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• **INTER-AMERICAN DRUG ABUSE  
CONTROL COMMISSION**  
• **CICAD**

• Secretariat for Multidimensional Security

- **FIFTY-EIGHTH REGULAR SESSION**
- **November 11 - 13, 2015**
- **Trujillo, Perú**

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- **GLOBAL ASSESSMENT OF SYNTHETIC DRUGS, 2015**
- **AMPHETAMINE-TYPE STIMULANTS AND NEW PSYCHOACTIVE SUBSTANCES**



**UNODC**

United Nations Office on Drugs and Crime

Global SMART  
Programme

# GLOBAL ASSESSMENT OF SYNTHETIC DRUGS, 2015

## Amphetamine-Type Stimulants and New Psychoactive Substances

**FIFTY-EIGHTH REGULAR SESSION, *CICAD***  
*Trujillo, Peru - November, 11-13, 2015*

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# Contents

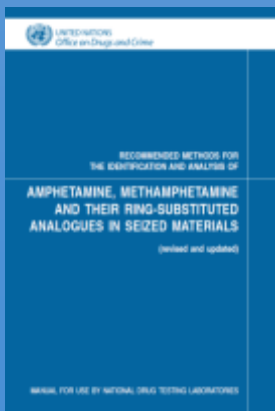
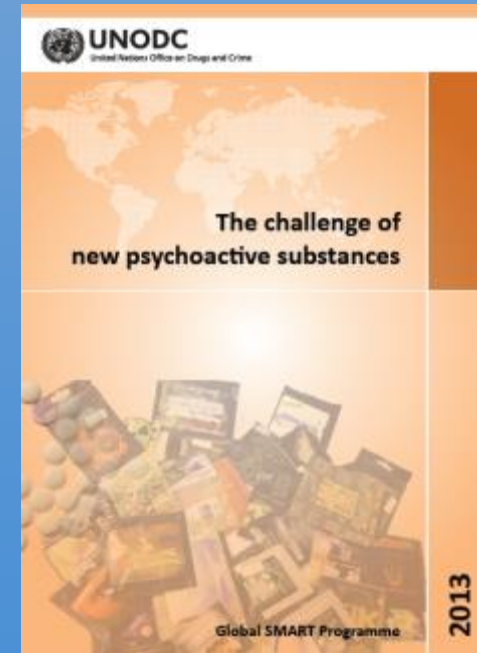
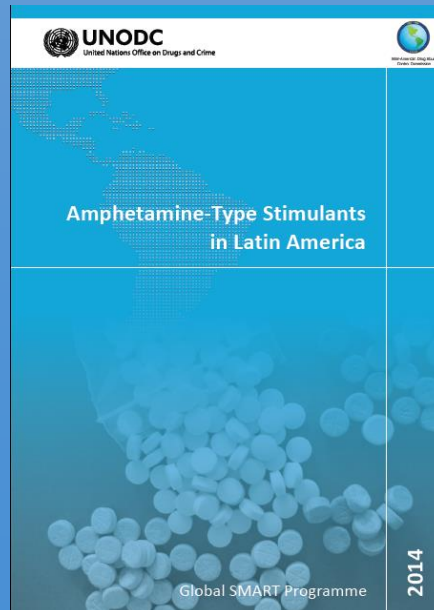
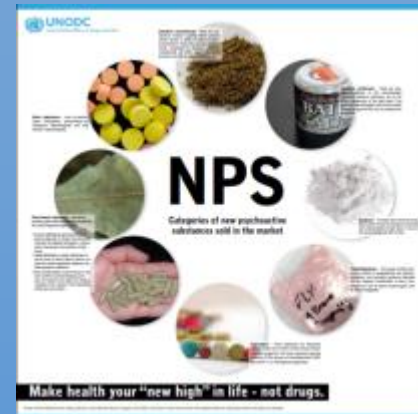
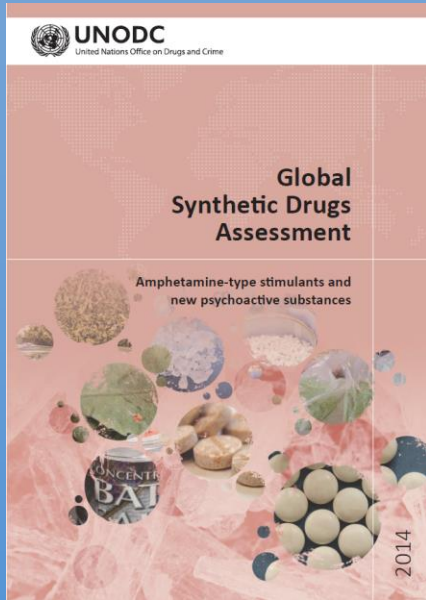
- The Global SMART Programme.
- *Amphetamine-Type Stimulants (ATS)*: global and regional perspectives.
- *New Psychoactive Substances (NPS)*: global and regional perspectives.
- *UNODC Early Warning Advisory on NPS (EWA)*.
- Synthetic Drugs and NPS – Challenges for Latin America.

## Brief overview:

### Synthetics Monitoring: Analyses, Reporting and Trends - SMART

- It is a strategic response to the problem of synthetic drugs and new psychoactive substances.
- Launched in September 2008, Global SMART provides capacity building in East and South-East Asia, the Pacific, the Near and Middle East, Latin America and Africa and regularly reviews the global ATS situation.
- From 2011 CICAD/OAS supports this programme in Latin America.
- Features of Global SMART are online data collection, situation reports and regional assessments. The first global situation assessment on NPS “***The challenge of new psychoactive substances***” was published in March 2013, pursuant to Commission on Narcotic Drugs resolution 55/1 (2012). The SMART Early Warning Advisory web-portal offers regularly updated information on NPS and related legislation.
- **Objective:** enhances the capacity of Member States in main regions to generate, manage, analyze, report and use synthetic drug information to design effective policy and programme interventions.

# • Global SMART- a resource of global and regional reports -updated- on synthetic drugs and NPS





-246 million use some of the drugs listed below, at least once, in 2013.

-27.4 million were problematic drug users.

-5.2% was the past-year prevalence.

(5.2% of the population aged 15-64, used drugs at least once in the last year).

ATS and opioids are among the substances most commonly used after cannabis.

