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The ATS market – 10 years after the 2009 Plan of Action

EN



About the SMART Update

Synthetic drugs constitute one of the most significant drug problems worldwide. After cannabis and opioids, amphetamine-type stimulants (ATS) are the most widely used drugs across the globe, with use levels often exceeding those of heroin and/or cocaine. Along with ATS, the continued growth of the new psychoactive substances (NPS) market over the last years has become a policy challenge and a major international concern. A growing interplay between these new drugs and traditional illicit drug markets is being observed, and trends on the synthetic drugs market evolve quickly each year. The UNODC Global Synthetics Monitoring: Analyses, Reporting and Trends (SMART) Programme enhances the capacity of Member States in priority regions to generate, manage, analyse, report and use synthetic drugs information to design effective policy and programme interventions. Launched in September 2008, the Global SMART Programme provides capacity building to laboratory personnel, law enforcement and research officers in the Pacific, East and South-East Asia, South Asia, the Near and Middle East, Africa, Latin America and the Caribbean; and regularly reviews the global amphetamine-type stimulants and new psychoactive substances situation. Its main products include online drug data collection, situation assessment reports, regional assessments and the UNODC Early Warning Advisory (EWA) on NPS. The EWA is a webportal that offers regular updates on new psychoactive substances, including trend data on emergence and persistence, chemical data, supporting documentation on laboratory analysis and national legislative responses (available at: www.unodc.org/nps). The Global SMART Update (GSU) series is published twice a year in English, Spanish and Russian. It provides information on emerging patterns and trends of the global synthetic drugs market in a concise format.* Past issues have covered topics such as the global opioid crisis, the dominance of methamphetamine in the synthetic drugs market, the role of NPS in the synthetic drugs market, non-medical use of benzodiazepines and the fentanyl group of synthetic opioids. Electronic copies of the Global SMART Updates and other publications are available at: www.unodc.org/unodc/en/scientists/publicationssmart.html.

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* The information and data contained within this report are from the Annual Report Questionnaire (ARQ) submitted by Member States to UNODC, the UNODC Early Warning Advisory (EWA) on NPS, official Government reports, press releases, scientific journals or incidents confirmed by UNODC Field Offices. This report has not been formally edited. The contents of this publication do not necessarily reflect the views or policies of UNODC or contributory organizations and neither do they imply any endorsement. Suggested citation: United Nations Office on Drugs and Crime, 2019. The ATS market – 10 years after the 2009 Plan of Action. *Global SMART Update*, Volume 22.

The ATS market – 10 years after the 2009 Plan of Action

Introduction

Already in 1998, the General Assembly realized that synthetic drugs, at that time mainly amphetamine-type stimulants (ATS), were a game changer in a world long dominated by plant-based drugs such as cannabis, cocaine and heroin.¹ In a globalized and increasingly interconnected world, new forms of information technology such as the Internet contributed to a rapid spread of knowledge on precursor chemicals and manufacturing techniques of ATS as well as on their psychoactive effects and possible forms of use. A decade later, in 2009, Member States realized that the absence of a global monitoring mechanism for synthetic drugs made it difficult to fully understand the illicit market for synthetic drugs and its characteristics. As a consequence, they adopted the Political Declaration and Plan of Action on international cooperation towards an integrated and balanced strategy to counter the world drug problem.²

The UNODC Global SMART Programme, a global monitoring mechanism was set-up in the same year and has since contributed significantly to improving the quantity and quality of information available on the illicit synthetic drugs market. Comparing the ATS market from 2008/9 to 2017/18 presented in this Global SMART Update, shows the picture of an increasing illicit synthetic drugs market, with signs of further expansion. Did we just not capture the full dimension and complexity of the synthetic drugs market in 2008/9 due to a lack of monitoring systems, or has it really multiplied in volume as some indicators suggest? Which-ever assumption we may consider more likely, the increase in affordability, availability and purity of ATS in combination with more globalized trafficking patterns and collaboration of international criminal organizations across continents are a reality, drug policy makers, health systems and drug control agencies need to get prepared for.

General features of the ATS market

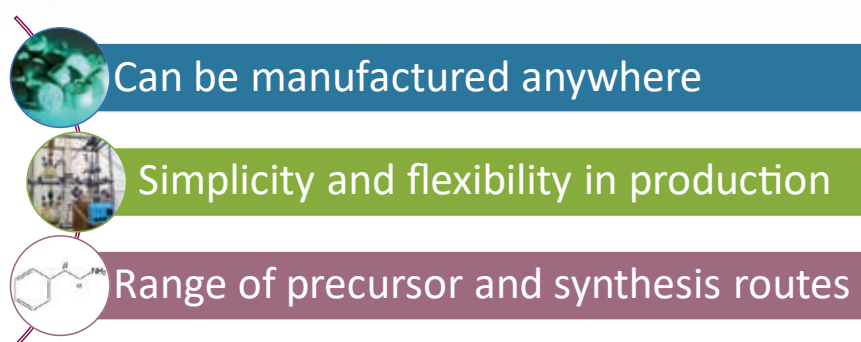
The synthetic drugs market is characterized by a number of unique features, ranging from simplicity and flexibility in production to the availability of various precursor and synthesis routes (see Figure 1).

As synthetic drugs do not depend on the cultivation of plants or certain environmental conditions, they can be manufactured anywhere, from small to large scale production.

Changes in the ATS market over time

The ATS market underwent remarkable changes over the last decade. New trends appeared, as for instance an increased differentiation of the ways synthetic drugs are sold and consumed (e.g. powder, tablets, capsules, crystals), changes in precursors over time, the appearance of new psychoactive substances (NPS) or the discovery of new ways of trafficking (e.g. dark net). The synthetic drugs market has been expanding over the past 10 years. The global quantity of ATS seizures increased more than four times, from 60 tons in 2008 to 261 tons in 2017 (see Figure 2). Methamphetamine is becoming the primary ATS drug of concern, as quantities of the drug seized increased more than sevenfold and its global share of all ATS seizures increased from 41 per cent in 2008 to 71 per cent in 2017. The quantity of ecstasy-type substances (hereinafter referred to as 'ecstasy') and amphetamine seized, doubled over the same time period. Observing the regional shifts over time, the ATS market spread to new regions: While in 2008 there were almost no seizures reported by Oceania and Africa, in 2017 they accounted for 4 per cent and 1 per cent of

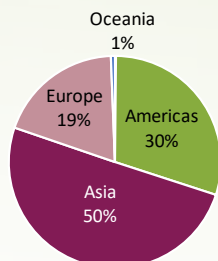
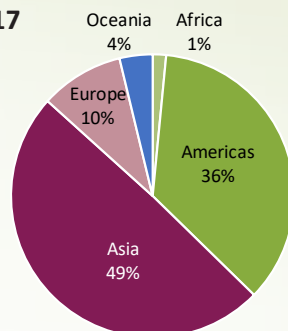
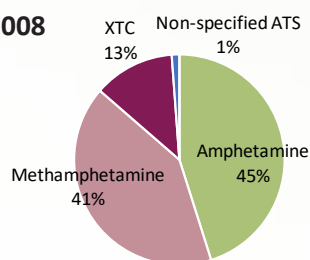
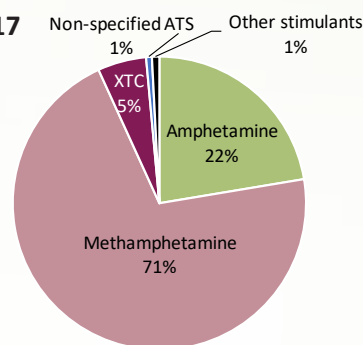
FIG. 1: Features of the synthetic drugs market



Source: UNODC elaboration

¹ General Assembly, 1998. *Action Plan against illicit manufacture, trafficking and abuse of amphetamine-type stimulants and their precursors*. (A/RES/S-20/4), 21 Oct 1998.

