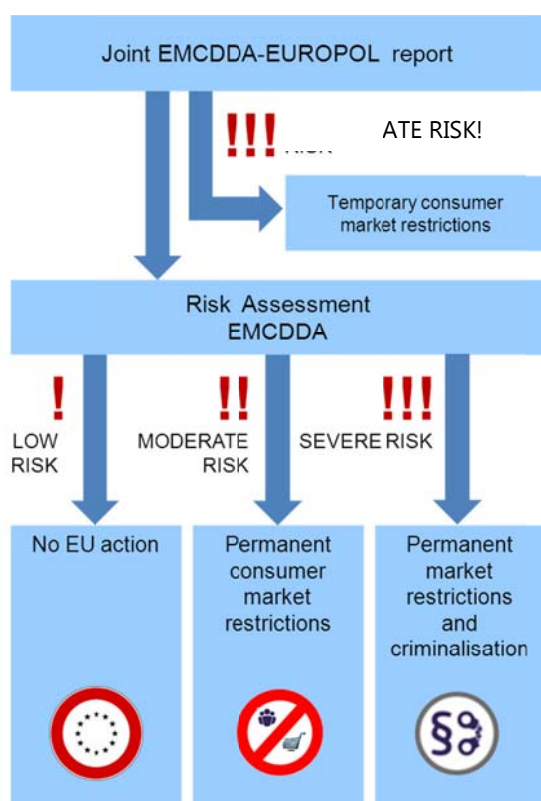
Once the substance's risks have been assessed, different actions will be taken depending on the level of risk identified. Thus, the EU will be able to:

**The levels of risk: low, moderate, severe**

- Not take any action, if the substance entails low risk (low);
- Prohibit the drug on the consumer market, if it involves a moderate risk (moderate)
- Prohibit the drug on the consumer market and limit its commercial and industrial uses, if it presents serious risk (severe). Criminal measures are also added to this. Within a year, the Member States must act to bring the substance to the criminal provisions applicable to narcotics, also at national level.

**Figure 1 - New proposal for a procedure for the fast withdrawal of the NPS from the market.**

Source European Commission, IP/13/837, September 2013.



Unlike the current system, the new measures will be directly applicable in the Member States and will not need to be transposed into national law. This will greatly accelerate the EU's response to the damaging NPS.

**A faster system at the EU and national level**

In addition, with the new mechanism, the European Monitoring Centre can include in its assessment similar substances already formally under examination. This is to anticipate the marketing of new substances by criminals who attempt to evade the restrictions by making small changes to the chemical structure of a prohibited substance.

**Inclusion of similar substances**

However, some countries, including Italy, have raised concerns regarding the classification of the risk related to various substances, divided into "low", "moderate", "severe" due to the risk assessment criteria used for the classification are not clear from a technical-procedural point of view, nor from a scientific point of view. In addition, it was found that the classification into the three classes identified could introduce possible inaccuracies on the gradation of the real risk that very often is not so easily defined and distinguished between the "low risk" and "moderate risk" classes also relative to the strong variability of the individual reactivity found for the substances by the consumer, a reactivity which is often unpredictable. Even the definition of "moderate" risk is found to be difficult to interpret and accept in the preventive healthcare field, because it may implicitly introduce a concept of acceptance of the use of certain drugs deemed, by a not known well known scientific criterion, not very dangerous. The definition of the class of risk should follow a more conservative policy, similar to what is used in trials and assessment of drug safety, which in prohibiting human use, considers all the various possibilities, even minimal, of damaging individual's health and also that of others due to changes in mental capacity and important functions, such as those required for driving motor vehicles. Thus, based on this aspect, it has been requested that the Commission provide further in-depth development and specifications.

**Perplexity in  
some  
countries  
including Italy**

### 3.3 National designations: Drug Action Plan 2010-2013

In the Fifth National Conference on Drugs (Trieste 12-14 March 2009) it was found that relative to the emergence of new drugs and new ways of consumption, it is necessary to create a strong synergy of information sources and enrich the monitoring and control tools for new markets that operate online, in order to be able to respond promptly and effectively to the new phenomenon. To this end, it was therefore necessary to activate early warning systems and fast response to the identification of new psychoactive substances and management of the phenomenon among the population.

**Sources of  
information  
and  
monitoring  
tools**

Thus, in the National Action Plan (PAN) on Drugs 2010-2013 the need to keep an active and efficient National Early Warning System is clearly shown, expanding its observation activities even to the Internet, to smart shops and to illegal rave parties, with the task of producing alerts and notices regarding the Regions and Autonomous Provinces in order to activate quick and effective responses at territorial level. Thus, specifically, PAN determines to increase the national and interregional network of facilities belonging to the National Early Warning System (collaborative centres) able to send warnings to the system and receive alert communications followed by response actions. In addition, it is expected that among activities of the Italian Warning System, the study and monitoring of the supply of new psychoactive substances over the Internet will be implemented, also in collaboration with law enforcement.

**Maintaining  
and enhancing  
the Early  
Warning  
System**



### 3.4 Conclusions

The resolutions of the United Nations, the European Union's guidelines and the National Action Plan on Drugs have provided a number of important guidelines and methodological notes that formed the basis for the drafting of the current National Action Plan on New Psychoactive Substances and have consolidated some strategic lines that were taken, developed and adapted to the standards in Italy.

In addition, since various Administrations, research institutions, scientific societies and technical professionals, and operators in the sector have contributed to the drafting of the National Action Plan on Drugs, it has been possible to also include in the Action Plan on New Psychoactive Substances, guidelines and concrete actions proposed by the above-mentioned parties who have, therefore, established the technical-scientific basis for its preparation.

Therefore, this document represents the overall general guidelines and principles to which the various Administrations and organizations operating in various capacities in Italy in the context of the fight against drugs, should aspire to in order to coordinate and better finalize their planning and internal activity within national and European logic which, like all other countries, must necessarily find coordination and a shared purpose and actions throughout the national territory in order to be truly effective.

## 4. Definitions and risk assessment

The expression "New Psychoactive Substance" – NPS has become widespread in both scientific and also institutional fields. It is also found in documents of international bodies such as UNODC, WHO, INCB and EMCDDA to indicate a "new drug or a new psychotropic substance, in pure form or in a preparation, that is not controlled by the United Nations 1961 Convention on Narcotics or the United Nations Convention on Psychotropic Substances of 1971, but which may have public health aspects comparable to those posed by substances included in these conventions, as defined in Council Decision of 2005 "(EU Council Decision 2005/387/JHA).

**Definition of a  
New  
Psychoactive  
Substance**

Therefore, new psychoactive substances, based on the definition adopted, include a broad spectrum of molecules, many of which are not controlled internationally, united by the fact that they mimic the effects of traditional drugs, although in some cases both the single substance and the mixture of NPS, which is taken is able to create "new" and very powerful effects. The term "new" means novelties on drug market and/or consumption (UNODC 2013; EMCDDA - Europol, 2013).

**New on the  
market and in  
consumption**

Therefore, all those molecules that have psychoactive effects and which are able to change the physiological neuro-psychological functions, that are not used (nor authorized) for therapeutic purposes, but used exclusively for recreational or leisure purposes, must be regarded as NPS.

**Modification of  
physiological  
neuro-  
psychological  
functions**

NPS are chemicals which appeared on the market in solid or liquid form or in the form of medicines, tablets or capsules (synthetic cannabinoids - often contained in herbal mixture - synthetic cathinones, phenethylamines, piperazines, tryptamines, ketamine, GHB/GBL, and more predominantly in preparations of synthetic origin). Therefore, the definition of "New Psychoactive Substances" appears to be generic and can include a wide variety of molecules, some of which, moreover, are already known in the past but have found new and particular popularity in recent years, others are active ingredients in medicinal products normally authorized that are however, used for non-therapeutic purposes and without a medical prescription (i.e., GHB and ketamine).

**NPS: various  
forms  
and nature**

A debate is ongoing within the scientific community and international organizations to attempt to better define these new molecules that today, according to various experts, are already over one thousand and may easily increase, given the possibility to transform the chemical structure of the actual NPS or synthesize similar substances in the laboratory by criminal organisations but also by persons that are not particularly experienced in production and chemical synthesis. The effects of these molecules may be extremely diversified, comparable or superior to those of the drugs from which they derive, that are not

**Debate on risk  
assessment of  
NPS**

very well known or not known at all, and subsequently may result in health risks that are not foreseeable and are not quantifiable based on the parameters used today in risk assessment models.

Another debate focuses on indicators of health risk and risk classification. This problem is by no means negligible when deciding whether to consider a new molecule that is a health risk, and thus needs to be included in the list of narcotics and/or psychoactive substances prohibiting its possession, use, manufacture, trafficking, dealing and anything else that may lead to health risks or illegal trade.

**Debate on risk indicators**

In view of this, it is important to define a new reference model to assess and rank the risk level to individual and collective health linked to each NPS. It is considered necessary to introduce 3 classification levels based on the existence of scientific information and/or clinical evidence (or lack thereof) that could categorize the substance into one of the identified levels.

**Risk levels**

**Table 1-Health risk levels of the NPS.**

<b>1<sup>st</sup> risk level</b>	<b>No risk</b>	The absence of risk or damage documented or potential, on the basis of studies and research (in the biological, epidemiological and clinical) that explicitly exclude adverse health effects associated with absence of negative clinical findings related to the use of these substances on clinical cases documented.
<b>2<sup>nd</sup> risk level</b>	<b>Potential risk</b>	Defined on the basis of the chemical-pharmacological and toxicological tests of the NPS and the similarities of these characteristics with those of known substances with properties harmful to health. For this level of risk the damage may not yet be detected and/or not yet sufficiently documented by studies, research and clinical cases because the studies have not yet been carried out, the substance may have appeared on the market for a short time (not so clear evidence available under which exclude the ability to generate damage). Substances having a pharmacological action with serious potential risk in case of recruitment to include also in the list displayed and shared internationally.
<b>3<sup>rd</sup> risk level</b>	<b>Actually documented risk</b>	Defined on the basis of damage detection by means of studies and researches in the psychological or biological or epidemiological or clinical evidence that shows the probable correlation or causation in cases of serious or fatal events. Substances to be put under national or international control as verified narcotic drugs or psychotropic substances, harmful to health.

At this point, however, it is useful and necessary to define the concept of "damage" as a result of taking NPS that must be understood as the existence of a change of one or more body functions or a structural lesion, an impairment or functional alteration (temporary or permanent) of an organ or tissue or of a

**NPS and the concept of "damage"**



system or ability/function with specific reference to the NPS, to the Central Nervous System, and specifically, but not exclusively:

- Degree of consciousness/alertness
- cognitive function (in particular attention span and memory)
- ability to self-control and aggressiveness
- degree of coordination and responsiveness
- psychomotor skills and the ability to drive vehicles, for the use of tools or weapons
- skills and abilities to carry out tasks that characterize responsibility towards third parties
- skills and abilities for social relationships

The "danger" of a molecule (potential risk) is thus, correlated to the degree of damage to health that it can cause. Its danger can therefore be regarded as a property or specific feature of a certain molecule that has the potential to cause a functional or structural type of change or damage whether temporary or permanent.

**"Danger"**

The "risk" is the possibility that, as a result of the use of NPS, a negative effect/event for the health (physical, mental, social) of the consumer may occur, i.e., an "event", which lead to the impairment of body functions or structures, or "damage".

**"Health risk"**

The health risk is therefore the product of the probability that a negative event/effect may occur and the severity of the damage that may result. The risk is the probability or possibility of the potential for damage under the conditions of use of the NPS.

The risk can then be expressed using the following formula:

$$R = P \times D$$

*R = Risk index*

*P = Probability of occurrence of an effect/event that generates damage*

*D = Severity of Damage created*

The health risk comes from the possibility that these molecules may produce more or less serious adverse effects according to their drug-toxicological characteristics.

Risk assessment, however, must also take into account the variables, i.e., the user's characteristics, namely the potential and unpredictable different hypersensitivity that some individuals may demonstrate for NPS (this is the case, for example, even in the case of pharmaceutical drugs), other relative environmental factors (conditions under which the substance is taken, prompt emergency treatment, etc.) and any synergistic products taken together (alcohol,

**Other variables to consider**

other drugs, psychoactive drugs, etc.).

The risk assessment “procedure” for the NPS must include the description and discovery of information in order to assess, with a good degree of safety, both the health risk at the individual level and the collective level relative to prevalence of use within the population as well as the criminal potential. The risk assessment must consider four different levels of information:

**“Risk  
assessment”**

1. Information derived from direct observation of clinical cases of acute intoxication, acute, analytical/toxicological findings on reports (if available) and biological samples
2. information about the actual movement of the molecule in question within the territory (seizures and/or recovery with the relative chemical-toxicological analyses)
3. information resulting from scientific literature when available
4. information derived from reports of other alert systems in Europe

**Variables of risk  
assessment**

To evaluate the health risk, i.e., the risk of an NPS, also for the purpose of adding it to the Tables of Presidential Decree 309/90, the following various notes or similarities to similar substances, must be taken into account:

1. Epidemiological data: degree of distribution (reports) in Italy and Europe, predominance of use in Italy, degree of accessibility to the substance (Internet, smart shops, dealing, etc.)
2. Chemical and physical characteristics (including minimum lethal dose, bioavailability – half-life)
3. Risk of developing abuse and/or addiction behaviours with tolerance and addiction (addiction potential)
4. Known precursors and metabolites and their degree of toxicity
5. Mechanism of action (kinetics and dynamics)
6. Existence of structurally similar substances with already known psychoactive effects
7. Potential therapeutic applications (therapeutic guidelines of authorised medicinal products)
8. Methods of administration and possible association found with other substances
9. Health risks (structural and/or functional changes):

- a. Induced or related and detected acute mortality
  - b. Effects on the Central Nervous System
  - c. Effects on the Peripheral Nervous System
  - d. Psychological effects (degree of consciousness/alertness, cognitive function, ability to self-control and aggression, psychomotor coordination and responsiveness, etc.)
  - e. Effects on the cardiovascular system
  - f. Effects on the respiratory system
  - g. Effects on hepatorenal system
  - h. Effects on the endocrine system
  - i. Special effects on other apparatuses and systems
10. Social risks (loss of work/study, loss of social relationships/family, prostitution, etc.)
11. Criminal Risk (involvement in criminal activities, creating new criminal/illegal markets)

However, it should be remembered that the psychoactive substances, in accordance with the guidelines of the WHO, to be considered as drugs, must cause tolerance, addiction and dependence. These conditions often cannot be easily proven for these new substances, because of their short history of appearance on the market or sporadic or simultaneous use with other substances. However, for the purposes of inclusion in the tables, toxicity may be demonstrated as substances pharmacologically active on the nervous system and the impossibility of therapeutic use because of unfavourable risk benefit ratio for serious side effects, known or likely, for the nervous system and its functions.

**WHO  
Guidelines**

Risk assessment is a process designed to identify, analyse and quantify health risks (even if potential) but also social and criminal risks associated with using NPS.

**Identification, and  
assessment of  
risks**

Risk analysis must include the definition of the nature and type of healthcare and social risk and forms the basis for subsequent decisions: regulation or control according to legislation on narcotics and/or psychotropic substances.

Therefore, in deciding whether an NPS should be or not included in Table I of Presidential Decree 309/90, the criteria to be followed, once the risk assessment procedure is performed, is that these substances must be added in the tables if they prove to have a risk or may damage health, documented, according to the variables shown above, also taking into consideration the precautionary principle.

**Criteria for  
inclusion in  
DPR 309/90  
Tables**



Potential risk must categorise the NPS under observation at the 2<sup>nd</sup> level of risk, by applying conservative criteria and subjecting the substances in question to the guidelines provided for pharmacologically active substances which in Europe provides for authorisation prior to production, distribution and sales by authorised companies, and does not provide for individual possession, if not in the dose and form of medication duly authorised and dispensed upon submitting a prescription (EC Codex Dir. 2001/83/EC as amended and supplemented).

In addition, in national legislation the prescription of compounds only based on substances included in the European Pharmacopoeia or medicines regularly authorised in Europe or revoked or not confirmed for reasons not related to the risks of using the active ingredient, is expressly authorised (see Law 94/98).

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\* Substances, which chemically or pharmacologically, are basically similar to illegal ones or controlled substances.

## 5. New substances identified

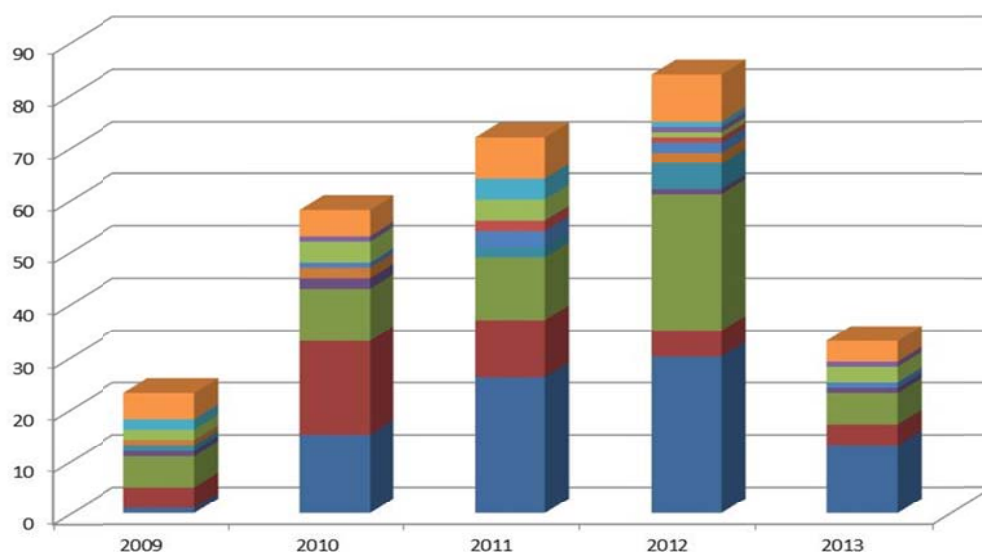
From August 2009 to 2013, after reporting from European Monitoring Centre and collaborating Italian centres, over 280 new molecules were detected by the National Early Warning System, including:

**Over 280  
new  
molecules  
recorded**

- 84 synthetic cannabinoids
- 42 synthetic cathinones
- 60 phenethylamine
- 6 ketamine and similar
- 4 piperazine
- 8 tryptamine
- 6 azepane-like
- 4 PCP-like
- 3 fentanyl

The following table shows in detail the molecules detected by the System with the month and year of recording.

**Figure 2 - Psychoactive Substances (traditional and new) by type of substance, reported for the first time in Europe or Italy and recorded by the National Early Warning System (2009-2013)-Number. Source: National Early Warning System, 2013**



No	Name	Month	Year	No	Name	Month	Year
1	Nitracaine	August	2013	145	CP 47,497-C8-homolog	November	2011
2	JWH-412 5-fluoropentyl derivative	August	2013	146	Propoxyphene	November	2011
3	Proscaline	August	2013	147	Paracetamol	October	2011
4	Tadalafil	July	2013	148	bk-MDDMA	October	2011
5	PMKA	July	2013	149	Benzylpiperidine	October	2011
6	βk-PBDB	July	2013	150	4-EMC	October	2011
7	Synthacaine	July	2013	151	Desomorphine	October	2011
8	3,4 CTMP	July	2013	152	4-BMC (Brepheдрone)	September	2011
9	Escaline	July	2013	153	Isopentadrone	September	2011
10	Mephtramine	July	2013	154	WIN 48,098 (Pravadoline)	September	2011
11	5-EAPB	July	2013	155	Pyrovalerone	September	2011
12	AL-Allylescaline	July	2013	156	Dipipanone	September	2011
13	Mebroqualone	July	2013	157	Sildenafil	August	2011
14	5F-AB-PINACA	July	2013	158	Methylone (MDMCAT; MDMC; bk-MDMA)	August	2011
15	JTE-907	July	2013	159	4-fluoroamphetamine (4-FA)	August	2011
16	2-(2,3-dimethoxyphenyl)-N-(3,4,5-trimethoxybenzyl)ethanamine	July	2013	160	Methamphetamine	August	2011
17	3-[2-(2-methoxybenzylamino)ethyl]-1H-quinazoline-2,4-dione (RH-34)	July	2013	161	N-Ethylbuphedrone	August	2011
18	N-(1-amino-3-methyl-1-oxo butan-2-yl)-1-(4-fluorobenzyl)-1H-indazole-3-carboxamide (AB-FUBINACA)	July	2013	162	Org-29647	August	2011
19	1-(4-methoxyphenyl)-2-(pyrrolidin-1-yl)pentan-1-one (4-MeO-α-PVP)	June	2013	163	Org-27569	August	2011
20	4-methylbuphedrone, N-benzyl derivative	June	2013	164	Org-27759	August	2011
21	A-836,339	June	2013	165	AM-2233	August	2011
22	2-ethylamino-1-phenyl-propan-1-one (Ethylpropion, N-ethylcathinone and 2-ethylaminopropiophenone, Ethylcathinone)	May	2013	166	JWH-307	August	2011
23	Phenacetin	May	2013	167	Caffeine (in heroin)	August	2011
24	α-PVT, alpha-PVT, alpha-pyrrolidinopentiothiophenone	May	2013	168	Benzoin isopropyl ether (BIE)	July	2011
25	AB-PINACA	May	2013	169	Pseudoephedrine	July	2011
26	TFMPP	May	2013	170	Nandrolone	July	2011
27	Hydroxyzine	May	2013	171	JWH-412	July	2011
28	N-Methyl-2-pyrrolidone (NMP)	May	2013	172	JWH-387	July	2011
29	N-Ethyl-1-phenyl-2-butanamine	May	2013	173	Phenazepam	July	2011
30	URB-597([3-(3-carbamoylphenyl)phenyl]N-cyclohexylcarbamate))	April	2013	174	Ayahuasca (NN-DMT)	July	2011
31	25H-NBOMe; 2C-H-NBOMe(2-(2,5-dimethoxyphenyl)-N-(2-methoxybenzyl)ethanamine)	April	2013	175	Ayahuasca (Armina; Harmine)	July	2011
32	3,4-dichloromethylphenidate	April	2013	176	4-APB	June	2011
33	UR-144 heptyl derivative ((1-heptyl-1H-indol-3-yl)(2,2,3,3-tetramethylcyclopropyl)-methanone)	April	2013	177	6-APB	June	2011

No	Name	Month	Year
34	Chloroquine	April	2013
35	JWH-145	April	2013
36	JWH-030	April	2013
37	JWH-307 bromine derivative	April	2013
38	2,5-dimethoxy-4-ethylphenethylamine (2C-E)	April	2013
39	4-bromo-2,5-dimethoxyamphetamine (DOB)	April	2013
40	4-chloro-2,5-dimethoxyamphetamine(DOC)	April	2013
41	5F-PB22	March	2013
42	Flubromazepam	March	2013
43	EAM-2201 [1-(5-fluoropentyl)-1H-indol-3-yl]-(4-ethyl-naphthalen-1-yl)methanone	February	2013
44	Carfentanil	February	2013
45	JWH-368 ( 5-(3-phenyl)-1-pentylpyrrol-3-yl]-1-naphthalen-methanone)	February	2013
46	A-834,735 (1-(tetrahydro-2H-pyran-4ylmethyl)-1H-indol-3-yl]-(2,2,3,3-tetramethylcyclopropyl)methanone)	January	2013
47	2C-H (2-(2,5-dimethoxyphenyl)ethanamine)	January	2013
48	2C-B (4-Bromo-2,5-dimethoxyphenyl)ethanamine	January	2013
49	5-MAPB (1-(Benzofuran-5-yl)-N-methylpropan-2-amine)	January	2013
50	4-fluorocathinone	January	2013
51	Quetiapine	December	2012
52	4-methyl-phendimetrazine	December	2012
53	4-methylaminorex-4-methyl derivative	December	2012
54	25N-NBOMe	December	2012
55	25G-NBOMe	December	2012
56	25E-NBOMe	December	2012
57	2C-N	December	2012
58	2C-G	December	2012
59	UR-144 N-(5-chloropentyl) derivative	December	2012
60	25B-NBOMe	December	2012
61	4-chloroamphetamine (4-CA)	December	2012
62	Isobutanoilfentanyl	December	2012
63	4-HTMPIPO	November	2012
64	JWH-018 quinolinecarboxamide	November	2012
65	AB-005 azepane isomer	November	2012
66	AB-005	October	2012
67	AM-2201 analog Indazole-carboxamide	October	2012
68	AKB-48F	September	2012
69	AM-1248	September	2012
70	N-Ethylketamine	September	2012
71	5-(2-Aminopropyl)-2,3-dihydro-1H-indene	September	2012
72	4-Hydroxyamphetamine	September	2012

No	Name	Month	Year
178	RCS-4(C4)	June	2011
179	Ostarine	June	2011
180	JWH-122 fluoropentyl derivative	June	2011
181	2C-C-NBOMe	June	2011
182	Rosin in hashish	June	2011
183	OMMA	June	2011
184	Methanandamide	May	2011
185	AM-1220-azepane-derivative	May	2011
186	AM-1220	May	2011
187	5-HTTP	May	2011
188	JWH-007	May	2011
189	Tropicamide	May	2011
190	Diazepam	April	2011
191	(2-methoxyphenyl)(1-pentyl-1H-indol-3-yl)methanone	April	2011
192	N-Ethylamphetamine	April	2011
193	$\alpha$ -Pyrrolidinopentiophenone ( $\alpha$ -PVP)	April	2011
194	DMMA	April	2011
195	Metorphan	March	2011
196	3-FMC	March	2011
197	Derivative JWH-250	March	2011
198	5-IAI	March	2011
199	JWH-182	March	2011
200	1-Pentyl-3-(1-adamantoyl)indole	February	2011
201	JWH-251	February	2011
202	N,N-dimethylamphetamine	February	2011
203	AM-2201	January	2011
204	MPA	January	2011
205	CRA-13	January	2011
206	4-MeO-PCP	January	2011
207	Desoxy-D2PM	December	2010
208	5-APB	December	2010
209	BMDB	December	2010
210	BMDP	December	2010
211	Arecoline	November	2010
212	Dibutylone	November	2010
213	MDPBP	November	2010
214	3-MeO-PCE	November	2010
215	3-(4-Hydroxymethylbenzoi)-1-pentylindole	November	2010
216	Methoxetamine	November	2010



No	Name	Month	Year
73	3-Methylmethcathinone (3-MMC)	September	2012
74	2-MeO-Ketamine	August	2012
75	Pirazolam	August	2012
76	4-AcO-DPT	August	2012
77	AH-7921	August	2012
78	JWH 018 N-(5-chloropentyl) derivative	August	2012
79	JWH 018 N-(5-bromopentyl) derivative	August	2012
80	1-(5-Fluoropentyl)-3-(2-ethylbenzoyl)indole	July	2012
81	1-(5-Fluoropentyl)-3-(2-methylbenzoyl)indole	July	2012
82	JWH-122 pentenyl 2-methylindole derivative	July	2012
83	JWH-122 pentenyl derivative	July	2012
84	MAM-2201 chloropentyl analog	July	2012
85	3,4-Methylendioxy-N,N-dimethylamphetamine	July	2012
86	JWH-018 carboxamide derivative	July	2012
87	APICA	July	2012
88	25I-NBOMe	June	2012
89	MPHP	June	2012
90	STS-135	June	2012
91	5-MeO-MET	June	2012
92	4-HO-DPT	June	2012
93	UR-144(-2H)	June	2012
94	Zopiclone	June	2012
95	5-(2-Aminopropyl)indole (5-IT)	June	2012
96	APINACA	May	2012
97	2,4,5-TMMC	May	2012
98	1-Phenyl-2-(piperidin-1-yl)butan-1-one	May	2012
99	4-AcO-DALT	April	2012
100	LSD	April	2012
101	A-796,260	April	2012
102	25D-NBOMe	April	2012
103	Benzocaine	April	2012
104	5FUR-144	March	2012
105	3-MeO-PCP	March	2012
106	4-Fluoroephedrine	March	2012
107	1-Ethynyl-1-cyclohexanol (ECX)	March	2012
108	4-Amino-3-phenylbutyric acid (Phenibut)	March	2012
109	MAM-2201	March	2012
110	2-Fluoro-N-methyl-amphetamine-(2-FMA)	March	2012
111	6-APDB	March	2012
112	5-APDB	March	2012
113	Alpha-methyltryptamine (AMT)	March	2012
114	JWH-370	February	2012
115	UR-144	February	2012
116	MDMA	February	2012
117	URB754	February	2012
118	1-(Thiophen-2-yl)propan-2-amine	February	2012
119	Chlobenzorex (or-chlorobenzylamphetamine)	February	2012
120	Phenylpropanolamine (PPA)	February	2012

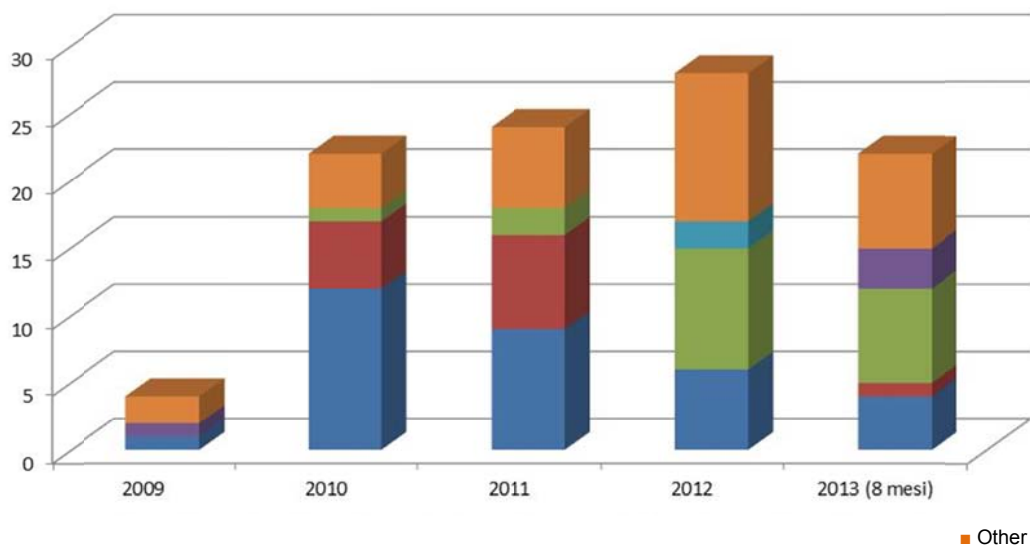
No	Name	Month	Year
217	PMMA	October	2010
218	JWH-019	October	2010
219	JWH-203	October	2010
220	3,4-DMMC	October	2010
221	JWH-250	October	2010
222	Desoxypropiradol	October	2010
223	JWH-200	September	2010
224	Buflomedil	September	2010
225	Diltiazem	September	2010
226	Etaphedrine	September	2010
227	JWH-210	September	2010
228	Pentedrone (β-Ethylmethcathinone)	September	2010
229	5-MeO-DPT	September	2010
230	Pentylone	September	2010
231	M-ALPHA	September	2010
232	Naphyrone isomer	August	2010
233	C8 + C2 variable of CP-47,497	August	2010
234	4MBC	August	2010
235	MPPP	August	2010
236	Buthylone	August	2010
237	MDPV	August	2010
238	JWH-015	July	2010
239	MPBP	July	2010
240	JWH-122	July	2010
241	AM-694	July	2010
242	4-Methylethcathinone (4-MEC)	July	2010
243	Buphedrone	July	2010
244	JWH-073 methyl derivative	July	2010
245	Dimethocaine DMC	June	2010
246	DMAA	June	2010
247	iso-Ethcathinone	June	2010
248	pFBT	June	2010
249	Naphyrone	June	2010
250	JWH-081	June	2010
251	RCS-4 (JWH-018 analog)	May	2010
252	Fentanyl	May	2010
253	4-FMA	March	2010
254	Mephedrone (4-MMC)	March	2010
255	Metamizole (Novalgine)	March	2010
256	pFPP	March	2010
257	MDAI	March	2010
258	β-Me-PEA	March	2010
259	N,N-dimethylphenylethylamine	March	2010
260	N-benzyl-1-phenylethylamine	March	2010
261	JWH-073	February	2010
262	JWH-018	February	2010
263	GHB	January	2010
264	2C-B-BZP	January	2010

No	Name	Month	Year	No	Name	Month	Year
121	2-Fluoroamphetamine	February	2012	265	Pregabalin	December	2009
122	1-(3-Methylbenzyl)piperazine	February	2012	266	4-MA	December	2009
123	3-Fluoroisomethcathynone (3-FiMC)	February	2012	267	JWH-200	December	2009
124	Trans-CP 47,497-C8 homolog	February	2012	268	3-FMA	November	2009
125	1-Cyclohexyl-x-methoxybenzoyl	February	2012	269	Etqualone	November	2009
126	N-Propylamphetamine	February	2012	270	Metamfepramone	November	2009
127	3-(p-methoxybenzoyl)-N-methyl-indole	February	2012	271	Flephedrone (4-FMC; 4-fluoromethcathinone)	November	2009
128	N-hydroxy MDA (MDOH)	February	2012	272	Mytragine	November	2009
129	Popper (Isopropyl Nitrite)	January	2012	273	Bromo-Dragonfly	October	2009
130	HU-331	January	2012	274	Levamisole	October	2009
131	Scopolamine	December	2011	275	Methedrone (bk-PMMA)	October	2009
132	Atropine	December	2011	276	2-PEA	October	2009
133	1-Phenyl-1-propanamine	December	2011	277	MDPV	August	2009
134	AM-694 - chloro derivative	December	2011	278	DNP (2,4-dinitrophenol)	August	2009
135	$\alpha$ -Pyrrolidinobutiophenone ( $\alpha$ -PBP)	December	2011	279	4-AcO-DMT	August	2009
136	3-Amino-1-phenylbutane (3-APB)	December	2011	280	PMA	July	2009
137	AM-2232	December	2011	281	Pethidine/Demerol	July	2009
138	Etizolam	December	2011	282	Nortramadol (O-Desmethyltramadol)	June	2009
139	Ethylphenidate	November	2011	283	Ketamine	June	2009
140	Camfetamine	November	2011	284	mCPP	June	2009
141	JWH-022	November	2011	285	Piperonal	June	2009
142	4-Methylbuphedrone (4-Me-MABP)	November	2011	286	TMA-6	June	2009
143	WIN 55,212-2	November	2011	287	Carbaryl	May	2009
144	AM-679	November	2011				

Italy was also particularly affected by the phenomenon of the emergence on the national territory of synthetic cannabinoids (12 new cannabinoids identified and reported for the first time in 2010, 9 in 2011) and synthetic cathinones (5 new cathinones in 2010, 7 in 2011), which decreased in terms of chemical diversity in 2012 to date (10 new cannabinoids, only one new cathinones identified). The emergence of new psychoactive substances represents a dynamic phenomenon that responds to market demand for new substances, and at the same time a market that reflects the legal status of molecules which have been banned, not only in Italy, but also in numerous European countries. So there was a kind of "replacement" of some molecules with other more complex chemical structures, which circumvents the current generic definition of structural analogues (for example for synthetic cannabinoids, instead of benzyl or phenyl, naphthyl, substitutions appeared on the market such as adamantyl molecules, tetramethylcyclopropyl, etc., not falling within the definition of analogues included in Table I of Presidential Decree 309/90), as well as the proposed new classes of molecules which witnessed an increase of new phenethylamines detected within Italy from 2012 to date.