**TABLE 1.** Global estimates of the use of various drugs, 2013

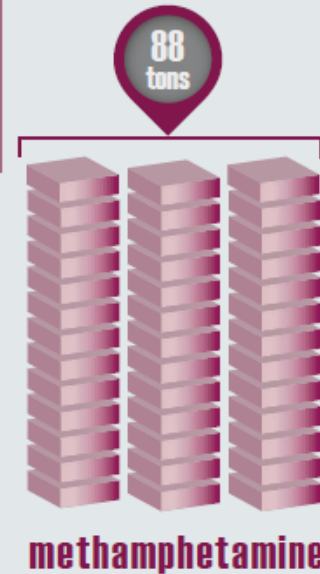
|                      | Percentage of population that has used the drug |      | Number of users (thousands) |         |
|----------------------|---|------|-----------------------------|---------|
|                      | low   | high | low                         | high    |
| Cannabis             | 2.7   | 4.9  | 128,480                     | 232,070 |
| Opioids ←            | 0.6   | 0.8  | 27,990                      | 37,560  |
| Opiates              | 0.3   | 0.4  | 12,920                      | 20,460  |
| Cocaine              | 0.3   | 0.4  | 13,800                      | 20,730  |
| Amphetamines ←       | 0.3   | 1.1  | 13,870                      | 53,870  |
| "Ecstasy" ←          | 0.2   | 0.6  | 9,340                       | 28,390  |
| All illicit drug use | 3.4   | 7.0  | 162,000                     | 329,000 |

Source: UNODC, responses to annual report questionnaire.

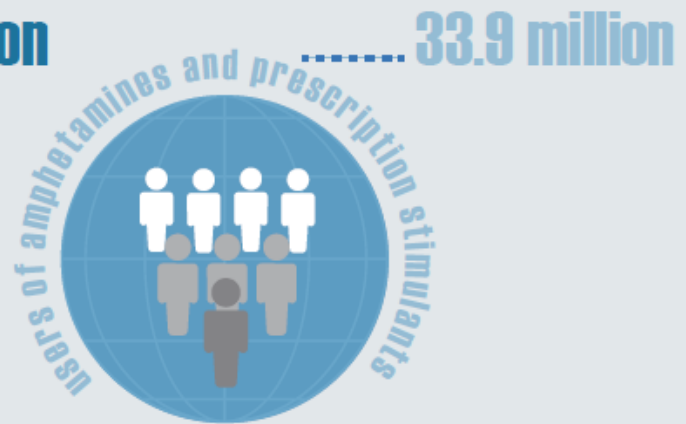
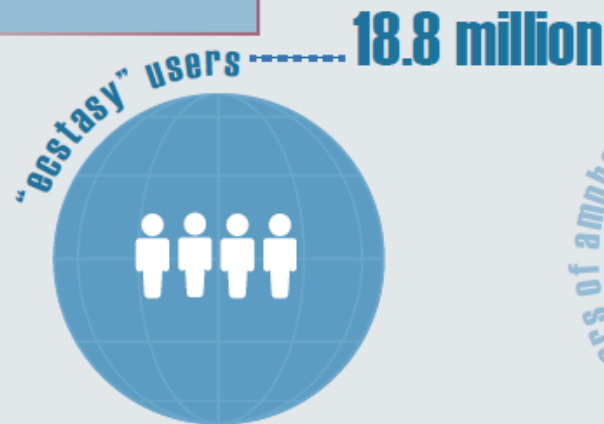
Note: Estimates for adults aged 15-64, based on past-year use.



## Global seizures five-year change



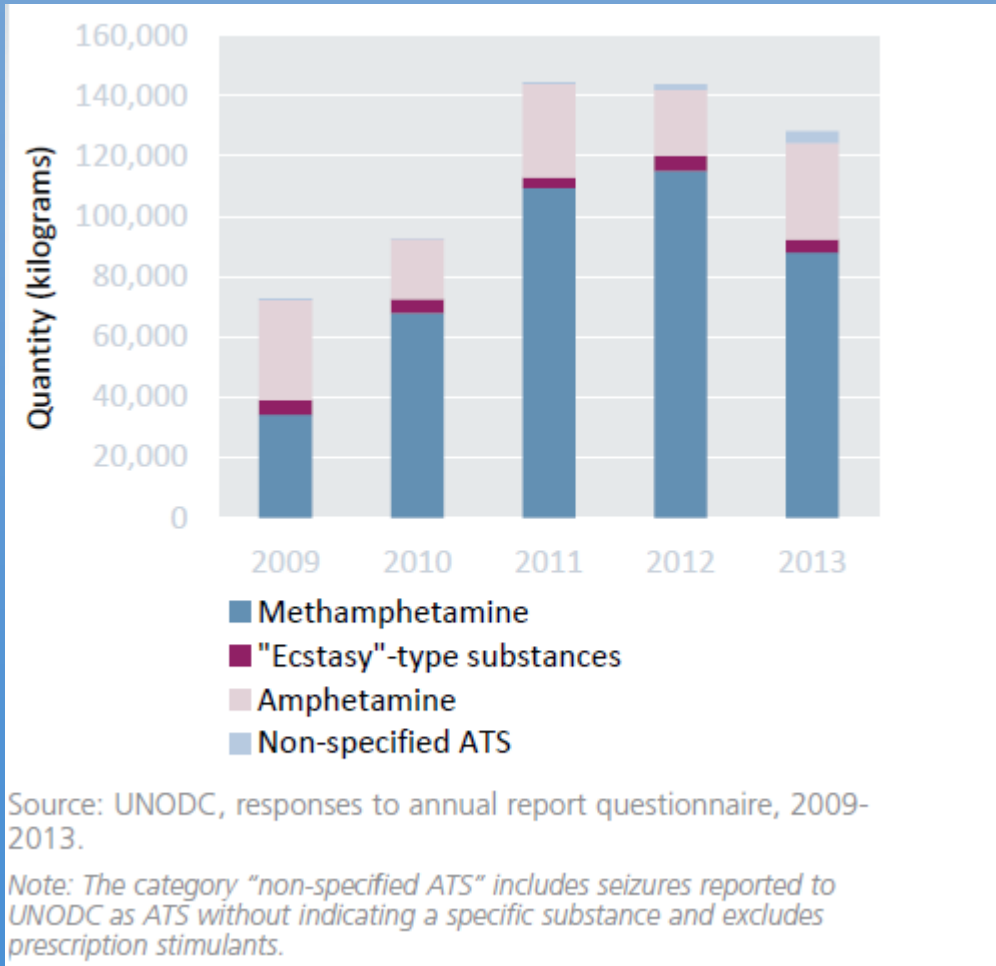
## Global number of users



Note: Data for seizures and number of users are from 2013. Amphetamines include both amphetamine and methamphetamine.