² UNODC (United Nations Office on Drugs and Crime), 2009. *Political Declaration and Plan of Action on international cooperation towards an integrated and balanced strategy to counter the world drug problem*. High-level segment Commission on Narcotic Drugs. Vienna, 11-12 March 2009. New York: United Nations.

FIG. 2: Global ATS seizures**GLOBAL QUANTITY SEIZED:****2008**
 **60 tons**
2017
 **261 tons**
REGIONAL DISTRIBUTION OF GLOBAL QUANTITIES SEIZED, 2008 AND 2017 (TONS)**2008****2017****GLOBAL QUANTITIES SEIZED PER DRUG, 2008 AND 2017 (PERCENTAGE)****2008****2017**

Source: UNODC Database, 2019.

Note: Global ATS seizures involve seizures of methamphetamine, amphetamine, ecstasy-type substances („XTC”), non-specified ATS and other stimulants.

global ATS seizures respectively. The global share in seizures in the Americas and Asia remained quite stable over time and decreased in Europe by almost half between 2008 and 2017.

Seizures are a valuable indicator to understand the size of global drug markets, however other factors have to be considered when looking at the expansion of the synthetic drugs market. The upcoming sections will look at the evidence considering different indicators to explore how the synthetic drugs market changed between 2008/2009 and 2017/18.

Methamphetamine

The fastest growing synthetic drugs market over the past 10 years

Seizures and trafficking flows

Substantial increases in regional and global methamphetamine seizures were reported over time, with global seizures growing more than sevenfold from 25 tons in 2008 to 185 tons in 2017 (see Figure 3). While in 2008, only 50 countries reported seizures, this figure increased to 72 countries in 2017. The increase in seizures are more than just a reflection of more effective law enforcement activities. Together with falling

prices and increased quality of methamphetamine, they indicate a dynamic and growing market for methamphetamine.³

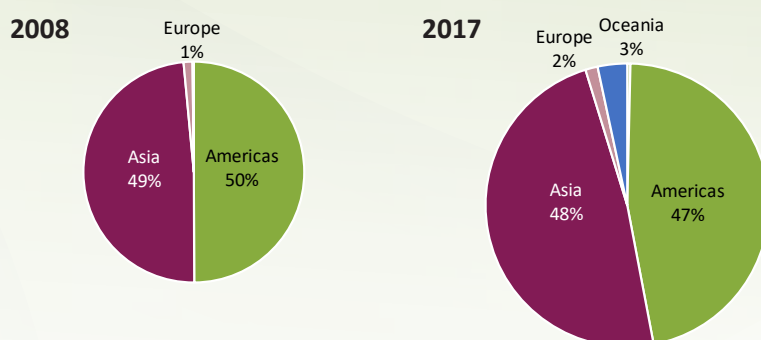
The Americas (mainly North America) and Asia (mainly East and South-East Asia) remained the two main hubs for methamphetamine trafficking over the past 10 years. In North America, the largest amount of seizures by weight were reported by the United States and Mexico; in East and South-East Asia, China and Thailand were the main hotspots for methamphetamine trafficking. In 2018, methamphetamine seizures in Thailand were 17 times larger than the combined amount of methamphetamine seized by the whole East- and South-East Asian region a decade ago.⁴ Not only is methamphetamine trafficked extensively between countries within each of those subregions but also most methamphetamine trafficked globally is destined for those two subregions.⁵ Oceania reported major methamphetamine seizures since 2012 and in 2017 those accounted for 3 per cent of global methamphetamine seizures. Europe has a very small share of global methamphetamine seizures, however quantities seized increased from 0.3 tons in 2008 to 2.6 tons in 2017.

Europe also registered some intra-regional shifts over the past decade: While in 2008 the largest amount of seizures were made in Norway, in 2017, France, Germany and Czechia were among the top three seizing countries. Furthermore, methamphetamine use in 2008 was mostly restricted to Czechia and Slovakia, but has

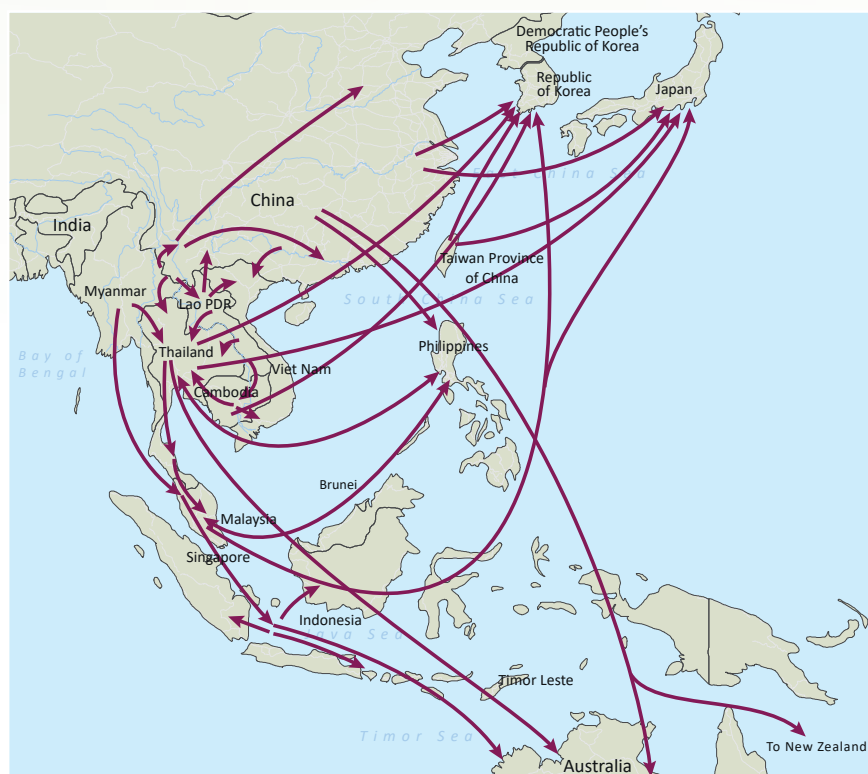
³ UNODC, 2018a. *World Drug Report 2018*. Vienna: United Nations. Sales No. E.18.XI.9.

⁴ UNODC, 2019a. *Synthetic Drugs in East and South-East Asia: Trends and patterns of amphetamine-type stimulants and new psychoactive substances*. Bangkok.