**Over 280  
new  
molecules  
recorded**

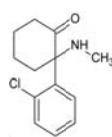
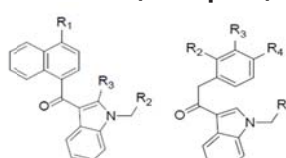
**Figure 3 - number of New Psychoactive Substances reported for the first time in Italy by Collaborative Centres to the National Early Warning System, starting in 2009.**

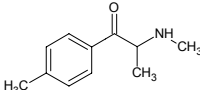
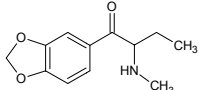
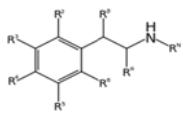
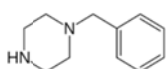
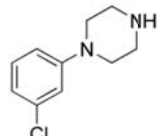
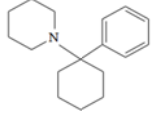
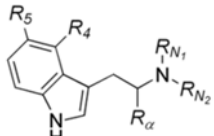


### 5.1 Negative effects reported for new psychoactive substances

Although limited, in scientific studies there is growing evidence of the effects of psychoactive substances. Some of these known effects of each substance are summarised in the table below. Behind these major physical effects, there were also findings of tolerated compulsive use that indicate a potential for the abuse of these substances (Kelleher *et al.* 2011).

Until research does not result in more detailed data, as summarised in the partial list of the effects of these new substances below, it will be complicated to try to understand the exact consequences of their combined effects.

New Psychoactive Substances		Effects reported	Effects reported
<b>Ketamine</b> 		<ul style="list-style-type: none"> <li>Tachycardia</li> <li>Abdominal pain</li> <li>Vertigo</li> <li>Bladder damage</li> </ul>	<ul style="list-style-type: none"> <li>Hypertension</li> <li>Pulmonary edema</li> <li>Compromised consciousness and memory</li> <li>Rhabdomyolysis</li> </ul>
<b>Synthetic cannabis (i.e. "Spice")</b> 		<ul style="list-style-type: none"> <li>Panic and anxiety</li> <li>Paranoia</li> <li>Respiratory distress</li> <li>Sweating</li> </ul>	<ul style="list-style-type: none"> <li>Chest pain</li> <li>Hallucinations</li> <li>Restlessness</li> </ul>

New Psychoactive Substances	Effects reported	
<b>Synthetic cathinones (es. Methyldone, Bath salts/Ivory Wave/Mephedrone/MCAT, MDPV/MDPK/MTV, Flephedrone and Naphyrone)</b>  	<ul style="list-style-type: none"> <li>• Agitation</li> <li>• Severe psychosis</li> <li>• Tachycardia</li> <li>• Hypertension</li> <li>• Convulsions</li> </ul>	
<b>Phenethylamine (es. PMMA, 2C Series, D-Series)</b> 	<ul style="list-style-type: none"> <li>• Agitation</li> <li>• Tachycardia</li> <li>• Mydriasis</li> <li>• Hallucinations</li> <li>• Severe ischemia</li> </ul>	
<b>Piperazine (i.e. BZP, TFMPP, MBZP)</b>  	<ul style="list-style-type: none"> <li>• Toxic convulsions</li> <li>• Respiratory acidosis</li> <li>• Hyperthermia</li> <li>• Rhabdomyolysis</li> </ul>	
<b>Phencyclidine (PCP)</b> 	<ul style="list-style-type: none"> <li>• Range of neurological anomalies</li> <li>• Changes in consciousness (from mild listlessness to coma)</li> </ul>	
<b>Tryptamine</b> 	<ul style="list-style-type: none"> <li>• Restlessness</li> <li>• Agitation</li> <li>• Gastrointestinal pain</li> </ul>	
<b>Khat</b>	<ul style="list-style-type: none"> <li>• Attention deficit</li> <li>• Euphoria</li> <li>• Hyperthermia</li> <li>• Anorexia</li> </ul>	
<b>Kratom</b>	<ul style="list-style-type: none"> <li>• Stimulating effect (at low doses)</li> </ul>	
<b>Salvia Divinorum</b>		<ul style="list-style-type: none"> <li>• Sedative-Narcotic effect (at high doses)</li> <li>• Death</li> </ul>



## 6. Characteristics of several main substances

Below the major characteristics found for some of the NPS detected by the National Early Warning System as well as more than 60 cases of acute intoxication related to these and officially recorded until mid-2013. The activities of the System and the results achieved to date are also summarized. The cases detected by the Alert System relate only to intoxication, for which there is a verified diagnosis (using specific analytical tests) associated with typical toxic effects from the NPS for the case. This means that the case studies below are a selection of cases of intoxication from NPS collected from the N.E.W.S., which in turn represent only a small portion of adverse events from NPS use occurring within the national territory. Obviously, this data alone is not able to provide a correct indication on the real amount of distribution and use of NPS within the national territory that, according to the data on seizures and other sources of information, appears today to be substantial and is constantly increasing.

**Great  
variability  
of  
substances  
and effects**



**Images of  
several NPS  
reported by  
the Warning  
System  
since 2009**



## 6.1 Synthetic cannabinoids

In Europe, the first synthetic cannabinoids were detected in 2008 in several vegetable mixtures, called "herbal mixture" or "herbal blend", and sold as incense or room fresheners. The first identified were the cannabinoids JWH-018 and JWH-073. Synthetic cannabinoids were detected in Italy starting in 2010 (first report confirmed by Warning System).

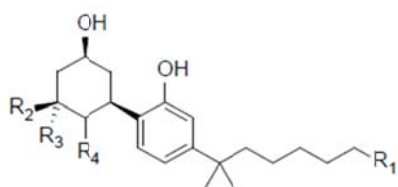
**What they are**

Analyses performed on products like "herbal mixture", implemented by various international laboratories, revealed the existence of many other synthetic cannabinoids such as JWH-122, JWH-200, JWH-250, JWH-251, JWH-081, JWH-398, JWH-019, HU-210 and the CP 47,497 including its analogues with alkyl chain C6, C8 and C9. These molecules act on CB1 receptors responsible for the psychoactive effects of cannabis, mimicking its effects.

**Figure 4 - Chemical structures of the main synthetic cannabinoids recorded by the National Early Warning System.**



### "Classic" cannabinoids



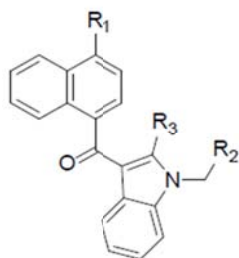
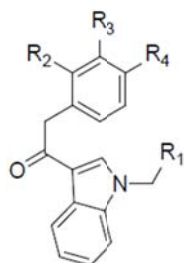
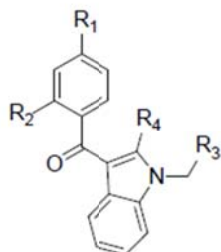
**CP-47,497** (R2=R3=R4=H, R1=methyl)

**CP-47,497 C6** (R1=R2=R3=R4=H)

**CP-47,497 C8** (R2=R3=R4=H, R1=ethyl)

**CP-47,497 C9** (R2=R3=R4=H, R1=propyl)

### "Non-classic" cannabinoids

**Aminoalkylindoles:****JWH-018** (R<sub>1</sub>=R<sub>3</sub>=H, R<sub>2</sub>=butyl)**JWH-073** (R<sub>1</sub>=R<sub>3</sub>=H, R<sub>2</sub>=propyl)**JWH-122** (R<sub>1</sub>=methyl, R<sub>3</sub>=H, R<sub>2</sub>=butyl)**JWH-081** (R<sub>1</sub>=OMe, R<sub>3</sub>=H, R<sub>2</sub>=butyl)**Naphthoylindoles****JWH-250** (R<sub>1</sub>=butyl, R<sub>2</sub>=OMe, R<sub>3</sub>=, R<sub>4</sub>=H)**Phenylacetylindoles****AM-694** (R<sub>1</sub>=R<sub>4</sub>=H, R<sub>2</sub>=I, R<sub>3</sub>=butyl)**RCS-4** (R<sub>1</sub>=OMe, R<sub>2</sub>=R<sub>4</sub>=H, R<sub>3</sub>=butyl)**WIN 48,098** (R<sub>1</sub>=OMe, R<sub>2</sub>=H, R<sub>3</sub>=4-morpholinomethyl, R<sub>4</sub>=methyl)**Benzoylindoles**

In vitro activity of JWH-018 and JWH-073 analogues and JWH-019 appears to be higher than that of  $\Delta^9$ -THC. CP 47,497 shows agonistic activity on CB1 receptors from 3 to 28 times greater than that of  $\Delta^9$ -THC. For this reason, consumers often use these holding them as alternative natural products to cannabis, but with similar psychotropic activity. In addition, due to the ability of synthetic cannabinoids identified to act as CB1 receptors agonists, it is possible to easily develop tolerance to these molecules.

**Their potency**

Synthetic cannabinoids are generally administered through the airway by the using cigarettes containing vegetable substance to which these synthesised molecules are added. The effects of synthetic cannabinoids are similar, if not greater, than the effects caused by the use of cannabis. In fact, their use after just ten minutes, results in conjunctivitis, tachycardia, xerostomia and altered perception and mood, with these effects lasting for about six hours. Since 2009, in Germany, there have been recorded cases of persons arriving in the emergency room after using the "herbal mixture" with disorders of the cardiovascular and nervous system, such as tachycardia and temporary loss of consciousness. In some cases, effects have been recorded such as psychomotor agitation, panic attacks and confusion, and convulsions. Similar cases have been recorded in Sweden, Austria, Romania and Italy. Cases of serious cardiovascular effects (i.e., acute coronary syndrome, severe and prolonged bradycardia) and neuro-behavioral effects (i.e., acute psychosis) have now already been reported in the scientific literature and also found also in Italian case studies.

**Use and effects**

Since 2010, in Italy, the National Early Warning System, through the reports of its collaborative centres, has recorded 41 cases of acute intoxication related to the use of synthetic cannabinoids for which emergency room admission was necessary. Figure 5 shows the georeferencing of cases of intoxication by synthetic cannabinoids and the names of the products consumed by patients intoxicated, showing the relative synthetic cannabinoids. Most cases were recorded in Northern Italy and involved subjects between 14 and 55 years of age.

**Acute intoxication in Italy**



**Figure 5-georeferencing of cases of acute intoxication by synthetic cannabinoids that have required admission to the emergency room and that have been recorded by the National Early Warning System since 2010, names of products used by patients and the relative synthetic cannabinoids found in the samples analyzed.**



**Images of  
several  
products  
containing  
synthetic  
cannabinoids**

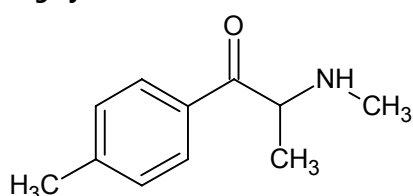


## 6.2 Synthetic cathinones

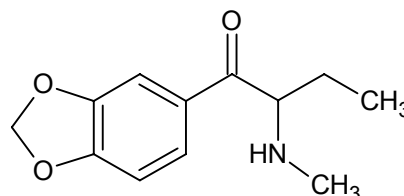
Synthetic cathinones are structural analogues of cathinones (a psychoactive molecule found in the Khat plant) and are marketed in tablets of various colours/shapes, in capsules, powder/crystals; these are generally called "bath salts" or "plant fertilisers". In these products, often the cathinones present are more than one and/or are combined with other psychoactive substances. Among those recorded by the National Early Warning System since 2010, are mephedrone (14 reports), 4-methylethylcathinone (4-MEC) (11), butylone (5), methylone (5), 3,4-methylenedioxypyrovalerone (MDPV) (4), pentedrone (4), 3-fluoromethcathinone (3) and buphedrone (2).

**What they are**

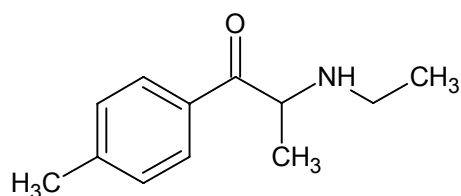
**Figure 6-Chemical structures of the main synthetic cathinones recorded by the National Early Warning System.**



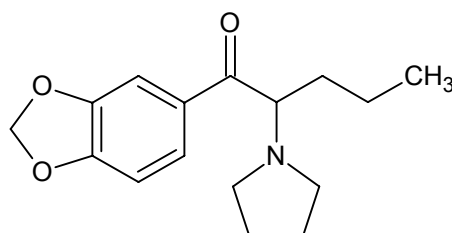
**Mephedrone**



**Methylone**



**4-methylethylcathinone (4-MEC)**



**3,4-methylenedioxypyrovalerone (MDPV)**

Relative to the availability of different types and formulations, cathinones can be ingested, snorted/smoked or taken intravenously or rectally. Many synthetic cathinones are characterised by sympathomimetic activity, mainly related to pre-synaptic level release of catecholamines and the inhibition of reuptake of the monoaminergic neurotransmitters. These are able to simulate the effects of cocaine. The clinical effects most commonly reported are anxiety, decreased ability to concentrate and reduced short-term memory, irritation of the nasal mucosa, headache, tachycardia, hypertension, hyperhidrosis, mydriasis, lockjaw, bruxism, hallucinations, severe psychomotor agitation and aggression, convulsions. For many

**Use and effects**

of the synthetic cathinones identified also within Italy there is no comprehensive data relating to the pharmacological and toxicological characteristics, the precise mechanism of action and potential toxic effects. However, the clinical presentation is not different from the acute effects of MDMA or cocaine.

Since 2010, Italy, 8 cases were recorded (between the ages of 18 and 38) of acute intoxication by synthetic cathinones. The symptoms reported were mydriasis, anxiety, panic, auditory and visual hallucinations, psychomotor agitation and violent attitude, convulsions. In one case the use (ingestion/sniffing) of the product bought in a smart shop as fertilizer for plants resulted, in addition to systemic effects, also in oral hyperemia, edema of the glottis and the uvula. All patients were treated symptomatically and discharged after 24-48 hours of observation. The cases were recorded in the Region of Lombardy, the Region of Veneto and the Region of Tuscany. Synthetic cathinones, methylethyl-cathinone buthylone, mephedrone and MDPV were responsible for the intoxications. Other cases of mixed cathinones-other molecules intoxication have been identified in various Italian regions.

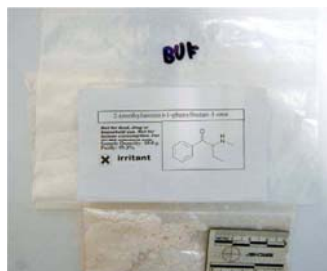
#### Acute intoxications in Italy

**Figure 7 – Georeferencing of cases of intoxication by synthetic cathinones which required admission to the emergency room and that have been recorded by the National Early Warning System since 2010 and the relative synthetic cathinones found in the samples analysed.**





**Images of several products containing synthetic cathinones recorded by the Warning System**



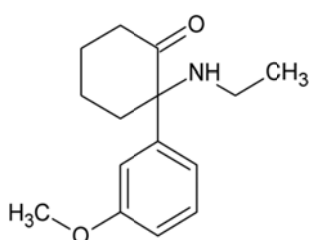
### 6.3 Methoxyethamine

Methoxyethamine is an analogue of ketamine from which it differs due to the presence of 3-methoxy substituting 2-chlorine on the aromatic ring and the 2-ethylamine instead of methylamine. Similarly to ketamine, methoxyethylamine is believed to act as a non-competitive antagonist of NMDA receptors and dopamine reuptake inhibitor. In addition, it appears to act as an agonist of dopaminergic D2, serotonergic 5HT2, muscarinic cholinergic, sigma-1, mu and kappa opioid, receptors.

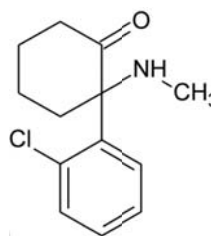
**What it is**

Relative to the effects of ketamine, the presence of the *N-ethyl* group leads to a greater prolonged toxicological effect, while the presence of the 3-methoxy group in place of 2-chlorine, results in a lower analgesic and anesthetic effect and a longer half-life.

**Figure 8 – Chemical structures of methoxyethamine and of ketamine.**



**Methoxetamine**



**Ketamine**



Methoxetamine may be taken by oral, endovenous, intramuscular, rectal and nasal administration. Based on the reports of several users, the onset of effects may be delayed (after 30-90 minutes) when sniffed, with the risk of taking repeated doses within a short time; if on the other hand, it is administered intramuscularly, the effects may appear even within a few minutes. The duration of the effect varies (on average 5-7 hours). To prolong the effects desired, often it is taken combined with other hallucinogens (for example, LSD) or amphetamine/amphetamine-like.

**Use and effects**

The effects desired and described after the use of the methoxetamine are euphoria, increase in empathy, intensified sensory perception, distortion of the sense of reality, vivid and persistent visual hallucinations. Some consumers report to have experience nausea, vomiting, diarrhea, paranoia, anxiety, mental confusion, vertigo, distortion of time, aphasia, synaesthesia and severe psychomotor agitation, acute renal deficiency and rhabdomyolysis.

Following the intake of methoxetamine, some of the “undesirable” effects include sensory deprivation, derealisation and prolonged dissociative state (generally described as “near-death” experience).

During 2012, 15 cases of intoxication from methoxetamine were detected by the National Early Warning System, most of which (12) were identified in Northern Italy, while the remaining 3 in Central Italy, specifically in the Regions of Tuscany and Lazio.

**Acute intoxications in Italy**

The main symptoms recorded at admission to the emergency room were severe psychomotor agitation associated with hallucinations, mydriasis, tachycardia, state of confusion, stupor.

The figure below shows the georeferencing of cases of acute intoxication related to the intake of methoxetamine that required admission to the emergency room, and at times to intensive care.

**Figure 9 – Georeferencing of cases of intoxication from methoxetamine that required admission to the emergency room and were recorded in the National Early Warning System in 2011-2012.**



## 6.4 Phenethylamine

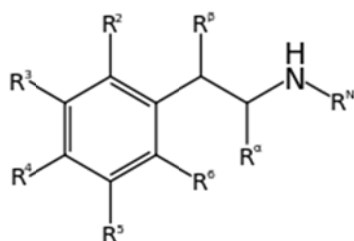
Phenethylamines are a rather wide class of molecules with psychoactive and stimulant action which includes amphetamine, methamphetamine and 3,4-methylenedioxymethamphetamine (or MDMA, also known as ecstasy), molecules controlled by the Convention of 1971. There are several sub-groups depending on different aromatic ring substitution on the alkyl and nitrogen chain which are identified mostly by numbers and letters: the "2C" series is characterized by the replacement 2,5-dimethoxy, the "D" (DOI, DOC) series, is similar to the 2C series, but has a methyl group on the chain, the "NBOMe" series, with different examples, recently appearing on the drug market, are phenethylamines with the nitrogen atom substituted with a 2-methoxybenzoic group. These structural changes give the phenethylamines effects that vary from the stimulating action to hallucinogenic type effects, like mescaline analogues, a phenethylamine of natural origin, which belongs to the "2C" series.

**What they are**

Phenethylamines are sold in tablets of various colours/shapes, in capsules, and powder/crystals. It should be noted, that for some phenethylamines, those of the "25NBOMe" series, seizures of the product marketed in the form of stickers ("blotters"), typical formulation of high-power hallucinogens, were recorded.

Among the phenethylamines recorded by the National Early Warning system since 2010, the following are noteworthy: 25I-NBOMe, 2C-B, 2C-H, 2C-E, DOB, DOC, 4-FA, 4-MA, PMA and PMMA.

**Figure 10 – Chemical structures of the main phenethylamines recorded by the National Early Warning System.**



NAME	RN	Rα	Rβ	R2	R3	R4	R5	R6
Phenethylamine	H	H	H	H	H	H	H	H
Amphetamine	H	CH3	H	H	H	H	H	H
Methamphetamine	CH3	CH3	H	H	H	H	H	H
PMA	H	CH3	H	H	H	CH3	H	H
PMMA	CH3	CH3	H	H	H	CH3	H	H
4-MA	H	CH3	H	H	H	CH3	H	H
4-FA	H	CH3	H	H	H	F	H	H
DOC	H	CH3	H	OCH3	H	Cl	OCH3	H
DB	H	CH3	H	OCH3	H	Br	OCH3	H
DOI	H	CH3	H	OCH3	H	I	OCH3	H
2C-H	H	H	H	OCH3	H	H	OCH3	H
2C-C	H	H	H	OCH3	H	Cl	OCH3	H
2C-B	H	H	H	OCH3	H	Br	OCH3	H
2C-E	H	H	H	OCH3	H	CH2CH3	OCH3	H
25H-NBOMe	BOMe	H	H	OCH3	H	H	OCH3	H
25I-NBOMe	BOMe	H	H	OCH3	H	I	OCH3	H

Note: BOMe=(2-methoxyphenyl)methyl

Phenethylamines are ingested and sniffed. Phenethylamines cause an increase of heart rate, respiration, blood pressure and body temperature; the latter effect may cause convulsions and coma. One of the most dangerous effects with these types of drugs is muscular stiffness. However, the effects vary from substance to substance and as an example, include: for 2C-I, very high blood pressure associated to epileptic seizures, confusion; for 2B-B, cardiovascular disorders, dehydration, confusion; for 2C-T, depression of the central nervous system, panic attacks, vomiting, delirium, loss of memory; for 2C-T-2, panic attacks, paranoia, muscular stiffness, vomiting, anxiety; for 2C-T-7, vomiting, headaches, confusion, delirium, high blood pressure, muscular spasms.

**Use and effects**

Since 2010, 4 cases (between the ages of 16 and 39) of acute intoxication from phenethylamines, were recorded in Italy. Two cases of intoxication were related to taking PMA/PMMA with symptoms such as agitation, confusion, visual hallucinations, profuse sweating, mydriasis, hyperaemia, tachycardia, normothermia. One case of taking 2C-E and one of 2C-B with the occurrence of symptoms such as mydriasis, delirium, psychomotor agitation, tachycardia, comatose state, convulsions. The cases were recorded in Liguria (2 cases), Umbria and Veneto.

**Cases of intoxication recorded in Italy**

## 6.5 Piperazines

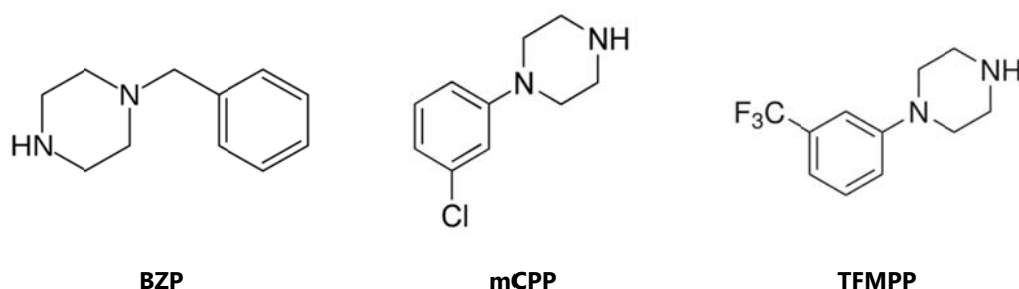
These are a wide class of chemical compounds with piperazine as the main part of the molecule, to which are linked different chemical portions. These molecules had potential pharmaceutical interest but never reached the market. They are known as stimulants and include benzylpiperazine (BZP, is the most well known) and MBZP (1-benzyl-4-methylpiperazine) which are a limited group of benzyl-type derivatives, and TFMPP and mCPP (meta-chlorophenylpiperazine),

**What they are**

Piperazine derivatives are laboratory synthesised molecules and are available as capsules and tablets in various shapes and logos, and more uncommonly as powders. Often, they are sold as substitutes to MDMA (ecstasy).

Since 2009, The National Early Warning System recorded numerous reports of seizures of piperazine in Italy, predominantly mCPP, but also benzylpiperazine and TFMPP.

**Figure 11 – Chemical structures of several piperazines recorded by the National Early Warning System.**



Administration of piperazines appears to be oral, more uncommonly by injection, by sniffing or by inhalation by smoking. Piperazines produce different effects depending on the type, BZP is a stimulant of the Central Nervous System, increases heart rate, blood pressure, and body temperature. It causes poor appetite, sweating, nausea, abdominal pain, migraine, tremors, lack of sleep and energy, confusion, and irritability. BZP, such as TFMPP, is a skin irritant and persons that inhale it in powder form or take the tablets may develop sore throats or irritation of the respiratory tracts. On the other hand, mCPP produces stimulant and hallucinogenic effects similar to those produced by MDMA. In addition, effect such as anxiety, vertigo, tachycardia, confusion, shivering, sensitivity to light and noise, migraines, fear of losing control and panic attacks, are also reported. Physiological and subjective effects reach their peak after 1-2 hours from oral administration. The symptoms produced by piperazine may also last 24 hours. When taken at high or repeated doses, hallucinations, convulsions and respiratory deficiency, may result.

**Use and effects**

Since 2010, in Italy, the National Early Warning System did not receive any reports of intoxication related to taking piperazines.

**Cases of intoxication recorded in Italy**



## 6.6 Date-Rape Drugs

There are also new drugs (which are known for some time in the pharmacological/therapeutic field for the treatment of alcohol addiction) that may be used by criminals to subjugate the will of those consuming them, thus inducing the users into a semi-conscious state for the purpose of deception and rape.

For this reason, they are called "date-rape drugs". These are substances such as GHB (gamma-hydroxybutyric acid), or its precursor GBL, called by various slang terms ("scoop", "cherry" and "liquid ecstasy", even if its chemical structure is very different from that of ecstasy).

**Substances  
used to  
perpetrate  
sexual  
violence or  
deception**

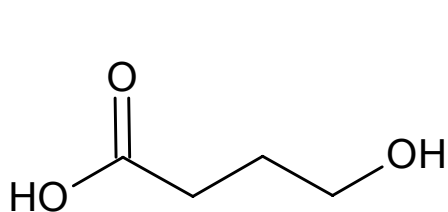
The use of these substances is a health and social problem of increasing interest globally and also in Italy. Currently, the phenomenon is often poorly understood and underestimated, particularly due to lack of structures able to supply specific analytical/toxicological data and due to the victim's poor access to healthcare facilities. Certainly noteworthy is the lack of prevention programmes and information to reduce the risks of sexual aggression, particularly for young women, often inclined to also consume alcohol and drugs of various types.

**Necessity to  
better  
understand  
the  
phenomenon**

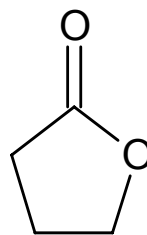
GHB is a molecule which depresses the central nervous system, initially developed as an anaesthetic drug and subsequently used in studies for the treatment of narcolepsy (sleep disturbance). The effect of GHB is dose dependent: at 10 mg/Kg it has a stimulating effect (relaxation, disinhibition), from 20-30 mg/Kg it has a sedative effect (drowsiness, amnesia), from 50-70 mg/Kg it causes respiratory depression and coma (which is increased if used in combination with alcohol). It is noted that in the preparations sold on the illegal market, there are often very different dosages than those stated, thus increasing the risk of overdose. It can be added to drinks without its presence being detected by the user, because it cannot be tasted, it is clear and fragrance-free. GHB has an effective time and duration of its effect varying between 15-30 minutes, up to 1-2 hours, with a half-life (dependency dosage) varying between 20-60 minutes. An important datum to stress is its traceability in blood is of 5-8 hours, and in urine it is 10-12 hours. This fast disappearing effect adds to the diagnostic difficulties because often the victims can reconstruct what occurred only after a few days and thus this time frame does not allow for the correct collection of the biological samples containing the substance.

**GHB**

**Figure 12 – Chemical structures of GHB molecules (Gamma-hydroxybutyric acid) and GBL (Gamma-butyrolactone).**



**GHB (Gamma-hydroxybutyric acid)**



**GBL (Gamma-butyrolactone)**

The main characteristics of date-rape drugs are the following:

- easily available
- clear, fragrance-free and taste-free
- effective at low doses
- ability to quickly dissolve in drinks
- quick absorption after oral administration
- quick onset of sedative effect
- ability to induce disinhibition and relaxation of voluntary muscles
- ability to induce retrograde amnesia in the victim

**Main  
characteristics  
of date-rape  
drugs**

To specifically address this new trend, the Department of Anti-drug Policies, Presidency of the Council of Ministers, has started the VARD Project, in collaboration with the Poison Control Centre of Pavia – National Centre of Toxicological Information, and the toxicology laboratory, Institute of Forensic Medicine, Università Cattolica [Catholic University] of Rome. This project monitors the cases of sexual aggression or other crimes in which the intake or administration of disabling substances such as GHB, is suspected. To this end, 25 emergency and SVS services were involved creating the first network of collaborative centres in Italy to also start to address this problem.

**The VARD  
project and  
the national  
network of  
collaborative  
centres e il**

**Figure 13 – National network of collaborative centres to the VARD project against date-rape drugs.**



The main objectives of the project are to assess the prevalence of use of these substances, to develop and verify sensible and reliable analytical methods, to define procedures and good procedures to be able to draft and distribute the appropriate technical-scientific guidelines.

**Objectives of the project**

During the last 3 years, the Warning System recorded 15 documented cases of GHB/GBL intoxication in Italy, but these are probably only a small part of the actual cases because as previously stated, GHB/GBL is a substance with dosage that is hard to trace due to the fact that it is particularly volatile and quickly metabolised by our bodies. This results in the need for an early and accurate laboratory diagnosis when there is suspicion that these substances may have been used, since these may be untraceable even within a few hours from the event.

**Need for an early laboratory diagnosis**

It should be remembered that often, persons who unwittingly take not only GHB/GBL, but also other date-rape drugs, may have already ingested large amounts of alcohol or other drugs (given the contexts in which these drugs are used), or psychoactive drugs of different varieties and types. Also, the fact that the dose used to obtain the inhibiting effect and to break will and resistance of the subject is very high and extremely dangerous even for the person's life. This concept also applies for the other substances used for similar purposes such as Rohypnol (flunitrazepam) and ketamine.

**Combined use with alcohol and drugs**

## 6.7 Other NPS

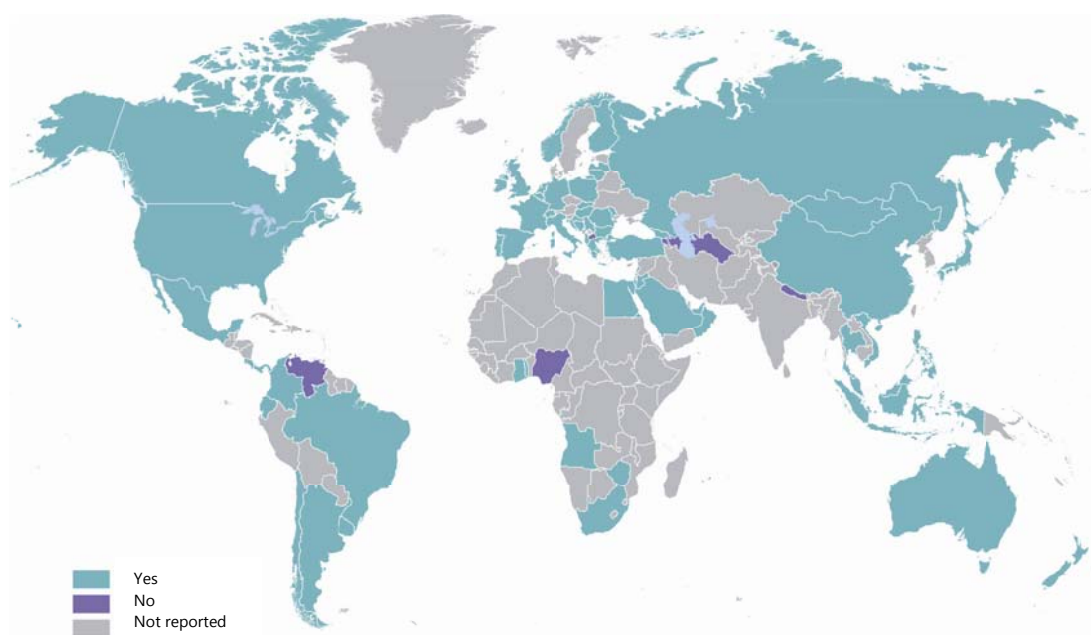
Various other NPS caused severe intoxications detected by the National Early Warning System in Italy within the last two years, among which benzofuranes (3 cases), anticholinergics (15), volatile nitrites, fentanyls and other molecules.

## 6.8 Epidemiological relevance

The phenomenon of diffusion of NPS is not a global emergency in many countries and in all continents, as found by an investigation performed by the UNODC during 2012 and 2013. The figure below shows the presence of NPS detected for various countries around the world

**NPS: global emergency**

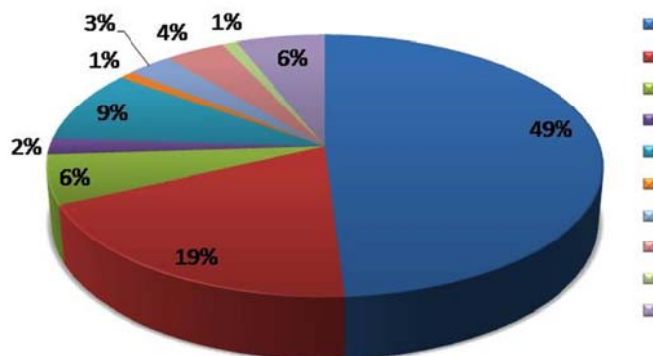
**Figure 14 – Global emergency for new psychoactive substances**



Source: UNODC questionnaire on NPS 2012-13

In addition, different types of substances were identified with synthetic cannabinoids (49%) and phenethylamine (19%) appearing to be predominant. The graph shown below shows the distribution percentage for various groups of substances.

**Figure 15 – Groups of new psychoactive substances**



Source: UNODC questionnaire on NPS 2012-13

In addition, the individual substances show diversified distribution in various



continents as shown in Figure no. 16

**Figure 16 – Global emergency for new psychoactive substance**

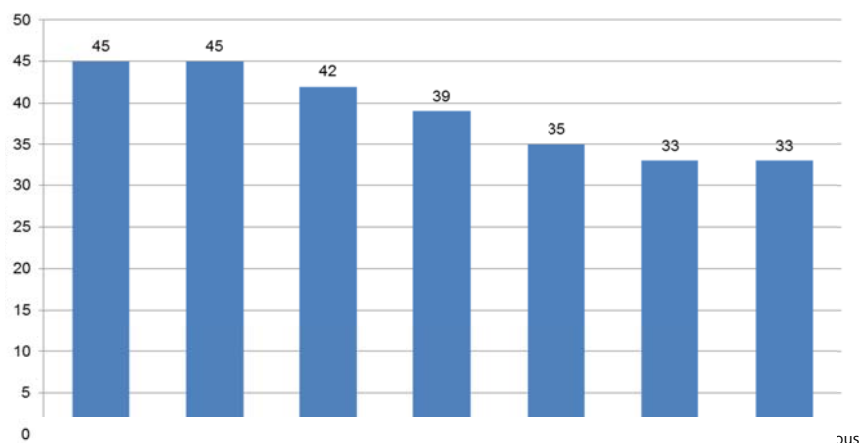


Source: UNODC questionnaire on NPS 2012-13

Seizures of NPS were reported by many countries. Well over 45 countries reported

seizures of synthetic cannabinoids and Ketamine, 42 for vegetable based substances, 39 of piperazine, 35 of synthetic cathinones, 33 of phenethylamine and another 33 various substances.