# Total reported ATS seizures worldwide, 2009-2013







# The challenge of New Psychoactive Substances

**UNODC**  
United Nations Office on Drugs and Crime

## The challenge of new psychoactive substances

2013

Global SMART Programme

**UNODC**  
United Nations Office on Drugs and Crime

## NPS

### Categories of new psychoactive substances sold in the market

- Synthetic cannabinoids:** These are non-natural organic entities which produce effects similar to those of delta-9 tetrahydrocannabinol (THC). The principal psychoactive component in synthetic cannabinoids are other plant cannabinoids. Synthetic cannabinoids are often sold using herbal products and sold in capsules, 21 June.
- Synthetic cathinones:** These are structurally similar to the amphetamine central nervous system stimulant, one of the major components of the final product. They generally have stimulant effects and include the synthetic stimulant 3,4-MDA as an example.
- Salvia divinorum:** A number of synthetic versions exist and which are sold in capsules, tablets, and as a salvia tea or high dose, it is one of the most widespread NPS in use.
- Plant-based substances:** This group includes plants with psychoactive properties. The most frequently reported are:
  - African birthright plant (African birthright plant)
  - African birthright plant (African birthright plant)
  - African birthright plant (African birthright plant)
- Phenethylamines:** This group contains substances related to amphetamine and methamphetamine, and generally produce stimulant effects. However, modification of these can produce substances with different effects.
- Flunitrazepam:** These substances are frequently sold in capsules, tablets, and as a salvia tea or high dose, it is one of the most widespread NPS in use.

**Make health your “new high” in life - not drugs.**



# Definition(s) New Psychoactive Substances

- Produced or recently introduced and now for first time discovered, not having existed before.
- They existed before, but they have been recently experienced or purchased for the first time.

Affecting the  
Central Nervous  
System  
-CNS-

- A particular type of substance with uniform properties.
- A chemical or intoxicating, stimulating or narcotic drugs.

- Recently introduced synthetic compound (undeveloped or failed medicine).
- Recently produced synthetic compound
- Newly discovered natural product (could have a traditional or exotic use).
- Newly abused / new mode of use to achieve psychoactivity (effect on CNS).
- It should be recognized and characterized both chemically and pharmacologically.

- They don't appear on the lists / not controlled by the United Nations Conventions of 1961 and 1971.
- They imply a serious threat to public health.
- The term "new" does not necessarily refer to new inventions - several NPS were synthesized for the first time 40 years ago.
- They don't have or only have a limited therapeutic value.

- Most of them (semi) synthetic compounds made from readily available starting materials (precursors).
- It can also be a natural product (with difficulty identifying the active ingredient).



## Aminoindanes

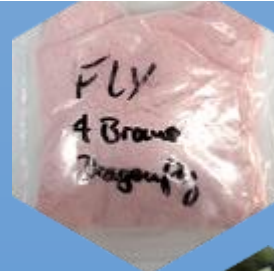
Sold by their ability to produce empathogenic and entactogenic effects of serotonin releasing drugs, such as MDMA.



**Ketamine** - A human and veterinary anaesthetic which acts as a stimulant at low doses and a hallucinogen at high doses. It is one of the most widespread NPS in Asia.



**Phenethylamines** - This group contains substances related to amphetamine and methamphetamine, and generally produces stimulant effects. However, modification of these compounds can lead to potent hallucinogens such as *Bromo-Dragonfly*.



**Synthetic cannabinoids** - These are cannabinoid receptor agonists which produce effects similar to those of delta-9-tetrahydrocannabinol (THC), the principal psychoactive component in cannabis. Synthetic cannabinoids are often laced onto herbal products and sold as *spice*, *K2*, *Kronic*, etc.



**Piperazines** - These substances are frequently sold as 'ecstasy' due to their central nervous system stimulant properties. The most commonly reported members of this group are benzylpiperazine (BZP) and mCPP (1-(3-chlorophenyl) piperazine)



# NPS

## Categories of new psychoactive substances sold in the market

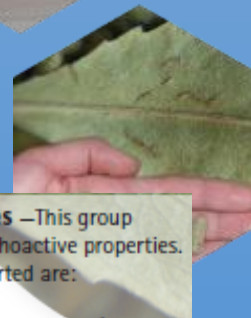
## Tryptamines

Search for its hallucinogenic effects. Natural tryptamines are available in preparations of dried or brewed mushrooms, while tryptamine derivatives are sold in capsule, tablet, powder or liquid form.



**Plant-based substances** - This group includes plants with psychoactive properties. The most frequently reported are:

- Kratom (*Mitragyna speciosa* Korth), a plant indigenous to South-East Asia that contains the alkaloid mitragyne; a stimulant at low doses and sedative at high doses.
- *Salvia divinorum*, a plant indigenous to forest areas in Oaxaca, Mexico, which contains the active ingredient salvinorin A, a hallucinogenic substance.
- Khat (*Catha edulis*), a plant native to the horn of Africa and the Arabian peninsula. The leaves of the plant are chewed, resulting in the release of the stimulants cathinone and cathine.



**Synthetic cathinones** - These are analogues/derivatives of the internationally controlled substance cathinone, one of the active components of the khat plant. They generally have stimulant effects and include frequently reported NPS such as mephedrone and MDPV.