⁵ UNODC, 2018b. Methamphetamine continues to dominate synthetic drug markets. *Global SMART Update*, Volume 20.

FIG. 3: Global methamphetamine seizures**GLOBAL QUANTITY SEIZED:****COUNTRIES REPORTED:****REGIONAL DISTRIBUTION OF METHAMPHETAMINE QUANTITIES SEIZED, 2008 AND 2017 (PERCENTAGE)**

Source: UNODC Database, 2019.

MAP 1: Perceived crystalline methamphetamine trafficking flows in East and South-East Asia, 2016–2018

Source: UNODC elaboration based on information from responses to ARQ 2016 and 2017; Country presentations presented at the 2018 SMART Regional Workshop, Chiang Rai, Thailand, August 2018 and the Mekong Drugs and Precursor Trafficking Route Analysis workshop, Ho Chi Minh, Viet Nam, April 2018 in UNODC, 2019a.

Note: The boundaries and names shown and the designations used on the map do not imply official endorsement or acceptance by the United Nations.

since been spreading to Cyprus, Germany, Spain, Finland and Norway.⁶

Crystalline methamphetamine

Strong increases in quantities of crystalline methamphetamine seized, which is associated with a high level of health risk for users, point to growing trafficking of the drug to East and South-East Asia, Oceania and North America.⁷ In East and South-East Asia alone, seizures of crystalline methamphetamine almost quintupled from 8 tons in 2008 to 39 tons in 2017.⁸ Map 1 shows the perceived crystalline methamphetamine trafficking flows in the region from 2016 to 2018.

Manufacture

Clandestine manufacture of methamphetamine can range from small-scale kitchen laboratories to reach the local markets, to large-scale laboratories with sophisticated manufacturing equipment using a range of precursor chemicals and synthesis routes (see photos on page 6). Usually drug trafficking organizations attempt to adapt their manufacturing methods in response to the national and international control and the efforts of law enforcement and industry in targeting and preventing the diversion of chemicals. The trend in precursor chemicals provides important information for a more comprehensive understanding of the synthetic drugs market.⁹ Currently, available information suggests that for most methamphetamine manufacture

6 EMCDDA (European Monitoring Centre for Drugs and Drug Addiction), 2010. *Annual report 2010: The state of the drugs problem in Europe*. Luxembourg: Publications Office of the European Union and EMCDDA, 2019. *European drug report 2019: Trends and developments*. Luxembourg: Publications Office of the European Union.

7 UNODC, 2018a.

8 UNODC, 2019a and UNODC, 2010a. *Asia and the Pacific: Patterns and trends of amphetamine-type stimulants and other drugs*. Bangkok.

9 UNODC, 2018b.

Methamphetamine and production facilities



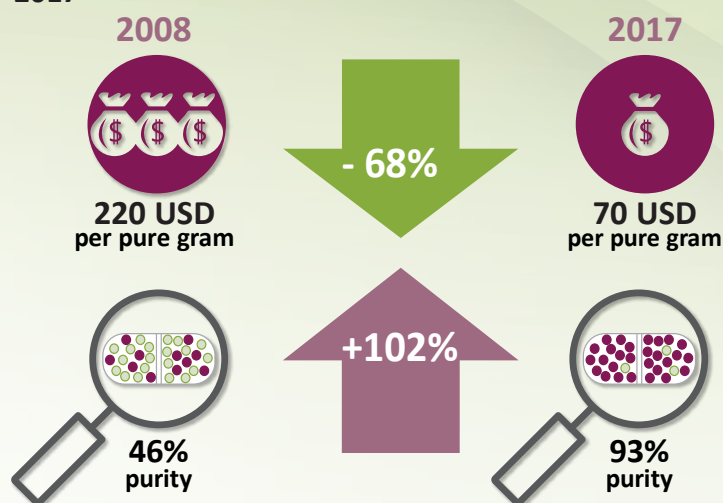
Source: First photo (from the top): UNODC; Second and third photo: Methamphetamine manufacture facilities dismantled in Kutkai, Myanmar, Contributed by CCDAC Myanmar in UNODC, 2019a.

in Africa, Asia, Europe and Oceania ephedrine or pseudoephedrine continues to be used. While methamphetamine in North America was manufactured using those precursors a decade ago, nowadays, mostly P-2-P pre-precursors and a number of non-scheduled chemicals are used. This shift to other precursors over the past decade seems to have been a consequence of improved controls of (pseudo) ephedrine in Canada, Mexico and the United States.¹⁰

Retail prices & purity

Price and purity can be used to understand changes in the availability of drugs. In a situation, where larger amounts of a drug enter a country, and demand does not pick up fast enough, increases

FIG. 4: Price and purity development of methamphetamine in the United States, January–March 2008 and January–March 2017



Source: DEA, 2010 and 2018.

Note: Purity is defined as a measure of the amount of an illicit substance present in a sample compared to other substances in the sample such as adulterants, diluents or solvents (DEA, 2018).

in purity/dosage can be expected while users would still pay the same amount per dose. A situation where nominal retail prices fall but purity still goes up could indicate a large increase in availability.

Price¹¹ and purity trends in the two core regions of methamphetamine trafficking show that while retail prices of the drug decreased over time in most countries, purity increased or remained stable. For instance, in the United States, the price per pure gram decreased 68 per cent from 220 USD in 2008 to 70 USD in 2017, while the purity doubled from 46 per cent to 93 per cent respectively (see Figure 4).¹²

In East- and South-East Asia, the typical purity of methamphetamine tablets ranged from 15 per cent to 25 per cent and the retail price showed recently decreasing tendencies in several countries in

the region. For instance, in Thailand the typical nominal retail price for a methamphetamine pill decreased from a range of 6 USD to 10 USD in 2008 to 3 USD to 5 USD in 2018. In Thailand, purity of methamphetamine pills seems to have remained stable, ranging between 10 per cent to 28 per cent in 2009 and 15 per cent to 25 per cent in 2018. Likewise, the typical retail price of crystalline methamphetamine decreased in several countries in the region, including Cambodia, Indonesia, Japan and Thailand, while the purity remained high. For instance, in Thailand the typical nominal retail price for crystalline methamphetamine decreased from 71 USD to 86 USD per gram in 2008 to 41 USD to 61 USD per gram in 2018. The purity ranges of crystalline methamphetamine remained unchanged at around 90 per cent over this time period.¹³

Income & retail price trends

Over the past decade, in several countries monthly average

¹⁰ UNODC, 2019b. *World Drug Report 2019*. Vienna: United Nations. Sales No. E.19.XI.9. For more information on precursors, please see the section “ATS Precursors” in this issue.

¹¹ The prices from UNODC sources in general refer to typical nominal prices at retail level (gram prices), e.g. no adjustments were made for inflation or purchasing power, if not otherwise indicated.

¹² DEA (Drug Enforcement Agency), 2010. *National drug threat assessment 2010*, and DEA, 2018. *National drug threat assessment 2018*.

¹³ UNODC, 2019a and UNODC, 2011. *Asia and the Pacific: Patterns and trends of amphetamine-type stimulants and other drugs*. Bangkok.