**Figure 17 – Number of countries that reported seizures of new psychoactive substances**



Sources: UNODC questionnaire on NPS 2012-13

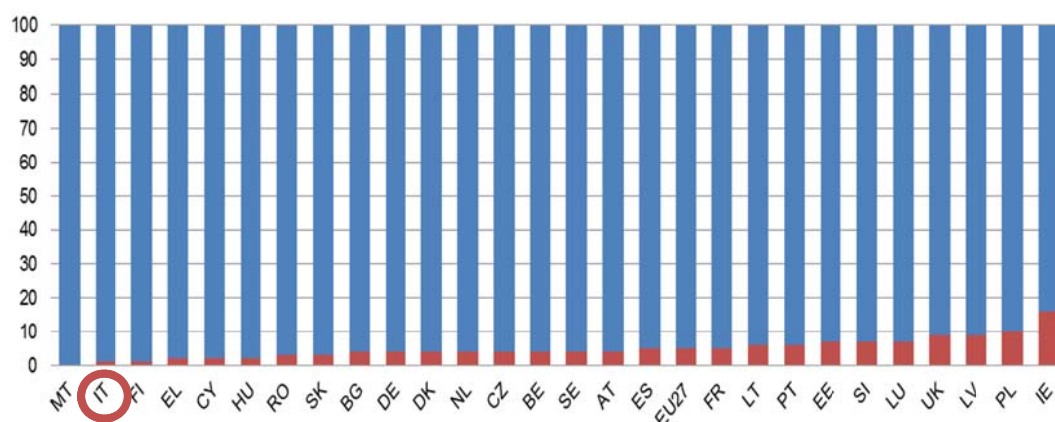
In 2011, the European Commission performed an investigation through the Eurobarometer (no. 330) to examine the attitude of young people towards the use of drugs, for the first time adding questions relative to their experiences and attitudes towards new psychoactive substances or "legal high". In this investigation, the term NPS showed "an ample number of new compounds not yet controlled that mimic the effects of illegal drugs". Thus, 12,000 subjects between 15 and 24 years of age, were interviewed by phone. 5% of the responders stated that they had used new psychoactive substances at least once in their lives. Specifically, Ireland (16%), Poland (9%), Latvia (8.8%) and the United Kingdom (8%) were the countries with the highest use. On the other hand, in Italy, prevalence was 0.8%, the second lowest absolute result. This low prevalence is striking compared to other European countries, probably due to the preventive action and clampdown on supply implemented up to now in our country through the warning system and the effort of law enforcement.

**Prevalence  
NPS use in  
Europe, 2011**

**Figure 18 - Experience reported relative to the use of New Psychoactive Substances in Europe - population 15-24 years of age.**

Source: Flash Euro-barometer on "Youth attitudes on drugs 2011" N. 330.

end



ne 2013 EU-  
Bulgaria and

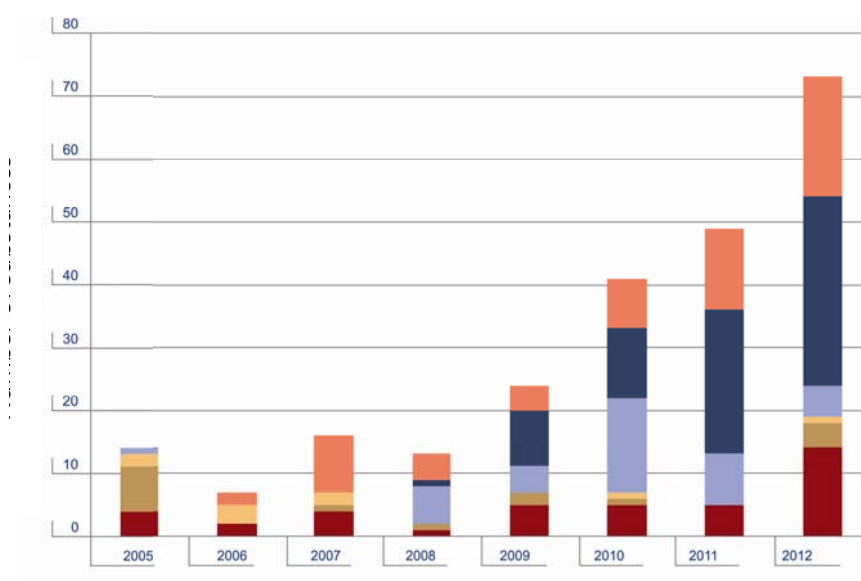
Relative to the supply of NPS, 54% of respondents stated to have received the substance from friends, 37% to have received it during a party, 33% to have purchased it in a specialised shop and 7% to have purchased it on the Internet. The youths that stated to have used NPS also proved to be less able to recognise the seriousness of risks associated to the use of drugs, whether new or traditional.

**Supply**

The Figure below shows the changes in distribution of the number of NPS reported to the European Monitoring Centre from 2005 to 2012, by which it is possible to see a constant increase in NPS, particularly for cathinones and synthetic cannabinoids.

**Increase of  
NPS  
in EU**

**Figure 19 – Number of new psychoactive substances reported to the European Warning System pursuant to Council decision 2005/387/JHA (EMCDDA, 2013).**



of Anti-drug Policies through a national GPS-DPA 2012 investigation that involved a sample of approximately 19,000 residents between the ages of 18-64. In this study, in addition to the traditional drugs, the use of several new drugs by the population was investigated, relative to use at least once in their lives (LTP), during the last year (LYP) and during the thirty days preceding the investigation (LMP). Specifically, the following substances were investigated: Smart Drugs, (all those compounds both of natural and synthetic origin that may contain active ingredients with assumed or verified psychoactive properties), Salvia Divinorum (a psychoactive plant that may have disassociation effects, visions and hallucinations), Hawaiian LSA-seeds (a psychedelic hallucinogenic strongly associated to LSD) and Kobret (a form of heroin).

**National GPS-DPA investigation**

The start and use of these new substances appears to more greatly pertain to the youngest age groups, particularly adolescents. The results of the study on the general population confirm this hypothesis, from which it can be seen that the use profile is very limited for all the new substances investigated: Smart Drugs, (0,27% LTP, 0,02% LYP, 0,0% LMP), Salvia Divinorum (0,37% LTP, 0,02% LYP, 0,01% LMP), and Kobret (0,06% LTP, 0,01% LYP, 0,005% LMP).

**Prevalence of greater use among adolescents**

At the same time as the general population epidemiological study, the analysis of wastewater performed between the three years of 2010-2012, showed concentrations of ketamine in 2012 equivalent to those found in 2011 (3.22 grams/day in 2012 vs 3.24 grams/day in 2011), after a general increase in use was recorded in 2011 compared to the previous year (3.24 grams/day in 2011 vs 1.96 grams/day in 2010).

**Analysis of wastewater**

Territory distribution of Ketamine residues in wastewater, shows almost no use in Southern/island Italy, unlike the higher concentrations recorded in other geographical areas, increasing in Northern Italy from 2010 to 2012: for the North-Western area from 0.7 g/day in 2010 to 4 g/day in 2012, while in North-Eastern Italy, from 0.6 g/day to 2.6 g/day in 2012.

**Greater use in Northern Italy**

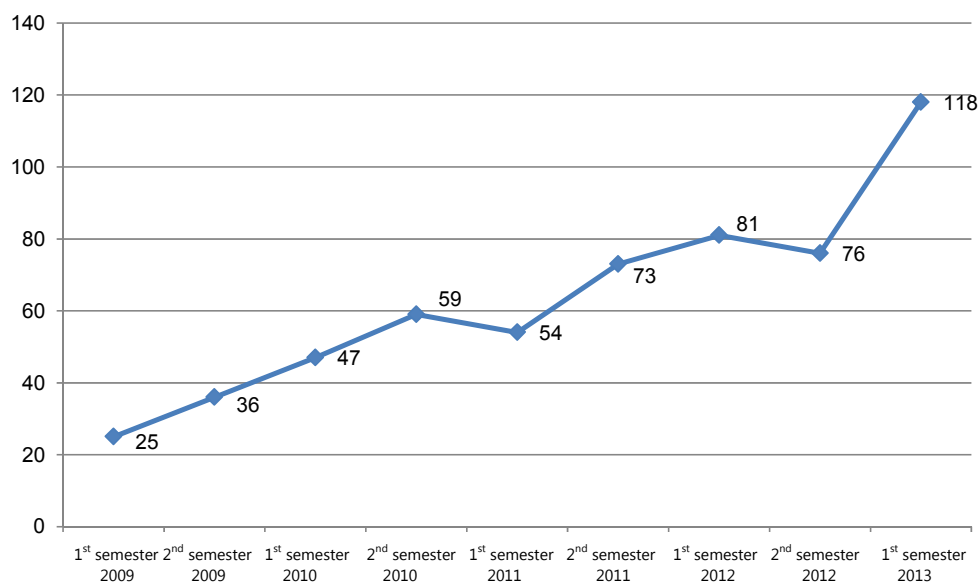
Unlike the investigation on the general population, the SPS-DPA investigation, performed in 2012 and 2013 on a sample of over 36,000 students between the ages of 15-19 years of age found a strong increase in the two-year period considered of ketamine use, hallucinogenic mushrooms and other hallucinogens (1.3% LYP in 2012 compared to 1.7% LYP in 2013), while for the other substances investigated, Salvia Divinorum, Smart Drugs and anabolic steroids, use was basically unchanged. Focusing attention on the SPS-DPA study of 2013 for total hallucinogens, the predominant use was found equal to be equal to 1.7%, with greater use of hallucinogenic mushrooms (1.08%) compared to ketamine and other hallucinogens (0.77% and 0.33% respectively).

**SPS-DPA Investigations: in 2012 and 2013 increase in use of ketamine and hallucinogens; stable findings for smart drugs**

## 7. Reports and warnings

In 2012, the National Early Warning System recorded 157 reports and 118 only in the first semester of 2013, many of which pertaining to new psychoactive substances. In general, an increase of 23.6% of reports received was found compared to 2011, and of 48.1% compared to 2010. In addition, following the reports received, in 2012, the Warning System also sent 34 notices to collaborative centres that are part of the output network of the System: 19 Information notices were forwarded and 15 Warnings, 10 of which at the highest degree (level 3), or explicit conditions of severe risk of serious damage to public health.

**Figure 20 – Number of reports received by the National Early Warning System since 2009 to the 1<sup>st</sup> semester of 2013.**



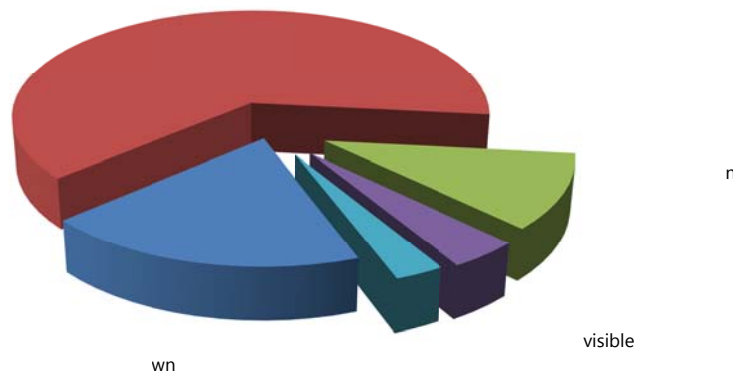


## 7.1 Web monitoring

Through web monitoring for the purpose of prevention of the supply of drugs online, since 2011, 54 websites were detected in Italian with a server located within the national boundaries, and 491 pages were reported to Law Enforcement. The reports to the Carabinieri N.A.S. of sites that sell controlled substances, resulted in 63.3% cases of removal of the advertisement, 18.9% of cases of redacting of the webpage and 10.8% of shutting down the site. Of these, 2.9% of reports did not have an effect and the drugs marketed are still visible online.

**Web  
monitoring  
for the  
prevention  
of the supply  
of drugs**

**Figure 21 – Result of reports of sites that market illegal drugs on the web.**



**Figure 22 – Screenshot of an advertisement on the site <http://bologna.anunico.it>**

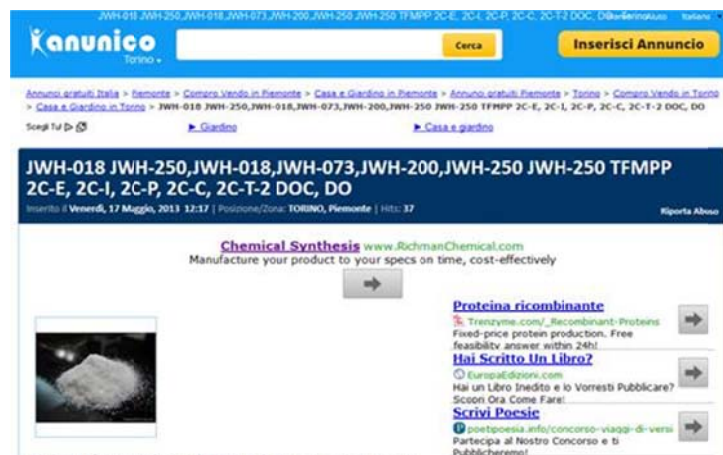


Figure 23 - Specifics of substances sold online (synthetic cathinones, synthetic cannabinoids).

**JWH-018 JWH-250, JWH-018, JWH-073, JWH-200, JWH-250 JWH-250 TFMPP  
2C-E, 2C-I, 2C-P, 2C-C, 2C-T-2 DOC, DO**

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 Methedrone (BK-PMMA)  
 Bulytone (bk-MBDB)  
 Flaphedrone  
 Butylone (bk-MBDB)  
 MDAI  
 MDPV  
 4-Fluoromethamphetamine  
 chimica analgesico CB1 e CB2  
 Katamina hcl polveri di cristallo  
 Effedrina HCl Polvere  
 Bulytone (bk-MBDB)  
 MDPV  
 JWH-018 JWH-250, JWH-018, JWH-073, JWH-200, JWH-250  
 JWH-250  
 TFMPP  
 2C-E, 2C-I, 2C-P, 2C-C, 2C-T-2  
 DOC, DOI  
 Bromo Dragonfly  
 TCB-2  
 5-Meo-OMT  
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 4-Meo-PCP  
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Figure 24 – Screenshot of the site <http://agazzano.blidoo.it>

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**mdpv, ketamina, methylone, 2ci, 4mmc a vendo**

Pubblicato il 04 aprile 2013 da Agazzano, Emilia-Romagna, Italia

portiamo a voi prodotti chimici di ricerca della purezza superiore (99,98%). Abbiamo atos siano portatori di alimentazione di piante e fertilizzanti e meds altri, di seguito è la nostra lista di prodotti e speriamo che si ottiene quello che hai bisogno di partire da qui.

Mephedrone  
 Buytone (bk-MBDB)  
 MDAI  
 Chimica analgesico CB1 e CB2  
 Effedrina HCl Polvere

**Figure 25 – Specifics of the substances sold (synthetic cathinones, synthetic cannabinoids, products to be smoked, heroin, cocaine).**

**mdpv,ketamina,methylone,2ci,4mmc a vendo**

Publicato il 04 aprile 2015 da Agazzano, Emilia-Romagna, Italia.

portiamo a voi prodotti chimici di ricerca della purezza superiore (99,98%). Abbiamo alios siano portatori di alimentatori di piante e fertilizzanti e meds altri, di seguito è la nostra lista di prodotti e speriamo che si ottiene quello che hai bisogno di partire da qui.

Mephedrone  
Bulytone (bk-MBDB)  
MDAI  
Chimica analgesico CB1 e CB2  
Efedrina Hd Polvere  
JWH-018 / JWH-200, JWH-250  
TFMPP  
2C-E, 2C-I, 2C-P, 2C-C, 2C-T-2  
DOC, DOI  
Bromo DragonFly  
25i-Nbome  
TCB-2  
5-Meo-DMT  
4-Aoo-DMT  
4-Ho-MIPT  
4-Meo-PCP  
Naphyrone  
Erolina  
Methylone (bk-MDMA)  
BENZO FURY.  
fumare  
Grande Oro.  
Flephedrone (4-FMC, 4-Fluoromethcathinone)  
Methedrone (BK-PMMA, Methoxyphedrine)  
4-Fluoromethamphetamine (4-FMA)  
a-Pyrrolidinopropiophenone (a-PPP)  
MDPV (Methylenedioxypropylvalerone, MDPK)  
Testosterone  
JWH-073, 1-butyl-3-(1-naftoile) indolo  
hydrocodone  
Oxycodone  
Dimethocaine (Larocaine / DMC)  
morfina  
JWH-018, 1-pentil-3-(1-naftoile) indolo  
Herione  
4-Fluoroamphetamine (4-FA, 4-FMP, o Flux)  
ketamina

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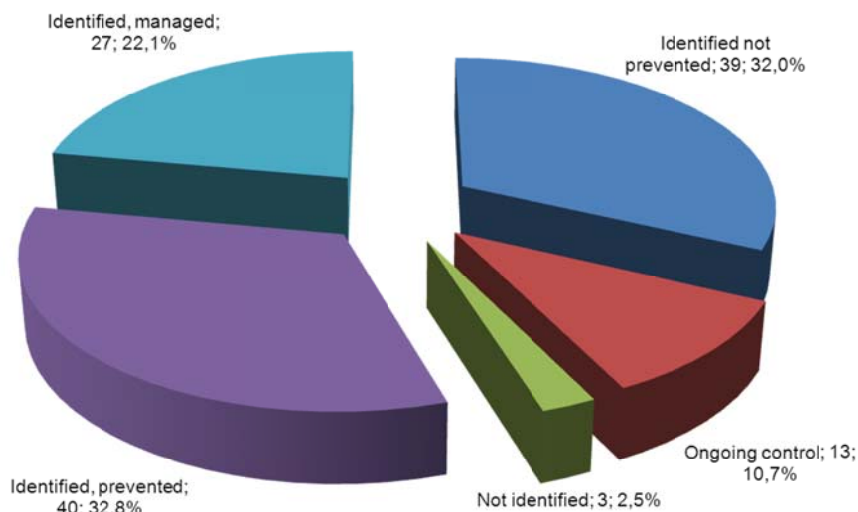
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The web-monitoring activity performed from October 2010 to August 2013 led to the detection of 116 illegal musical events promoted online. Of these, 122 events were reported to Law Enforcement: 40 of these (32.8%) were prevented, thus stopped before they were implemented; 27 were managed with the onsite intervention of Law Enforcement (22.1%); 39 (32.0%) were performed despite having been reported, and 13 were awaiting formal verification by Law Enforcement.

#### Monitoring of illegal rave parties

**Figure 26 – Rave parties identified through web-monitoring and reported to DCSA, Prefecture, Police Headquarters, Town Hall and Prosecutor's Office of the location where they would take place.**



## 8. Updating of legislation

In Italy, drugs or psychotropic substances subject to supervision and control of the Ministry of Health are grouped, in compliance to the criteria pursuant to Article 14 of Presidential Decree 309/90, into two tables, annexed to the single text. The Ministry of Health by his decree has established the completion and updating of the tables by the modalities pursuant to Article 2, Paragraph 1, Letter e), Number 2). The tables according to Paragraph 1 must contain the list of all substances and preparation indicated in the conventions and international agreements and are updated promptly also based on the provisions of the conventions and the same agreements or on new scientific findings.

**Adding of  
substances  
to the table**

Following the reports received, within the operating procedure for the activation of safety measures aimed to safeguard health relative to new psychoactive substances identified through the National Early Alert System agreed to between the Department of Anti-Drug Policies and the Ministry of Health, since 2010, various decrees were issued for the updating of Table I of Presidential Decree 309/90 as amended and supplemented.

**Updating of  
Table I  
DPR 309/90**

Thus, below a list of NPS is shown which are included in Table I annexed to the Single Text since June 2010 to date and the reference to the relative decrees.

Common name	Chemical name	Other name	Ministerial decree
JWH-018,	(naphthalene-1-yl)(1-pentyl-1H-indole-3-yl) methanone		Ministerial Decree of 16 June 2010 (Gazzetta Ufficiale [Official Journal] General Series no. 146 of 25 June 2010)
JWH-073,	(naphthalene-1-yl)(1-butyl-1H-indole-3-yl) methanone		Ministerial Decree of 16 June 2010 (Gazzetta Ufficiale [Official Journal] General Series no. 146 of 25 June 2010)
Mephedrone,	4-Methylmethcathinone		Ministerial Decree of 16 June 2010 (Gazzetta Ufficiale [Official Journal] General Series no. 146 of 25 June 2010)



Common name	Chemical name	Other name	Ministerial decree
3,4Methylenedioxy-pyrovalerone	(RS)-1-(benzo[d][1,3]dioxo-5-yl)-2-(pyrrolidinyl-1-il)pentan-1-one	MDPV	Ministerial Decree of 11 May 2011 (Gazzetta Ufficiale[Official Journal] General Series no. 112 of 16 May 2011)
JWH-250 common name	1-pentyl-3-(2-methoxyphenylacetyl)indole,	[2-(2-methoxyphenyl)-1-(1-pentylindole-3-yl)ethanone]	Ministerial Decree of 11 May 2011 (Gazzetta Ufficiale[Official Journal] General Series no. 112 of 16 May 2011)
JWH-122	[1-pentyl-3-(4-methyl-1-naphtoyl)indole]	4-methylnaphtalene-1-il-(1-pentylindole-3-yl)methanone	Ministerial Decree of 11 May 2011 (Gazzetta Ufficiale[Official Journal] General Series no. 112 of 16 May 2011)
Structure analogues deriving from 3-phenylacetylindole			Ministerial Decree of 11 May 2011 (Gazzetta Ufficiale[Official Journal] General Series no. 112 of 16 May 2011)
Structure analogues deriving from 3-(1-naphtoyl)indole			Ministerial Decree of 11 May 2011 (Gazzetta Ufficiale[Official Journal] General Series no. 112 of 16 May 2011)
Butylone	1-(1,3-benzodioxol-5-yl)-2-(methylamine)butan-1-one	Bk-MBDB	Ministerial Decree of 29 December 2011 (Gazzetta Ufficiale[Official Journal] General Series no. 3 of 4 January 2012)

Common name	Chemical name	Other name	Ministerial decree
AM-694	1-[(5-fluoropentyl)-1H-indole-3-yl]-(2-iodophenyl)methane	1-(5-fluoropentyl)-3-(2-iodobenzoyl)indole	Ministerial Decree of 29 December 2011 (Gazzetta Ufficiale[Official Journal] General Series no. 3 of 4 January 2012)
Structure analogues deriving from 2-amino-1-phenyl-1-propanone, for one or more substitutions on the aromatic ring and/or nitrogen and/or on terminal carbon *			Ministerial Decree of 29 December 2011 as amended by  Ministerial Decree of 11 June 2012 (Gazzetta Ufficiale[Official Journal] General Series no. 142 of 20 June 2012)
Structure analogues deriving from 3-benzoylindole			Ministerial Decree of 29 December 2011 as amended by Ministerial Decree of 11 June 2012 (Gazzetta Ufficiale[Official Journal] General Series no. 142 of 20 June 2012)
6-Monoacetylmorphine	3-hydroxy-6-acetyl-7,8-didehydro-4,5-epoxy-N-methylmorphinan	6-MAM	Ministerial Decree of 11 June 2012 (Gazzetta Ufficiale[Official Journal] General Series no. 142 of 20 June 2012)
3-Monoacetylmorphine	3-acetyl-6-hydroxy-7,8-didehydro-4,5-epoxy-N-methylmorphinan	3-MAM	Ministerial Decree of 11 June 2012 (Gazzetta Ufficiale[Official Journal] General Series no. 142 of 20 June 2012)

Common name	Chemical name	Other name	Ministerial decree
Methoxyethylamine,	2-(ethylamine)-2-(3-methoxyphenyl)cyclohexanone,	MXE, MKET	Ministerial Decree of 24 October 2012 (Gazzetta Ufficiale[Official Journal] General Series no. 264 of 12 November 2012 )
4-Methylamphetamine	1-(4-methylphenyl)propan-2-amine	(4-MA)	Ministerial Decree of 24 October 2012 (Gazzetta Ufficiale[Official Journal] General Series no. 264 of 12 November 2012 )
CP 47,497	(2-[(1R,3S)-3-hydroxycyclohexyl]-5-(2-methyloctane-2-yl)phenol		Ministerial Decree of 24 October 2012 (Gazzetta Ufficiale[Official Journal] General Series no. 264 of 12 November 2012 )
CP 47.497-homologue C8	(2-[(1R,3S)-3-hydroxycyclohexyl]-5-(2-methylnonan-2-yl)phenol	Cannabicyclohexanol	Ministerial Decree of 24 October 2012 (Gazzetta Ufficiale[Official Journal] General Series no. 264 of 12 November 2012 )
4-Fluoroamphetamine	(RS)-1-(4-fluorophenyl)propan-2-amine)	(4-FA)	DM 24 October 2012 (GU n. 264 del 12 November 2012 )
MDAI	5,6-Methylenedioxy-2-aminoindane		Ministerial Decree of 24 October 2012 (Gazzetta Ufficiale[Official Journal] General Series no. 264 of 12 November 2012 )
5-(2-aminopropyl)indole,	(1H-indole-5-yl)propan-2-amine),	5-IT or 5-API	Ministerial Decree of 10 December 2012 (Gazzetta Ufficiale [Official Journal] General Series no. 303 of 31 December 2012)

Common name	Chemical name	Other name	Ministerial decree
6-APB	6-(2-aminopropyl) benzofuran		Ministerial Decree of 25 June 2013 (Gazzetta Ufficiale[Official Journal] General Series no. 158 of 8 July 2013)
5-APB	5-(2-aminopropyl) benzofuran		Ministerial Decree of 25 June 2013 (Gazzetta Ufficiale[Official Journal] General Series no. 158 of 8 July 2013)
6-APDB	6-(2-aminopropyl)-2,3-dihydrobenzofuran		Ministerial Decree of 25 June 2013 (Gazzetta Ufficiale[Official Journal] General Series no. 158 of 8 July 2013)
5-APDB	5-(2-aminopropyl)-2,3-dihydrobenzofuran		Ministerial Decree of 25 June 2013 (Gazzetta Ufficiale[Official Journal] General Series no. 158 of 8 July 2013)

\*with the specific exclusion of Bupropione and Pyrovalerone

Lastly, noteworthy, is the addition once again in Table I of the following substances; these were eliminated from Table II section B pursuant to Art. 14 of Presidential Decree 309/90, thus, they must no longer be used in therapy.

Common name	Chemical name	Other name	Ministerial decree
Amphepramone	2-(diethylamine)propiofenone	Diethylpropione	Ministerial Decree of 02 August 2011 (Gazzetta Ufficiale[Official Journal] General Series no. 180 of 04 August 2011)
Phendimetrazine	(+) – (2S,3S)-3,4-dimethyl-2-phenylmorpholine		Ministerial Decree of 02 August 2011 (Gazzetta Ufficiale[Official Journal] General Series no. 180 of 04 August 2011)
Phentermine	Alpha,alpha-dimethylphenethylamine		Ministerial Decree of 02 August 2011 (Gazzetta Ufficiale[Official Journal] General Series no. 180 of 04 August 2011)
Mazindol	5-(para-chlorophenyl)-2,5-dihydro-3H-imidazo[2,1-a]isoindole-5-olo		Ministerial Decree of 02 August 2011 (Gazzetta Ufficiale[Official Journal] General Series no. 180 of 04 August 2011)

Lastly, it should be noted that in Italy there are different modalities of control relative to the various conditions of production and use that are summarised below by the appropriate competency.

Condition	Modalities of control
Detection of drugs	Tables of drugs and psychotropic substances
Manufacturing, employment, and marketing	Advance authorisation
Import/export	International permits and monitoring and reporting to the UN
Movement on the national territory	Vouchers
Retention and medical or scientific use	Inflow – outflow register
Retention for use	Medical Prescription
Destruction	Authorisation and assistance of Law Enforcement



## 9. The scenario

The current scenario, extremely varied and quickly changing, shown a series of poignant characteristics that are summarised in the 10 points shown below:

### 1. The new supply

For several years, we have witnessed an increasing supply of new psychoactive substances (NPS), of various types and kinds, within a new, ever expanding market, mainly based on the Internet, the smart shops (even if this area greatly decreased after the addition in Tables of Presidential Decree 309/90 of many new substances in sexy shops) and by direct purchase of the active ingredients by small dealers that make "domestic" and often hand-made preparations of the end-product molecules, with all the risks that may derive to user's health, both due to unstable products and to the dosage and calibrating of the quantity of active ingredient. In addition, international organisations have reported the role of "sexy shops" as the new distributors of NPS, particularly for substances such as GHB/GBL.

**Internet,  
smart shops  
and sexy  
shops**

### 2. Characteristics of NPS that are not well known

NPS are still not very well known from a pharmacological and toxicological point of view relative to their kinetics and dynamics. There is also little knowledge relative to therapeutic remedies that can be implemented for acute and chronic intoxications. In fact, the laboratory and clinical centres are not equipped with the technical-scientific information necessary, both to identify NPS and to better address the various and uncommon clinical symptoms and the toxic effect related to their use. These considerations pertain to the NPS in circulation, and also the expanding market and the speed by which more new molecules are made available, aggravate problems and concerns.

**Lack of  
toxicological  
information**

### 3. Toxic Mixtures

From the samples that it was possible to analyse, it was often seen that the products available on the market contain mixtures of molecules that are not disclosed on package labels, thus deceiving the user relative to the real content of the product and inducing him to consume unknown substances. Moreover, the amounts of NPS within products sold were found to extremely vary, thus creating further danger for users who are unaware of the quality and quantity of what they are taking. In addition, it should be noted that often, NPS are used in combination with high doses of alcohol or other drugs such as cocaine, heroin, and cannabis: this combination may have a synergistic action, thus increasing the toxic effects.

**Various  
unstable  
combinations**

#### 4. Acute intoxications in emergency services - emergency room

NPS have caused numerous acute and even serious intoxications, in Italy as in other countries, with the need of intervention by emergency units and hospitalisation. Correlated deaths were also recorded. The trends of distribution and consumption of these molecules appears to be increasing in all European, North-American and Central-Asian countries. In Italy as well, the data on intoxications and seizures available to date appear to indicate a substantial increase in the use of NPS. Due to this information deficiency, the data on NPS-related mortality is not yet known and European studies which our country is participating in to define this problem, are in progress.

**Dangerous  
acute toxicity**

#### 5. Difficult identification of NPS

In laboratory settings, there is a widespread difficulty in identifying NPS, both due to the lack of analytical reference standards (non-existent or not easily found), both due to the lack of literature and reference methods, and due to the limited distribution of technologies available to date and suitable for this purpose. Identification appears to be even more difficult in the diagnostic area because to date, no screening tests (first level) exist that are easily usable (such as for cannabis, heroin, cocaine and methamphetamine) and able to quickly find the presence of these substances (i.e., road checks, testing on persons with at risk work tasks, testing in emergency room laboratories of the National Health System, etc.).

**Unknown  
chemical  
structures  
and  
metabolites**

#### 6. The NPS user profile

The NPS users are extremely diversified: often they use these substances precisely to yield negative results for toxicological testing due to the difficulty involved in identifying these substances. The age range identified to date on cases of acute intoxication arriving to the emergency room is between 15 and 55 years of age; most intoxicated users appear to be unaware of both the compounds and the real molecules contained in the products used, and of the adverse effects that these may generate. Most of the users are male, are in Northern Italy and are also, usually, frequent Internet users. At this point, the prevalence of NPS use is also unknown from studies on subjects monitored in addiction services. The joint use of alcohol and also of other traditional drugs is very widespread. It should be noted that several NPS users reported to have used these substances because they are not easily detected with the normal tests, since they previously had been subject to sanctions (i.e., confiscation of driver's license) due to the discovery of other drugs in their biological fluids during health testing for driving.

**User's wide  
age range**

## 7. Varied clinical symptoms and mid-long term health consequences

Clinical symptoms due to acute intoxication are difficult to interpret because often they do not involve one specific toxicological syndrome. This also makes the work of physicians difficult who must verify the use of drugs, including NPS, not only in emergency services and in the emergency room, but also in workers with at risk tasks. The main symptoms recorded were: conjunctivitis, increased heart rate, xerostomia, and altered perception and mood for synthetic cannabinoids, anxiety, reduced concentration capacity, headache, tachycardia, hypertension, mydriasis, hallucinations, severe psychomotor agitation and aggression for synthetic cathinones, euphoria, distortion of the sense of reality, visual hallucinations, paranoia, anxiety, aphasia, severe psychomotor agitation for methoxyethylamine, etc. The consequences of NPS use on different organs and systems, starting with the central nervous and cardiovascular systems, are still more or less completely unknown. Initial evidence of psychotic effects even for short-term use of cannabinoids and cathinones, for example, lead us to hypothesise a possible relevant role in subverting the neuroreceptor physiology caused by these new molecules that often show, both experimentally and clinically, a toxicological "potency" greater than the molecules that have been abused for a longer time and are better known. In addition, studies are not yet available that define appropriate intervention procedures that assess the efficacy of various treatments on the neuro-behavioural effects, also because at this time, pharmacological therapies are not yet known that are able to combat the complex pathological effects deriving from changes to multiple receptor systems altered at the same time by these substances.

**Clinical  
consequences**

## 8. Prevention

There is certainly a lack of information for users but also for operators relative to the specific prevention of the use of NPS. The information campaigns and educational interventions on these "chemical novelties", however, must take into account the risk that providing information on these, particularly to young "novelty seekers", may in fact have the effect of promoting these substances, stimulating the curiosity of the potential users, giving media relevance to this phenomenon. However, the huge amount of bad information and sponsored advertising that youths may find on the internet should also be considered, thus there is a need to have the right "counter-information" also on the internet, in addition to having it in schools and within families.

**Huge need**

## 9. Variability of the supply and actions of Law Enforcement: The marketing of NPS by Internet and characteristics of the new online criminal network

The NPS supply on the market are many and are quickly changing both based on user's demand, and based on the control and enforcement and also regulatory activity operating in various countries. The early addition of drugs into the tables, thus appears fundamental to also allow enforcement action by Law Enforcement which otherwise, could not seize the toxic compounds and perform a careful and effective preventive action on the territory and on the Internet. In addition, it should be noted that the organisations that market NPS have different characteristics than the traditional organisations because they organise their markets on the Internet (Internet based criminal organisations), using order systems, payment and shipping or merchandise systems that are completely legal and common (Internet sites, credit cards, mail couriers). These new criminal organisations also escape the control of the classic mafia organisations which manage the trafficking and dealing of other drugs.

**Internet: the preferred method of new dealers**

The quantity of information available and the ease of purchasing illegal substances online by users of any age is also linked to the wide range and distribution of the Internet. We can consider that in Italy, Internet users are 58.4% of the population, while at the European level, Internet penetration is more than double of the global average (EMCDDA-EUROPOL, 2013). This technology has also allowed criminal elements involved in drug trafficking to act without geographical limits, creating a market for the sale of new psychoactive substances, both legal and illegal. The new role played by the Internet raises substantial worries, precisely due to the information and distribution ability of the Internet. According to the EMCDDA, the online sites that sell drugs online identified in January 2010 were 170, in January 2011 they were 314, in January 2012 they increased to 693, increasing their number fourfold during the course of only 2 years (EMCDDA-EUROPOL, 2012). The main countries where there is a greater concentration of these online sites are the United States (31,2%) and the United Kingdom (19,1%).

**Internet: technology for everybody**

The availability of drugs on the Internet is a serious problem from a public health point of view because drugs that are so readily available expose users to a high risk of acute intoxications. In addition, in case of intoxication, the lack of precise information relative to the active ingredients contained in products purchased online, makes it difficult for healthcare professionals to formulate a precise diagnosis and, thus, provide to the immediate treatment of the patient.