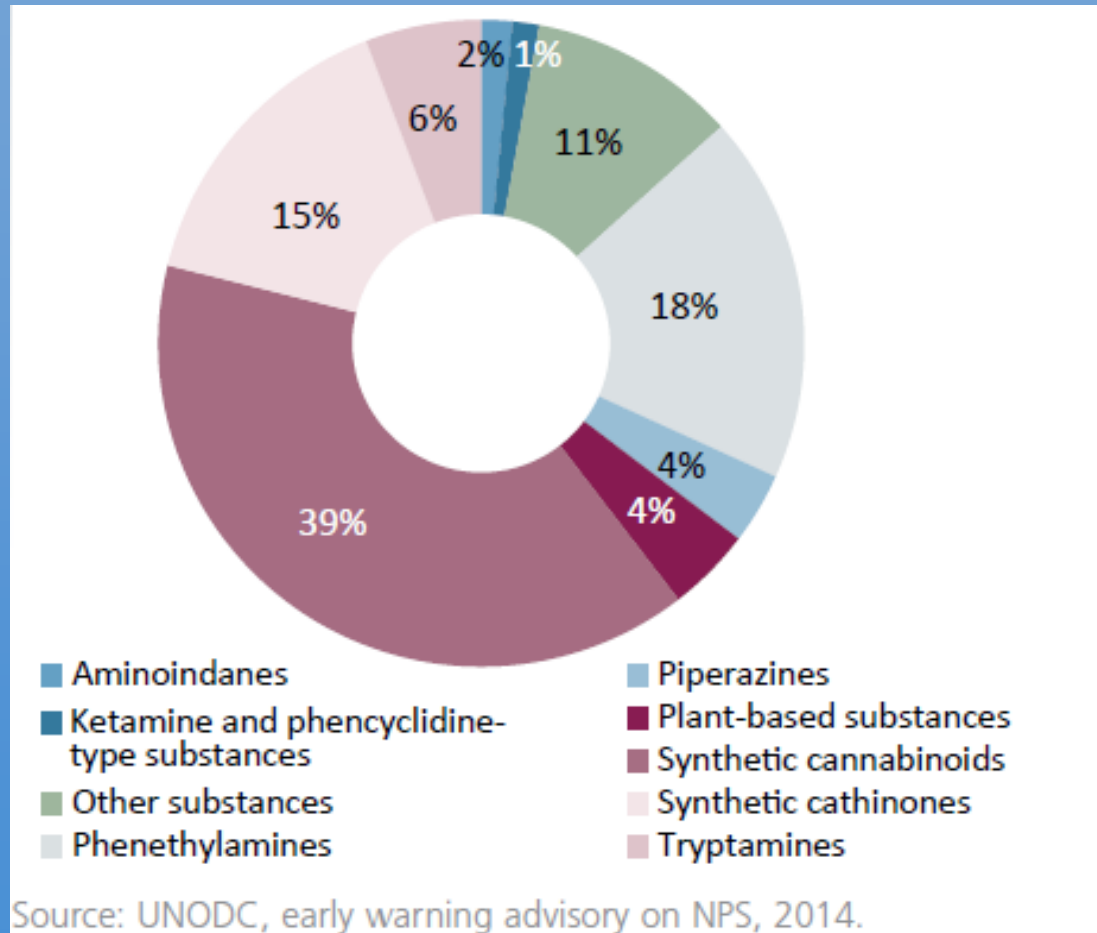


**Other substances** - such as aminoindanes (stimulants), phencyclidine-type substances (hallucinogens) and tryptamines (hallucinogens).