FIG. 5: Typical price of 1 gram of methamphetamine as percent of New Zealand's monthly average income, 2009 and 2016 (percentage)



Source: UNODC Database, 2019 (drug price) and ILOSTAT Database International Labour Organization, 2019 (mean national monthly earning).

incomes increased while methamphetamine prices fell at the retail level. In China in 2010 for example, 16 per cent of an average monthly salary was needed to buy one gram of methamphetamine, whereas in 2016, only 7 per cent of an average salary was required to purchase the same amount. In New Zealand, in 2009, 29 per cent of an average monthly salary was needed to buy one gram of methamphetamine and in 2016, only 13 per cent was necessary (see Figure 5).

Amphetamine

Spread to new countries and regions

Seizures and trafficking flows

Within 10 years, global amphetamine seizures more than doubled from 27 tons in 2008 to 58 tons in 2017 and the number of countries reporting amphetamine seizures increased from 57 to 68 countries (see Figure 6). For many years, the amphetamine drug market was dominated by the Near and Middle East and Western and Central

Europe. However, recent increases in quantities seized reported from North Africa and North America point to growing trafficking activities in these subregions. While Asia's amphetamine shares of global quantities seized remained stable between 2008 and 2017, Europe's share decreased from 35 per cent in 2008 to 25 per cent in 2017. However, both regions experienced an increase in quantities seized in absolute terms. Africa and the Americas gained importance on the global amphetamine market with increases of the share of global quantities seized from 0 per cent in 2008 to 3 per cent in 2017 and 2 per cent to 9 per cent respectively.

In the Middle East, amphetamine emerged as a new major market around 15 years ago, specifically for pills called 'captagon' (containing mostly amphetamine and caffeine). The predominance of these tablets in the Near and Middle East did not change over time. On the contrary, instability and conflicts in

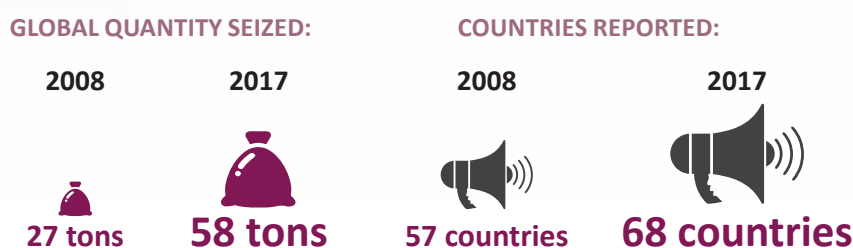
the region seem to have nurtured manufacture and trafficking of 'captagon' in this subregion.¹⁴

Manufacture

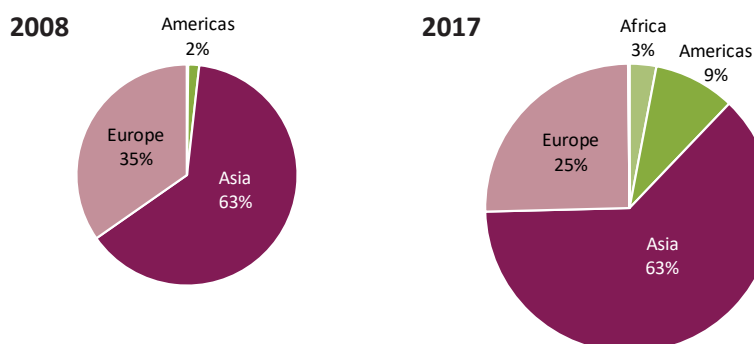
In 2008, Europe accounted for more than 80 per cent of all amphetamine laboratories reported on a global level. In that year, not a single laboratory was reported in the Near and Middle East. Even though the manufacturing of amphetamine in Europe is still ongoing, including for trafficking to other regions, the situation has changed over time.¹⁵

Data suggest the existence of clandestine amphetamine laboratories producing 'captagon' tablets in the Near and Middle East, partly for domestic consumption and partly for trafficking to other countries in the region. Moreover, within the period of 2013 to 2017, a quarter of the global number of clandestine amphetamine laboratories were dismantled in the Americas, with the majority in the United States, followed by a smaller number in

FIG. 6: Global amphetamine seizures



REGIONAL DISTRIBUTION OF AMPHETAMINE QUANTITIES SEIZED, 2008 AND 2017 (PERCENTAGE)

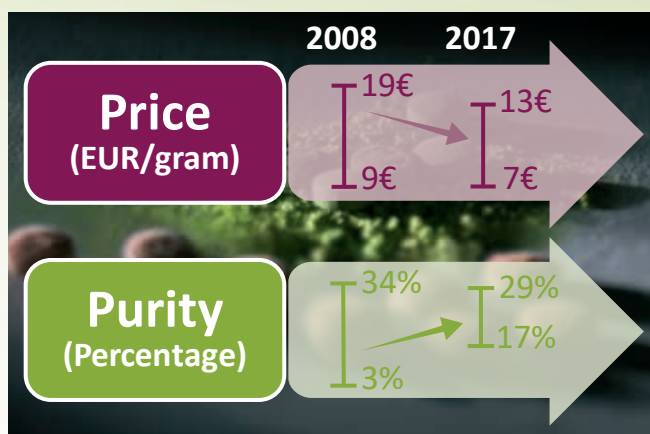


Source: UNODC Database, 2019.

¹⁴ UNODC, 2019b and UNODC, 2010b. *World Drug Report 2010*. Vienna: United Nations. Sales No. E.10.XI.13.

¹⁵ EMCDDA, 2010 and EMCDDA, 2019.

FIG. 7: Typical price and purity of amphetamine in Europe, 2008 and 2017



Source: EMCDDA, 2010 and 2019.

Guatemala which reportedly produced mainly for the drug market in the United States.¹⁶

Retail prices & purity

Price and purity data of amphetamine in Europe¹⁷ suggest the availability of cheaper and purer drugs compared to 10 years ago (see Figure 7). While in 2008, the mean price for one gram of amphetamine of unknown purity ranged from 9 EUR to 19 EUR, in 2017, the price range decreased to 7 EUR to 13 EUR. At the same time, the very wide range of mean purities of 3 per cent to 34 per cent purity reported by countries in Europe in 2008 narrowed to 17 per cent to 29 per cent in 2017, suggesting that in that year a larger proportion of amphetamine with higher purity was on the market, while very low purity amphetamine has become less common.¹⁸

over the past 10 years, with seizures almost doubling from 8 tons in 2008 to 14 tons in 2017 (see Figure 8). In contrast to other synthetic drugs, 'ecstasy' was almost as frequently reported in 2008 (77 countries) as in 2017 (80 countries). The 'ecstasy' market shows major regional changes in terms of seizure quantities and their regional distribution over the past decade. In 2008, the Americas were dominating global seizure quantities, representing almost

two thirds with 64 per cent, followed by Europe (24 per cent), Asia (11 per cent) and Oceania (1 per cent). However, 10 years later, Europe dominated global seizures in terms of quantities with 46 per cent, followed by Oceania with 22 per cent and Americas with 10 per cent, a much lower amount also in absolute terms. Africa, with almost no country reporting 'ecstasy' seizures in 2008, reported 1 per cent of global quantities seized in 2017. In Europe, in 2008, mainly Western and Central European countries reported 'ecstasy' seizures. However, in 2017, almost half of the quantities seized were reported from countries in South-Eastern Europe (mainly Turkey). Over the same time period, Oceania's seizures expanded significantly, in particular since 2014.