**Substances online: a public health problem**

Adding to this, is also the problem of control and enforcement against the production, trafficking and dealing of NPS. In fact, the Internet is an extremely changing environment, without boundaries, freely accessed, so that it is difficult to perform systematic controls and investigative actions even by Law Enforcement. This problem was also addressed at the international level where the International Narcotics Control Board (INCB) encouraged a coordinated global action to combat the phenomenon of the online sale of substances.

**Difficult control of the internet**

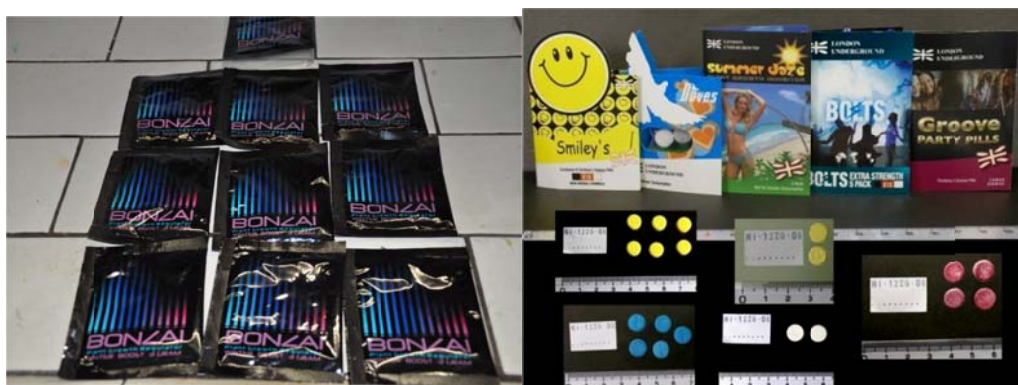
The traffic and dealing of NPS predominantly occurs on the Internet (in addition to smart shops and sexy shops) according to a production chain which includes specific elements, such as:

- |  |                         |
|--|-------------------------|
| a. "Production of molecules": le NPS may be produced by chemical industries that are completely legal or by clandestine laboratories that regularly supply these substances to anyone requesting these substances. The producers that manage these spaces are often located in different countries than those where, on the other hand, those subsequently selling the NPS through the web are located.  | <b>Production</b>       |
| b. "Packaging": once produced, to be marketed the NPS must be packaged. Organisations or private individuals oversee this, which usually add the new molecules, or multiple molecules, to vegetable type products, powders or tablets, however, without any type of precision for the quantities added, without following standard product work procedures. After being produced in this manner, the product is then placed inside little bags more or less colourful or small boxes. Sometimes, labels are affixed to the packaged products, showing the chemical structure of the substance contained. However, this is rarely done, leaving the product without a description of its composition, or the label showing contents that do not correlate to what is actually inside the product. | <b>Packaging</b>        |
| c. "Distribution": products made in this manner are marketed by organisations or private individuals and are distributed to resellers. These can then proceed to sell the products on the web, in smart shops, or in other specialised commercial businesses. Distribution may occur within the span of a few days.  | <b>Distribution</b>     |
| d. "Seller": is the party who directly sells NPS. Very often, on the internet, this party is also the distributor, while in smart shops these are two different parties.   | <b>Seller</b>           |
| e. "Credit collector": is the legal operator which manages the payments from the customers regularly depositing the revenue to the seller through the normal and legal electronic banking channels that involve the use of regular credit cards (often anonymous) for payments.  | <b>Credit collector</b> |
| f. "Postal courier": is the independent organisation that delivers a mailed package containing the NPS. This organisation is generally unaware of the transported content. This is also supported by the fact that the packages made by the seller appear to be anonymous relative to the source and do not show any reference to their origin. Usually, common delivery couriers are used, such as FedEx, SDA, TNT, etc.  | <b>Postal courier</b>   |

At a global level, organisations that offer NPS use different sites called “window” sites. These sites are found online and advertise NPS with clever commercial names, also with multicoloured packages that are particularly attractive. An additional supply channel is offered by sites that sell NPS as products for research, also to avoid controls in countries where the substances sold are controlled. In this case, the molecules are sold directly under their names, which for some highly specialised users, may raise interest. Lastly, NPS are also sold through sites also through commercial advertising, where it is possible to post messages to sell or purchase products that are generally innocuous (automobiles, shoes, gardening tools, musical instruments, etc.). In this case, NPS sell offers in sections of the site usually aimed at sales of generic products and thus hidden among the various ads.

**“Window” sites, produced to search for inexpensive advertising**

**Figure 27 - Image of several products also sold on the Internet.**



All of these sites, in all their diversified types, are created and managed by a multitude of “agents”, very often individual persons or new organisations that are not part of the traditional criminal organisations aimed at trafficking and dealing of drugs that are already well known. It should be noted, that there is also a high turnover for these sites which once identified and placed under control or shut down by the Federal Bureau of Investigation, are reopened after a few days, appearing different, on other servers.

**New criminal organisations**

This appears to be the birth and development of a new form of traffickers and dealers that may easily and quickly organise new markets, using the Internet as a commercial vehicle. These markets proliferate uncontrolled and are uncontrollable even by the traditional criminal organisation aimed at trafficking and dealing drugs.

This form of online market, which proceeds make home deliveries by mail courier and has been experimented with success for the marketing of NPS, is also taking hold for traditional substances such as cannabis, cocaine, and amphetamine. In fact, several sites which offer NPS, also offer any type of drug or counterfeit pharmaceutical drug at the same time.

**Internet also for the sale of traditional drugs**



Another important aspect to consider in the near future, is the alarming convergence and concentration on several internet sites of various supply of not only new psychoactive drugs, but also traditional drugs, pharmaceuticals or various types and kind (anti-depressants, sedatives, appetite suppressants, sexual performance enhancers, anabolic drugs, pain relievers and other generic drugs), but also of cannabis seeds and various other plants.

This is a dangerous trend, which due to the Internet and E-commerce can be easily started, and may lead to a concentration of multiple-offers that create a particular problem because they tend to encourage multi-use of various substances for various problems and purposes. This marketing technique, already applied with success in the legal market for various commercial products, concentrates into a single supply point not only the main products (primary offer), but also a series of other related offers (secondary offer) of other products that may be of interest to the user.

The risk is that persons that have a vulnerability to addiction and at risk health behaviours, may in this manner have access to a series of multiple and varied dangerous offers, thus increasing their health risk even more. This trend will further complicate the scenario in the near future and a complex strategy is needed immediately.

The subsequent figure summarises the concepts illustrated herein

**Figure 28 – Development of E-commerce and convergence of the various offers and of the illegal Internet markets (co-marketing).**





# Traditional Narcotics

methamphetamine drugs for sale

## Methamphetamine

1. our products are  
we sell research chemicals  
relationship between



Price: US\$150 /gram  
Min Order: 30

Tag: cocaine lsd ecstasy

Contact

View Website

conceal a long and trusted business  
why? The chemical n-methyl-1-phenyl-

Inquiry Now

Supplier - anshikastepanov  
(Manufacturer)  
Ukraine  
Credibility: ★★

Inquiry Now

Supplier - Aptekapharmacy  
(Manufacturer)  
Ukraine  
Credibility: ★★

Inquiry Now

Supplier - Abi Chemical Inc  
(Manufacturer)  
United States  
Credibility: ★★

Inquiry Now

## Methamphetamine

1. Purity: 100%
  2. Other Names: Methamphetamine
  3. Place of Origin: United States
- We are capable to supply you with any quantity of the mentioned products with fast and secure delivery to any of your desire address, and any part of world with good prices. We are premium suppliers of high voltage research compounds and plant feed with ou

## Buy marijuana and cannabis seeds online!

Welcome to Amsterdam Marijuana Seeds  
Order your cannabis seeds and marijuana seeds straight from Amsterdam.  
We offer high quality cannabis seeds and marijuana seeds at affordable prices.  
Our strains are selected by dutch top breeders.  
Discrete stealth delivery world wide!  
We ship all marijuana seeds in crush proof sealed envelopes with no indication of what the content might be.  
You can choose how we ship your parcel, with priority mail or registered with track and trace.  
All seed packages contain 10 marijuana seeds.



- SEMI DI CANNABIS
- Pacchetti Offerta
- Semi indoor
- Semi Indoor/Outdoor
- I Semi Outdoor
- Semi Femminizzati
- Marijuana Medicinale
- Cannabis Autofiorente

PRICE

WERT

LIGHT

THE LEVEL

IVAT

MELON

STRAIN



Il mondo di semi di cannabis e di marijuana di alta qualità da Amsterdam. Paesi  
il mondo di semi di cannabis e di marijuana di alta qualità da Amsterdam. Paesi  
il mondo di semi di cannabis e di marijuana di alta qualità da Amsterdam. Paesi

Il miglior fumo di marijuana per i nostri clienti è la nostra massima priorità! Noi vi aiuteremo personalmente  
alla vostra riuscita. E soprattutto, Buy Dutch Seeds spedisce con successo e con discrezione semi di  
cannabis in tutto il mondo.

Noi offriamo la più grande lista di semi di marijuana direttamente dai migliori coltivatori olandesi di  
cannabis. Oltre 30 ceppi di marijuana. Tanti vincitori di coppa come White Widow, Durban Poison e  
Northern Light. Noi forniamo semi di marijuana per tutte le esigenze: Semi di marijuana da coperto, Semi  
di cannabis da esterno, Semi di marijuana femminizzati, e Marijuana medica.

# Cannabis Seeds



€ 450.00

Annuncio pubblicato il 16/08/2012, da: jon

Buy prozac

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Pharmaceutical  
Drugs

## Prozac (Fluoxetine)



*We Ship Worldwide  
To all Countries and  
all Destinations,  
Feel Free to Order*

Prozac is an antidepressant of the selective serotonin reuptake inhibitor (SSRI) class.

CVS

VIAGRA<sup>®</sup>  
(sildenafil citrate) tablet

Prescribing Info

Patient Prescribing Info

VIAGRA and ED

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TAKING VIAGRA

Home > Buy Real VIAGRA

# BUY REAL VIAGRA

Save a trip to the pharmacy by getting your prescription filled online and having it shipped straight to your door—with no added costs.

I have a VIAGRA prescription

VIAGRA home delivery

CVS

Powered by

CVS

includes ensuring your  
and credit card, and

# Prescribed eutical

VIAGRA HOME DELIVERY

YOU GET:

FREE shipping in

trusted pharmacists

can also be redeemed at your

preferred online pharmacy with a valid prescription for VIAGRA.



The supply of only pharmaceutical drugs is a known phenomenon that daily invades the E-mails of millions of citizens, through unrelenting and often deceptive advertising. Each day, many offers to purchase are received through the Internet, for various medicinals to treat many diseases and disorders, in addition to various other conditions particularly relevant to some segments of the population (obesity, hair loss, sexual and sports performance, etc.). There are also many sites that directly sell pharmaceutical drugs without a medical description: the so-called online pharmacies.

**Online pharmacies: a phenomenon that is alarmingly growing**

Italian customers have even now a limited attitude for online purchases, compared to that of many other European countries. In fact, National regulations do not allow for the sale of pharmaceutical drugs through the internet, but the number of persons that in Italy has resorted to foreign online pharmacies is hundreds of thousands. Given the characteristics of the national pharmaceutical market (characterised by the reimbursement for all essential pharmaceuticals, from the network of pharmacies and authorised points of sale within the territory and by the limited resorting to E-commerce), in Italy the phenomenon appears to be limited, at least on the surface, to a few well defined types of medicines, such as those for erectile dysfunction and steroid used illegally in sports.

**Hundreds of thousands of Italians that resort to online pharmacies**

Many of these supplies are completely unreliable and offer drugs that often are not related to the merchandise actually sent. Other sites offer so called "natural" products, many of which instead, contain real and actual undeclared pharmacological substances, some of which are even added in the Tables of the Presidential Decree 309/90. To give an idea to the extent of the phenomenon, it was found that according to an investigation performed by the WHO (2010), the drugs purchased on the Internet are counterfeit in over 50% of the cases.

**Dangerous drugs sold without medical prescription**

The online purchase of drugs is in most cases dangerous and unreliable both due to the providers that often are only have illegal business interests, and also due to the substances sold, which have not control during production, for origin or composition.

The sale of pharmaceutical drugs on the Internet in Italy is illegal. However, it is possible to purchase them by connecting to sites located outside of the national territory, in several countries where, on the other hand, these types of sales are authorised or unregulated.

**Illegal sale**

Among the risks that may be incurred by purchasing pharmaceutical drugs online, there is thus, the one relative to counterfeiting or of the purchase of drugs with dosages of the active ingredient not correlating to the ones stated on the warnings, in addition to the fact that the organisations that manage online pharmacies are very often connected to criminal organisations even able to manipulate the purchase through credit cards.

**Risks**

There is a large segment of the population that, despite the risk, uses online pharmacies to purchase various types of pharmaceutical drugs and pharmacologically active substances. This phenomenon appeared to be very high in several countries, such as the United States and Australia, but also in European countries, so that it grew to such a size to be considered a public health problem. The use of pharmaceuticals purchased online, even and most of all among adolescents, is continuously and alarmingly increasing. In addition, online pharmacies are also often found on sites that also offer drugs for sale.

**From online pharmacies to sites that sell drugs**

It should not be excluded that in the near future, this scenario may evolve negatively even in Italy, with increased access to these sites and creating compromised health conditions linked to the use of this multitude of pharmaceuticals which, currently, is not yet possible to assess for its actual size and for the health consequences that may derive.

**An evolving scenario**

**Figure 29 – Online pharmacies (pharmaceutical drugs offered without medical prescription)**



In Italy, the agency that oversees the monitoring and control of online pharmacies is the Agenzia Italiana del Farmaco [Italian Medicine's Agency] (AIFA). According to this agency, the phenomenon of pharmaceuticals counterfeiting, meaning "a pharmaceutical drug with labelling that was deliberately prepared with deceptive

**Counterfeiting of pharmaceutical drugs**

information relative to its content and source” (definition of the World Health Organisation, 1992), is today a growing trend, not just limited to developing countries but also regarding industrialised countries. In addition to counterfeiting, the illegal supply of psychoactive drugs, sexual performance drugs, appetite suppressants, pain relievers, anti-depressants, etc. is also increasingly present, through modalities that prevent medical monitoring and correct use. As already stated, often these sites overlap their offers and activities with sites that offer both traditional and new drugs.

Most of the AIFA activity on this topic concentrates on the study of the Internet as a distribution tool for counterfeit pharmaceutical drugs, also in order to characterise the supply available on the internet (legal, illegal and fraudulent pharmacies), for the purpose of drafting and making public a “black list” of fraudulent pharmacies aimed at committing fraud and an initial approach to the sports networks, where smaller resellers or hidden pharmacies responsible for distributing counterfeit doping drugs could be hiding.

**AIFA  
activity**

Counterfeiting involves brand name pharmaceutical drugs and generic pharmaceutical drugs, life saving and “lifestyle saving” drugs. Different types of counterfeiting can be distinguished because a counterfeited medicinal may contain the same substances of the original ones or substances/different dosages, may not contain any active ingredient or may even be made of contaminated or dangerous ingredients. However, the different types have a common denominator of poor quality because production, even when made with non-toxic ingredients, does not occur under good manufacturing and distribution standards established globally.

**The most  
counterfeited  
pharmaceutical  
drugs**

According to what is reported by the AIFA (Counterfeit prevention unit), in Italy, the occurrence of the problem is lower compared to other EU and non-EU countries, due to a series of preventive and enforcement measures in place for some time. Firstly, there is tracing of pharmaceutical drugs, authorisation and monitoring of imports and also, collaboration among institutions and controls by Law Enforcement. However, the phenomenon is growing, as confirmed by the numerous seizures of illegal or counterfeit products by customs and in the illegal network within Italy. The problem is largely linked to the multiplying of web pharmacies that sell illegal products at low prices and without the need for a medical prescription.

**A lesser  
problem in  
Italy compared  
to other  
countries**

The sale of NPS on the Internet, and therefore, the ordering and payment by the customer, occur through the regular electronic credit channels. This modality is also facilitated by the appearance of anonymous credit cards, that may be used to make the purchases, and by the ease of the online transactions which allow for maintaining the complete anonymity of the purchaser.

**Ease of  
purchasing  
transactions  
online**

The delivery to the customer of the NPS purchased online also appears to be very safe and difficult to detect because it uses regular international mail couriers with delivery at home through an anonymous package, not marked by signs or logos

**Ease of  
delivery**



that would disclose its origin. The couriers are also used by the “packager” to receive the various molecules from the “manufacturer”. With this “disappearing act” of supplying companies, anyone can become a trafficker and dealer through the Internet. The traditional mafia organisations in this case lose their monopoly and the supply is globalised.

**Loss of  
monopoly?**

In addition to this, a new Internet distribution network is being constructed which already is able to also deal traditional drugs. This will probably be the future of dealing. At this point it is appropriate to pose some questions. Will this also result in a change in hierarchies for traditional dealing? Will the new internet distributors be able to also have traditional drugs from the manufacturers considering their widespread distribution network to compete with the mafia? The mafia has 7 to 8 passes before arriving to dispatching; the “Internet dealers” have a maximum of 2, thus resulting in considerably savings in costs even with the added courier costs which are high.

**Evolving  
scenarios**

## **10. Organisation and coordination of the supply**

There is an organisational challenge at the national level also sustained by the absence of a National Action Plan that is coordinated and specific for the New Psychoactive Substances (PAN-NPS). Often the regional monitoring systems are unprepared to address this new phenomenon, which does not have borders nor confined territories, but which uses a global approach both for the trafficking and for the dealing with poor epidemiological evidence, also due to an imperfect connection to the National Early Warning System. Thus, there is the need to improve both the level of regional coordination, and the level of Interministerial coordination.

**Exchange of  
information  
for drugs  
without  
borders:  
strategic  
factor**

## 10. General strategy principles

In view of what is stated above, and in consideration of new problems arising from the quickly expanding of the NPS, it is deemed indispensable to reiterate the need to implement a well balanced and integrated approach which should work at the same time on reducing demand, on reducing the supply, providing support for the diagnosis, treatment and rehabilitation of users, and also a new strategy to fight dealing and trafficking which has assumed new types of criminal organisation and distribution (through the Internet), in a global context that is often difficult to control. Therefore, it is deemed necessary, in order to contain the distribution and use of NPS also within Italy, to adopt as soon as possible the following general strategy (which will subsequently be turned into a National Action Plan – NPS and in a series of operative projects):

### 1. Surveillance, early warning and epidemiology

Epidemiological dimensioning and monitoring of the phenomenon (users and profiles), of the type of substances, of the supply points and new avenues of supply, appears to be indispensable. Promptness and sharing of information is a strategic factor in a market in continuous and rapid change, such as that for NPS.

**Quantitative  
dimensioning**

### 2. Diagnostic enhancement

It is necessary to proceed to enhance the early diagnostic strength of laboratory networks and of emergency units and also of recognition of NPS by Law Enforcement, both through the increase of technical-scientific knowledge (specialised training) through both the increase of technological detection support and the distribution of analytical reference standards.

**Increase in  
analytical  
capacity**

### 3. Prevention and reduction of demand

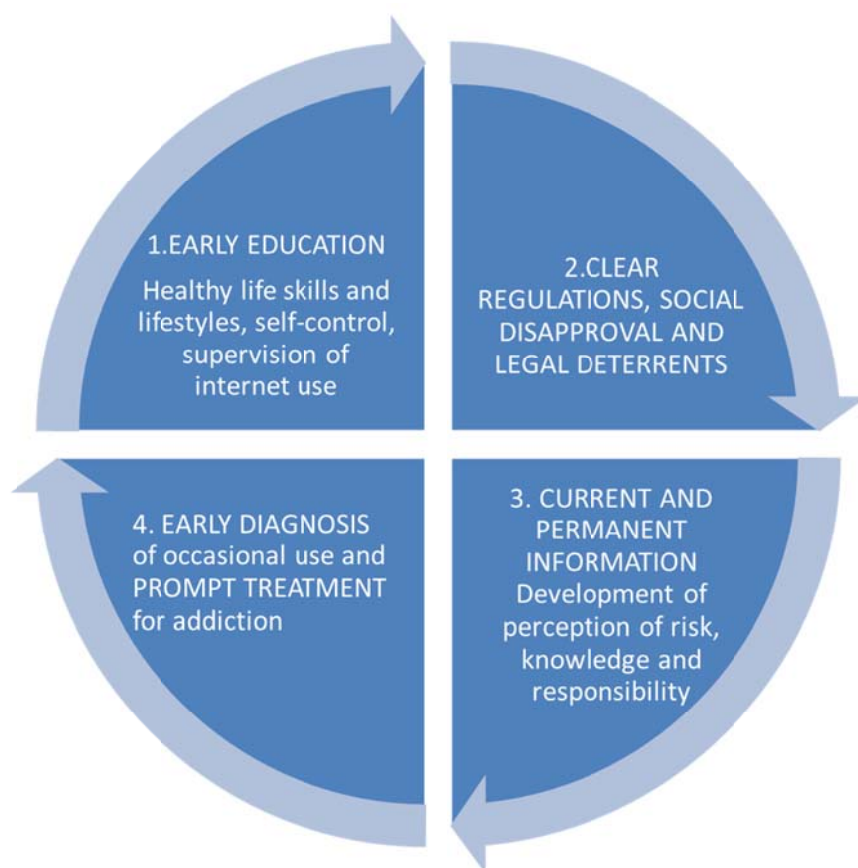
Promote the prevention and reduction of NPS demand, through integrated actions and measures of early education for the development and maintenance of healthy “life skills” and lifestyles. At the same time, a permanent activity of information on risks and damage deriving from taking these substances will be maintained, in order to develop a high perception of risk and a good degree of knowledge of the problem and to promote the responsibility in persons of their behavioural decisions. Specific attention will be given to support families and schools and to control the use of the Internet as an easy access tool to the supply of these new drugs by minors. In addition, it is necessary to promote the early diagnosis of use, and also treatment and rehabilitation of users. Specifically, for persons that have developed an addiction it is necessary to increase the specialised offerings particularly relative

**Prevent use**

**Internet:  
strategic point  
of control  
Early  
Diagnosis**

to the effects in the neuro-psychological area which these substances are able to cause, increasing the risk of occurrence of psychiatric co-morbidity. Other important elements for the reduction of demand are clarity of regulations and rules against use, high degree of social disapproval and the existence of legal deterrents both for users of NPS (not compatible with driving of vehicles or performing at risk work tasks – fines), and for trafficking and dealing – criminal sanctions.

**Figure 30 – Integrated measures for the prevention of the use and distribution of NPS.**



#### 4. Enforcement against supply

Control, reduction and enforcement of the supply, focusing attention most importantly on the Internet, on illegal rave parties, on orders and transactions through the web by credit card, as well as in smart shops. Enforcement against the supply also occurs through the early and comprehensive addition of NPS into the list of drugs, in order to allow for the monitoring and the actions of Law Enforcement to combat trafficking, dealing and production. The deterrent measures and controls linked to them (i.e., drug tests for drivers or workers at risk for third parties or to acquire the driver license, etc., which punish the use of substances with fines) and the penalties issued for the illegal trafficking, dealing and production (with criminal consequences), are an important part of the balanced and integrated approach against the use of all drugs.

**Integrated measures**

**Deterrence**

## 5. Promoting research

Given the scarcity of technical-scientific information relative to the NPS characteristics, their metabolites and toxic effects, it is deemed strategic to also promote research both in the diagnostic-clinical-toxicological area, and in the neuroscience area relative to the psychological-behavioural effects and structural and neuroreceptor changes following the use of NPS. In addition, promoting and encouraging study, production and marketing of new quick diagnostic systems would also allow on one hand to decrease the diagnostic gap apparent today, and on the other, stimulate research activity.

**Toxicology  
and  
neuroscience**

## 6. Collaboration, coordination and training

Considering the ample and widespread circulation (even outside of the strict national borders) of NPS, it is strategic to operate and promote a network of national, European and international collaboration, placing in a synergistic, coordinated and systematic manner, both the existing regional systems, and the various interested central Administrations (particularly the Ministry of Health, Ministry of the Interior/DCSA [Central Anti-drug Directorate] and Ministry of Education, University and Research). Interinstitutional collaboration and sharing of information fall within the principle of shared responsibility in the fight against distribution and use of drugs to which all public Administration are asked to participate based on their specific area of expertise. Even training and updating of operators on these new substances appears to be particularly important to ensure efficiency and efficacy of interventions in all sectors.

**A united front**

## **11. National Action plan on New Psychoactive Substances: summary of the areas of intervention and objectives**

Therefore, 6 strategic areas of intervention are identified on which the National Action plan – NPS was structured:

- A. Epidemiological, early warning and networking area
- B. Area of diagnostic enhancing
- C. Area of prevention and reduction of demand
- D. Area of reduction of supply
- E. Area of scientific research
- F. Area of collaboration, coordination and training

The following pages include descriptions, for each individual area, the objectives, action, specifications, indicators and the executive bodies.



Figure 31 – Strategic areas and general objectives of PAN-NPS

	Strategic area	General objective
A	Early warning and networking, epidemiology	Size and monitor the distribution of NPS in the population, through epidemiological surveillance and early warning systems integrated and cooperating for the purpose of activating suitable and prompt protective measures for public health and prevention.
B	Enhanced diagnostics	Support the activation and direction of the Regional Health Systems and local and regional laboratories for the early identification of NPS
C	Prevention and reduction of demand	Define and implement informational intervention and education on the topic of new psychoactive substances, differentiated according to reference, treatment and rehabilitation targets.
D	Reduction of the supply	<p>Maintain Italian regulation promptly updated on the subject-matter of new psychoactive substances and activate safety measures for health</p> <p>Support the activation of specific action by Law Enforcement</p>
E	Scientific research	Activate specific research projects on new psychoactive substances.
F	Collaborations, coordination and training	Activate interregional, national and international collaboration for the purpose of exchanging information on new psychoactive substances and good practice for monitoring, prevention and management of the NPS phenomenon.

## A. EPIDEMIOLOGICAL, EARLY WARNING AND NETWORKING AREA

### OBJECTIVE no. 1

Dimensioning and monitoring of the distribution of NPS in the population, through epidemiological surveillance and early alert systems integrated and cooperating in order to activate suitable and prompt protective measures for public health and enforcement activities.

Action	Specifications	Executive bodies	Indicators
1.1 Epidemiological monitoring of the use of NPS in the population, also by performing national investigations (SPS, GPS) and ad hoc investigations to find prevalence of use	1.1.1 National institutional investigation on the general population (between the ages of 18-65) – GPS-DPA	DPA– National Monitoring Centre	Prevalence of use of NPS
	1.1.2 National institutional investigation on the student population (between the ages of 15-18) – SPS-DPA	DPA– National Monitoring Centre	Prevalence of use of NPS
	1.1.3 Analysis of metabolites of NPS in wastewater of the “Aquadugs”-DPA network	DPA– National Monitoring Centre  University Research Centres	Prevalence of use of NPS
	1.1.4 Ad hoc investigations performed on particularly at risk populations (i.e., participants in rave parties, users of substances by injection, etc.) and other special populations (university students)	DPA– National Monitoring Centre  University Research Centres	Prevalence of use of NPS
	1.1.5 Assessment of the occurrence of new patients admitted to the Departments for Addiction with dependency to NPS and/or combined use of other primary drugs (heroin, cocaine, cannabis, amphetamines, etc.) and of the prevalence of patients already under treatment using NPS	Regions and Public Administrations  Departments for Addiction	No. new patients with dependency or use of NPS/year
Action	Specifications	Executive bodies	Indicators

1.2 Monitoring of the supply (particularly online but also at smart shops, trafficking and dealing on the territory) of NPS in Italy and comparative analyses on foreign data	1.2.1 Monitoring of the online offer of illegal NPS sold through websites, web pages or advertisements. Monitoring must be implemented in collaboration with Law Enforcement which are able to perform in depth investigations and potentially proceed to completely shut down the website, remove the single web page that is selling illegal NPS or remove the advertisement that promotes the sale of NPS. Online monitoring also includes sites that market NPS as molecules for scientific research or as laboratory reagents and which instead, often, are vehicles for the trafficking and dealing of illegal substances.	DPA-NEWS Research Centres DCSA Law Enforcement	No. websites detected/ year  No. sites shut down/year
	1.2.2 Monitoring of smart shops. Control of commercial businesses where NPS may be sold as a legal alternative to illegal substances, under the form of incense, bath salts, fertiliser, etc. It is necessary to prevent with regulations that impede these offerings, said businesses from continuing to sell NPS, in order to prevent distribution to the population.	DPA-NEWS Ministry of Health Research Centres Law Enforcement	No. smart shops detected/ year  No. smart shops shut down/year  No. of substances/ products seized and financial estimate of the traffic blocked
	1.2.3 Monitoring of seizures. Control of the number of NPS seizures in Italy, of the quantity and type of products seized. This contributes to highlighting which products are circulating on the territory and are thus offered to users, as well as showing, in time, the supply trends. It is appropriate that the data relative to these seizures (subject to the requirements and limitations on privacy of the investigations) are reported also to the National Early Warning System to inform collaborative centres of the territory relative to the spreading danger for users and the DCSA to allow it to organise the response actions to implement to prevent and/or reduce the distribution of NPS.	DPA-NEWS Law Enforcement DCSA	No. seizures performed /year  No. NPS detected/ year  Amount of substance seized/year financial estimate for the trafficking blocked

Action	Specifications	Executive bodies	Indicators
	1.2.4 Control of postal transit. Intensification of the inspections of postal packages, particularly those originating from countries producing or "assembling" NPS, to identify those that contain NPS. It is appropriate that these detections are reported also to the National Early Warning System to alert the assigned structures of the danger for protection of public health and the DCSA relative to the response actions to implement to prevent and/or reduce their distribution also potentially through special operations.	DCSA Law Enforcement	No. intercepted postal packages/year  No. postal packages containing NPS/No. intercepted packages
1.3 Monitoring of the online demand of NPS among the population	1.3.1 Control of NPS purchases that occur online. It is possible to track, through advanced software, the orders and purchases performed online by using credit cards, identifying both the purchaser of NPS and the seller that received the money.	DCSA Law Enforcement Credit card operators	No. of NPS purchases intercepted/year
1.4 Monitoring and detection to prevent illegal musical events (illegal rave parties) where there is a high probability of use and trafficking of NPS	1.4.1 Monitoring is aimed at those sites and online spaces where the organisers promote illegal musical events (rave parties) where often new drugs and traditional drugs are used. Monitoring must be implemented in collaboration with Law Enforcement that is able to perform in-depth investigations and potentially proceed to prevent the event from taking place or onsite intervention.	DPA-NEWS Law Enforcement	No. illegal rave parties identified  No. prevented illegal rave parties  No. illegal rave parties managed  Types of substances identified in subjects participating in raves
1.5 Monitoring of admission to the emergency units due to acute intoxications related to the use of NPS	1.5.1 Maintenance of a clinical-toxicological consulting reference centre for emergency units, available by telephone 24hours/day, where healthcare professionals can turn to for abnormal cases of acute intoxication of patients with suspected use of NPS. The centre provides immediate telephone consultations and if necessary, collects and tests the biological samples drawn at admission of the patient to the emergency room. The medical	DPA-NEWS CAV Ministry of Health	No. cases of acute-intoxication/year  Types of substances detected

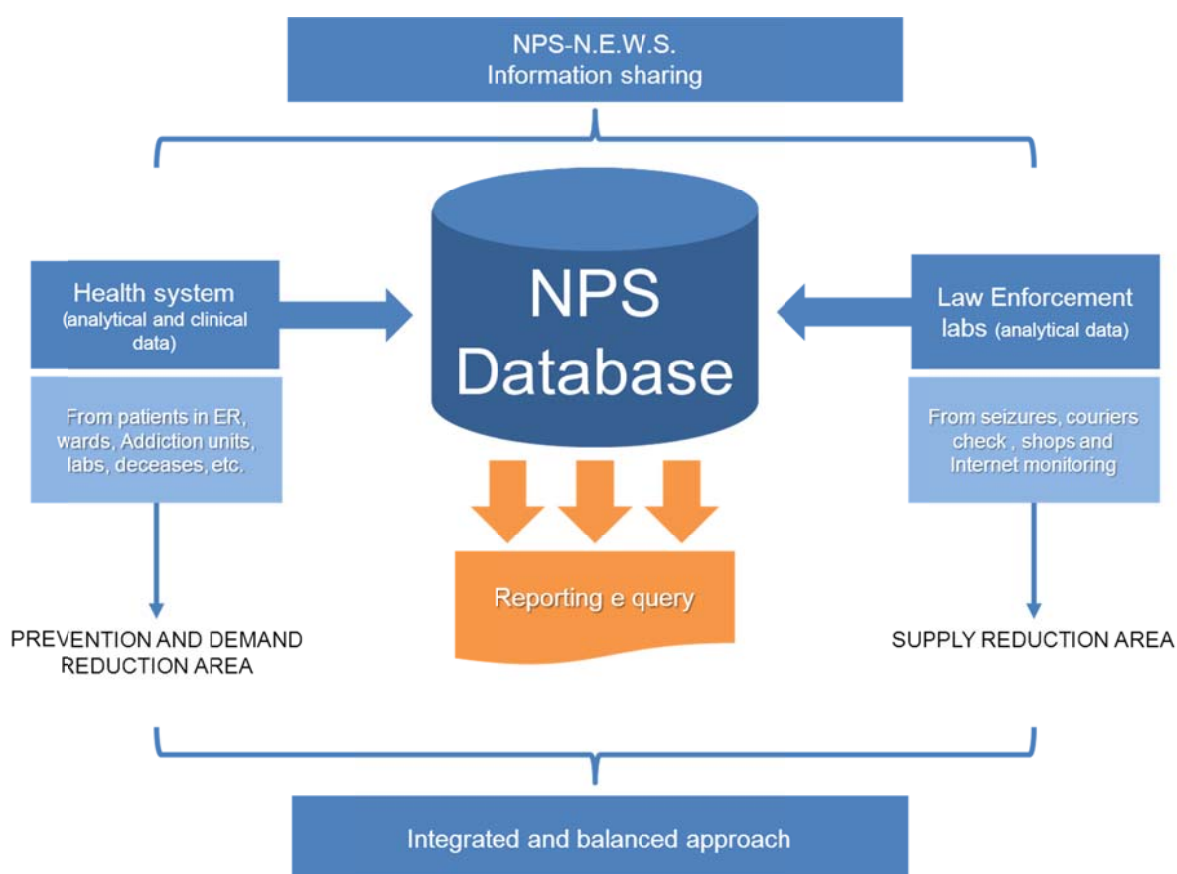
	findings are available in 24/48 hours, when the laboratory already has the analytical reference standards (the time frame may be longer if the standards are not readily available). The centre proceeds to return the results of the testing performed to the emergency units. No cost is expected for the healthcare facilities. The cases of intoxication connected to NPS are reported to the National Early Warning Systems for any health warnings in Italy and in Europe.		No. warnings activated for Italian cases
1.6 Enhancing of the National Early Warning System (N.E.W.S.), of collaboration with the concerned Autonomous Regions and Provinces and collaborating in the national network of collaborative centres on NPS	1.6.1 It is necessary to enhance an institutional system for monitoring of the appearance of new drugs in Europe and in Italy able to activate, as needed, health warnings among pertaining structures for the protection of public health, that would activate prompt response actions to address the phenomenon reported. The system must maintain active flow of information at the national level, through their network of collaborative centres (clinical centres, emergency units, laboratories, Law Enforcement, etc.), and at a European level, towards the EMCDDA and internationally.	DPA-NEWS Ministry of Health	No. NPS detected  No. warnings activated  No. collaborative centres involved
	1.6.2 Development and update of the database (DB-NEWS) of the National Early Warning System on NPS, accessible on the web, to all public institutions that may need it for analytical, clinical or law enforcement. Sharing of information through the database allows for a quicker identification of the substances in biological and non-biological samples tested, a prompter defining of a diagnosis and easier detection of products marketed through Law Enforcement controls.	DPA-NEWS Ministry of Health DCSA Law Enforcement ISS CAV Laboratories	No. NPS reported  No. consultations/year

To better monitor the phenomenon and most importantly, understand its progression and spreading on the territory, it is necessary and fundamental to share all the various information that may be held by the bodies and organisations which for various reasons intervene on this phenomenon.