**Plant-based substances** - Plants like these are also of use in Latin America: Floripondio, Ayahuasca, Peyote, etc.

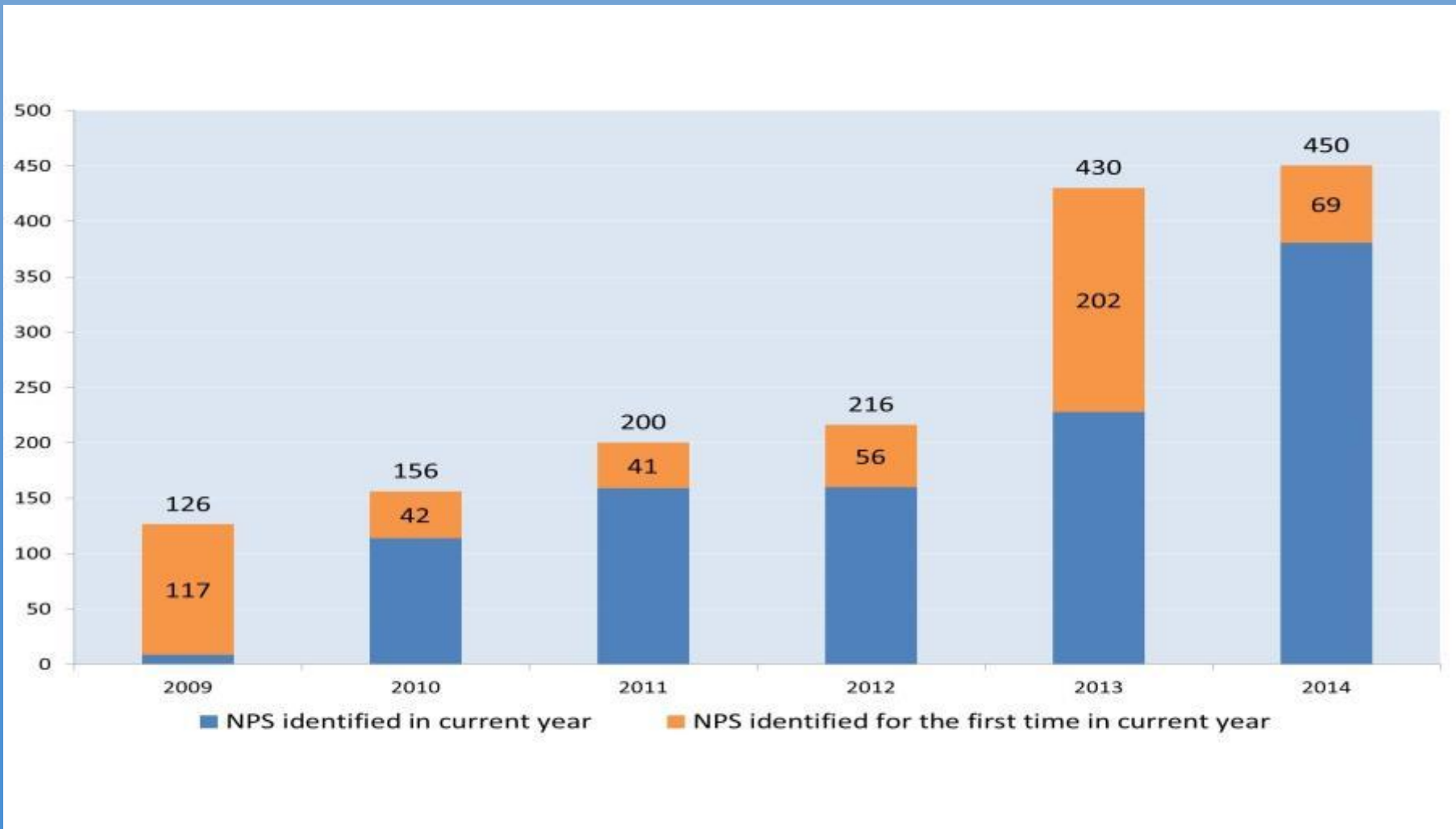


# Number of NPS informed by group of substances, 2014





# UNODC EWA – Survey on NPS reveals 69 newly emerged substances in 2014





# NPS

|                      | Nº cases   | Substance Groups | Period    |
|----------------------|------------|------------------|-----------|
| <b>Argentina</b>     | 30         | 7                | 2012-2013 |
| <b>Brazil</b>        | 22         | 7                | 2008-2014 |
| <b>Chile</b>         | 24         | 6                | 2009-2014 |
| <b>Colombia</b>      | 30         | 2                | 2008-2014 |
| <b>Costa Rica</b>    | 17         | 4                | 2009-2013 |
| <b>Ecuador</b>       | 1          | 1                | 2011      |
| <b>México</b>        | 28         | 8                | 2008-2014 |
| <b>Panama</b>        | 2          | 2                | 2011-2013 |
| <b>Peru</b>          | 2          | 1                | 2014      |
| <b>Uruguay</b>       | 1          | 1                | 2009      |
| <b>Total reports</b> | <b>157</b> |                  |           |

- 157 NPS cases reported
- 54 phenethylamines, 26 synthetic cannabinoids, 24 piperazines, 18 synthetic cathinones, 16 hallucinogenic drugs, 11 plant-based substances, 2 tryptamines, and 2 aminoindanes.
- Mexico has presented NPS in all categories, and Argentina and Brazil in seven.



## Treatment problems associated

### New Psychoactive substances

- Little/no research into treatment
- Harms still poorly understood
- NPS effects are different to traditional drugs
- Rapidly changing profile

### New populations

- Different context of use, sometimes with high risk behaviors
- Not 'typical' drug user“ How to engage?



# Challenge for specialist drug services

- Clinical staff have **poor knowledge** of changing patterns of NPS use
  - ‘**technical**’ knowledge (what are the drugs, how do they work)
  - ‘**cultural**’ knowledge (who is using, how are they using)
  - ‘**clinical**’ knowledge (how to clinical manage acute/chronic presentation)
  - ‘**service**’ knowledge (when and where to refer)





## Frontline clinical staff from specialist drug service in United Kingdom

|   | Heroin, crack, alcohol | 'Club drugs' including NPS |
|---|------------------------|----------------------------|
| High confidence in identification and clinical management | 80%                    | 30%                        |

✓ 75% requested further training on club drugs and NPS



Organization of  
American States



Inter-American Drug Abuse  
Control Commission



**CHAPTER 6: AMPHETAMINE-TYPE STIMULANTS**

**Introduction**

Amphetamine-type stimulants (ATS) are a group of substances that include synthetic stimulants such as amphetamine, methamphetamine, and methamphetamines<sup>64</sup> (such as speed, meow, rock/rocks and their analogues), legally controlled or modified prescription medications that contain these substances, and other stimulants such as methylphenidate and L-DOPA.<sup>65</sup>

According to the World Drug Report (UNODC, 2014), ATS are the psychoactive substances most used worldwide after marijuana. It was estimated in 2012 that the number of ATS users was 34.4 million for the amphetamine-like class, and 18.7 million users of ecstasy-type substances, while there were 17.6 million users of marijuana, 18 million users of opiates, 18 million users of cocaine, and 1 million users of cocaine.

**Amphetamines group**

The amphetamines group includes both amphetamine and methamphetamine. Although some amphetamines are produced for medical purposes, most are distributed illegally and produced mainly in clandestine laboratories.

Methamphetamines are the ATS most widely produced and used. They are a central nervous system stimulant commonly known as "speed", "meth" and "crack". These terms generally refer to the crystalline form of the drug, which can be smoked as "ice", "uppers", "crack" or "glass". It is a white, bitter-tasting, odorless powder or crystal that is easily soluble in water and alcohol.

The substances in the amphetamines group were originally synthesized at the end of the nineteenth century and sold without medical prescription as nasal decongestants beginning in 1892. When used in similar doses to amphetamine, methamphetamine reaches the brain in larger amounts than amphetamine, which makes them a more powerful central nervous system stimulant, whose effect is of longer duration.

Both amphetamine and methamphetamine are under international control, and both are on Schedule I of the Convention on Psychotropic Substances of 1971.

North America has had a large and growing market for ATS for a number of years. Manufacture of methamphetamine in particular in Mexico and the United States appears to have grown significantly and, according to the United States, large volumes of the drug are brought into the country as contraband from Mexico. However, the use of methamphetamine has remained at relatively low and stable levels thus far throughout the subregion.

<sup>64</sup> Under the abbreviation of "ice" with or the prefix "crack" or "crack" has other chemical variations and should be treated both as crack and as crack. This report will use the word "crack" or "crack" type substances interchangeably to refer to these drugs.

**CHAPTER 7: NEW PSYCHOACTIVE SUBSTANCES AND OTHER EMERGING DRUGS IN THE REGION**

**NEW PSYCHOACTIVE SUBSTANCES**

In recent years, the illicit drug market has seen the appearance of a number of new substances that often have chemical and/or pharmacological properties similar to internationally controlled substances. Their variety has never been greater than it is now.

These new psychoactive substances (NPS) have been termed "designer drugs", "legal highs", "herbal highs", "bath salts", "research chemicals" and "laboratory reagents". In an effort to clarify the language, UNODC uses only the term new psychoactive substances, which are defined as: "substances of abuse, either in a pure form or a preparation, that are not controlled by the 1961 Single Convention on Narcotic Drugs or the Convention on Psychotropic Substances of 1971, but which may pose a threat to public health". The word "new" does not necessarily refer to new inventions, a number of NPS were first synthesized forty years ago, but rather means that they are substances that have appeared recently on the market and that have not been scheduled in the UN Convention.