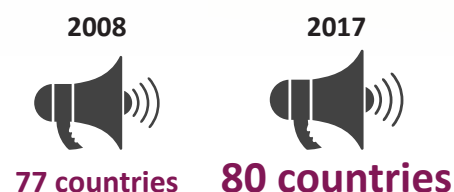
Trafficking in 'ecstasy' appears to have expanded over the last two decades, despite the decline in 2007 to 2011 due to a shortage of 'ecstasy' precursors on the market. After 2011, the trafficking of the drug increased again, especially

FIG. 8: Global 'ecstasy' seizures

GLOBAL QUANTITY SEIZED:



COUNTRIES REPORTED:



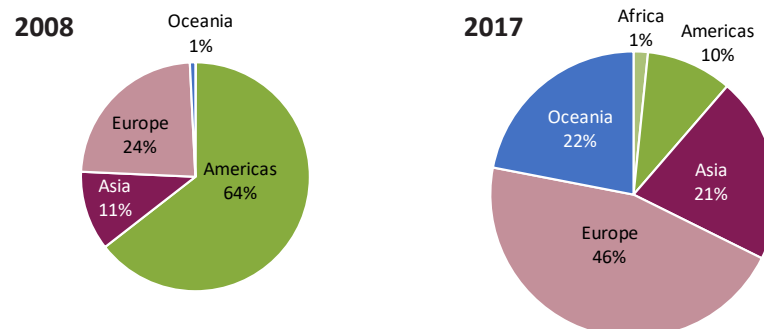
Ecstasy-type substances

Continuous growth in popularity and typical purity on a global level

Seizures and trafficking flows

Sharp increases in the quantities of 'ecstasy' seized were reported

REGIONAL DISTRIBUTION OF 'ECSTASY' QUANTITIES SEIZED, 2008 AND 2017 (PERCENTAGE)



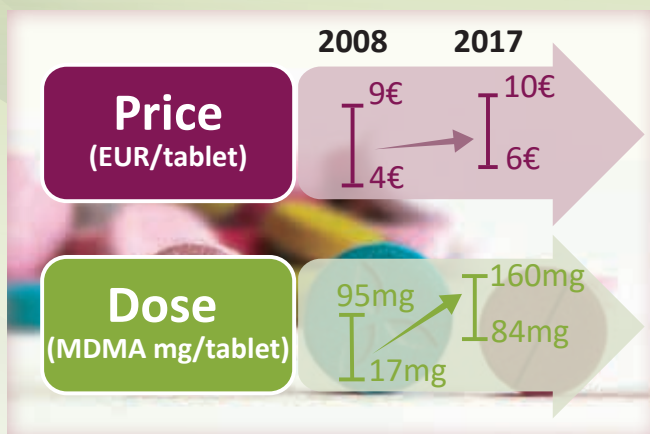
Source: UNODC Database, 2019.

¹⁶ UNODC, 2019b.

¹⁷ Price and purity data are indicated as inter-quartile range of national mean values (EMCDDA, 2019).

¹⁸ EMCDDA, 2010 and 2019.

FIG. 9: Typical price and dose of ecstasy-type substances in Europe, 2008 and 2017



Source: EMCDDA, 2010 and 2019.

since 2013, when non-scheduled precursor chemicals started to be used for MDMA manufacture.¹⁹

Manufacture

The number of dismantled 'ecstasy' laboratories more than doubled from 53 in 2008 to 155 laboratories in 2017.²⁰ Large-scale manufacture of 'ecstasy' has been reported in Europe, with the main manufacturing suspected to take place in the Netherlands and Belgium in 2008. In 2017, 21 MDMA laboratories were dismantled in the Netherlands, whereas in Belgium no MDMA manufacture facility was detected. However, reports of chemical waste dumps of MDMA precursors suggests the continuation of manufacture.²¹ In Oceania, Australia reported the highest number of 'ecstasy' laboratories dismantled with 17 facilities, both in 12 months' reporting period of 2009/2010 and in 2017.²² Marketing plays a major role in sales of 'ecstasy'. Frequent changes in tablet design, colours, shapes, sizes and brand logos are typical for this market. The Dutch police reported a significant increase in number of

tablet designs from 50 new designs identified in 2012 to 174 designs in 2014²³.

Retail prices & purity

As with other synthetic drugs, there is a tendency to purer and higher dosed 'ecstasy' on a global level. High dose 'ecstasy' tablets can consist of up to 270mg to 340mg MDMA (i.e. "super pills"), highly exceeding the usual dose of around 50mg to 80mg.²⁴ The use of such tablets has been linked to severe adverse health consequences. In Europe, the price range per tablet remained almost stable with 4 EUR to 9 EUR in 2008 and 6 EUR to 10 EUR in 2017, while the typical dose of MDMA per tablet increased substantially from a range of 17mg to 95mg to a range of 84mg to 160mg (see Figure 9).²⁵ Likewise, in East and South-East Asia, a rise in the usual dose of MDMA was reported in 2019. Several countries of the region reported 'ecstasy' tablets with nearly 50 per cent of MDMA content.²⁶

²³ EMCDDA, 2016. *Recent changes in Europe's MDMA/ecstasy market*, EMCDDA Rapid Communication. Luxembourg.

²⁴ For more information please see: EMCDDA, 2016 and UNODC, 2019c. *Global SMART Newsletter for Latin America and the Caribbean*, Issue No. 3.

²⁵ Price and purity data are indicated as inter-quartile range of national mean values (EMCDDA, 2019).

²⁶ UNODC, 2019a.

Since 2009, the emergence of new psychoactive substances (NPS) that mimic the psychoactive effects of traditional drugs such as MDMA has been reported to UNODC. These substances have been sold to drug users under a familiar drug street name, in similar form of presentation, but the product did not contain the psychoactive substance originally associated with the drug. Since 2009, NPS such as alpha-PVP, BZP, MDPV, PMMA, TFMPP have been discovered in tablets sold as 'ecstasy' seized in Asia, the Americas, Europe and Oceania.

ATS Precursors

Increase in the diversity of precursor chemicals

Over the last ten years there has been a significant increase in the diversity of precursor chemicals most commonly used in the clandestine manufacture of amphetamine-type stimulants including 'ecstasy'. Since 2009, trends in the seizures of these precursors in different parts of the world and profiling of seized drugs indicate that drug trafficking organisations have adapted their manufacturing methods to use different precursor and pre-precursor chemicals as a result of stronger law enforcement activities and responses at both the national and international level (see Figure 10).