Also at an international level, and specifically by the United Nations, it was recommended that the information be shared. For this reason, the Department of Anti-drug Policies had created an institutional database (DB-NPS) supported by various structures of the healthcare system and other structures belonging to Law Enforcement. Thus, this database contains data originating both from biological samples collected by emergency facilities, and by data originating from seized substances or substances acquired from other sources. The double type of information appears to be important to be able to define specific preventive actions and reduce demand, on one hand, and other specific action to reduce supply, on the other, within an integrated and balanced approach.

The database can be easily used by authorised staff and to produces a reporting standard at a national and regional level.

**Figure 32 - Input and output of the institutional database of New Psychoactive Substances of the National Early Warning System.**





Epidemiological monitoring needs a series of diversified data sources in order to be able to reconstruct the various size of the phenomenon and thus, to be able to have a reconstruction as precise as possible on the size of its progression. To this end, a general set-up was created for epidemiological monitoring of NPS. Therefore, the possible sources of data are reported that may be able to supply information on not only the impact and prevalence of use but also a series of chemical-toxicological and clinical news extremely important to increase knowledge, which is unfortunately still scarce, on these substances, their toxicity and the current remedies, antidotes and effective therapies.

**Table 2 – Possible sources of data, specifications, expected output and indicators.**

Possible sources of data	Specifications	Expected output and indicators
Internet: NPS offer	Specialised websites	List of published NPS No. accesses to site No. orders Financial flow detected (credit cards monitoring)
	Recovery samples of NPS (simulated order)	Other NPS output on the market No. controlled packages No. positive packages
Postal packages in transit	NPS sent by supplier to customers by postal couriers	Prevalence of use in the general population (PY, PM)
General population	GPS Survey (questionnaires 19-64)	Prevalence of use in the student population (PY, PM)
Student population	SPS Survey (questionnaires, ages: 15-18)	Concentration of active ingredients Concentration of metabolites
Wastewater	Analysis of wastewater 18 cities	Concentration of active ingredients Concentration of metabolites

Possible sources of data	Specifications	Expected output and indicators
Patients in emergency room	Collection of biological liquids	Mixtures/Combined substances Georeferencing of acute intoxications
	Recording of typical and/or atypical symptoms	Frequency of symptoms relative to the substance
	Collection of substances given by the patient at admission to the healthcare professionals	Matching with active ingredients found in biological samples
Patients undergoing treatment in Departments for Addictions	Specifically, populations using cocaine and THC	Prevalence of positive results
		Method of use
		Neurocognitive consequences
		Other consequences to the body (heart, lungs, liver, etc.)
Patients hospitalised in wards	Pediatric wards	Prevalence of positive results
	Psychiatric wards	Prevalence of positive results
Special populations already subjected to mandatory screening for traditional drugs	Workers with at risk tasks	Prevalence of positive results
	Drivers of vehicles	Prevalence of positive results
		Prevalence of positive results
Persons who died in driving accidents	Investigations by forensic medicine institutes on biological liquids	Type of molecule
		Concentration
Seizures by Law Enforcement	Substances seized	Companies
		Georeferencing of the seizure

## B. DIAGNOSTIC ENHANCING AREA

### OBJECTIVE No. 2

**Support the activation and aim of the Regional Healthcare Systems and the university laboratories for the early detection of NPS**

Action	Specifications	Executive bodies	Indicators
2.1 Promotion of the increase of the capacity of local and regional laboratories (forensic toxicology, university laboratories, Law Enforcement, Customs Agency, etc.) for the detection of NPS in seized substances, patient and user biological samples, substances purchased online or from other sources	2.1.1 Distribution of analytical reference standards pertaining to the network of the National Early Warning System. The selection of the standards will occur based on adding NPS to the SSP table and based on the probability that a NPS has to be distributed on the territory and online, calculated based on the strength of the molecule. Stronger molecules have a greater change to be liked and requested by the user, therefore to be distributed, as well as to be a greater danger due to toxicity.	DPA-NEWS ISS	No. reference standards distributed/year  No. of laboratories that have received reference standards/year
	2.1.2 Definition of technical-scientific guidelines for laboratories to identify NPS. These guidelines will take into consideration any European and international documents available on the topic. These will be distributed to all Italian laboratories and will be adopted by all laboratories belonging to the National Early warning System. The document will be updated annually, based on the appearance of new substances.	DPA-NEWS ISS	Degree of consent on guidelines among laboratories belonging to the NEWS analytical network
	2.1.3 Organisation of annual technical-scientific updated courses, even online, on the topic of NPS and their detection in the laboratory and sharing of documents useful to strengthen analytical capacity, as soon as available.	DPA-NEWS ISS CAV	No. courses organised/year  No. participants

Action	Specifications	Executive bodies	Indicators
	2.1.4 Increase in the number of laboratories that belong to the National Early Warning System.	DPA-NEWS ISS	No. new laboratories belonging to NEWS/year
2.2 Increase in the detection capacity by clinical centres of cases of acute intoxication related to use of NPS (poison control centres, emergency units, psychiatric services, etc.)	2.2.1 Increase the number of poison control centres in Italy able to give immediate response for intoxications relative to the use of NPS. In addition to the Poison Control Centre of Pavia, it is appropriate to identify at least another centre. This would allow emergency staff to increase the possibility to call and manage biological samples to be analysed within a quicker time frame. In fact, the procedure of collection and testing of samples by the Poison Control Centre of Pavia appears to date to be successful and had allowed for the detection of many NPS taken by users. However, it is necessary to strengthen this activity, also locating it in other areas of the country, while maintaining the same operating modalities.	DPA-NEWS CAV	No. reference poison control centres
	2.2.2 Definition of national technical-scientific guidelines for the clinical centres to identify cases of acute intoxication related to use of NPS. These guidelines must take into consideration the European and international documents already available on the topic. These will be distributed to all Italian emergency centres and will be adopted by all the clinical centres belonging to the National Early Warning System. Thus, the document will be updated annually and based on the appearance of new substances.	DPA-NEWS ISS CAV Scientific companies	Degree of agreement on guidelines among the clinical centres belonging to NEWS
	2.2.3 Organisation of annual technical-scientific training and updating (even online) on the topic of NPS and their detection in cases of acute intoxication and sharing of documents useful to enhancing clinical capacity, as soon as available.	DPA-NEWS ISS CAV	No. courses organised/year  No. participants

Action	Specifications	Executive bodies	Indicators
	2.2.4 Organising of periodic updated courses and/or information events for operators of Departments for Addictions in order to update their knowledge relative to the NPS and thus, increase their diagnostic capacity relative to NPS use among patients receiving these services.	DPA Regions and Public Administrations CAV Departments for Addictions	No. courses organised/year  No. participants
	2.2.5 Increase in the number of clinical units of the emergency system belonging to the National Early Warning System. This will allow for increasing the number of centres that receive information from NEWS and thus, will be updated relative to the NPS recorded by the System in Italy and Europe. In addition, the new centres, may forward warnings to the System relative to cases of intoxication related to the NPS, contributing to increase awareness of the System and to give a more complete picture relative to the phenomenon in our country.	DPA-NEWS CAV	No. new units of the emergency systems/ belonging to NEWS/year
	2.2.5 Targeted involvement of psychiatric services and pediatrics for the detection of cases of intoxication from NPS	DPA-NEWS CAV	No. cases identified in psychiatric and pediatric services  No. collaborative services recruited
2.3 Increase in capacity of detection of NPS by the competent physicians for the assessment of suitability of workers with at risk tasks	2.3.1 Distribution of information on the characteristics of NPS and their effects to competent physicians so that they may have the necessary background to be able to completely assess the suitability of workers to perform at risk tasks. The information may be distributed by national technical-scientific guidelines, bulletins to the associations within the category and training courses.	DPA Ministry of Health ISS CAV	No. competent physicians updated

Action	Specifications	Executive bodies	Indicators
	2.3.2 When new devices are available for sale for the onsite detection of NPS in biological samples such as saliva, urine, sweat, it will be appropriate that these are supplied to competent physicians in order to activate toxicological onsite controls in the workplace. The use of these devices will facilitate the work of competent physicians, allowing them to assess the suitability to perform at risk tasks, based on a new tool.	DPA Ministry of Health	Degree of distribution of the use of the devices



## C. PREVENTION AND REDUCTION OF DEMAND AREA

### OBJECTIVE No. 3

**Define and implement information and education interventions on the topic of new psychoactive substances, differentiated according to the reference, treatment and rehabilitation target**

Action	Specifications	Executive bodies	Indicators
3.1 Organisation of information events for teachers (teacher training)	3.1.1 It is appropriate to activate some time dedicated to teachers to inform them on NPS and to give them guidelines on the early detection of any use among their students. At the same time, recommendations will be provided on how to manage any suspicion of use, by first involving the family of the subject, informing them on the existence of a potential problem related to the use of drugs, and to activate healthcare operators of the local Department of Addiction which operates within schools through the Information and Consultation Centres (CIC). In addition, teachers must be provided with paper information materials and references online so that they can gain in-depth knowledge on the topic and easily find contacts for local services.	DPA-NEWS MIUR/Schools Regions and Public Administrations Departments of Addictions	No. school institutions involved  No. events organised/year  No. participating teachers  No. materials supplied
3.2 Organisation of information events for parents (parent training)	3.2.1 Activate meetings with parents in schools to inform them on NPS, the risks that their children face when using these, the ease of purchasing them on the web. The meetings will be used to give recommendations to parents for the early identification of any use of NPS for their children, on managing any suspicion that their child is using them and who to turn to. At the same time, advice will be provided on how to control and make their children's navigating the net safer. In addition, parents will receive paper information materials and online references to be able to gain more knowledge on the topic and find local contacts.	DPA-NEWS MIUR/Schools Regions and Public Administrations Departments of Addictions	No. school institutions involved  No. events organised/year  No. participating parents  No. materials supplied

Action	Specifications	Executive bodies	Indicators
3.3 Promotion of prevention campaigns on the use of NPS for youths	3.3.1 Through the use of communication channel most frequently used by the youth (websites, social networks such as Facebook, MySpace, Twitter, etc.), messages to prevent the use of NPS are activated (banners, slogans, etc.), that show clear and understandable technical-scientific information aimed at developing awareness and perception of risks and keeping in mind that on the Internet there is a great amount of negative information easily accessible by youths. Thus, there is the need to provide them with "counter-information" that allows them to be correctly informed and to assume responsible behaviours.	DPA-NEWS MIUR/Schools Regions and Public Administrations Departments of Addictions	No. posts added on social network  No. followers/friends on social network
	3.3.2 Taking advantage of new smart-phone technology, very popular among youth, software applications ("Apps") may be developed to supply information and prevention tools on NPS and on traditional drugs. These methods of communication are particularly interactive and for this reason may be considered a tool able to involve youths for preventive purposes. Even in this case, the information supplied through the Apps must be careful to not stimulate the desire to try new substances in the most curious ( avoid an advertising effect).	DPA-NEWS MIUR/Schools Regions and Public Administrations Departments of Addictions	No. Apps developed  No. downloads of each App
	3.3.3. Production of prevention materials through the direct involvement of the students in the creative phase	DPA-NEWS MIUR/Schools	No. materials created

Action	Specifications	Executive bodies	Indicators
3.4 Promotion of prevention activities through the involvement of civil society organisations	3.4.1 Promote the coordination and involvement of civil society organisation that oversee the prevention of the use of NPS and traditional drugs and that appear to be aware, interested and involved in contributing, both in theory and in practice, to improve the interventions and the global impact on the use of these substances.	DPA Ministry of Health Ministry of Education	No. participating bodies
3.5 Support to the Department for Addictions for implementation of suitable and sustainable treatment and rehabilitation interventions (falling within the LEA, also for these substances)	3.5.1 In order to update the personnel operating in the Departments for Addictions it will be important to organise annually some training and updating courses where the characteristics of the phenomenon and of users and where guidelines on treatment of patients that use NPS are provided. The information may also be distributed through national technical-scientific guidelines, bulletins to the associations of the category.	DPA Ministry of Health CAV Departments for Addictions	No. courses activated/year  Type of NPS detected in subjects treated for the primary use of other substances

## D. SUPPLY REDUCTION AREA

### OBJECTIVE No. 4

**Promptly maintain updated the Italian legislation on the subject of new psychoactive substances and activate health safety measures.**

Action	Specifications	Executive bodies	Indicators
4.1 Early update of Tables of Presidential Decree 309/90 in order to make NPS illegal as soon as possible when appearing in Italy and that are found to be dangerous to user's health	4.1.1 Maintain active and efficient the procedure shared by the Department of Anti-drug Policies and the Ministry of Health for the production of the technical-scientific opinions to submit for assessment of the Italian National Health Institute to update the Tables of Presidential Decree 309/90.	DPA-NEWS Ministry of Health ISS CAV	No. decrees for the addition of NPS in Tables of Presidential Decree 309/90
	4.1.2 The procedure for updating the Tables must be further strengthened by defining a shared procedure with a specific risk assessment, in compliance with the European recommendations on the subject, which highlights the risk that NPS are not only for users but also for the general population.	DPA-NEWS Ministry of Health ISS CAV	Existence of a risk assessment procedure
4.2 Early activation of ordinances on hygiene and public health finalised for the immediate withdrawal of marketed products containing NPS detected within the national territory (while waiting for any updating of the Tables)	4.2.1 When NPS are not added in the Table but are a freely sold product or a substance reported as dangerous by the System through a warning and sold by Internet and/or smart shops, an ordinance may be issued to prohibit manufacturing, importing, issuing on the market, sale and use of products containing the substance subject to the warning. At the same time, the healthcare and control authorities and police bodies, may be activated to supervise compliance to the provision.	Ministry of Health Law Enforcement	No. ordinances activated/year

Action	Specifications	Executive bodies	Indicators
4.3 Activation of the Consumer Code in cases of violation	4.3.1 When the substance reported to the System is not contained in products such as food or medicinals, the procedure provided by Art. 107 on the Consumer's Code, based on Legislative Decree 206 of 6 September 2005.	Ministry of Health	No. activations of the Consumer Code activated/year
4.4 Activation of the European warning systems (RAPEX and RASFF)	4.4.1 In the case that NPS are introduced and marketed, in Italy and/or Europe, through "non-food" type products, if appropriate and necessary, the activation may also be assessed of the RAPEX (European Rapid Alert System for non-food consumer products) System.	Ministry of Health	No. activations RAPEX/year
	4.4.2 Where the reported NPS by the System is offered as a food or is contained within food products, any notification of the product is verified and if necessary, the RASFF (Rapid Alert System for Food and Feed) is activated, the EC alert system to notify in real time the direct or indirect risks to public health connected to the use of foods or foodstuff (EC Regulation 178/2002 of the European Parliament and Council and EC Regulation 16/2011). The activation of RASFF occurs according to procedures provided by the EC, using the appropriate notification sheets.	Ministry of Health	No. activations RASFF/year
4.5 Proposal for updating of toxicological verifications to perform based on the Driving Code (Art. 187)	4.5.1 It is appropriate to state that the NPS may be the cause of psychological-physical changes in drivers of vehicles and that these can be detected by tests available today. It is appropriate to provide, for performing toxicological testing, the research of the NPS among substances that may be the cause of psychological-physical changes for drivers of vehicles, not detectible with test available to date.	DPA Ministry of the Interior Ministry of Health Ministry of Infrastructure and of Transportation	No. amendments of implemented laws
	4.5.2 Since currently there are no rapid "precursor" devices to identify NPS on the road for drivers of vehicles, it is appropriate to strengthen clinical-toxicological controls on	Law Enforcement	No. Prot. DOS adopted at a national level  No.

	the road (Protocol DOS) to find any psychological-physical changes related to taking NPS through the objective examination performed by expert medical staff.		psychological-physical changes NPS correctly identified/ year
4.6 Proposal to update the regulations on health testing to detect the use of drugs or psychotropic substances for workers with at risk tasks that involve particular risks for the safety, protection and health of third parties	4.6.1 In view of the distribution of NPS, it is deemed useful to update the list of molecules to detect for workers with at risk tasks	Ministry of Health	No. NPS added



**OBJECTIVE No. 5****Support the activation of specific actions of Law Enforcement**

Action	Specifications	Executive bodies	Indicators
5.1 Support the activation of training courses and technical-scientific updating on NPS aimed at laboratory staff of Law Enforcement and staff operating on the field	5.1.1 It is appropriate to organise at least once a year, events for technical-scientific updating of staff in charge of testing the findings seized with specific attention to the NPS recorded by the Warning System	DPA-NEWS Law Enforcement Laboratory ISS CAV	No. updating events organised /year
	5.1.2 It is necessary to supply agents that perform controls on the territory, for information useful in facilitating the macroscopic detection of products that may contain dangerous NPS to health and thus it would be appropriate to seize in order to avoid that they are purchased or used, Therefore, it is important to organise training and updating events on how NPS appear, how they are marketed, etc.	DPA NEWS ISS CAV Law Enforcement	No. training and updating events organised/year
	5.1.3 It is necessary to activate programmes to strengthen instrumental equipment and tools available to the laboratories that analyse substances, also providing for the acquisition of certified reference materials, guaranteeing maximum safety in the detection of unknown substances, or however, of other material of suitable purity, to use as reference.	DPA Ministry of the Interior ISS Law Enforcement	No. devices of materials acquired  N. substances detected
5.2 Performance of controls to verify compliance to activated health safety measures	5.2.1 It is necessary that controls are activated on all the national territory for commercial businesses that sell products reported by the National Early Warning System as containing dangerous NPS to health (smart shops, sexy shops, herbal shops).	Ministry of Health Prosecutor's Office Law Enforcement	No. commercial businesses shut-down  No. commercial businesses controlled

Action	Specifications	Executive bodies	Indicators
5.3 Performance of investigations on websites identified that market illegal NPS	5.3.1 It is necessary that specific controls are activated on specific websites, reported by the National Early Warning System, which through the Internet market NPS added to the list of illegal drugs. In addition, it is necessary to develop a NEWS-AIFA protocol of collaboration to coordinate the control actions on NPS sold online.	DPA-NEWS DCSA Ministry of Health AIFA Law Enforcement	No. investigations performed/year
5.4 Performance of controls to combat production of NPS	5.4.1 It is essential to coordinate and organise specific activities of controls to combat the production in Italy of NPS for which the risk to public health is known and that are subject to control in other European countries.	DCSA Ministry of Health Law Enforcement	No. investigations performed/year
5.5 Control of express courier services and national and international transport	5.5.1 Intensify controls on postal packages that are sent by suppliers of NPS to purchasers in Italy. Specifically, controls should be intensified in border areas, by Customs Agencies. The packages containing NPS and intercepted are reported to the National Early Warning System to activate any health alerts. Study and plan control and investigation modalities, also through the use of new technologies, that make controls on packages sent by suppliers of NPS to purchasers in Italy, more effective.	DPA-NEWS Ministry of Health DCSA Law Enforcement	No. packages containing NPS/No. intercepted packages
5.6 Development and use of new onsite rapid devices for performing toxicological testing on NPS	5.6.1 When new onsite rapid devices are available and sold for the identification of NPS in biological samples (saliva, urine, sweat) it will be appropriate that Law Enforcement are provided with them in order to activate onsite, 1 <sup>st</sup> level, toxicological controls on drivers. The use of these devices will aid the work of agents, allowing them to perform preliminary testing on the driver, according to Art. 187 of the Driving Code, based on the new tool.	DPA Ministry of Health ISS Law Enforcement	Degree of distribution of the use of devices  Validation test

Action	Specifications	Executive bodies	Indicators
5.7 Support updating actions of NPS and on reference regulations for Magistrates	5.7.1 Promptly notify Magistrates of the updates of tables of Presidential Decree 309/90 when the new NPS are included, in order to implement proactive updates for Prosecutor's offices and aid Magistrates in assessing and managing pertinent cases.	DPA-NEWS Ministry of Health Ministry of Justice	No. notices sent/No. updates made to the regulations
	5.8.1 Organise technical-scientific training and updating even online to support Magistrates in managing the phenomenon of NPS and supply them with information elements to assess pertinent cases and to entrust autopsies to coroners.	DPA-NEWS Ministry of Health Ministry of Justice ISS CAV	No. events organised

## E. SCIENTIFIC RESEARCH AREA

**OBJECTIVE No. 6****Activate specific research project on new psychoactive substances**

Action	Specifications	Executive bodies	Indicators
6.1 Activation of research projects on toxicity of NPS and on treatments	6.1.1 Development of research for assessment of toxicity of NPS and to identify their metabolites in animal models and on human subjects using them (hospitalised due to acute intoxication).	DPA University Research centres	No. projects activated  No. publications created
6.2 Development of rapid screening tests for detection of NPS	6.2.1 Study and proposal of new onsite rapid screening devices to rapidly detect biological samples (urine, saliva) of NPS currently non-detectable unless by 2 <sup>nd</sup> level laboratory methods, available only in the most well equipped laboratories with longer response periods.	DPA ISS University Research centres	No. projects activated  No. publications created
6.3 Activation of research projects on clinical follow-up and on organ damage from NPS	6.3.1 It is appropriate to activate studies to better understand the possible post-acute effects in patients that had acute intoxication from NPS and assess more in depth any organ damage (images, tissue damage and organ markers, etc.).	DPA-NEWS CAV University Research centres	No. projects activated
6.4 Activation of research projects on actual mortality rates related to NPS	6.4.1 Development of research for the collection of data relative to mortality related to NPS with the involvement of hospital structures and forensic toxicology. This study will allow for gaining epidemiological information on the actual frequency of deaths related to these types of substances, not available to date due to the poor capacity for identification of these molecules and due to the rare habit of Magistrates to request in-depth testing on the causes of drug-related deaths.	DPA ISS University (Forensic toxicology) Prosecutor's Office Research centres Hospitals	No. projects activated  No. publications created

Action	Specifications	Executive bodies	Indicators
6.5 Activation of research projects on new modalities of online marketing of NPS (illegal market) and on its prevention	6.5.1 It is appropriate to activate studies to better understand the trade dynamics for NPS, particularly the illegal ones, through the web and thus, to be able to propose modalities for more effective and efficient monitoring aimed at preventing and preventing their marketing on the Internet. Specifically, it is necessary to activate specific research on the modalities of use of the "dark net", virtual space in which the users connected are anonymous, difficult to identify and through which other illegal actions are also perpetrated, such as the illegal sale of weapons, the sale of paedophile-pornographic material, in addition to the sale of illegal substances.	DPA Ministry of Health University Research Centres DCSA Law Enforcement	No. projects activated

## F. COLLABORATION, COORDINATION AND TRAINING AREA

**OBJECTIVE No. 7**

**Activate interregional, national and international collaborations for the purpose of exchanging information on new psychoactive substances and of good practice for monitoring, prevention and management of the NPS phenomenon.**

Action	Specifications	Executive bodies	Indicators
7.1 Activation and maintenance of collaboration with accredited international research centres for the exchange of information and best practices on monitoring the NPS phenomenon	7.1.1 Maintenance of collaboration with the EMCDDA (EU) and with the National Institute on Drug Abuse (USA) for the sharing of best practices on the monitoring of the NPS phenomenon, including the <i>ad hoc</i> investigations at a national level to assess dissemination in the population.	DPA	No. international collaborations activated
	7.1.2 Activation of new international collaboration, also with research laboratories, for the exchange of best practices on monitoring of the phenomenon in NPS	DPA	No. international collaborations activated
7.2 Sharing of information on NPS with European and international bodies	7.2.1 It is desirable to increase the exchange of information on NPS with European and international bodies, particularly UNODC and EMCDDA. The transmission of information from Italy must occur by providing national reports, answers to questionnaires, participation to specific investigations, etc.	DPA-NEWS	No. reports transmitted



Action	Specifications	Executive bodies	Indicators
7.3 Activation of international institutional/diplomatic collaborations, specifically with countries producing NPS (i.e., China), for the exchange of information and best practices to implement better prevention and management of the online supply and sale of NPS	7.3.1 Activation of forms of institutional collaboration to jointly identify effective methods of identification, prevention and control to reduce the production and supply of NPS.	DPA	No. international collaborations activated
	7.3.2 Activation of forms of institutional collaboration to exchange information and good practices on early diagnosis and clinical management of users of NPS.	DPA Regions and Public Administrations Departments for Addictions	No. international collaborations activated
7.4 Activation of a project of collaboration with the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA), specifically with NPS	7.4.1 The project of collaboration with EMCDDA may provide for the sharing of knowledge and experience on monitoring of the NPS phenomenon through the National Early Warning System, specifically in reference to the defining and constructing of collaboration and reporting networks as well as for defining and implementing standardised institutional databases for the collection and management of toxicological, pharmacological and clinical data on these new substances.	DPA-NEWS	No. projects activated
7.5 Promotion of collaboration with the European Police Office (EUROPOL)	7.5.1 It is appropriate to reinforce collaboration with EUROPOL in order to strengthen and increase the information flow between Italian Law Enforcement and the European agency on the subject of seizures of NPS, this contributing to create a more complete picture on the phenomenon in Europe and to improve the work of Law Enforcement on the national territory.	DCSA	No. international collaborations activated

Action	Specifications	Executive bodies	Indicators
7.6 Coordination of stakeholder Central Governments and regional systems on the subject of NPS	7.6.1 Considering the widespread circulation (beyond the regional boundaries) of NPS, it is appropriate to operate and promote national collaboration networks connecting, while respecting the autonomy of each, in a coordinated, systematic and bidirectional manner, both the existing regional systems and the various existing stakeholder central Governments, specifically, the Ministry of Health, Ministry of the Interior/DCSA and the Ministry of Education, University and Research.	DPA All Administrations and Organisations involved	No. coordination meetings/ year

## 12. Projects and collaborations activated in the New Psychoactive Substances Area

To support the implementation of National Action Plan on New Psychoactive Substances, the Department of Anti-drug Policies activates a series of national projects that are shown below.

No.	Title	Custodial Institution
1	BIOTOX-ALERT Project – Project for enhancing toxicological-analytical activity of N.E.W.S.	<i>Istituto Superiore di Sanità [Italian Board of Health]</i>
2	ALERT NETWORK N.E.W.S. Project – Project for increasing, enhancing and greater operativity of the Warning System relative to the identification of new substances and the activation of suitable response measures on reported related drug phenomena	<i>Centro Antiveleni di Pavia [Poison Control Centre of Pavia]</i>
3	ALERT WEB MONITORING Project – Project for monitoring narcotic drug and cannabis seeds online and for the organisation by Internet of illegal musical events with high risk for the use of drugs	<i>Dipartimento delle Dipendenze, Azienda ULSS 20 Verona [Department for Addictions, Local Health Authority 20, Verona]</i>
4	SMART STOP Project – Project for the activation of control measures of commercial businesses that sell products containing substances dangerous to health	<i>Università Cattolica Sacro Cuore di Roma [Sacred Heart Catholic University of Rome]</i>
5	RIS-LASS Project – Project to support a more efficient and prompt detection of new narcotic substances in Italy through RIS/LASS laboratories of the Carabinieri Corps	<i>Arma dei Carabinieri [Carabinieri Corps]</i>
6	INSIDE-018 Project – Pre-clinical multidisciplinary project to define the acute and chronic effects on the central nervous system of synthetic cannabinoid JWH-018	<i>Dipartimento di Scienze Biomediche Università degli Studi di Cagliari [Department of Biomedical Sciences - University of Cagliari]</i>
7	NS-Drugs Project – Multidisciplinary study of the pharmacological-toxicological and physiopathological effects of new synthetic molecules (Novel Synthetic Drugs, NS-Drugs) to understand the possible psychological-physical changes in drivers of vehicles	<i>Dipartimento di Scienze della Vita e Biotecnologie (SveB) Università di Ferrara [Department of Life Sciences and Biotechnologies(SveB) University of Ferrara]</i>

No.	Title	Custodial Institution
8	VARD Project – Project to assess the prevalence of use of the date-rape drugs, develop and validate sensitive and reliable analytical methods, define procedures and good procedures relative to the drafting and dissemination of technical-scientific guidelines	<i>Centro Antiveleni di Pavia [Poison Control Centre of Pavia]</i>
9	PIED Project - Multicentre on dissemination of “performance and image-enhancing drugs” (PIED) and prevention campaign based on the use of technological tools	<i>Dipartimento Neuroscienze, Salute Mentale e Organi di Senso Università La Sapienza, Roma [Department of Neurosciences, Mental Health and Sensory Organs- La Sapienza University, Rome]</i>
10	N.P.S. - Tox Project - Toxicology study in Animal Model on New Psychoactive Substances (N.P.S.) according to GLP procedures relative to the preparation of methods for the assessment of road accidents associated to N.P.S.	<i>Dipartimento di Sanità Pubblica e Medicina di Comunità Università di Verona [Department of Public Health and Community Medicine-University of Verona]</i>
11	SON (Save Our Net) Project - Aiming to protect minor subjects, because they are the most at-risk category of the population exposed to the phenomenon of online sales of substances damaging to health.	<i>Project financed by the European Commission for the DPA – Action Grants 2010 – Prevention of and Fight against Crime</i>

### SON Project

The project has the double objective of protecting minor subjects, because they are the population most at-risk for exposure to the phenomenon of online sales of substances damaging to health and at the same time of activating a monitoring system, of verification and tracking of the information on the WEB through innovative and easily transferable methods to Member States, with the help of advanced technologies and control procedures of the demand and supply substances of narcotic drugs online.

From a conceptual point of view, the project provides for a balanced intervention on two levels: the first of a preventive-educational type and the second of a preventive-suppressing type. At the first

level the project provides for the implementation of a protection system for minors for access to the Web "Family internet security", specifically for the protection of minors to access websites that sell potentially dangerous substance online. This system must interact synergistically with the National Early Warning System for updating and continuously archive potentially dangerous websites. At the second level, the project provides for a double line of intervention, the first aimed to verify and update the archive of potentially dangerous websites, through the synergistic action between the Central Directorate for Anti-drug Services of the Ministry of the Interior, Judicial Authority and interbank services Institutes, the second aimed to combat the sale of narcotic substances online, through enforcement actions activated by Law Enforcement, based on the elements resulting from the preceding action.

The implementation of this project is added across the strategic action plan on NPS, in support of the actions provided in the epidemiological area, of the early warning and networking, in the area of reducing the demand and reducing the supply area.

Specifically, the intervention actions provided at the first level of the project, comply to the actions provided in the epidemiological area and specifically action 1.2 "Monitoring of offer – particularly online, but also smart shops, trafficking and dealing within the territory – of NPS in Italy and with comparative analysis of the foreign data" and in the area of reducing the demand and specifically in actions 3.2 "Organisation of information events for parents (parent training)" and 3.3 "Promotion of prevention campaigns on the use of NPS for youths". The objectives provided at the second level of the project, tend to support the reduction of supply strategies, through action 5.3 "Performance of investigations on websites detected that market illegal NPS" and 5.5 "Control of express courier services and national and international transports".

Other national projects and international collaborations may be activated in the future relative to the objectives of implementation of the National Action Plan - NPS and based on the availability of the budget of the Department of Anti-drug Policies.

List of technical-scientific collaborations activated to date.

No.	Area	Institution	Subject of collaboration
1	Clinical investigation on promising treatments	National Institute on Drug Abuse (NIDA)	Study to assess tolerability and efficacy of ketogenic diet in reducing withdrawal symptoms in hospitalised alcohol dependent subjects (TECAL protocol)
2	Studies and interventions on early detection, on drug testing and on short term interventions	National Institute on Drug Abuse - Division of Epidemiology	Assessment of the efficacy of early diagnosis and intervention in minors

No.	Area	Institution	Subject of collaboration
3	Natural history on drug users	National Institute on Drug Abuse - Division of Epidemiology	Exchange of best practices on monitoring systems for new drugs and new modalities of use
4	Natural history on drug users	University of Maryland Baltimore School of Medicine	Study for the <i>in vivo</i> and <i>in vitro</i> pharmacological and toxicological defining of receptors for new synthetic cannabinoids
5	Natural history on drug users	Friend Research Institute di Baltimore	Study on the association of the use of drugs and pathological gambling
6	Assessment of the outcome	Friend Research Institute di Baltimore	Assessment of the outcome of patients treated by the Department of Addictions
7	Assessment of the outcome	Friend Research Institute di Baltimore	Study and creation of software for management of clinical and research data for persons with addictions, to propose as a standard system to clinical centres
8	Clinical Neurosciences	University Hospital of Psychiatry di Berna	Study on pathological-physiological mechanism in addiction examined with Magnetic Resonance and Arterial Spin Labeling (ASL) techniques
9	Neuroimaging of addiction	NYU Child Study Center	Study through advance techniques of Magnetic Resonance. The study proposes the understanding of cognitive and biological aspects of the brain both from an anatomical and a functional point of view in adolescents and young adults (between the ages of 15 and 30) that use narcotic drugs
10	Transcranial Magnetic Stimulation	New York State Psychiatric Institute Columbia University	Study for the verification of the possibility that applying Transcranial Magnetic Stimulation (TMS) in heroin addicts undergoing treatment results in therapeutic effects (reducing the use of heroin, reducing the use of substitute drugs, reducing the number of patients sent to rehabilitation centres, etc.)
11	Transcranial Magnetic Stimulation	Intramural Research Program del National Institute on Drug Abuse	Research study aimed at assessing the efficacy of deep Transcranial Magnetic Stimulation in subjects addicted to cocaine Abuse





## 13. Annexes

### A. The National Early Warning System: organisation, functioning and collaborations

#### 1. Introduction

In compliance with the European provisions on the subject, in 2009, the Department of Anti-drug Policies of the Presidency of the Council of Ministry, has activated the National Early Warning System and Rapid Response for Drugs National Early Warning System (N.E.W.S.) – within our country

**Compliance to  
European  
provisions**

The System is for the purpose, on one hand, of early identification of phenomenon potentially dangerous to public health, related to the appearance of new drugs and new methods of use within the territory, and on the other, for the purpose of activating warning reports that promptly involve all the facilities authorised for the protection of health and responsible for the potential activation of adequate measures in response to emergencies.

**Purposes**

#### 1.1 Organisational aspects

The mechanism for the rapid exchange of information on the subject of new psychoactive substances involved in all EU Member States due to the Decision 2005/387/GAI of the European Council. Within this framework, the Italian National Early Warning System is a tool through which the exchange of information can occur between Europe and the National Focal Point, official interface with the European Monitoring Centre for Drugs and Drug Addiction (OEDT). All reports collected by the National Early Warning System through the national channels are transferred to the National Focal Point of the Department for Anti-drug Policies, which has the role to transfer the information to the OEDT which in turn proceeds to distribute them to different European countries. Similarly, when the Focal Point receives reports from the OEDT, it transmits it to the National Early Warning System which informs the network or asks for relative information, as necessary. The interactions between OEDT and the Warning System may also regard in important depth technical-scientific studies for the monitoring and supervision of new substances and new methods of use.