**NPS mimic the effects of controlled substances<sup>64</sup>**

Many new psychoactive substances on the market contain chemical products that have structural and/or pharmacological properties similar to the substances under international control and are designed to mimic them.

For example, synthetic cannabinoids, which include the JWH series (such as JWH-018), are compounds that mimic THC (delta-9-tetrahydrocannabinol), which is the principal psychoactive compound in marijuana.

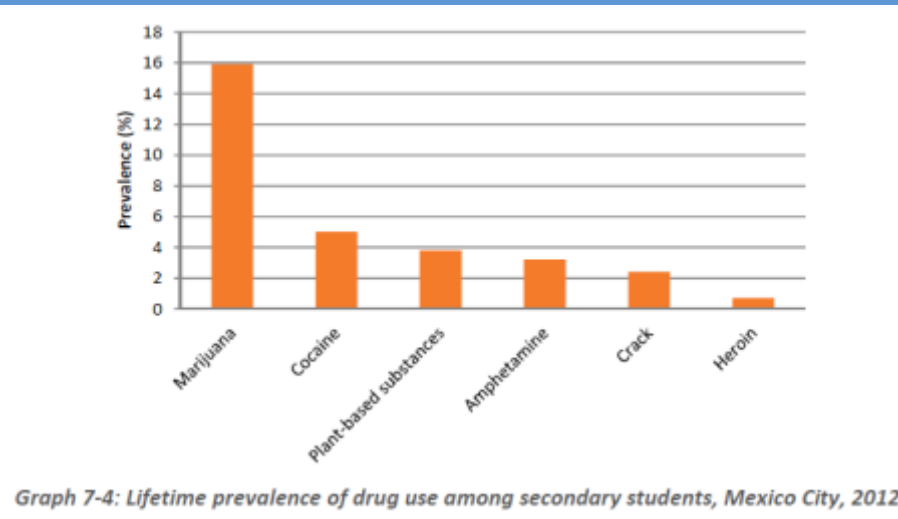
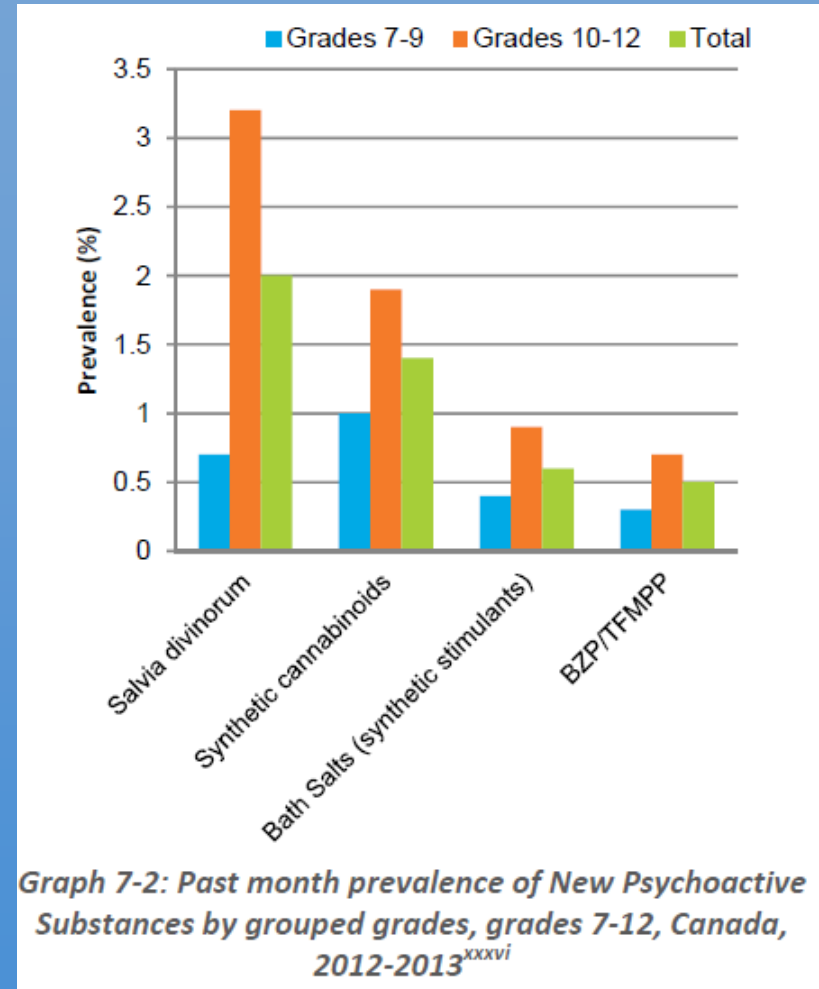
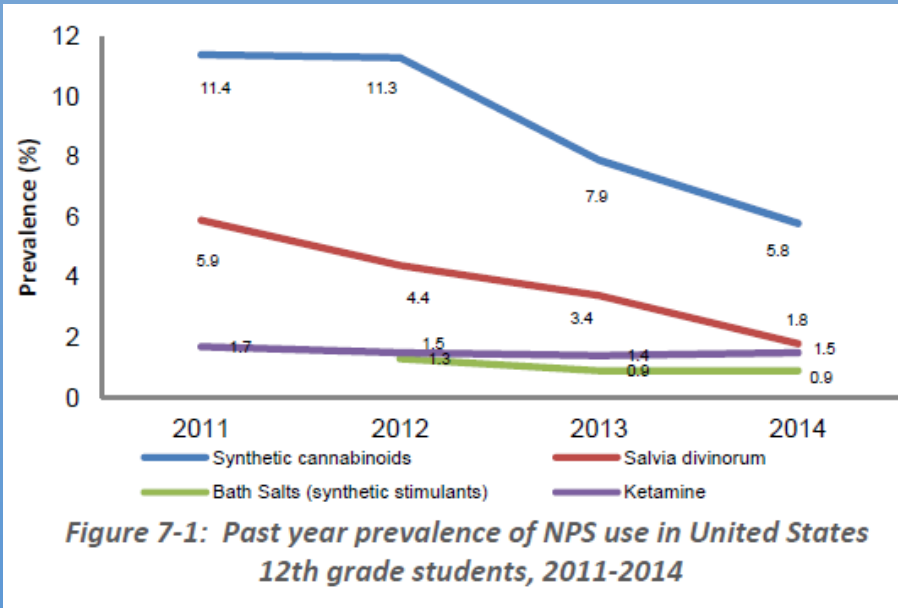
Synthetic cathinones, which include substances like mephedrone, methylene and MDPV, may produce stimulant and empathogenic effects similar to amphetamine, including MDMA.