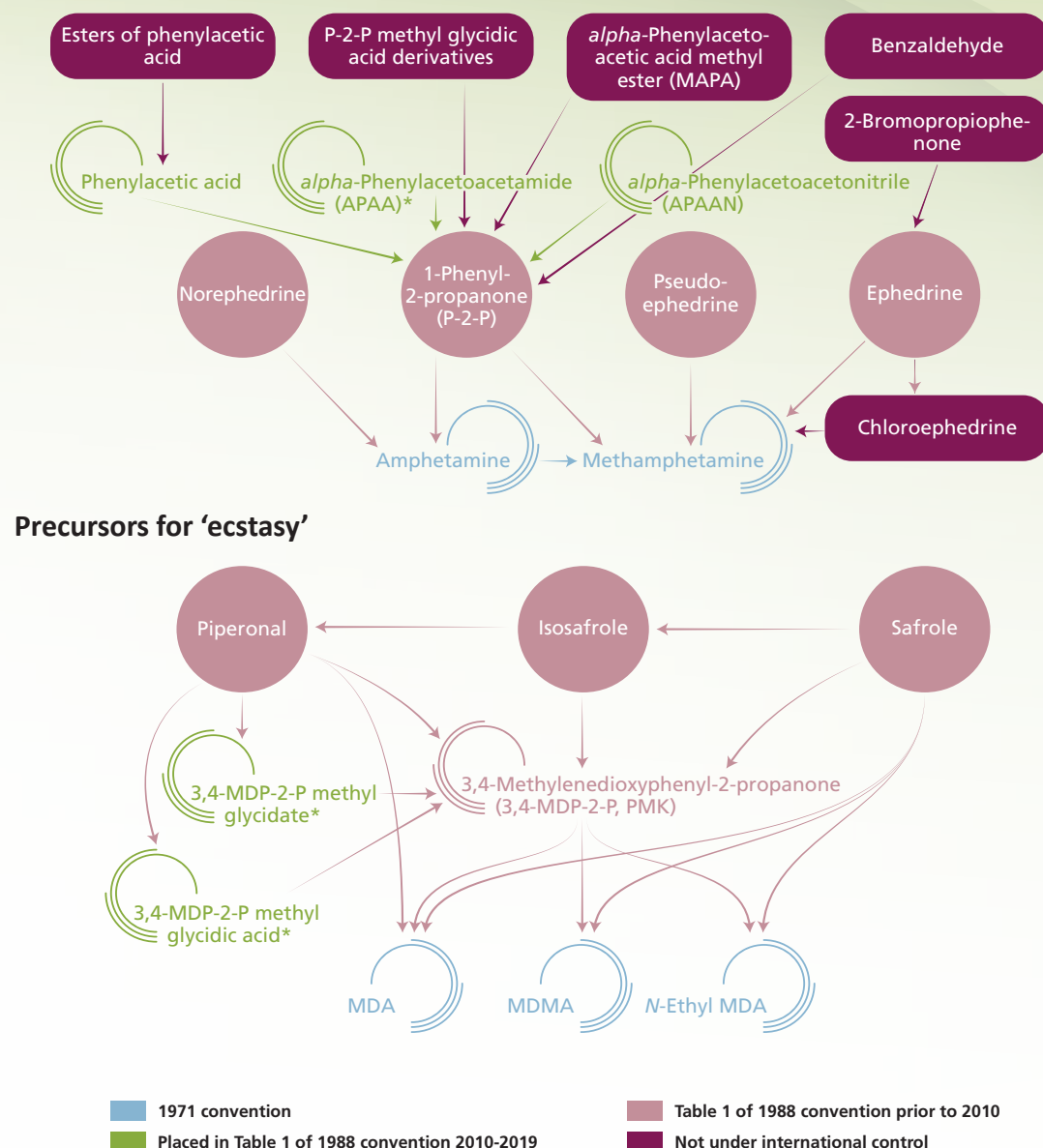
Since 2009, phenylacetic acid was rescheduled from Table II to Table I (2010) of the United Nations Convention Against Illicit Traffic in Narcotic Drugs and Psychotropic Substances of 1988 and a further four precursor chemicals were included in Table I of the same convention. The diagram on the following page illustrates a variety of the precursor chemicals that have been most commonly used in the last decade and indicates those which have additionally been placed under international control during this time period.

¹⁹ UNODC, 2019b.

²⁰ UNODC, 2010b and background information for UNODC, 2019b.

²¹ EMCDDA, 2010 and 2019.

²² UNODC, 2010a and background information for UNODC, 2019b.

FIG. 10: Precursors for amphetamine and methamphetamine

Source: UNODC elaboration.

* Placed in table I, 1988 convention at 62nd CND March 2019.

The demand-side of ATS

Measuring any form of illicit drug use is highly complex and there is no single indicator that can provide the full picture. For synthetic drugs, this is particularly challenging as many countries where high demand exists do not undertake population-based drug use surveys and users often do not know which synthetic drugs they are using. However, a combination of indicators can show certain trends and patterns over time.

Methamphetamine use

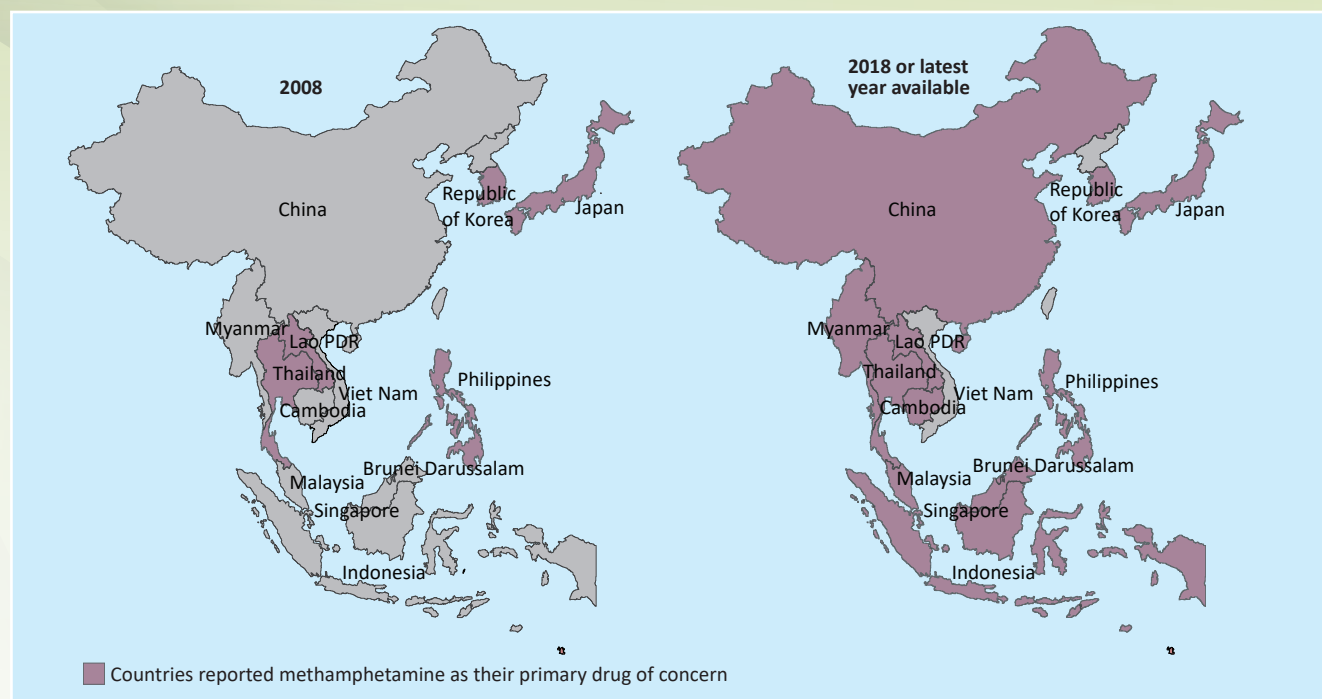
In East and South-East Asia in 2008, only five countries reported methamphetamine as their primary drug of concern, whereas in 2018 almost all countries did (see Map 2).