**European  
level**

At the national level, the Directorate of the System is aided by consulting and operativity of three structures, each competent and responsible for the coordination of a specific area:

**National level**

- National coordination of biotoxicology aspects: under the authority of the Italian Board of Health, provides opinions, consultations, supervision of the documents and events that in time, may arise and which are subject to the activities of the System in the biotoxicology area;
- National coordination of the clinical-toxicological aspects: under the authority of the Poison Control Centre of Pavia, Institute for Research, Treatment and Healthcare Foundation Salvatore Maugeri, provides opinions, consultations, supervision of the documents and events that in time, may arise and which are subject to the activities of the System in the clinical-toxicology area;
- National coordination of operative aspects: under the authority of the Department for Addictions, Local Healthcare Authority Facility 20, Verona, is a centre for collection of reports, coordinates information flow, arranges reports and warnings for the supervision for the other coordination and direction, care and updating of the input and output network, coordinates the updating and technical functioning of software, coordinates the investigations on the field and performs web monitoring.

**Figure 1 – Organisational chart of the National Early Warning System (coordination and management group).**

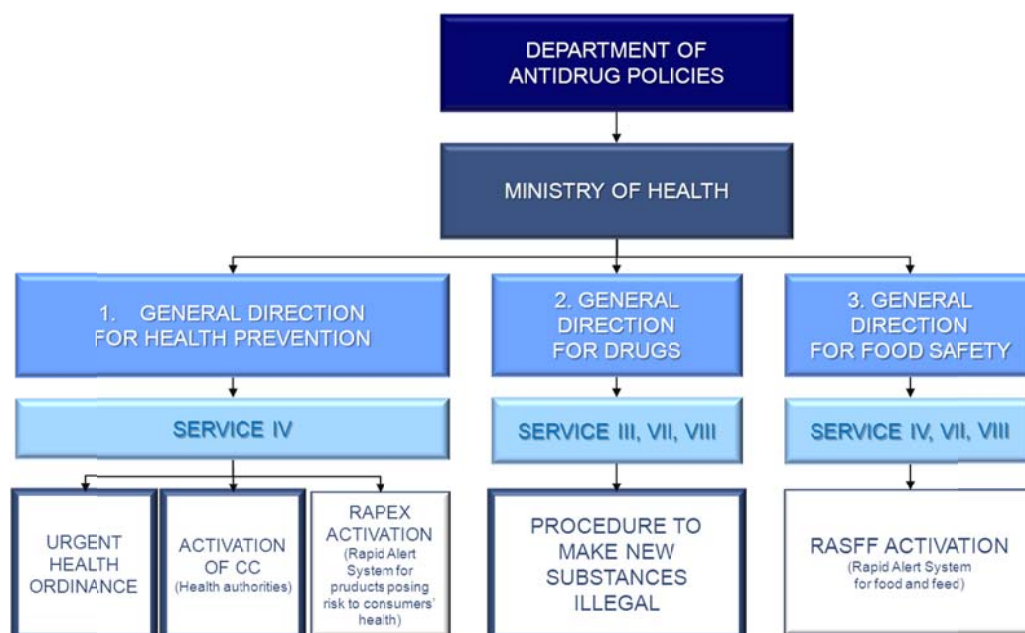


The System collaborates with the Ministry of Health and with the Central Directorate for the Anti-drug Services (DCSA). Specifically, relative to the Ministry of Health, collaboration predominantly occurs with the Directorates shown below, which have specific roles relative to the activity of the Warning System:

**Collaborati  
on with the  
Ministry of  
Health  
and with  
the DCSA**

- General directorate of medical devices, of the pharmaceutical service and safety of treatment
  - Assessment of the activation of the preliminary addition into Presidential Decree 309/90 Tables
  - Request for opinion of the Council for the Board of Health
  - Communication of the opinion expressed by the Council for the Board of Health to the Department of Anti-drug Policies
  - Issuing of the updated decree of the tables of Presidential Decree 309/90
  - Communication of proposal of decree to the Minister through the Cabinet Office
  - Forwarding of the decree to Italian Official Journal for publication
  - Assessment of the activation of safety measures provided by Legislative Decree 713/86
- General Directorate for Prevention
  - Activation of warning
  - Activation of the Consumer Code following the risk of danger for public health
  - Activation of cautionary notice for the withdrawal of commercial products containing the substance reported with the warning – Carabinieri Headquarters for the protection of Health
- General Directorate for hygiene, food safety and nutrition
  - Receipt of warnings of the National Early Warning System
  - Verification of any notification of the product
  - Activation of the RASFF

**Figure 2 – Detail of collaborations of the National Early Warning System with the Ministry of Health.**



## 1.2 Operating aspects: the macro-functioning of the System

The reports forwarded to the National Early Warning System arrive from different types of operating units that may observe the “drug” phenomenon and acquire useful information for the purposes of N.E.W.S. The reports may occur following seizures, expert opinions, accidents related to using the substances with admission to the emergency room, non-fatal and fatal overdoses, information reported by users, etc.

**Types of  
warnings**

The reports may originate both from the European Union and from within Italy. Therefore, the reports are assessed by the Directorate, with the support of the three coordinated efforts, and if necessary, enriched and completed through field investigations and external technical-scientific consultations requested to the network of experts. The reports may originate various types of communication by the System, according to the severity of the event reported, as shown on Table 1. To benefit the recipients and for better operational use, the System also provide to include data sheet specifications to the notices, photographs and scientific literature reviews.

**The  
informati  
on flow**

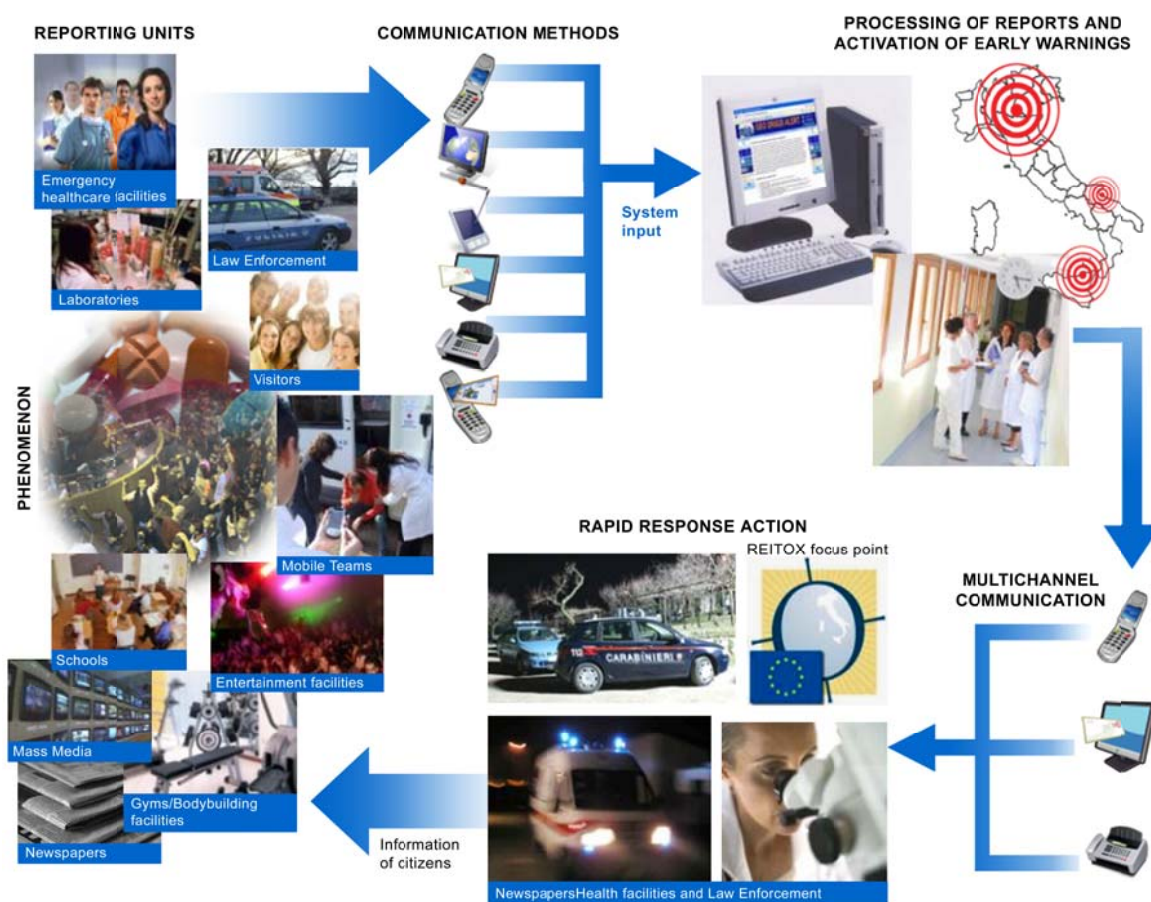
**Table 1 – Type and criteria of the output communications of the National Early Warning System.**

Type of communication of N.E.W.S.	Specifications
<b>Information</b>	NON-urgent notices sent by the National Early Warning System to collaborating centres for the purpose of sharing analytical and clinical information on new psychoactive substances, on new models on use, on new cutting agents/adulterants, in order to facilitate the analytical identification of new molecules, the identification of clinical cases and the monitoring of new phenomenon in the drug scenario.
<b>Pre-warning</b>	Appearance of a new psychoactive substance, of a new method of use, a new cutting agent/adulterant in Europe or Italy. There are no clinical cases recorded in Europe or in Italy. There are no deaths. Information in the process of being confirmed. Possibility to receive additional information that may turn into a Warning.
<b>Warning 1<sup>st</sup> degree</b>	Appearance of a new psychoactive substance, of a new method of use, new cutting agent/adulterant in Europe or in Italy. Analytically confirmed information. There are no clinical cases, in Europe or in Italy. There are no clinical cases, in Europe or in Italy. Conditions of social problems (worry, anxiety, social alarms).
<b>Warning 2<sup>nd</sup> degree</b>	Appearance of a new psychoactive substance, of a new method of use, a new cutting agent/adulterant in Europe or in Italy. Analytically confirmed information. Clinical cases occurring in Europe or in Italy. Risk of damage to health (temporary disorders, not potentially lethal) and risk of dissemination of toxic substance in the illegal and consumers market. There are no deaths.
<b>Warning 3<sup>rd</sup> degree</b>	Appearance of a new psychoactive substance, of a new method of use, a new cutting agent/adulterant in Europe. Analytically confirmed information. Clinical cases verified in Europe or in Italy. Severe risk conditions for damage to health (debilitating disease, deaths).



The different types of notices are then forwarded to the output network, in charge of the activation of the necessary and appropriate response actions (Figure 25).

**Figure 3 – Macro-functioning of the National Early Warning System: the information flow.**



## 1.3 Collaborations

### 1.3.1 The Collaborative Centres of the System

Figure 26 shows the Collaborative Centres of the System that are divided into collaborative centres for reporting and response (1<sup>st</sup> level) and Early Expert Network for rapid consultation (2<sup>nd</sup> level).

Among the first (approximately 1,500 centres) we can count the Autonomous Regions and Provinces, the Departments for Addictions, treatment centres, mobile units, laboratories, facilities in the emergency system and Law Enforcement. These centres have the role of forwarding reports to the System and of activating the suitable response measures in case of warning.

**1<sup>st</sup> level  
Centres**

Between the second level centres, on the other hand, we can include the Central Directorate for Anti-drug Services, Forensic Police, the Forensic Investigations Departments of the Carabinieri, the Customs Agency, forensic toxicology, poison control centres, university laboratories and several research centres. These have the role not only of forwarding reports and to activate response measures, if necessary, but to also support the System in the activity of completing the reports and to supply opinions and suggestions relative to reports and to any activation of warnings.

**2<sup>nd</sup> level  
Centres:  
Early Expert  
Network**

**Figure 4 – Image of the organisation of the Collaborative Centres of the National Early Warning System.**



### 1.3.2 Collaboration with the Carabinieri Corps

In December 2012, an agreement was signed between the Presidency of the Council of Ministers - Department of Anti-drug Policies, and the Carabinieri Corps. Through this agreement, the Department of Forensic Investigations centres (RIS) and Narcotic Substances Analysis Laboratories (LASS) of the Carabinieri Corps (coordinated by the Ra.C.I.S.) were inserted to all effects to the network of Collaborative Centres of the National Early Warning System of the Department of Anti-drug Policies (Presidency of the Council of Ministers) - National Early Warning System (N.E.W.S.), for the purpose of collaborating and supporting said System in identifying new drugs and new methods of use through the analysis of substances seized by the Narcotic Substances Analysis Laboratories.

**Agreement  
between DPA  
and Carabinieri  
Corps**

From the need for updating specialised staff on the analysis of new psychoactive substances, the Department of Anti-drug Policies (DPA) has thus, promoted a specific project, named "R.I.S. – N.E.W.S.", with the general objective of supporting a more prompt and efficient identification of the new psychoactive substances in Italy facilitating the formal admission into the laboratories of the Carabinieri Corps (RIS e LASS) into the National Early Warning System, their participation in the flow of national data and the adoption of suitable analytical methodologies to identify new substances.

**RIS-NEWS  
project  
to support  
admission of the  
laboratories in  
NEWS**

During 2013 a training course is planned for the purpose of updating specialised staff particularly on the topics the concern:

**Training course**

- Analytical protocols and good laboratory practices for the qualitative-quantitative chemical analysis of samples of narcotic substances, with specific reference to the new psychoactive substances;
- Participation to the National Early Warning System, to promptly find related drug phenomena potentially dangerous to public health and to forward warnings and activate response actions.

### 1.3.3 Collaboration with the National Institute on Drug Abuse

In Rome, on 25 July 2011, the second important international agreement was stipulated for scientific collaboration between Italy and the United States signed by the Chief of the Department of Anti-drug Policies, Giovanni Serpelloni, and by the Director of the National Institute on Drug Abuse, Nora Volkow. The agreement encourages the implementation of reciprocally advantageous research to improve diagnosis, the treatment of the use of drugs and addiction, developing areas of specific interest that include research, early diagnosis, screening, treatment and short-term intervention for addiction disorders, particularly among adolescents and young adults. In the area of prevention, the two structures decided to also

**Agreement  
Italy-USA**

collaborate in the National Early Warning System.

Therefore, during the course of 2012, the organisation, activity and results of the Italian Warning System were presented to a workgroup specifically recommended by Prof Volkow to exchange information and knowledge both on the organisational aspects of the System, and on the new psychoactive substances and the new methods of use that were identified through its activity. The exchange of information occurred through videoconferences and vis-à-vis meetings during the 2012 NIDA International Forum, held in June in Palm Springs (California). The collaborations persists to date and predominantly involves the exchange of information and best practices as well as supervision, by NIDA, of the development and creation of the institutional database of the National Early Warning System.

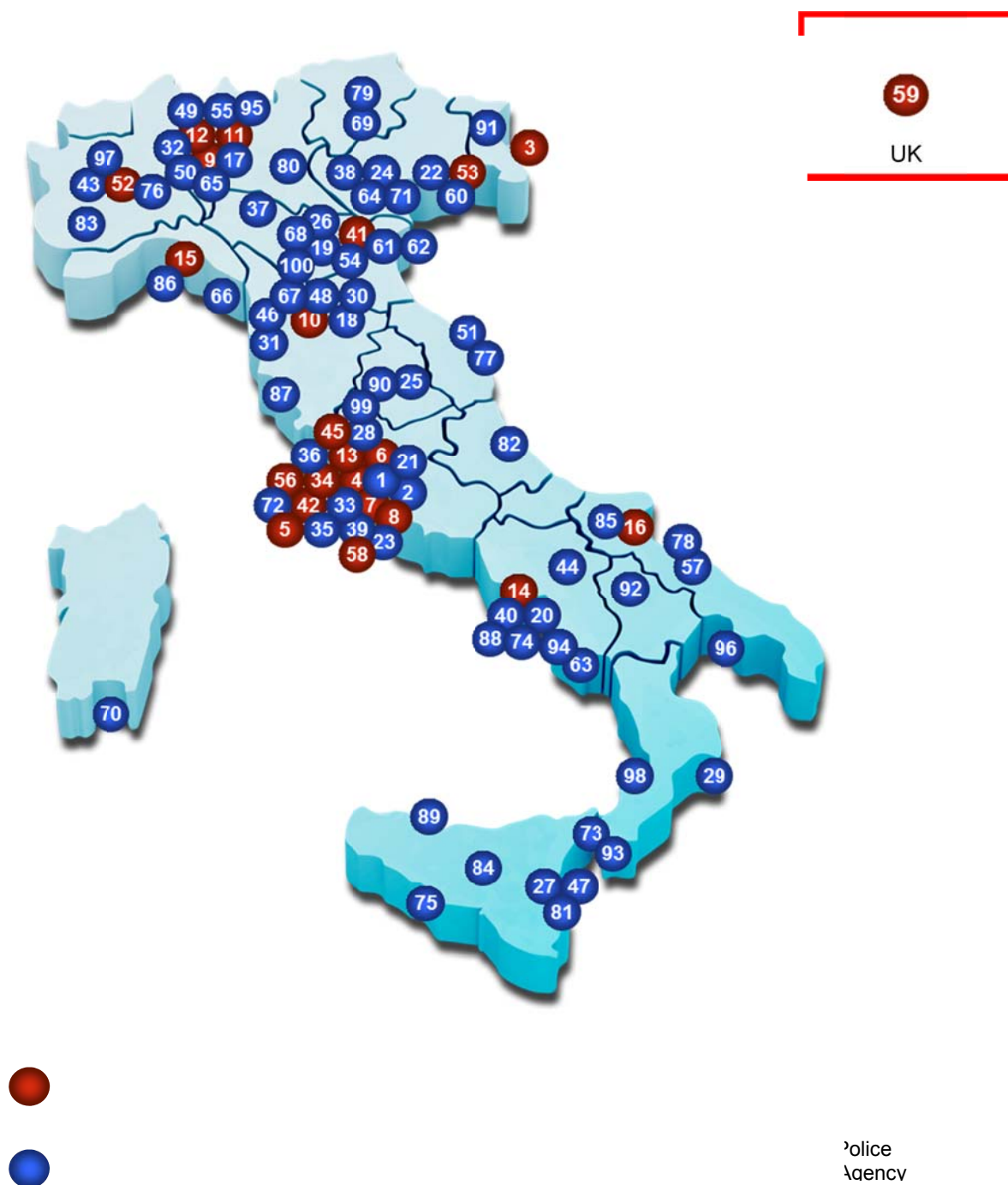
**Workgroup of  
NEWS**



## B. Collaborative Centres of the National Early Warning System

(September 2013)

The figure below shows the map and geographic location of the collaborative centres of the National Early Warning System - NEW





List of collaborative centres of the National Early Warning System - NEWS (September 2013)

No	Institution	Contact
1	Italian National Health Institute - Pharmaceutical Department	Teodora Macchia
2	Italian National Health Institute - Pharmaceutical Department	Roberta Pacifici
3	Ministry of the Interior UTG Trieste- Addiction Operating Core	Alma Biscaro
4	Ministry of Health - General Prevention Directorate – Office 7	Pietro Canuzzi
5	Ministry of Health - General Directorate of medical devices, pharmaceutical service and treatment safety - Office 8	Germana Apuzzo
6	Ministry of Health - Office 4 - Preventive Healthcare General Directorate	Aurelia Fonda
7	Ministry of Health - Director Office 4 - Preventive Healthcare General Directorate	Liliana La Sala
8	Italian Drug Monitoring Centre - Department of Anti-drug Policies	Roberto Mollica
9	Poison Control Centre of Pavia, National Centre of Toxicology Information - Scientific Research, Treatment and Care Institute Foundation Salvatore Maugeri	Carlo Locatelli
10	Poison Control Centre – University Hospital Careggi, Florence	Primo Botti
11	Poison Control Centre Bergamo, Riuniti Hospitals	Maria Luisa Farina
12	Poison Control Centre Milan - Niguarda Cà Granda Hospital	Franca Davanzo
13	Poison Control Centre Polyclinic Gemelli - Rome	Alessandro Barelli
14	Poison Control Centre, Cardarelli Hospital - Naples	Clara Volpe
15	Poison Control Centre, Gaslini Hospital - Genoa	Mario Lattere
16	Poison Control Centre, Riuniti Hospital - Foggia	Anna Lepore
17	Laboratory of Toxicology Analysis - Scientific Research, Treatment and Care Institute Polyclinic San Matteo - Pavia	Pietro Papa
18	Forensic toxicology University of Florence	Elisabetta Bertol
19	Forensic toxicology University of Bologna	Elia Del Borrello
20	Forensic toxicology 2 University of Naples	Renata Borriello
21	Forensic toxicology Catholic University of the Sacred Heart - Rome	Marcello Chiarotti
22	Forensic toxicology University of Padua	Santo Davide Ferrara
23	Forensic toxicology “La Sapienza” University- Rome	Mauro Iacoppini
24	Forensic toxicology University of Verona	Franco Tagliaro
25	Forensic toxicology University of Perugia	Paola Melai
26	Forensic toxicology University of Modena and Reggio Emilia	Manuela Licata
27	Forensic toxicology University of Catania	Guido Romano
28	Forensic toxicology - Forensic Medicine Institute Catholic University of the Sacred Heart	Sabina Strano Rossi
29	Toxicology Laboratory - Provincial Hospital of Catanzaro	Loris Rivalta
30	General Laboratory University Hospital Careggi	Gianni Messeri
31	Department of Pharmaceutical Sciences - University of Pisa	Marco Macchia
32	Department of Pharmaceutical Sciences - University of Milan	Veniero Gambaro
33	Dept. of Anatomy, Histology, Forensics and Musculoskeletal System, Sciences - “La Sapienza” University, Rome	Federica Umani Ronchi
34	Anti-crime Central Directorate - Italian State Police - Forensic Police Service	Egidio Lumaca
35	Forensic Police Service - Drug Abuse Investigation Section - Italian State Police	Serena Detti
36	Carabinieri Corps - Forensic Investigation Department	Luigi Ripani
37	Carabinieri Forensic Investigation Department of Parma	Maj Adolfo Gregori
38	Carabinieri Corps- Narcotic Substances Analysis Laboratory of Verona	Roberto Buonocore
39	Customs Agency - Chemical Laboratory of Rome	Alessandro Proposito
40	Laboratory and Chemical Services of the Customs Agency of Naples	Francesco Parisi
41	Italian State Police – Mobile Team of Bologna	Fabio Bernardi
42	Central Directorate Anti-drug Services	Luigi D’Onofrio
43	Anti-doping Laboratory - Turin	Marco Vincenti

44	ARPAC [Regional Agency for Environmental Protection in Campania] - Technical Department of Benevento	Caterina Martuccio
45	AIFA - Italian Medicines Agency - Assessment and Authorisations Office	Lucio Covino
46	Clinical biochemistry and toxicology - Local Health Unit 2 Lucca	Daniele Prucher
47	Chemistry and Clinical Toxicology Public Human Services Catania - Region of Sicily	Antonino Signorelli
48	Public Health Laboratory - Area Vasta Central Tuscany - Hospital of Florence	Roberto Baronti
49	"S. Anna" Hospital Laboratory - Como	Gianni Giana
50	Research Analysis and Technology Laboratories on Food and the Environment - University of Milan	Fernando Tateo
51	Forensics Institute -Neurosciences Department Polytechnic University of Marche	Raffaele Giorgetti
52	Public Prosecutor's Office - Turin	Raffaele Guariniello
53	Directorate of Social Policies Service for social sponsorship and inclusion - Municipality of Venice	Alberto Favaretto
54	Freelancer	Onelio Morselli
55	Freelancer	Mario Franchini
56	Poison Control Centre Polyclinic Umberto I - Rome	Caterina Grassi
57	Forensic Toxicology University of Bari	Roberto Candela Gagliano
58	DCSA [Italian State Police Central Directorate Anti-drug Services] - 3 <sup>rd</sup> Service	DCSA Secretariat
59	University of Hertfordshire department of Pharmacy	Fabrizio Schifano
60	Laboratory of Hygiene and Industrial Toxicology Local Health and Social Care Facility 12 Venetian Department of Prevention	Giampietro Frison
61	Department of Life Sciences and Biotechnologies (SvEb)- Pharmacology Section - University of Ferrara	Matteo Marti
62	University of Ferrara-Department of Pharmaceutical Sciences	Claudio Trapella
63	Clinical Toxicology – Critical Care Area Department	Nicola Maria Vitola
64	Simple Organisational Structure of Clinical Toxicology C/O Emergency Room	Giorgio Ricci
65	Laboratory of Prevention – Local Health Authority Milan	Roberta Casa
66	Laboratory of Toxicology - Local Health Authority 5 Spezzino	Fabio Evangelisti
67	Laboratory Narcotic Substances Analysis - Florence	Giuseppe Dellasorte
68	Hospital of Bologna S. Orsola-Malpighi Centralised Laboratory Hospital Unit - Motta	Edit Pierini
69	Laboratory of Public Health - Department of Prevention - Azienda Provinciale Healthcare Services Facility of Trento	Fiorenza Svaizer
70	Carabinieri Corps - Carabinieri Forensic Investigations Department of Cagliari	Marco Palanca
71	Italian State Police – Mobile Team of Verona	Roberto Della Rocca
72	Carabinieri Corps – Carabinieri Forensic Investigations Department of Rome	Giuseppe Peluso
73	Carabinieri Corps – Carabinieri Forensic Investigations Department of Messina	Pietro Maida
74	University of Naples "Federico II" - Department of Pharmacy	Ettore Novellino
75	Carabinieri Corps – Narcotic Substances Analysis Laboratory of Agrigento	Cesare Francesco Falcomatà
76	Carabinieri Corps – Narcotic Substances Analysis Laboratory of Alessandria	Gianluca Belli
77	Carabinieri Corps – Narcotic Substances Analysis Laboratory of Ancona	Francesco Simeone
78	Carabinieri Corps – Narcotic Substances Analysis Laboratory of Bari	Carmine Guerriero
79	Carabinieri Corps – Narcotic Substances Analysis Laboratory of Bolzano	Luciano Osler
80	Carabinieri Corps – Narcotic Substances Analysis Laboratory of Brescia	Alioscia Battini
81	Carabinieri Corps – Narcotic Substances Analysis Laboratory of Catania	Alberto Perna
82	Carabinieri Corps – Narcotic Substances Analysis Laboratory of Chieti	Vincenzo Trailani
83	Carabinieri Corps – Narcotic Substances Analysis Laboratory of Cuneo	Cristoforo Lu Mocco
84	Carabinieri Corps – Narcotic Substances Analysis Laboratory of Enna	Carlo Arancio
85	Carabinieri Corps – Narcotic Substances Analysis Laboratory of Foggia	Raffaele Di Paolo
86	Carabinieri Corps – Narcotic Substances Analysis Laboratory of Genoa	Fernando Leone

87	Carabinieri Corps – Narcotic Substances	Analysis Laboratory of Grosseto	Antonio Gaita
88	Carabinieri Corps – Narcotic Substances	Analysis Laboratory of Naples	Fernando Ricci
89	Carabinieri Corps – Narcotic Substances	Analysis Laboratory of Palermo	Maurizio De Pascali
90	Carabinieri Corps – Narcotic Substances	Analysis Laboratory of Perugia	Lanfranco Croci
91	Carabinieri Corps – Narcotic Substances	Analysis Laboratory of Pordenone	Natalino Lanzini
92	Carabinieri Corps – Narcotic Substances	Analysis Laboratory of Potenza	Michele D'Ascanio
93	Carabinieri Corps – Narcotic Substances	Analysis Laboratory of Reggio Calabria	Michele De Vanna
94	Carabinieri Corps – Narcotic Substances	Analysis Laboratory of Salerno	Fernando Russo
95	Carabinieri Corps – Narcotic Substances	Analysis Laboratory of Milan	Christian Marchetti
96	Carabinieri Corps – Narcotic Substances	Analysis Laboratory of Taranto	Francesco Damiani
97	Carabinieri Corps – Narcotic Substances	Analysis Laboratory of Turin	Luigi Murialdo
98	Carabinieri Corps – Narcotic Substances	Analysis Laboratory of Vibo Valentia	Donato Orlando
99	Carabinieri Corps – Narcotic Substances	Analysis Laboratory of Viterbo	Ivan Bianco
100	Carabinieri Corps – Narcotic Substances	Analysis Laboratory of Bologna	Errico Carloni

## C1 – Form for reporting a new substance - Laboratories

SISTEMA NAZIONALE DI ALLERTA PRECOCE  
NATIONAL EARLY WARNING SYSTEM - N.E.W.S.**Form for reporting to the National Early Warning System  
and rapid response for drugs**

Title of report		
Source of report		
Images subject to reporting		
Form of submittal of finding/s		
Organoleptic characteristics of the finding/s		
Total net weight		
Net unit weight		
Main active ingredients (name, %)		
Structure		
Empirical formula		
Molecular weight		
Other psychoactive substances (names, %)		
Excipients		
Date of seizure (month/year)		
Place of seizure (province)		
Seizure information		
Analytical testing supervised by:		
Notes		
Annexes (analytical data):	YES <input type="checkbox"/>	NO <input type="checkbox"/>



## C2 – Form for reporting a new substance - clinical centres


 SISTEMA NAZIONALE DI ALLERTA PRECOCE  
 NATIONAL EARLY WARNING SYSTEM - N.E.W.S.

Reporting unit	
Reporting operator	
Region	
City	
Address	
Telephone	
E-mail	
Initial date patient monitored	
Initial hours patient monitored	
Sex of the patient	<input type="checkbox"/> Male <input type="checkbox"/> Female
Patient's year of birth	
Structure where the patient was admitted and assisted	
First and last name of the physician who managed the case	
First and last name of manager of the admitting facility	

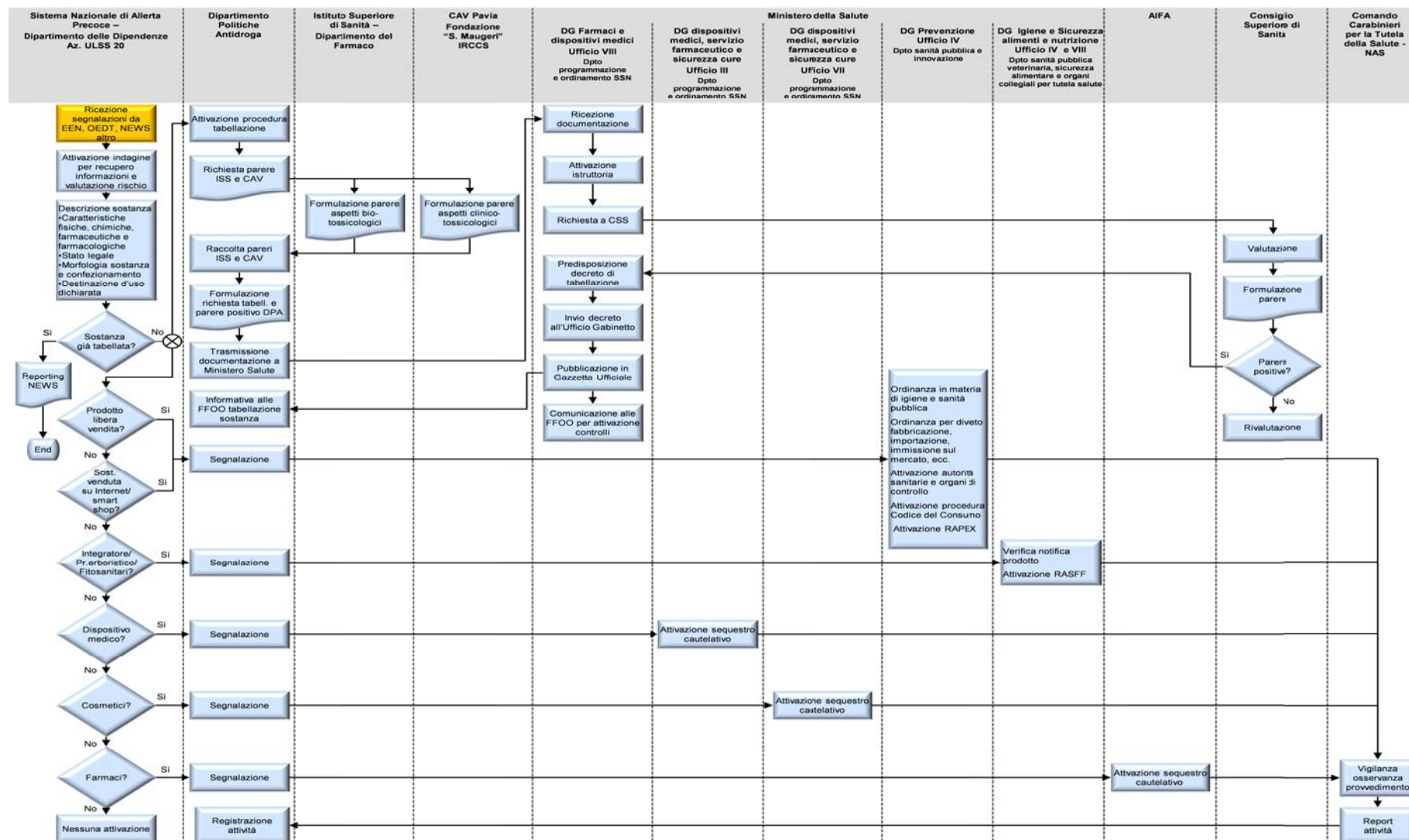


Telephone number of the admitting facility	
Main symptoms found at admission	
Degree of consciousness at admission	<input type="checkbox"/> Conscious <input type="checkbox"/> Partially Conscious <input type="checkbox"/> Unconscious
Narcotic substances used as <b>reported</b>	
Other <b>reported</b> substances	
Narcotic substances <b>found by toxicology test</b>	
Diagnosis at admission	
Final diagnosis	
Result	
<b>Information for georeferencing (if available)</b>	
Environment where substances were purchased	<input type="checkbox"/> "On the street" <input type="checkbox"/> Commercial business <input type="checkbox"/> Internet <input type="checkbox"/> School <input type="checkbox"/> Other: _____
Municipality where substance was purchased	
Address	
Municipality where substance was used	
Address	

Environment where substance was used	<input type="checkbox"/> Discothèque <input type="checkbox"/> Bar/Pub <input type="checkbox"/> Private dwelling <input type="checkbox"/> Workplace	<input type="checkbox"/> Parks/public gardens <input type="checkbox"/> School <input type="checkbox"/> Restaurant <input type="checkbox"/> Other _____
If the substance was purchased from a commercial business or on the Internet:		
Name of store		
Name of site		
Name of the product purchased		
Quantity of product purchased		
Expense incurred by the patient		
Are any samples of the substance available?	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Notes		

If available, please annex the clinical record of the Emergency Room where the patient was initially checked.