Phenethylamines include substances such as the 2C series (such as 2C-I) and NBOMe compounds (such as 25i-NBOMe), which produce effects that range from stimulant to hallucinogenic. Some substances in this group are already under international control through the Convention on Psychotropic Substances of 1971, but many of them are still not scheduled.

Tryptamines and their derivatives that have been reported as NPS are indolealkylamine molecules. While some tryptamines of natural origin are neurotransmitters (for example, serotonin, melatonin and bufotenin), most are found as psychoactive hallucinogens in plants, mushrooms and animals (for example, N,N-dimethyltryptamin (DMT) psilocybin, and 5-methoxy-N,N-dimethyltryptamine (5-MeO-DMT) (L-9).

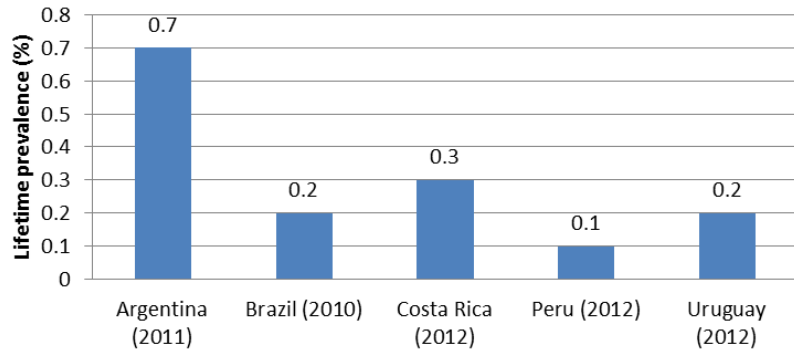


# NEW PSYCHOACTIVE SUBSTANCES IN NORTH AMERICA

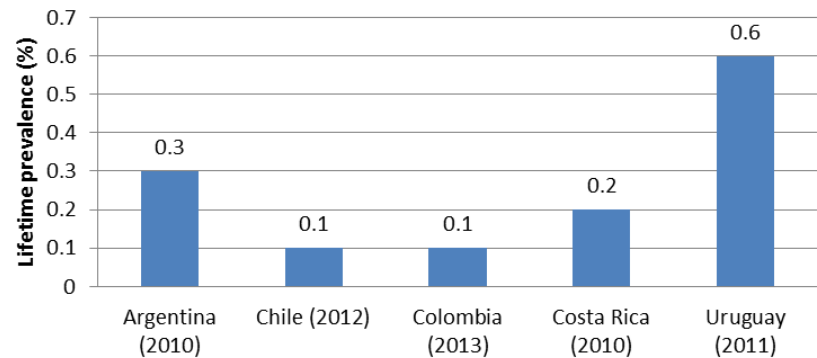


# NPS IN LATIN AMERICA

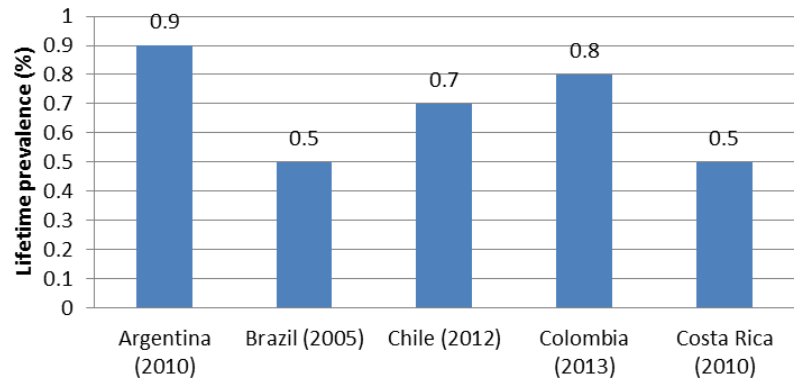
**Lifetime prevalence of ketamine use in secondary school surveys**



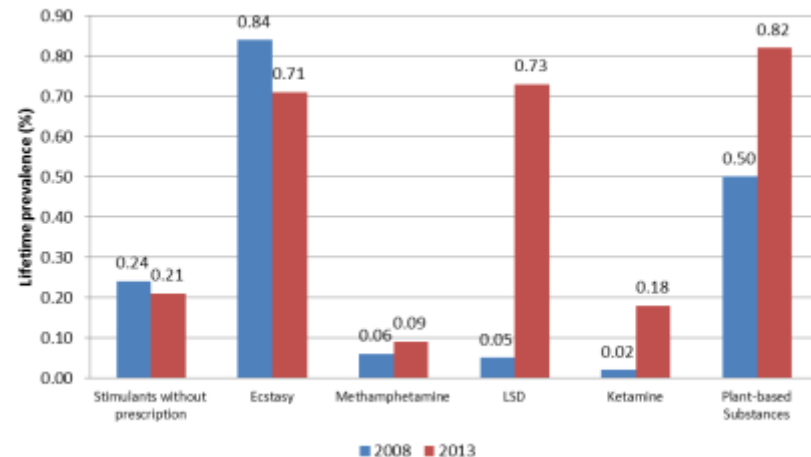
**Lifetime prevalence of ketamine use in general population surveys**



**Lifetime prevalence of plant-based substances use in general population surveys**



**Lifetime prevalence of drug use, comparative data, 2008-2013**



•Fuente: Cuestionario para los informes del  
OID/CICAD

•Fuente: Estudio de Drogas en la Población General de  
Colombia, 2013



## NPS are being sold in illicit drug markets

- A recent feature has been the emergence of cases in which the NPS has been sold in the markets of ATS and other illicit drug markets.
- Countries in most regions of the world have reported various NPS sold as "ecstasy", which was traditionally synonymous with MDMA.
- Recently, police authorities in some countries of South America have reported a substance being sold as "LSD" in the illicit drug market.