Additionally, changes in methamphetamine user's behaviour could be identified over time in the region. While from the 1990s onwards, youth and students were the main user groups of methamphetamine tablets, more

recent patterns of use show an increased use of crystalline methamphetamine by middle-income and higher classes, reflected also in the rise of crystalline methamphetamine seizures.²⁷ This shift to a form of methamphetamine associated with more severe, negative health implications is likely also contributing to an increase in treatment demand. For instance, Thailand's methamphetamine treatment admissions almost

²⁷ UNODC, 2018b.

MAP 2: Countries reporting methamphetamine as their primary drug of concern in East and South-East Asia, 2008 and 2018 (or latest year available)



Source: Drug Abuse Information Network for Asia and the Pacific (DAINAP) and Official communication with Japan and the Republic of Korea, January 2019, in UNODC, 2019a.

Note: Data for Democratic People's Republic of Korea, Hong Kong, China, Mongolia and Taiwan Province of China are not available. The boundaries and names shown and the designations used on the map do not imply official endorsement or acceptance by the United Nations.

FIG. 11: Methamphetamine treatment admissions in Thailand, 2009 and 2017 (by sex)



Source: UNODC, 2010a and 2019a.

doubled from 2009 to 2017 with 87,659 and 172,847 total admissions respectively (see Figure 11), with the proportion of females remaining largely unchanged.²⁸

Likewise, in the United States, methamphetamine remains a drug of high concern. Drug poisoning deaths involving psychostimulants, mostly methamphetamine,

increased more than sixfold from 1,608 deaths in 2005 to 10,333 deaths in 2017.²⁹

Amphetamine use

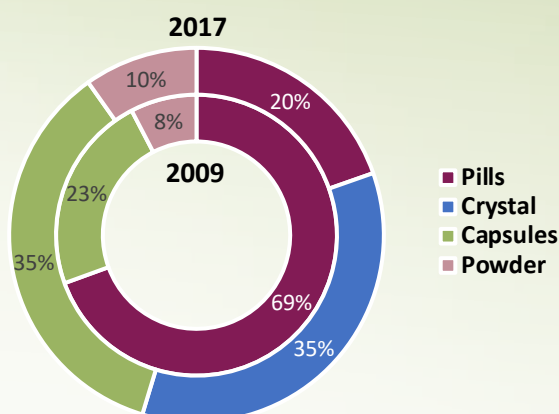
Very broad estimates indicate that past-year global amphetamines

use (including amphetamine and methamphetamine use) was estimated at 25 million users in 2005, while in 2017 past year use was estimated at 29 million users with the highest prevalence rates reported from North America (2.1 per cent) and Oceania (1.3 per cent).³⁰ The Middle East is one of

...
28 UNODC, 2010a and 2019a.

...
29 Note: Some deaths involved more than one type of drug, including opioids. DEA, 2018 and Karissa, M. et al., 2019. Drug overdose deaths involving cocaine and psychostimulants with abuse potential – United States, 2003–2017. *Weekly*, 68(17), pp. 388–395.

...
30 UNODC, 2019b and UNODC, 2007. *World Drug Report 2007*. Vienna: United Nations. Sales No. E. 07.XI.5

FIG. 12: Past six month use of 'ecstasy' in New South Wales (Australia), 2009 and 2017

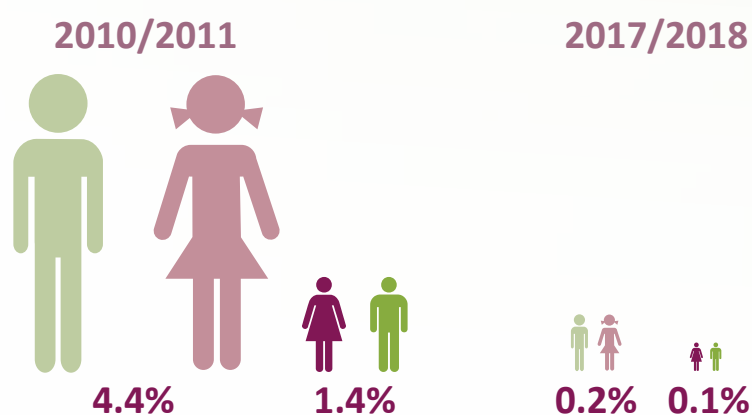
Source: Gibbs, D. and Peacock, A., 2018. *New South Wales drug trends 2018: Key findings from the ecstasy and related drug reporting system (EDRS) interviews. Supplementary data tables.* Sydney: National Drug and Alcohol Research Centre, UNSW Australia.

Note: Up until 2012, participant eligibility was determined based on any recent ecstasy use; subsequently it has been expanded to broader illicit stimulant use. Data collection for powder started in 2005, for capsules in 2008 and for crystal in 2013.

Ecstasy-type substances use

'Ecstasy' is a term that has traditionally been used to describe tablets containing 3,4-ethylenedioxymethamphetamine (MDMA). In the past decade, however, the 'ecstasy' market has undergone major changes and grown in complexity. Available products branded as 'ecstasy' became increasingly diversified, with some tablets containing little or no MDMA, some tablets having an extremely high content of MDMA, and some 'ecstasy' sold in powder and crystal form, under a variety of street names (see Figure 12).

NPS with stimulant effects gained popularity in 2009 which reflected the non-availability or low MDMA content of 'ecstasy' tablets in particular. In the United Kingdom, for example, a replacement effect of traditional drugs with NPS could be observed (see Figure 13). When MDMA became less available, substances such as BZP, mephedrone, MDPV, and TFMPP were being used. Users perceived NPS as being more effective, cheaper and due to their assumed legality, as safer compared to traditional drugs.³² The ease of access via online services, availability from head shops, petrol stations and takeaways led to an increased use of stimulant NPS by young adults. However, this development was only temporary in nature and weaned off when risk awareness programmes and legal controls were implemented.³³

FIG. 13: Past-year mephedrone use of young adults and the general population in the United Kingdom (England and Wales)

Source: Home Office, 2011. *Drug misuse declared: Findings from the 2010/2011 British crime survey England and Wales.* London and Home Office, 2018. *Drug misuse: Findings from the 2017/2018 crime survey for England and Wales.* London.