## D. Procedure for adding in the Presidential Decree 309/90 Tables of NPS and for activating other protective measures



## E. Guideline check list to perform risk assessment of a new psychoactive substance: standard profile

No.	Criterion	Main signs/symptoms	Assessment			
1	Found in Italy		Yes	No	Unknown	
2	Found in Europe		Yes	No	Unknown	
3	Prevalence of use		Low (<0,1% GPS)	Medium (0,1-0,3% GPS)	High (>0,3% GPS)	Unknown
4	Average lethal dose and differential dose used		High lethal dose High differential	Low lethal dose Low differential	Unknown	
5	Bioavailability - half-life		Low bioavailability Low half-life	High bioavailability Long half-life	Unknown	
6	Risk of developing tolerance, dependence or addiction (addiction potential)		None	Low	High	Unknown
7	Known precursors and their degree of toxicity		Yes	No	Unknown	
8	Known metabolites and their degree of toxicity		Yes	No	Unknown	
9	Existence of analogue substances already known with psychoactive effects		Yes	No	Unknown	
10	Mechanism of action (pharmacokinetics and pharmacodynamics)		Low	High	Unknown	
11	Potential therapeutic use		Yes	No	Unknown	
12	Method of use	Injection route of administration	Yes	No	Unknown	
		Parenteral route of administration	Yes	No	Unknown	
		Inhalation route of administration	Yes	No	Unknown	
		Sniffing route of administration	Yes	No	Unknown	
		Oral route of administration	Yes	No	Unknown	

13	Acute mortality reported		None	Described in literature (No. cases)	Directly observed and documented (No. cases)	Unknown
14	Effects on the Central Nervous System		None	Described in literature	Directly observed and documented	Unknown
15	Effects on the Peripheral Nervous System		None	Described in literature	Directly observed and documented	Unknown
16	Psychological Effects	Change in state of consciousness/alertness	None	Described in literature	Directly observed and documented	Unknown
		Changes of psychomotor coordination/reactivity	None	Described in literature	Directly observed and documented	Unknown
		Changes in attention	None	Described in literature	Directly observed and documented	Unknown
		Changes in the ability for self-control and aggression	None	Described in literature	Directly observed and documented	Unknown
		Other	None	Described in literature	Directly observed and documented	Unknown
17	Effects on the cardiovascular system	Myocardial infarction	None	Described in literature	Directly observed and documented	Unknown
		Arrhythmias	None	Described in literature	Directly observed and documented	Unknown
		Pressure disorders (hypotension - hypertension)	None	Described in literature	Directly observed and documented	Unknown
		Vessel involvement	None	Described in literature	Directly observed and documented	Unknown
		Other	None	Described in literature	Directly observed and documented	Unknown
18	Effects on the respiratory system (primary tract)	Destructive lesions of the oropharynx and nasal septum	None	Described in literature	Directly observed and documented	Unknown
		Glottis edema	None	Described in literature	Directly observed and documented	Unknown
		Other	None	Described in literature	Directly observed and documented	Unknown
19	Effects on the respiratory system (bronchi)	Bronchial spasm	None	Described in literature	Directly observed and documented	Unknown
		Other	None	Described in literature	Directly observed and documented	Unknown

20	Effects on the respiratory system (lungs)		None	Described in literature	Directly observed and documented	Unknown
		Alveolar changes	None	Described in literature	Directly observed and documented	Unknown
		Infections	None	Described in literature	Directly observed and documented	Unknown
		Microinfarct, embolism, thrombosis	None	Described in literature	Directly observed and documented	Unknown
		Other	None	Described in literature	Directly observed and documented	Unknown
21	Effects on the hepatorenal system	Changes in filter/catabolic function	None	Described in literature	Directly observed and documented	Unknown
		Other	None	Described in literature	Directly observed and documented	Unknown
22	Effects on endocrine system	Functional changes	None	Described in literature	Directly observed and documented	Unknown
		Other	None	Described in literature	Directly observed and documented	Unknown
23	Specific effects on other systems	Functional changes	None	Described in literature	Directly observed and documented	Unknown
		Other	None	Described in literature	Directly observed and documented	Unknown
24	Packaging and warnings for consumers (labelling)	Method of offering and selling the product to the customer	Truthful and complete information on the contents and effects on health		Untruthful, lacking e/or lack of warnings	Unknown
25	Social risks	Loss of work/study	None	Described in literature	Directly observed and documented	Unknown
		Compromised/Loss of social/family relationships	None	Described in literature	Directly observed and documented	Unknown
		Prostitution	None	Described in literature	Directly observed and documented	Unknown
		Other	None	Described in literature	Directly observed and documented	Unknown
26	Criminal risks	Involvement in production, trafficking and dealing	Yes	No	Unknown	
		Other	Yes	No	Unknown	





## F. UN Resolution 56/4 of March 2012



### United Nations

### Commission on Narcotic Drugs

#### Resolution 56/4

#### Enhancing international cooperation in the identification and reporting of new psychoactive substances

*The Commission of Narcotic Drugs,*

*Recalling* its resolution 48/1 of 11 March 2005, on promoting the sharing of information on emerging trends in the abuse of and trafficking in substances not controlled under the international drug control conventions,

*Recalling* also its resolution 53/11 of 12 March 2010, on promoting the sharing of information on the potential abuse of and trafficking in synthetic cannabinoid receptor agonists,

*Recalling further* its resolution 53/13 of 12 March 2010, on the use of “poppers” as an emerging trend in drug abuse in some regions,

*Recalling* its resolution 55/1 of 16 March 2012, on promoting international cooperation in responding to the challenges posed by new psychoactive substances,

*Reiterating its concern* at the number of potentially dangerous new psychoactive substances that continue to be marketed as legal alternatives to internationally controlled drugs, circumventing existing controls,

*Concerned* that emerging new psychoactive substances may have effects similar to those of internationally controlled drugs and may pose risks to public health and safety, and noting the need for additional data on the effects of these substances to be collected and shared,

*Concerned also*, that transnational organised criminal groups in certain parts the world create and exploit the increasingly lucrative market for these substances and take advantage of gaps in existing and legal regimes,

*Acknowledging* that the adverse impacts and risks to public health and safety that some new psychoactive substances can cause, including harm to young people, are a global concern for which all Member States have a shared responsibility,

*Recognising* the speed with which new psychoactive substances emerge and the role that the Internet and the media may play in the trade and promotion of these substances,

*Recognising also* that the establishment of a global early warning system, taking advantage of existing regional mechanisms, as appropriate, and providing timely reporting on the emergence of new psychoactive substances, could benefit Member States' understanding of and response to the complex and changing market for these substances,

*Noting* that the detection and identification of emerging substances is the first step in assessing the potential health risks of new psychoactive substances, and therefore scientific, epidemiological, forensic and toxicological information on these substances needs be collected, maintained and disseminated,

*Acknowledging* the valuable work of the global "Synthetics Monitoring": Analysis, Reporting and Trends" programme of the United Nations Office on Drugs and Crime in the collection of information on new psychoactive substances, pursuant to Commission on Narcotic Drugs resolution 55/1, through a questionnaire sent to all Member States and, through them, to territories,

*Welcoming* the report of the United Nations Office on Drugs and Crime entitled "The challenge of new psychoactive substances", published in March 2013, which provides a comprehensive overview of the nature and magnitude of the challenges posed by new psychoactive substances,

1. *Encourages* Member states to take a comprehensive, coordinated and integrated approach to the detection, analysis and identification of new psychoactive substances, incorporating health and consumer protection agencies, Government department responsible for drug policies, law enforcement, border and customs agencies, the justice sector and other relevant stakeholders as appropriate;
2. *Also encourages* Member States to continue to collect information on the adverse impacts and risks to public health and safety posed by new psychoactive substances, using chemical and toxicological data, data from hospitals and treatment and toxicology centres and data reported by individuals;
3. *Further encourages* Member States to take a proactive approach to the detection, forensic identification and toxicological testing of new psychoactive substances, including through interregional and intraregional collaboration, at points of entry and through the postal systems or points of sale, including over the Internet, and to monitor emerging trends in the potential adverse impacts and risks to health and safety, prevalence, availability, composition, production, manufacture, distribution and seizure of new psychoactive substances;

4. *Urges* Member States to share with one another information on the identification of new psychoactive substances and on the adverse impacts and risks they pose to health and safety, and also to share that information with the United Nations Office on Drugs and Crime, through, *inter alia*, its global Synthetics Monitoring: Analysis, Reporting and Trends programme, to enable timely analysis and dissemination of information to all Member States, using, where appropriate, existing national and regional early warning systems and networks;
5. *Also urges* Member States to include information on the potential adverse impacts and risks to public health and safety of new psychoactive substances through tailored prevention strategies, including awareness-raising, to counter public perceptions that new psychoactive substances not subject to drug control are safe;
6. *Encourages* Member States, the United Nations Office on Drugs and Crime, the World Health Organisation, the International Narcotics Control Board and other relevant organisations to share and exchange ideas, efforts, good practices and experiences in adopting effective responses to address the unique challenges posed by new psychoactive substances, which may include, among other national responses, new laws, regulations and restrictions;
7. *Urges* the United Nations Office on Drugs and Crime to continue to develop the voluntary electronic portal of the international collaborative exercises, a programme for national forensic and/or drug-testing laboratories to enable timely and comprehensive sharing of information on new psychoactive substances, including analytical methodologies, reference documents and mass spectra, as well as trend-analysis data, with a view to providing a global reference point and early warning advisory on new psychoactive substances, subject to the availability of extra budgetary resources;
8. *Requests* the United Nations Office on Drugs and Crime to consider including within its programmes the provision of technical assistance in the identification and reporting of new psychoactive substances, and requests Member States to consider the provision of bilateral technical assistance;
9. *Invites* Member States and other donors to provide extra budgetary resources for these purposes in accordance with the rules and procedures of the United Nations.

## G. Information materials for schools. "Stay free and healthy" cards.



### Nuove Sostanze Psicoattive - NSP?

perché' nuociono alla salute:

**cosa sono?**

Le NSP sono droghe sintetiche, cioè costruite in laboratorio che spesso vengono spacciate come "naturali". La maggior parte di queste sono scarti della ricerca farmacologica; altre, invece, sono state prodotte da laboratori artigianali proprio per ottenere esclusivamente. Le principali NSP ad oggi identificate sono i cannabinoidi sintetici, i catinoni sintetici, le piperazine, la metossietamina e le fenetilamine. E' importante segnalare che spesso i prodotti offerti in Internet contengono dei mix di NSP che non vengono dichiarati sulle etichette delle confezioni traendo in inganno il consumatore ignaro sia della qualità, sia della reale quantità di ciò che viene assunto.

**effetti**

A seguito dell'assunzione di NSP, si possono manifestare effetti tossici anche gravi, soprattutto sullo stato di coscienza e del controllo con forte perdita delle performance psico-fisiche che può portare anche al ricovero d'urgenza in pronto soccorso, come riscontrato in oltre 60 casi di intossicazione acuta registrati. A seconda del tipo di NSP assunto si possono avere diverse sintomatologie: congiuntivite, tachicardia, ipertensione, alterazione della percezione e dell'umore, ansia-crisi di panico, riduzione della capacità di concentrazione e della memoria a breve-termine, cefalea, allucinazioni, grave agitazione psicomotoria e aggressività.

**danni**

L'uso di NSP può sovvertire il naturale funzionamento dei neuroni cerebrali poiché queste nuove droghe possono avere una dannosità anche superiore alle droghe tradizionali (cannabis, eroina, cocaina, amfetamine), causando quindi danni maggiori al Sistema Nervoso Centrale ma anche ad organi e apparati, quali il cuore e i polmoni. Siccome l'identificazione delle NSP nel sangue risulta ancora difficile dai laboratori, in caso di intossicazione il tempo per fare una diagnosi può allungarsi, mettendo a repentaglio la vita dell'assuntore.

Disegni a cura di Massimo Anzoni  
Realizzato da www.dsa-italia.it

PRESIDENZA DEL CONSIGLIO DEI MINISTRI  
Dipartimento Politiche Antidroga

[www.droganograzie.it](http://www.droganograzie.it)  
[www.dronet.org](http://www.dronet.org)  
[www.drugfreedom.org](http://www.drugfreedom.org)

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# GHB?

perche' nuoce alla salute:

## cos'e'?

GHB (o acido gammaidrossibutirrico) è un farmaco utilizzato dai medici per il trattamento dell'insonnia e dell'alcolismo. E' noto sul mercato illegale come "droga dello stupro" perchè viene spesso impiegato per indurre nelle ragazze perdita del controllo e della capacità di opporsi a richieste inopportune e sedazione/relassamento, e abusarne sessualmente.

## effetti

Gli effetti principali del GHB sono: stato confusionale, perdita del senso della realtà e della capacità di coordinamento. Compaiono spesso nausea, vomito e problemi muscolari. Può indurre un abbassamento della capacità di resistere a compiere o a subire atti contro la propria volontà.

## danni

Nei casi più gravi possono verificarsi convulsioni, collasso, coma e morte. Se la assumi provi un senso di stordimento, incapacità di reagire e perdi anche la memoria a breve termine, cioè la capacità di ricordare ciò che è accaduto nelle ultime ore. Più la dose è elevata, più aumenta il rischio di nausea, vomito e vertigini, mal di testa, confusione, problemi respiratori e disturbi della memoria. Possono inoltre manifestarsi contrazioni muscolari incontrollabili simili ai sintomi di una crisi epilettica. Oltre ai rischi per la salute, particolarmente inquietante è il fatto che questa sostanza può essere aggiunta di nascosto alle bevande per favorire la violenza sessuale. In caso di consumo da lungo tempo ed in forti quantità, sono state osservate situazioni di dipendenza fisica accompagnata dai sintomi dell'astinenza.

## consigli

Per non incorrere nel rischio di violenza sessuale è consigliabile: evitare prima di tutto le situazioni e i luoghi a rischio, non bere mai dal bicchiere offerto da persone sconosciute o da chi non ti fidi, farsi sempre aprire la bottiglia in tua presenza.



DIPARTIMENTO  
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www.droganograzie.it  
www.dronet.org  
www.drugfreeedu.org

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by ASEP Italia per novembre 2009





# ketamina?

perche' nuoce alla salute:

**cos'e'?**

E' un anestetico generale ed ha un effetto rapido e molto forte, impiegato soprattutto per uso veterinario. Da alcune persone viene utilizzato impropriamente anche come sostanza stupefacente per i pericolosi effetti anestetici-dissociativi che induce. E' presente sul mercato illegale sotto forma liquida che, attraverso un procedimento di riscaldamento, viene trasformata in polvere per poi essere sniffata o fumata.

**effetti**


Gli effetti principali della ketamina sono quelli di produrre gravi alterazioni e stimolazioni anomale del cervello con distorsione delle percezioni, allucinazioni visivo-auditive, sensazione di essere inerti, con impossibilità di comandare al proprio corpo. Oltre a questo può dare effetti sedativi che alcune persone usano per contrastare gli effetti di sovraeccitazione di alcune droghe come la cocaina e le anfetamine, aumentando i danni e i rischi per la propria salute.

**danni**

L'uso di ketamina, dati i suoi effetti dissociativi, può compromettere in modo permanente le tue funzioni cerebrali, in particolare la tua capacità di giudizio, di attenzione, di memoria. In caso di particolare vulnerabilità, addirittura incrementa lo sviluppo di gravi patologie mentali quali ad esempio psicosi acute e schizofrenia. Con l'uso aumentano notevolmente inoltre le probabilità di farti coinvolgere in incidenti e comportamenti rischiosi per la tua incolumità fisica. Se associata contemporaneamente ad altre sostanze o droghe deprimenti come alcol, l'eroina e i barbiturici, la ketamina arresta la respirazione e la funzione cardiaca portando all'incoscienza e alla morte. Se assunta invece, insieme a stimolanti quali l'ecstasy o le anfetamine, può determinare livelli molto elevati della pressione sanguigna, con conseguente rischio di ictus cerebrale e infarto. Induce dipendenza, con forte desiderio della sostanza e bisogno di incrementare le dosi per ottenere gli stessi effetti, nonostante i potenziali danni.

**patente**


L'uso di ketamina è illegale. Se guidi l'auto, la moto o il motorino dopo l'uso di droga, le Forze dell'Ordine possono ritirarti la patente, sequestrarti il veicolo, darti una grossa multa, segnalarti alla Prefettura e ritirarti persino il passaporto.



DIPARTIMENTO  
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[www.droganograzie.it](http://www.droganograzie.it)  
[www.dronet.org](http://www.dronet.org)  
[www.drugfreeda.org](http://www.drugfreeda.org)

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## H. Information/training tools for operators

**www.drogaNews.it**

The screenshot shows the homepage of the DrogaNews portal. At the top, it identifies itself as part of the Italian Ministry of Health's Department of Anti-Drug Policies. The main navigation bar includes links for home, about, contacts, and a sitemap, along with a search function. Below this, there are two columns of menu items categorized into 'Page A' and 'Page B', covering topics like psycho-social education, neuroscience, prevention, and epidemiology. The central focus is on a featured article titled 'La Who fa il punto sulle strategie contro il fumo di sigaretta' (The WHO makes the point on strategies against cigarette smoking), dated 03-09-2013, sourced from the Bull World Health Organ. To the right of this article is a large graphic of the World Health Organization logo. Below the main article, there is a section for 'Allerte attive' (Active Alerts) under the N.E.W.S. system, listing recent drug-related incidents with dates and alert levels. At the bottom, there are four distinct boxes, each representing a different topic area: Epidemiologia, Prevenzione, Diagnosi, Clinica e Terapia, and Tecniche Analitiche, each with a representative image and a brief headline.

The portal proposes different topic areas that hold a collection of selected new information, translated and added by the editors of the site and relative to aspects such as prevention, pharmacology, psychological-social-educational aspects, epidemiology, and neurosciences. Other containers collect reports relative to the most recent publication in the epidemiological, regulatory, enforcement of trafficking and dealing fields, and the monthly newsletter DrogaNews.

<http://www.italianjournalonaddiction.it/>



Domenica 08 Settembre 2013

search...

THE ITALIAN JOURNAL ON ADDICTION

PRESIDENZA DEL CONSIGLIO DEI MINISTRI  
Dipartimento Politiche Antidroga

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Ministero della Salute unicri Società Italiana di Neuroscienze

**Numero corrente**

Copertina

ANNO III - N° 3 (2013)

Organo ufficiale della Italian Scientific Community on Addiction

**RELAZIONE ANNUALE AL PARLAMENTO: SINTESI**

Il Dipartimento per le Politiche Antidroga ha curato, come ogni anno, la Relazione sullo stato delle tossicodipendenze in Italia che, ai sensi dell'art.131 del D.P.R. n.309/1990, è stato trasmesso al Parlamento per l'esercizio delle funzioni relative alla promozione e all'indirizzo delle politiche per prevenire, monitorare e contrastare il diffondersi delle tossicodipendenze e alcolodipendenze correlate. La relazione è stata redatta sulla base dati riferita al 2012 e al primo semestre 2013. Il dato generale che emerge dalle indagini campionarie sulla popolazione e dalle analisi delle acque reflue eseguite dal DPA, al pari di quanto succede in Europa e come riferito il mese scorso dall'Osservatorio Europeo di Lisbona, che prosegue anche quest'anno il trend del calo dei consumi di sostanze stupefacenti nel nostro Paese. L'analisi generale dell'andamento dei consumatori negli ultimi 12 mesi, riferiti alla popolazione generale 15-64 anni, conferma la tendenza alla contrazione del numero di consumatori, già osservata nel 2010 per le sostanze quali eroina, cocaina, allucinogeni, stimolanti e cannabis. Il documento presentato in questa sezione dell'Italian Journal on Addiction è una sintesi del Rapporto originale, che il Dipartimento Politiche Antidroga ha come di consueto redatto e messo a disposizione dei professionisti del settore, ma anche di quanti vogliono informarsi sull'andamento di questo fenomeno, per semplificare la consultazione di dati complessi e rimandare ad approfondimenti successivi.

Sfoglia la rivista

**IJA**  
ORGANO UFFICIALE  
DI INFORMAZIONE SCIENTIFICA DI  
THE ITALIAN SCIENTIFIC  
COMMUNITY  
ON ADDICTION

**INVIA UN ARTICOLO**

**Utenti**

- Accedi
- Registrali
- Esci
- Vedi le notifiche
- Gestisci le notifiche
- Modifica il profilo

The Italian Journal on Addiction (IJA) is a specialised peer review journal, edited by the Department of Anti-drug Policies of the Presidency of the Council of Ministers, published in collaboration with the United Nations Interregional Crime and Justice Research Institute (UNICRI) and the Ministry of Health, within the strategy of institutional communication of the Italian Government.



IJA is a bimonthly online journal. It was created with the objective to give the proper space and appropriate exposure to the studies performed in Italy and abroad, to encourage cultural technical-scientific exchange between nations, in addition to providing a new tool for the international community to check that is accredited at the institutional level and of certain scientific rigour.

[www.droganograzie.it](http://www.droganograzie.it)



The site aims to be a reference point for adolescents in search of clear information relative to narcotics and New Psychoactive Substances.

I. Web-Monitoring of online marketing of narcotics and of illegal rave parties,

G. Serpelloni (1), C. Rimondo (2), M. Brunetto (2), G. Valvo (2)

(1) Department of Anti-drug Policies, Presidency of the Council of Ministers

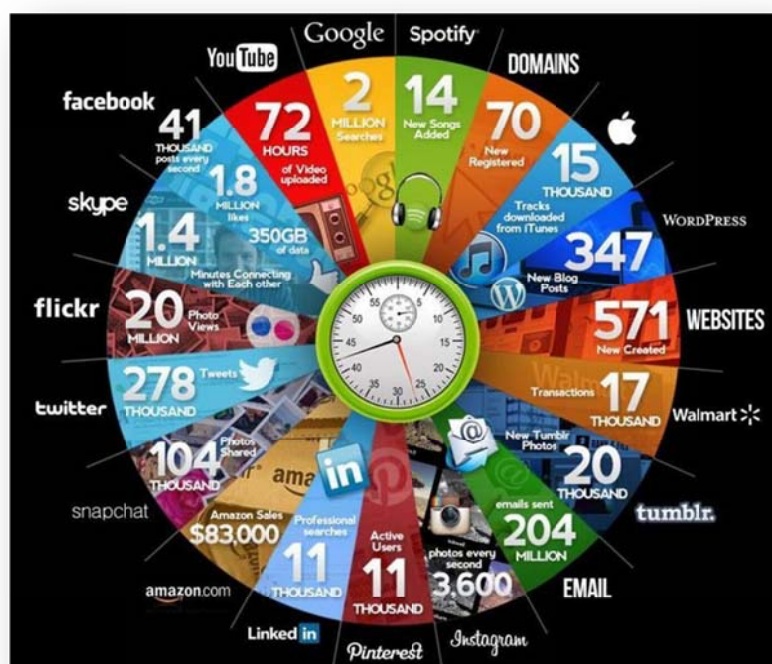
(2) National Early Warning System

## 1. Introduction: Web 2.0

Currently, part of the real life scenario is characterised by the strong presence on the Internet of a large number of people. In fact, we are talking about the world named Web2.0, with its own new way for people to communicate. Due to its great technical advancement, the Internet, through several individual communication tools (social networks), has gained a strong social spur, leading it to increase relating ability of human beings by supplying tools called "applications" for sharing online a vast array of multimedia content (Figure 1).

Web 2.0

Figure 1 – The sharing online of multimedia contents calculated in a sixty-second time frame for the various existent providers. Source GoGlobe.com



## 2. The online sale of narcotics phenomenon

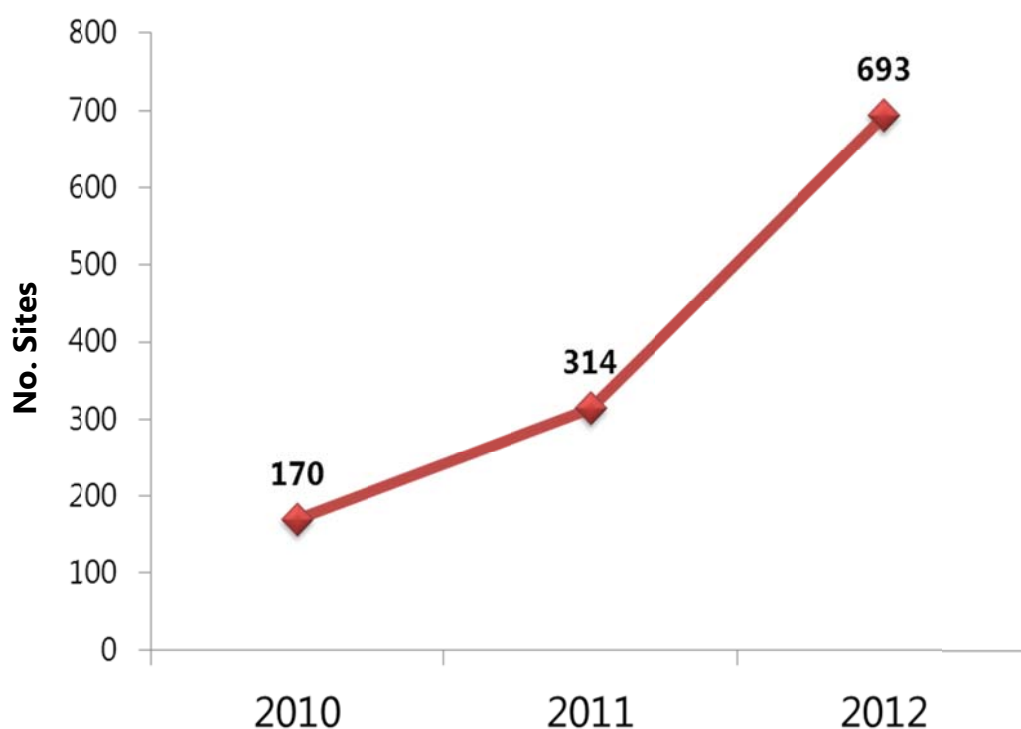
The quantity of information available and the ease of purchasing illegal substances online by users of any age are linked to the rapid development of the Internet and to its great size and accessibility. Just in Italy, the potential Internet users are 58.4% of the population, while at the European level the network penetration is more than double the global average<sup>1</sup>. This technology has allowed criminals to reach the "general public", without geographical limits, becoming a market for the sale of both legal and illegal psychoactive substances. This new role played by the Internet is worrisome precisely due to the information and distribution capacity of the network and because it cannot be controlled.

**Description  
of the  
phenomenon**

According to the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA), the online sites marketing narcotics identified in January 2010 were 170, in January 2011 they were 314, and in January 2012 they jumped to 693, quadrupling their number during the course of only 2 years (EMCDDA-Europol 2012).

**693 sites in  
the EU in  
2012**

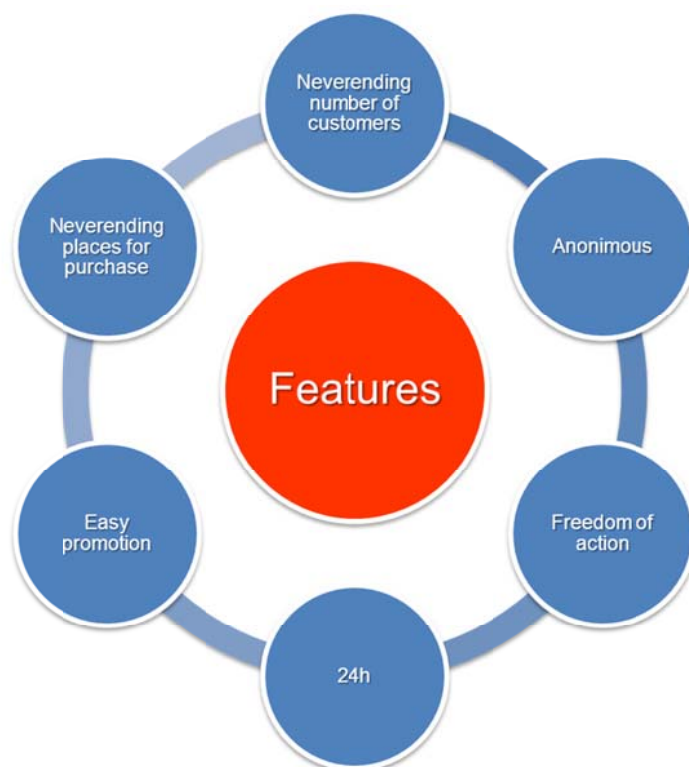
**Figure 2 – Progress of the number of sites found that market narcotics.** (Source: EMCDDA-Europol 2012)



The Internet is a tool that easily lends itself to marketing narcotics online. In fact, it provides access to a potentially infinite number of customers around the world, does not require particular investments by the suppliers which are able to manage their operations quickly and simply, guarantees anonymity, is always open 24 hours a day, and allows consumers to purchase products from different places (home, work, school, etc.) (Forman *et al.*, 2008). In addition, the Internet has a great amount of information on narcotics, even if often inaccurate, unreliable and deceptive (Dargan *et al.*, 2010). The products purchased are shipped directly at home, in plain packages to ensure that the contents and the recipient's identity remain unknown. In addition, there are anonymous communication systems that protect the privacy of people surfing the Internet and make it impossible for an external party monitoring to reconstruct retroactively the connections made (Linell *et al.*, 2010).

#### Characteristics of online marketing

**Figure 3 – Characteristics of online marketing of narcotics** (Source: National Early Warning System, DPA)



However, the purchasing of narcotics on the Internet exposes the purchasers to a high health risk, because there is no guarantee on the safety of these products purchased that often also show a deceptive label. In fact, in addition to the toxicity of these narcotics, the composition of the ingredients linked to the same product changes often. Online purchasing also exposes a wide variety of users to huge dangers due to the wide use of the internet. Lastly, the sale of pharmaceutical drugs, often counterfeit and sold without a medical description, is a serious problem from a healthcare point of view.

#### Dangers of purchasing online



**Figure 4 – Risks linked to the purchase of online substances.** (Source: National Early Warning System, DPA.)



### 3. Web monitoring unit

In order to address this new “cyber reality”, the Department of Anti-drug Policies has activated a web monitoring unit within the National Early Warning System, which operates in collaboration with the Central Directorate for Anti-drug Services of the Ministry of the Interior and Carabinieri Headquarters for the Protection of Health (N.A.S.), with the objective to combat the marketing through the Internet, of controlled substances which are added in the Tables of narcotics (DPR 309/90 as amended).

**Web  
monitoring  
unit**

The monitoring unit of the National Early Warning System, through a constant and systematic analysis of the Internet, oversees the identifying of potential suppliers freely marketing illegal drugs through the Internet and reports them to Law Enforcement. Monitoring of the Internet is performed by using easily reference targets that are easily accessible to any user interested in purchasing illegal substances.

**Objective**

Today there are many sites offering legal or illegal drugs, pharmaceutical drugs and sedatives of various types, “natural” drugs, as well as anything necessary to grow and use the above. During the last few years, this has been the method by which the

**A growing  
phenomenon**

supply has grown, with an ever-increasing sales volume, as reported by numerous international organisations (INCB, UNODC, EMCDDA, etc.) and by the National Early Warning System of the Department of Anti-drug Policies of the Council of Ministers.

It is thus necessary to increase attention for the Internet through targeted and systematic monitoring that allow to collect as much information as possible from the web, relative to the marketing and use of narcotics and to share this information with Law Enforcement so the necessary controls are activated aimed at protecting the health and safety of consumers. In addition, the proposed Internet monitoring allows for better understanding of the products offered on the web and of the sales and marketing characteristics that may be reported to Law Enforcement in order to activate specific targeted controls by the competent authorities.

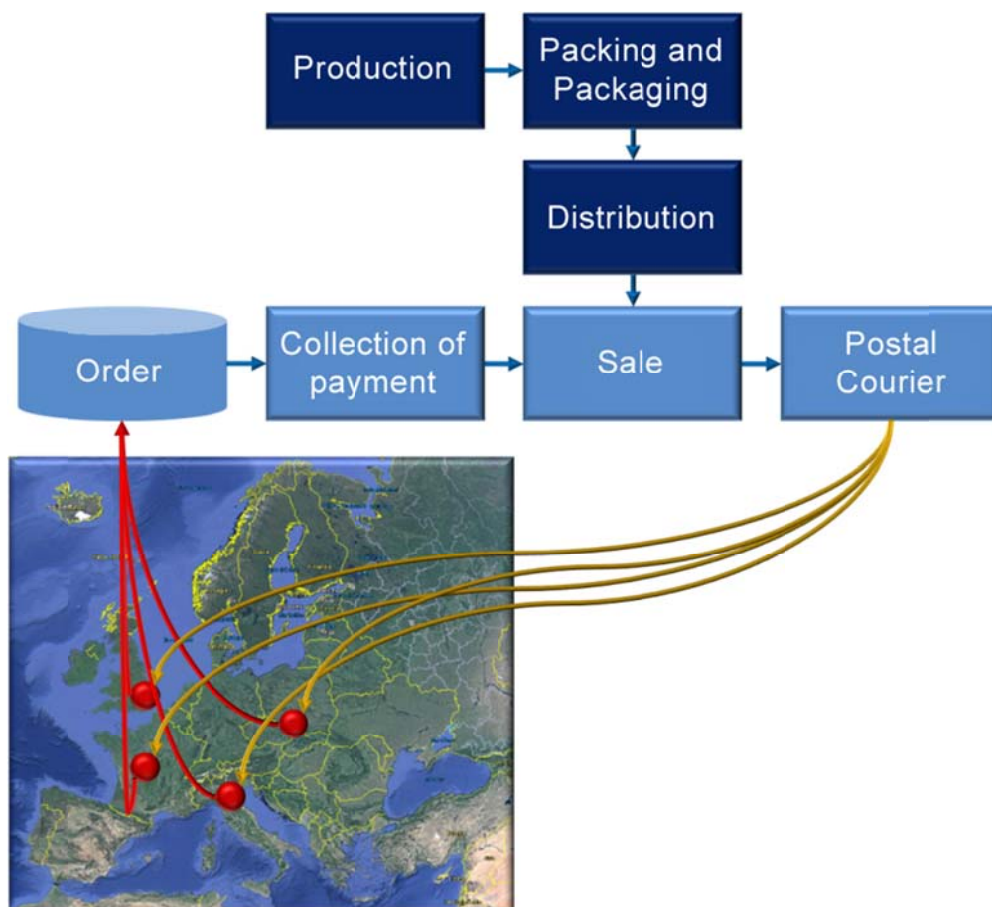
**Online  
controls**

Sites selling psychoactive substances, among these also illegal substances, often show unclear descriptions for the products sold, defined as chemical research products, vegetable foods, bath salts, incense, air fresheners, fertilisers, thus, sold as harmless and legal. Due to the monitoring activity on the web, 47 different types of substances were identified overall, among which controlled psychoactive substances included in the Tables for DPR 309/90 as amended and pharmaceutical drugs sold without a medical prescription (Table 2).

**What is  
sold online:  
47 different  
types of  
substances  
identified  
Flow of  
Trade**

All of these substances, in their various types, are sold on sites created and managed by a multitude of "agencies", often, individual persons or new organisations that are not part of the traditional criminal organisations. The products are ordered directly from chemical producers, normally paid by traditional methods (credit cards) on normal bank current accounts and are shipped through the postal services. This results in the creation and development of a new type of individual traffickers that may easily and rapidly organise new markets, using the Internet as a marketing method. These markets proliferate uncontrolled and uncontrollable even by traditional criminal organisations linked to trafficking and dealing.

Figure 5 - Diagram of flow of trade of NPS and narcotics.



#### 4. Advertising and sales channels

The activity of the National Early Warning System on monitoring of websites is mainly focused on the sites and web pages that sell illegal substances included on the Tables of DPR 309/90 and on specific types of sites, called "free ad boards".

**Sites for sales**

Through the monitoring of forums, blogs and chats, it was found that Internet users prefer to purchase narcotics, new synthetic drugs and pharmaceutical drugs such as Hydrocone and Oxycodone online, not only to experience their effects, but also due to the difficulty of detecting these substances in bodily fluids, because they are highly accessible, due to the alleged legal ingredients they contain and because these substances are perceived as safe substances by users.