## NPS are being sold in illicit drug markets

- In May 2013, Chile's National Police seized 800 stamps, they which are believed contained the hallucinogenic substance LSD, but actually consisted in 25I-NBOMe. The drug came from a batch smuggled from Spain.
- In June 2013, Colombian Observatory on Drugs informed, through its early warning system (EWS) which substances sold as LSD actually contained two compounds NBOMe: NBOMe-25B and 25C-NBOMe.
- Thereby, reports of high consumption of LSD among undergraduates students in some countries in the region could be misleading.



## NPS are being sold in illicit drug markets

- In May 2015 the results of a survey on drug use among undergraduate students in Uruguay indicated that the second most commonly used drug after marijuana was "LSD", surpassing cocaine.
- In June 2015, Uruguayan Observatory on Drugs informed, through its early warning system (EWS) which substances sold as "LSD" actually contained 4-Bromo-2,5-dimethoxyamphetamine (DOB).
- In general, it is not clear whether these new substances are replacing other controlled substances, either in the short or long term, or if they are simply being used as a complement to the existing range of drugs under international control.



# Problems derived from emergence of NPS

- **Drug users.** They may not be aware that they are taking a NPS instead of LSD, ecstasy or 2C-B, with risk of a possible overdose, with serious negative health effects, while effects on the body are not yet completely Understood.
- **Health services.** They may not be aware of the scope of the NPS in the market, its pharmacology and toxicology, how to identify them, or the best way to help in emergencies.
- **National drug labs.** They may not be able to identify the wide range of NPS that are already available to users.
- **Police.** They may not have the means to detect NPS with current methods.
- **Legal systems.** may not provide sufficient tools for interventions.



## UNODC Early Warning Advisory on NPS (EWA)

- The ATS global market expansion and the dynamic nature of the situation about NPS highlight the need for a global surveillance, and exchange of knowledge based on individual experiences from different Member States.
- The review of scientific evidence, forensic data and information are essential to generate an effective response to the rapid growth of the market for synthetic drugs.
- In order to supplement the mechanism currently available for global monitoring of synthetic drugs -such as the Global SMART Programme - UNODC launched in June 2013 the Early Warning Advisory on NPS (EWA).
- The UNODC Early Warning Advisory is designed to enable timely and complete exchange of information on NPS, including analytical methodology, reference documents, and data trend analysis, in order to provide a global benchmark.

# Response of national legislation to changes – From 2009

- Using (other) laws\*, not drug laws
  - Penalization of supply
- Modifying drug law
  - Penalization of supply and/or temporary possession or evaluation mechanisms of risk control
- Introducing new law on NPS
  - Penalization of supply
- Pharmaceutical legislations
- Consumer protection legislation

\* **Sometimes controversial**





# Support from UNODC to the Member States

**Guidelines for the acquisition of more competent portable device for the rapid detection of NPS**



# Progress in the countries of the region

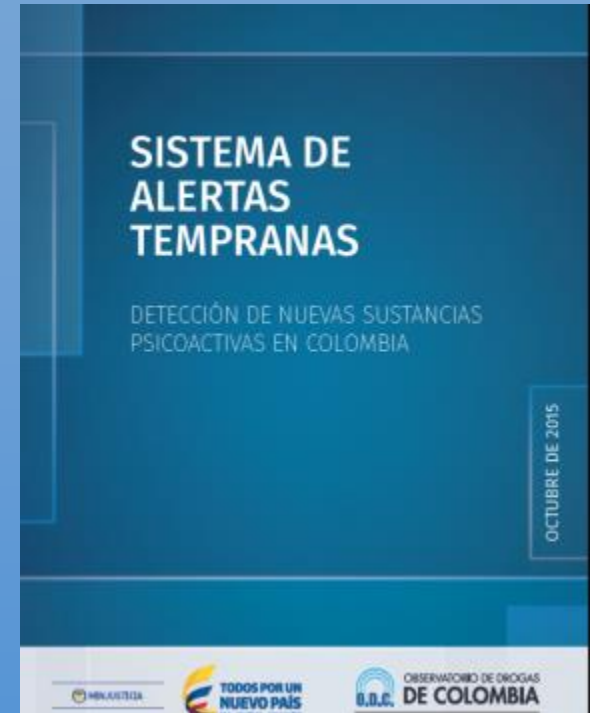


## MESA NACIONAL DE NUEVAS SUSTANCIAS PSICOACTIVAS

"Coordinación, recopilación y análisis interinstitucional de la información disponible para la actualización de los listados de drogas"

Informe N° 1, septiembre 2015

# NPS





# Conclusions and recommendations

## Synthetic Drugs and NPS: Challenges for Latin America

- While marijuana is the most popular drug, ATS use along with cocaine play an important role in Latin America's youngest population.
- The tools for collecting data in many countries need to be improved to reflect the real use of ATS and NPS.
- The drug-testing procedures in specialized forensic laboratories should include synthetic drugs and NPS.
- Query: The low level of ATS seizures in most countries is due to: the absence of ATS, the lack of enforcement capacity or a difference of priorities (cocaine)?
- It's happening now -The NPS are emerging in several countries, pointing to the markets of existing synthetic drugs.
- Addressing the drug problem in Latin America requires approaches that include ATS and NPS.
- **ATS/NPS requires identification and awareness!**



# Conclusions regarding treatment

- NPS presents a huge challenge for treatment services, both specialized drug services and other health settings.
- Limited knowledge on clinical harms, user profiles, engagement strategies and treatment approaches.
- Responses require adaptation of existing evidence-based interventions supported by investment in training and further research.
- Programs should be developed and / or responses specifically focused on these new challenges.



**UNODC**

United Nations Office on Drugs and Crime

Global SMART  
Programme



## UNODC/CICAD Global SMART Programme

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[Jaranceda@oas.org](mailto:Jaranceda@oas.org)

### More resources for information on ATS/NPS:

- <http://www.unodc.org/unodc/en/scientists/science-and-policy.html>
- <http://www.unodc.org/unodc/en/scientists/smart-new.html>
- <http://www.unodc.org/unodc/en/scientists/ewa.html>
- [http://www.cicad.oas.org/Main/Template.asp?File=/oid/smart/default\\_spa.asp](http://www.cicad.oas.org/Main/Template.asp?File=/oid/smart/default_spa.asp)