Note: Young adults include population aged 16 to 24 (left icon) and general population include population aged 16 to 59 (right icon).

the amphetamine core trafficking regions, but due to a lack of demand data, no evidence on the prevalence of use can be presented here. In Europe, amphetamine past year prevalence among the general population showed a relatively stable trend over time. While about 12.5 million adults, or 3.7 per cent of the general population, used amphetamine at least once in their lifetime in 2010, in 2017 the level was similar with 12.4 million adult

users (3.7 per cent of the general population). The mean age of first treatment of amphetamine did not change over time, with an average age of 30 years in Europe.³¹

...
31 EMCDDA, 2011. *Annual report 2011: The state of the drug problems in Europe.* Publications Office of the European Union: Luxembourg and EMCDDA, 2019. Estimates for the European lifetime prevalence is an average estimated according to surveys over time periods. For 2010, surveys from 2001 to 2010 were considered and for 2017, surveys from 2015 to 2017 were considered.

Estimates of 'ecstasy' use have largely remained stable with past year prevalence of the general population aged 15 to 64 ranging between 0.2 per cent to 0.8 per cent. Prevalence rates of 'ecstasy' in 2008 and 2017 were the highest in Australia and New Zealand (3.6 per cent and 2.2 per cent), North America (0.8 per cent and 0.9 per

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32 UNODC, 2017. *World Drug Report 2017.* Vienna: United Nations. Sales No. E.17.XL.8.

33 UNODC, 2017.

cent) and West and Central Europe (0.8 per cent and 0.9 per cent)³⁴. Between 2007 and 2012, most countries in Western and Central Europe reported stable or declining trends in the use of 'ecstasy', but there have been indications of an overall resurgence in 'ecstasy' use in recent years. While in 2009, MDMA was rather a niche or sub-cultural drug limited to dance clubs, raves and festivals, where electronic music was played, current indications suggest that it is used by a broad range of young people in mainstream recreational nightlife settings, including mainstream clubs, bars and parties.³⁵

Conclusion

In the Plan of Action adopted in 2009, Member States recognized the lack of information on the illicit ATS market and concluded that there was a growing need for monitoring systems, capability and capacity building, improved technology, identification and detection methods as well as for knowledge sharing at a national, regional and global level. Around the same time, the Global SMART programme was initiated, responding to these needs with global monitoring and trend analysis of synthetic drugs as well as national capacity building activities for data collection purposes and enhanced knowledge sharing with relevant institutions.

These systematic efforts improved the available information of the ATS market substantially. Several years later, in 2013, the UNODC Early Warning Advisory (EWA) on NPS was established, as NPS started to become a major concern from 2009 onwards. The EWA enabled the prioritization of NPS for international review and contributed to the placement of over 40 NPS under international control. In addition, the EWA provided countries with information on possible national legislative controls. Moreover, the Global SMART programme started to help assess and enhance the capacities of Member States with targeted workshops for improved drug identification. The final section provides an overview of SMART responses to the synthetic drugs problem.

Looking at 2017/2018, synthetic drugs in general and ATS in particular have not lost any of their importance. The increased knowledge, technology and identification methods improved the ability of Member States to detect and identify ATS, which can also be seen from the increase in ATS quantities seized over the past years. Additionally, developments and trends in prevalence, manufacturing, price, purity and precursors indicate that ATS play an increasingly important role on the global drugs market. This market expansion has reinforced the need to respond to the synthetic drug problem.

Global monitoring mechanisms of ATS and their precursors, as well as integrating national, regional and international reporting and information exchange systems are essential to respond to the problem. The control of precursors used to manufacture ATS is another important element, which enables efficient synthetic drugs control. Other emerging drug threats which appeared and continue to appear on the synthetics drug market, such as NPS need to be addressed with targeted policies at national, regional and global level. Prioritization of NPS helps countries making informed decisions on legal frameworks and enhances their preparedness. Such efforts can strengthen a scientific evidence-based, balanced, comprehensive and integrated approach to drug policy that contributes to reducing demand and restricting supply.

...
³⁴ UNODC, 2010b and UNODC, 2019b.

³⁵ UNODC, 2019b.

SMART responses to the synthetic drugs problem

Global Monitoring & Trend Analysis

Monitoring and trend analysis is paramount to understanding the synthetic drugs markets and informs the development of effective policies and responses to emerging drug threats, including their potential harms to public health. The transnational nature of the synthetic drugs problem and the specific technical expertise needed to interpret the data requires a dedicated global monitoring mechanism offered by the Global SMART programme to ensure a comprehensive understanding of the global synthetic drug situation.

National capacity building (data)

Building national data collection and management capacity ensures that Member States can generate and manage information on synthetic drugs and new psychoactive substances. National SMART workshops strengthen systematic collection of drug data on seizures, trafficking, cross-sectoral data, as well as information dissemination and online data-sharing mechanisms. Assessments on the quality of data shared by partner countries and technical assistance to improve data generation and analysis of synthetic drugs are part of the SMART approach.

National capacity building (drug identification)

The synthetic drug market is evolving rapidly, particularly due to the unprecedented number of structurally diverse NPS and frequent changes in precursors used to manufacture them. The identification and detection of emerging synthetic drugs is a necessary first step in any successful law enforcement or health intervention. Improving the capability of laboratories, law enforcement and border control agencies to identify synthetic drugs and their precursors and the introduction of new, powerful field-testing methods accompanied by capacity building becomes a necessity in more and more countries.

Early Warning Systems

Early Warning Systems play a key role in monitoring, early detection and timely responses to emerging drug threats. The UNODC Early Warning Advisory (EWA) on NPS was launched in June 2013 as a response to the emergence of NPS at the global level. The EWA is both an online platform with up-to-date, scientific information on NPS and a global information mechanism on the latest developments. The Global SMART Programme supports the establishment of national early warning mechanisms, with a focus on strengthening the generation and exchange of forensic information.

Legal responses

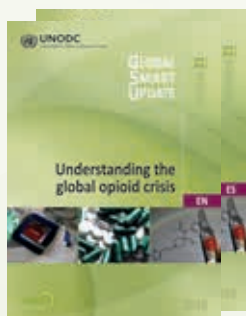
Given the structural diversity and rapid development of NPS on the global drug market, there is a need to prioritize the most harmful, prevalent and persistent NPS for international control. Due to the diversity of the global NPS market, the development of effective legislative and administrative measures at the national level is needed to support the international drug control system. The EWA contains a compendium of national legislative responses, to inform Member States about possible options for response to the NPS problem.

Knowledge sharing

Improved information and data on synthetic drugs and NPS needs to be available and accessed globally. Translating trends into a threat analysis to communicate potential risks, raise awareness and support countries in anticipating threats of synthetic drugs is key to reducing the risks to public health. Disseminating such information is essential for effective policy design and programme interventions of Member States. The Global SMART programme produces national, regional and global synthetic drug assessments as well as other information products on emerging patterns and trends of the global synthetic drugs market.



Recent Global SMART Publications



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Global Synthetic Drugs Assessment - Amphetamine-type stimulants and NPS 2017
(English)



Current NPS Threats Vol. 1, 2019
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UNODC Early Warning Advisory on NPS



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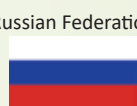
Japan



New Zealand



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