**Online drug purchase**

Smart shops and Head shops are specialised shops which sell legal psychoactive substances and accessories for their use respectively. Today, these shops are only found online: from physical shops they have been transformed in virtual stores due

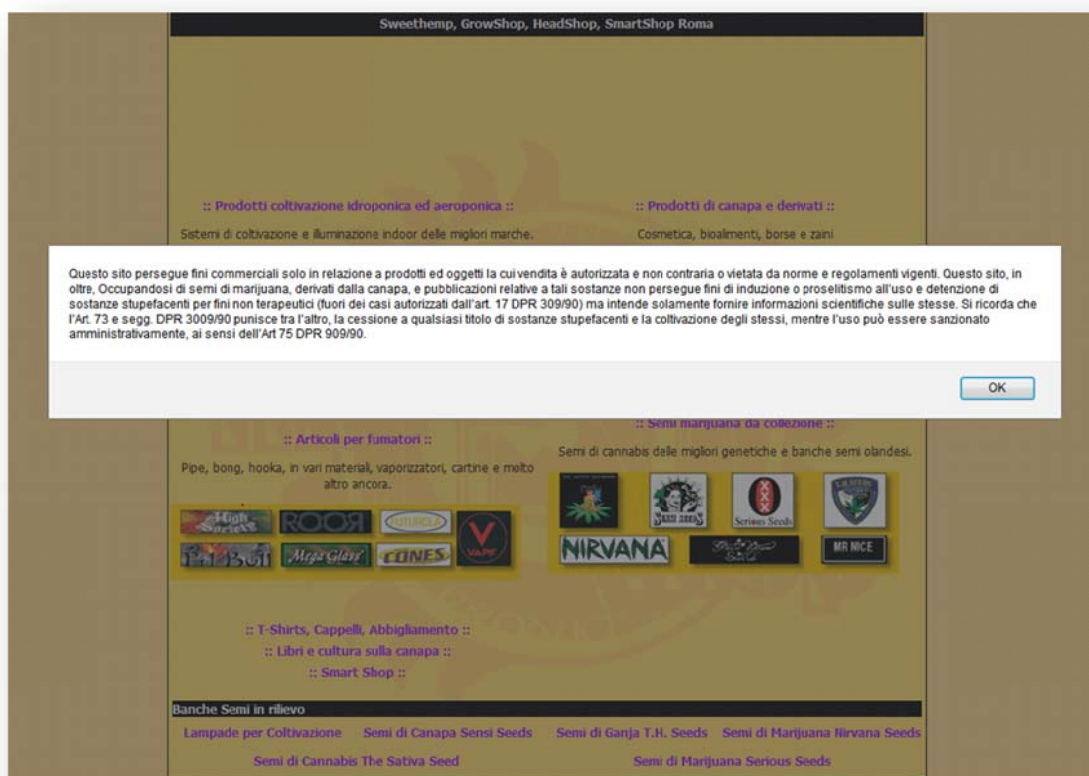
**Smart shops and Head shop**

the ease by which these sites can be created or shut down on the internet. a strong commercial demand by web surfers also contributed to the creation of numerous web pages that are both Smart shops and Head shops.

Within their sites, online managers add legal notices that are viewable through pop-ups both upon opening the homepage, and within the website pages. These notices stress that the site is only for commercial purposes relative to products and objects that are authorised and in compliance and are not prohibited by current law.

**Legal notices**

**Figure 6 – Homepage of a smart shop and legal type notices appearing.**



Their window shows a homepage structures with a clean graphic layout with engaging colours, and a precise distribution of products that are immediately visible and includes a photograph. The language used for sales is often lean, direct and characterised by a few simple words that present the narcotic as any other product which can be purchased online.

**Marketing**

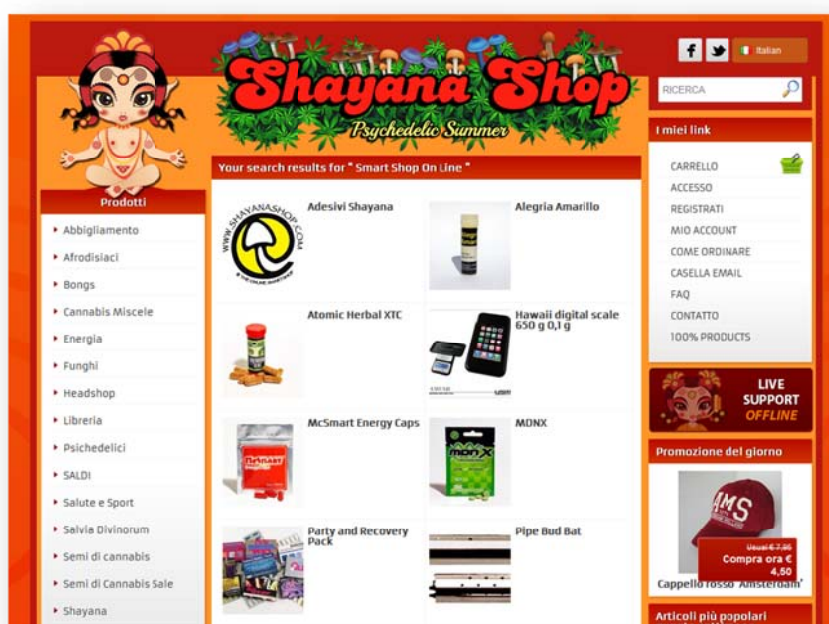
Figure 7 – Sample of a homepage of a Smart shop.



The homepage of these sites is often renewed by the managers as the shop window are changed and embellished to engage and attract users to continuously visit the site. Novelties, discounts, new products, "old" re-launched products with new graphics, gift with purchase products for certain amounts of substances, are offered. Fast payment channels are offered (for example, credit cards, PayPal) and guaranteed shipping by the most well-known Italian and foreign companies.

**Preparation  
of  
homepage**

Figure 8 – Graphic layout samples of sites that market narcotics.



Smart shops offer legal substances not yet controlled and added to the Table of the

**Smart shop  
offers**

DPR 309/90 as amended. Specifically, natural drugs, psychedelic substances (i.e. Kratom, Salvia divinorum), mushrooms, aphrodisiacs, calming herbs, some substances that cannot be better defined and added under the category, for example "After party". Often the true content of these substances is not clear and this may place the buyer in a high health risk situation or may lead to a real addiction without the user's knowledge.

**Figure 9 – Products sold by Smart shops.**



Head shops are mainly web pages within Smart shops that offer a wide array of materials for the use and for hiding the products sold. Specifically, bongs, pipes, grinders, precision scales, rolling papers and filters, dabbing, containers and boxes to store substances, for example, those used for Cuban cigars.

**Commercial supply and Head shops**



Figure 10 – Products sold in a head shops.

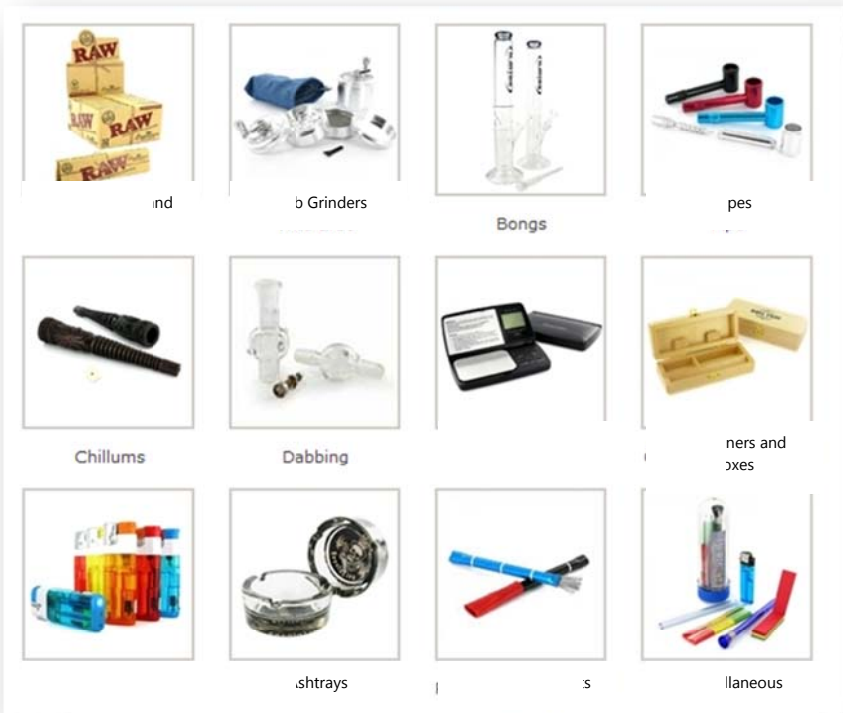


Figure 11 – Toilet brush with concealed double bottom. Source [www.marijuana.be](http://www.marijuana.be)

Materials  
to hide  
substances



**Figure 12 – Fake lenses for concealed double bottom to hold drugs (Source [www.marijuana.be](http://www.marijuana.be))**



**Figure 13 – Fake soda containers with concealed double bottoms. Source [www.marijuana.be](http://www.marijuana.be)**



Figure 14 – Grinder to grind dried cannabis plants. Source [www.marijuanagrinder.com](http://www.marijuanagrinder.com)

Materials  
for use



Figure 15 – Tools to inhale substances: inhaler and vapouriser. Source <http://sensiseeds.com>



According to the Report to the Parliament of the Department of Anti-drug Policies 2013, the individual communication sites found (Social networks, Blogs, Forums - Chat rooms) are approximately 960,000 (datum updated in May 2013).

Areas for  
individual  
communica  
tion

Not all internet surfers have the finances or technical know-how to create or manage an Internet site. Facebook is a valid alternative because it is simple to use and due to its "advertising" potential, considering that in Italy it is the most used individual communication channel.

Facebook  
used as site  
for sales

Figure 16 – Sample shop on Facebook



Figure 17 – Web page of the “Azarius” Smart shop



Facebook  
pages of  
Smart  
shops

There are group pages used that usually share the type of music promoted in illegal events (rave parties). The substances offered for sale are only a list with the amount available and the cost, an image, contacts, without any information on the composition of the product.

Sale of  
substances  
on  
Facebook

The “Free advertising boards” are portals where it is possible to post ads of different types (gardening, musical instruments, house and garden, etc.), often without requiring the mandatory registration of the party placing the ad. For

Free  
advertising  
boards

this reason, those parties illegally trafficking narcotics is attracted to these types of sites, which guarantee anonymity and have a lower risk of being identified by Law Enforcement. Managers of these portals pass on the responsibility for the ads published on the parties advertising, declaring that no ads may be posted for illegal purposes (for example, sale of drugs) and that each advertiser is responsible for any offence relative to the ads. In case of violation of the conditions of the service, the ad is removed and the advertiser is reported to the competent authorities, if the party can be identified.

**Figure 18 - Sample screenshot relative to a free advertising website with various type ads (in this case musical instruments)** Source: <http://ameglia.blidoo.it/jwh-018-ketamina-mephedrone-efedrina-e-altre-sostanze-chimiche-56291.html>.

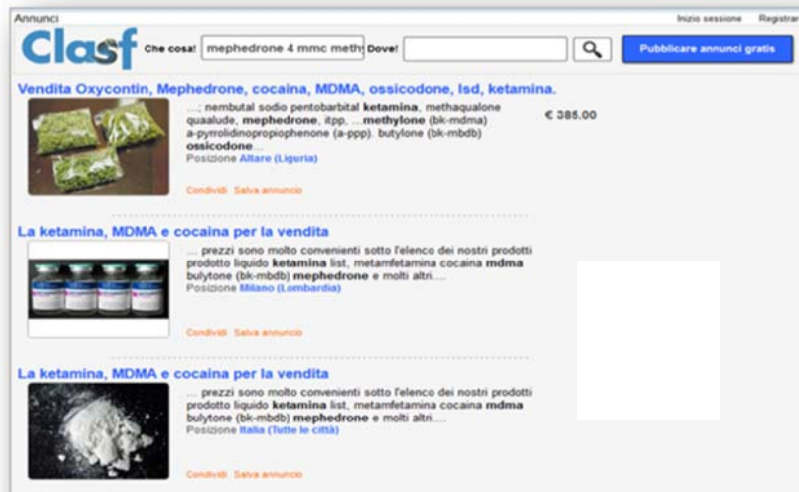


Commercial offers promoting the sale of narcotics, usually do not contain a description of the effects of the products sold, nor does it contain the potential harmful effects that may result from their use. Instead, there are reassurances on reliability, promptness and the discrete nature of the supplier and sometimes, also the contacts of the advertiser (E-mail, Skype). Rarely, the advertisement contains indications relative to the cost of the products sold; often this information can be obtained by contacting the advertising party by E-mail. In order to stimulate sales and make the commercial offer more attractive, often images showing the substances are also added to the ads.

**Commercial  
characteristics**



**Figure 19 - Sample of a screenshot relative to commercial offers for the sale of illegal substances identified on the web and reported to the Carabinieri N.A.S. [ Nucleo Antisofisticazioni Sanità - Department of the Carabinieri responsible for controls of foodstuff, drinks, medicinals] Source: <http://www.clasf.it/q/vendita-oxycotin-mephedrone-cocaina-mdma-ossicodone-lsd-ketamina/>.**



**Figure 20 - Website named "AnnunciRomaExplorer" with server in Italy and added in the "Home Decorating -Do-it yourself" Advertising Board**

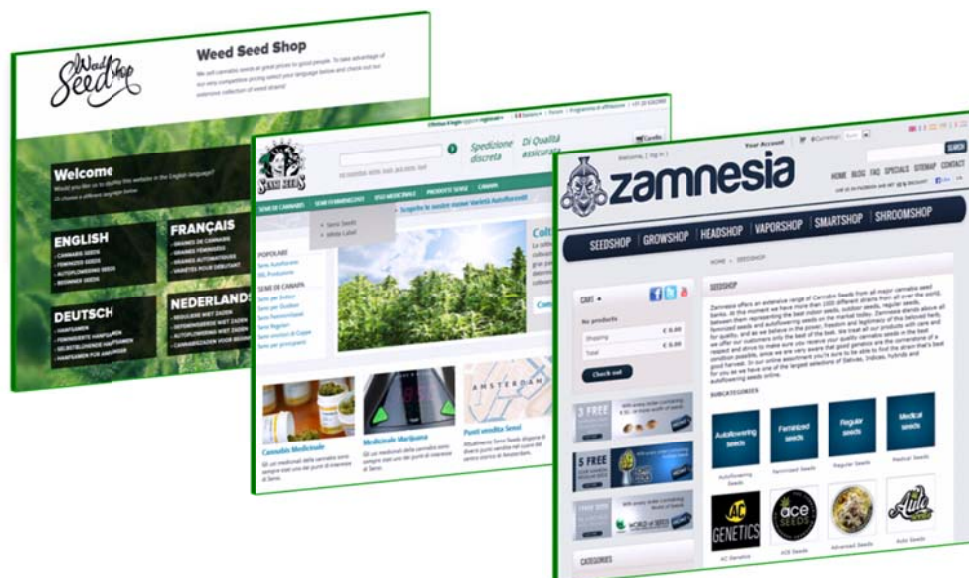


There are many E-commerce sites for the advertising and sale of cannabis seeds and products for its use. They are true shops that offer various hemp seeds for sale. Their "window" is organised and created just like all the other sites that sell legal or illegal psychoactive substances; the homepage is structured based on a precise sales strategy.

**Seed shops**

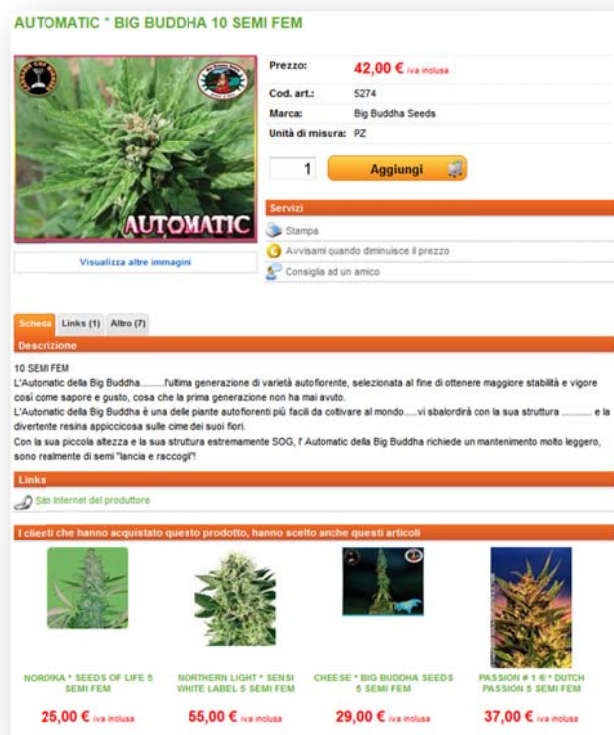


Figure 21 – Sample of a Seed shop homepage.



Specifically, the sale is characterised by a wide variety of products viewable in detail through photographs and combined with precise information relative to the type of seeds, the effects caused on the body and the best methods for growing and picking.

Figure 22 – Sample of a product for sale in a Seed shop.



Often the sales strategy targets customer loyalty, with discounts on the purchase of products, but most of all with fast, anonymous and easily reimbursable shipping.

Figure 23 – Sample of promotion of products



Seed shops are generally managed by producers of hemp seeds. These are mostly producers, a few growers, specialising in creating new varieties of marijuana, who select and cross fertilise the best plants in order to improve the variety.

**Who manages Seed shops**

Within this context, there are also seed banks, specialising in the sale of collected hemp seeds. These offer hemp seeds from various international producers (Breeders).

**Breeders  
and seed  
banks**

From the sites recorded under a single domain, to blogs, then online-shops and pages on social networks, users around the world purchase seeds, exchange recommendations on growing and provide opinions on the effects of various plants. From a wide analysis performed on the accessible databases of both institutional facilities and companies in the sector, it was possible to estimate that the number of site favourable on the topic of legalisation or freeing or offering these substances has amply surpassed 800,000 units during the course of this year (datum estimated below). A definite progress if we look at the datum reported for the year 2008, in which there were approximately 200,000.

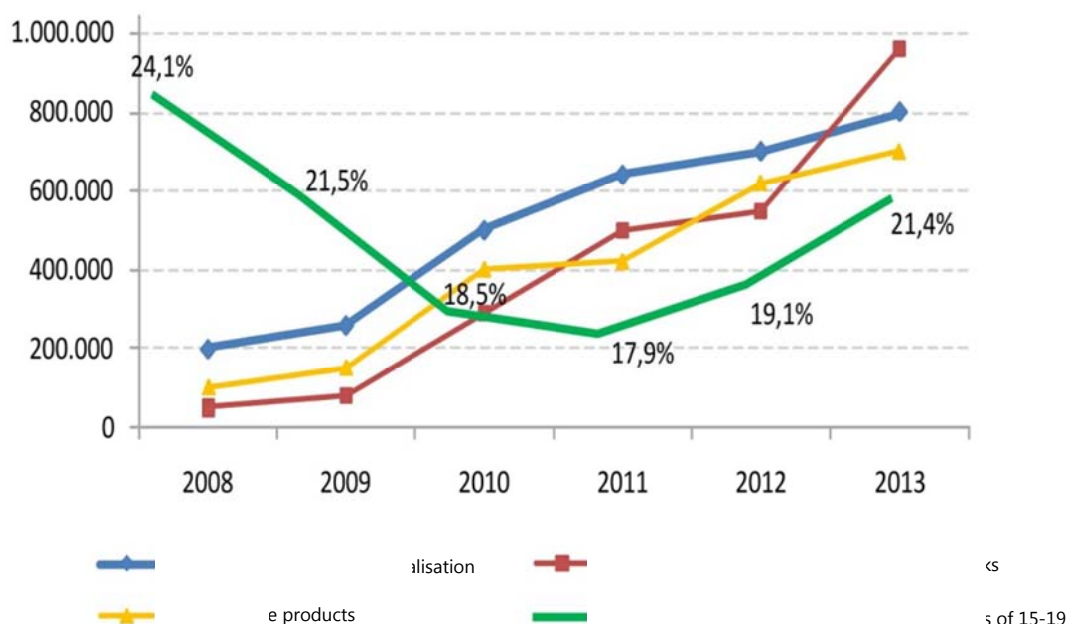
**Increase on  
the Internet  
of the  
cannabis  
phenomen  
on**

Considerable growth was also recorded for those pages (which could be accessed freely), that have a positive opinions on cannabis within social networks, on forums on these topics or in personal blogs, which are estimated to decisively be high, encouraged by the successful gathering of youths within the virtual arena. The peak of 960,000 reached in May 2013, was projected to grow by 2% by the end of the year.

The conversation changes for the E-commerce sector or the online sale from collections and equipment for sprouting. The E-shops that display seeds and lighting kits, as well as organic fertilisers specifically for cannabis are still very numerous.

It is interesting to note that the progress of growth of sites from 2008 to 2013 of the sites advertised or those that advertise in various ways the use of cannabis and to compare it with the progression of consumption in the population between the ages of 15-19. In fact, this age segment, is the one that most uses the Internet and social networks. As can be seen, the increase of marketing correlated with a latency time of 14 to 24 months, an increase of cannabis use in the younger age segments inverting the decreasing trend found in 2008 and creating, since 2011, an increase of approximately 3 percentage points. This phenomenon also allows for reflecting on the ability to induce use by youth of numerous supplies of narcotics on the Internet and of the publicising of their effects, also through deceptive advertising, which even involve offers for franchising. Lastly, it should be remembered that these sites, at the same time also offer other narcotics such as opiates, cocaine and also synthetic cannabinoids, mephedrone, piperazine, etc.

**Figure 24 - Dissemination of pro-legalisation sites, blogs, forums, social networks and E-commerce relative to seeds and products for growing cannabis vs users of cannabis (marijuana or hashish) (prevalence%) in school population between the ages of 15-19 during the last 12 months. Years 2008-2013**



Fonte: Studi SPS-DPA 2010-2013 – Dipartimento Politiche Antidroga

From the 90's the phenomenon of online pharmacies that sell drugs without a medical prescription are heavily increasing and have now reached 89% (Forman, 2006). The appearance of these types of sites has also created a channel for the illegal access to opiates, which are in fact, the first drugs to be marketed through the web (Forman, 2006).

**Online  
pharmacies**

Advertising of online pharmacies mainly occurs through individual communication spaces and specifically, social media (i.e., Facebook). In fact, these allow for rapidly reaching a great number of users, with large exposure predominantly for youths, of potentially dangerous products, often counterfeit that would otherwise require a medical prescription.

**Marketing  
strategies**

Online pharmacies predominantly sell products to improve sexual performance, weight loss products, antidepressants, painkillers and supplements.

**Most  
requested  
drugs**

## 5. Monitoring results

From July 2011 to September 2013, the Web Monitoring System of the National Early Warning System identified a total of 482 web pages that showed narcotics for sale. The sites were reported, according to a shared procedure, to the Carabinieri N.A.S.

**482 Web  
pages  
detected**

The Carabinieri N.A.S., upon receipt of the report, proceed as follows:

**Result of  
the reports**

1. If it is a report of a **web domain** which offers narcotics for sale included on the Table, the Carabinieri N.A.S. inform the Judicial Authority because it falls within the criminal case pursuant to Art. 73, paragraph 1 ".....anyone.....offering for sale.....narcotic or psychotropic substances....", requiring among other things, the issuing of a decree which pursuant to Articles 5, 14 and 15 of Legislative Decree 70/2003, would prevent access to Italian users ("blacking-out");
2. If it is a report of an **advertisement** where narcotics are offered for sale, on an Internet site, advertised on an "Ad Board" (where anyone can post advertisements), the data of the "registrant" of the domain is drawn from the website; whether these parties are Italian or foreign, they are asked to withdraw the ad, in order to protect the health of users that may become potential users, supplying the relative data to the author, if available. The authors, meaning IP addresses, show the specific countries such as the USA, Cameroon, Brazil, and Russia. If the preliminary findings require it, specific investigative activities are started;
3. If it is **pages** of an Internet site, the procedure is the same as that for advertisements.
4. Lastly, if it involves a report of **advertising of narcotics**, in the case where the domain hosting them is an Italian "registrant", in addition to being asked to remove the page, the latter is sanctioned pursuant to Art. 84 of Presidential Decree 309/1990.

After approximately 30 days of reporting, the National Early warning System proceeds to verify its result, directly consulting the website pages reported and compiling a database where the following results are recorded:

1. **Shutting down of site:** the site is blacked-out and its Internet address appears to be inactive.
2. **Shutting down of page:** the page reported for the sale of substances, within a site, is shut-down, while the site into which it was added, remains visible.
3. **Removal of the advertisement:** only the sales ad is removed from the page where it was visible and the site holding it remains active.
4. **Site is still clear:** the advertisement, web page and the site, remain visible and active despite having been reported. These are predominantly Internet sites hosted in EU countries (such as Holland and Spain) and countries outside of the EU (USA, Russia, South America, Africa, etc.) with "registrants", that ignore the requests of the Carabinieri N.A.S.

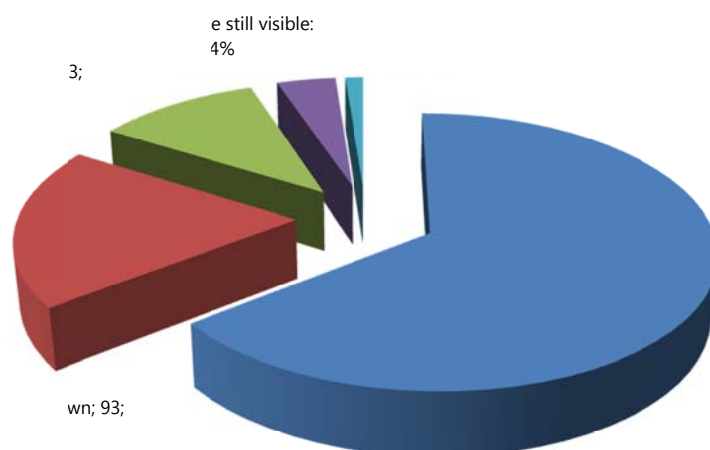


To date, reports resulted in 65.1% of cases of removal of the advertisement, 19.4% of backing-out of the web page and 11.1% of cases where the site is shut-down. For 0.3% of reports there were no findings and the commercial offers are still visible online.

**Table 1 - Result of reporting of commercial offers on the Internet for illegal narcotics. Source: National Early Warning System, 2013.**

Report results	No.	%
Advertisement removed	311	65,1%
Page shut-down	93	19,4%
Site shut-down	53	11,1%
Page still visible	19	4,0%
Investigation in progress	6	0,3%
Total	482	100,0%

**Figure 25 - Result of reporting of commercial offers on the Internet that involved illegal narcotics. Source: National Early Warning System, 2013.**





## 6. Illegal musical events advertised on the Internet

In Italy, the phenomenon of illegal rave parties has become a reality that during the last few years was the setting for drug-related deaths of even very young people. Within these gatherings a substantial amount of narcotics are sold and used.

**Figure 26 – Georeferencing of events**



Illegal rave parties are considered illegal because their organisers do not have the proper authorisations by law Enforcement and public Administrations to have the party, occupy public land, play music, serve alcoholic beverages, etc. In addition, mobile teams are not always present for emergency services able to assist participants in case of illness. The use of narcotics by the participants also often occurs, particularly new psychoactive substances (NPS), deemed by ravers (participants in raves) to be substances able to enhance and increase the feeling created by the music listened to and this improve the "high" searched for (Weir, 2000; Report of Parliament, Department of Anti-drug Policies, 2011).

**The phenomenon of illegal rave parties: dangerous and out of control**

The Department of Anti-drug Policies has decided sponsor, within the National Early Warning System, a web monitoring activity also for the phenomenon of the illegal rave parties in Italy, in collaboration with the Central Directorate of the Anti-drug Services (DCSA), the Police for Communication, the Department of Addictions Local Social Healthcare Facility of Verona, the Higher Health Institute and the Poison Control Centre of Pavia.

**Functions  
of the web  
monitoring  
units**

The web monitoring units also coordinates efforts with various Agencies and Organisations operating within the social-healthcare prevention area, on local safety, on dealing and trafficking of narcotics and on the Internet: Prefectures, Police Headquarters, Departments for Addictions, Municipalities, Central Directorates for Anti-drug Services and Police for Communication.

**Agencies  
and  
organisatio  
ns involved**

The objective is to identify, through the systematic monitoring of the Internet, illegal and high risk rave parties organised in Italy and reported to Law Enforcement and to the local Administrations in order to prevent the unlawful occupying of private or state-owned spaces with unauthorised events and/or events lacking safety measures for participating persons. In addition, measures aimed at the safer management of raves and protecting the health of participants have been activated.

**Objectives  
of the  
activity**

All is possible by adopting early detection techniques for the dates of raves which in most cases are advertised only through specialised sites where access is often granted by codes or registering in private areas, possible only if authorised by the site master. Specifically, the activity is for the purpose of:

**Specificatio  
ns**

- Bind organisers of these events to adopt all protective measures and the rules provided by law in order to ensure the safety of participants;
- In case of refusal of the safety conditions required, through Law Enforcement and the pertaining Authorities, proceed to directly identify and make the organisers responsible;
- In the event that is impossible to prevent the event, make sure that within these events there is secondary prevention in order to reduce the risk of intoxication and overdose;
- After the occurrence of the illegal event, through Law Enforcement, proceed to the seizure of sound equipment and systems use to perform the illegal music event, all by identifying the responsible parties and proceeding against them as provided by law.

**Table 2 – Interventions adopted to intervene on illegal music events.**

Timing	Intervention	Specifications
<b>1<sup>st</sup> – Before the event</b>	Prevention of the event	Web-monitoring and alerting the authorities
<b>2<sup>nd</sup> - During the event</b>	Management of the risk during the event	Healthcare support through mobile teams
<b>3<sup>rd</sup> - After the event</b>	Seizure of the equipment	Combating and suppressing activity

Most of the illegal rave parties are advertised on the web. Through an Internet search on the topic it is possible to identify numerous sites and forums where the dates of similar events for type of music, participating DJ's and type of public, are systematically published. Among the advertising tools used are the forum boards, private messages, social networks and job sites for "workers". Facebook has an important role for the methods of haring of information available on this communication channel, available only to the users and with inclusion and exclusion criteria of participants based on direct relationships. Thus the friendly or acquaintance relationship allows for the group of "ravers" to know and identify each other, a determining factor in avoiding any "undesired intrusions".

On the other hand, the illegal events advertised in the job sites for "workers" use as a main advertising methods the areas where private messages can be exchanged.

The following specific information is supplied:

- how to reach the place of the events (usually industrial areas, open areas such as plateaus, fields, river beds)
- how to participate
- which DJ's
- services provided
- recommendations (i.e., how to avoid road blocks by Law Enforcement)
- flyers advertising the event.

**Advertising  
on the web**

Figure 27 - Sample flyers of illegal music events.



"Crews" are closed groups of persons that plan and organise the illegal music events. They may be members of different cities, even foreign countries (for example Spain and France), united under a single identifying nickname and linked to specific types of music such as techno, psytrance, etc. The web monitoring unit has currently detected 134 active crews in Italy, particularly in Northern and Central Italy.

**Who  
organises  
illegal rave  
parties:  
crews**

Figure 28 – Sample of a Crew and its Facebook reference and advertising page.



Once a potentially illegal music event is detected, the web monitoring unit proceeds to forward the report to the Headquarters, Prefecture and, where possible, the Municipality where the even will take place, to the Superintendent of the Prefect and the Mayor. A copy of the report is also sent to the Central Directorate for Anti-drug Services (DCSA) of the Ministry of the Interior.

**Reporting  
to Law  
Enforcement  
t**

Written notices containing the results of verifications performed by the web monitoring units within a database where the following events are recorded:

- Prevented;
- Managed, where Law Enforcement verified authorisations and implemented control of organisers and participants;
- Not prevented;
- Waiting for findings.

**Figure 29 – Sample of an event reported to Law Enforcement and recorded in the database of the web monitoring unit of the National Early Warning System.**

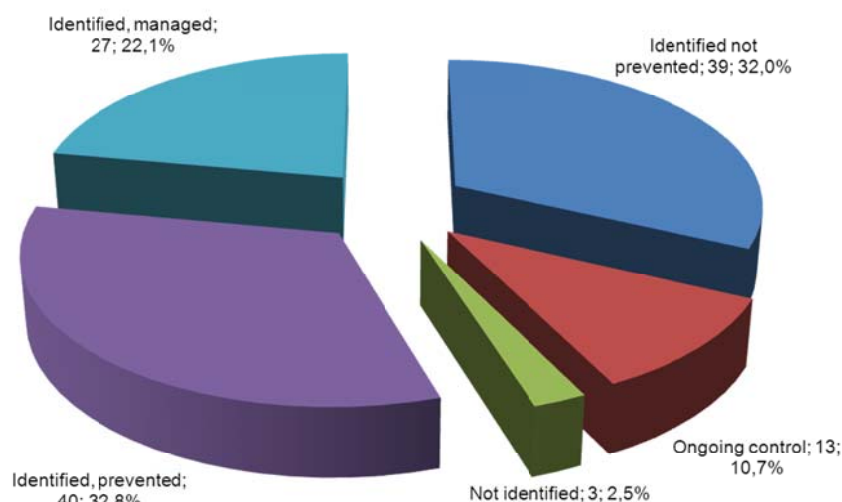
**Nome dell'evento:** FRENCH/ITALIAN LINK-UP - Big Free Party - 10-12/05/2k13  
**Data prevista:** 10-11-12 maggio 213  
**Sito Web:**  
<http://thetinytpage.artathack.me/forum/viewtopic.php?f=16&t=126>  
**Caratteristiche:** Da quanto riportato online, la festa si dovrebbe svolgere in una località all'aperto del Nord Italia, non meglio precisata. Online non vengono fornite specifiche informazioni per raggiungere il sito (<http://thetinytpage.artathack.me/forum/viewtopic.php?f=16&t=126>). L'evento viene pubblicizzato online attraverso un flyer (Allegato 1), sul quale vengono riportati i seguenti recapiti: FR 0892563672, IT 3890403511  
**Data Segnalazione Forze dell'Ordine:** 09/05/2013  
**Periodo di anticipo:** 1 giorno  
**Esito:** Evento segnalato e gestito.



In September 2013, the web monitoring unit led to the detection of 122 illegal music events. Of these, 119 were reported to the Prefecture, Police Headquarters, Municipality and a copy sent to the Public Prosecutor of the place where the event would have taken place and the Central Directorate for Anti-drug Services, in order to verify its legality.

## Results

**Figure 30 – Results of web monitoring of illegal events**



## 7. Conclusions

From reading what is reported within this article, it can be easily seen that dealing and the various offers online are very articulated and specifically structured. The specialisation reached by these new criminal organisations from both the commercial and technological point of view is of high calibre and at the same time very efficient, both in always offering new products and in gaining customer loyalty with related offers of all types. The speed of growth creates widespread effects and also affects the perception of which complex and articulated organisations are behind these multiple offers.

The situation is even more worrisome if we consider the great promiscuity of these organisations having illegal purposes with other legal organisations, unaware of these situations (for example, postal couriers). Italy, just like other countries must implement a long-term strategy and a plan of action, coordinated with international organisations within the sector, operating both in the area of prevention and reduction of the demand both in the area of combating and reducing the supply. All of this not only for NPS but also for online pharmaceutical drugs, cannabis seeds and traditional narcotic substances now offered, in addition to the plazas and streets, unfortunately also on the web.



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