



Breaking Bans

The scourge of synthetic drugs in Mauritius

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Summary

Synthetic drugs, more specifically, new psychoactive substances (NPSs), were first detected in Mauritius in 2013 and since then have had a significant negative impact, overtaking heroin as the most popular drug among young people. The government has developed various policies to address the issue, the most recent being the National Drug Control Masterplan, which promotes collaboration among law enforcement agencies. However, the success of the strategy will depend on its effective implementation.

Recommendations

- Establish a network of practitioners or a platform on which law enforcement, customs and other agencies can share and access information.
- Set up a regional warning system that allows law enforcement and customs officials in the region to share materials and new chemical and toxicological information about NPSs and promote collaboration in research initiatives.
- Law enforcement and customs officials should be trained to keep abreast of the new development of both NPSs and their precursors.
- Develop specific NPS-related legislation to curb the increasing threat the drugs pose.

Introduction

It was a warm and humid afternoon at the rehabilitation centre in Terre Rouge, Mauritius. More than 60 people were squeezed into a meeting room that can accommodate about 30. The two ceiling fans did little to alleviate the discomfort and heat inside the room. For the former drug users and their families that afternoon was of great importance. Twelve of those present would be chosen to undergo a nine-week detoxification programme at the conclusion of which, it was hoped, they would be able to resume a drug-free life.

For the former users it offered the hope that they could change their lives and not end up in prison. For their families it offered the hope that life would go back to normal, with their loved ones free of the scourge of drug abuse. For the director of the centre the hope was that the patients will not relapse once the programme ends.

This is the most dangerous drug we have seen so far, and sadly we might not have an effective treatment

A former addict himself, he understands the struggle and he also knows that synthetic drugs are different from heroin or crystal meth. He sees daily the devastation caused by new psychoactive substances (NPSs) among young people. Every time his telephone rings he expects to hear the cry of another parent telling him that his or her child has succumbed to the drug.

'This is the most dangerous drug we have seen so far,' he explains, 'and sadly we might not have an effective treatment to deal with the problem.' If the problem of synthetic drugs is not addressed, he says, it will be the 'downfall of our society and generations for years to come'.

NPSs were discovered on the island in 2013 and since then their availability and affordability have resulted in them overtaking heroin as the most popular and attractive drugs among young people. Mauritius is the only country in Africa in which synthetic drugs have gained a foothold and spread so widely.

The government has responded to the challenge in various ways, among them the creation of a National Drug Control Master Plan that promotes a collaborative approach from various government departments to address the threat.

This paper attempts to provide an understanding of the synthetic drug market in Mauritius, the reasons behind its growth and its main consequences, and examines government responses. It also serves as a warning to other African states in which NPSs may emerge. It concludes with recommendations of ways to assist government and other stakeholders to curb the threat of NPSs on the island.

Methodology and study design

The study was conducted in response to the rising incidence of the use of synthetic drugs in Mauritius. Very little research has been done on the topic apart from a 2015 study by *Prévention Information Lutte contre le Sida* (PILS).¹

The primary objectives of the current study are twofold:

- To provide an understanding of synthetic drugs in general while focusing on the market and its consequences in Mauritius; and
- To examine the policy responses to synthetic drugs and frame them within the country's history of drugs.

To this end the study adopted a qualitative approach that attempts to explore and portray the experiences of participants in an attempt to understand the complexities and sensitivities of the topic.

The study involved 12 participants of different ages and socioeconomic backgrounds. They included customs officials, law enforcement officers from various policing units, former drug users, former drug dealers, the director of a rehabilitation centre, parents of patients in rehabilitation and social workers. The author informed participants of the objectives of the study and gave them the option of remaining anonymous given the sensitivity of the subject.

The fieldwork was originally meant to have been carried out over two weeks in March-April 2020 but during that time Mauritius registered its first Covid-19 cases. The ensuing lockdown meant that some face-to-face interviews had to be cancelled. While this was a key limitation, the author is confident that the interviews yielded enough information to fulfil the research

objectives. Furthermore, where additional clarification was required, the author conducted further interviews telephonically and via Skype after the field research was completed.

Synthetic drugs: An overview

The term synthetic drugs is generally used to refer to chemical compounds that are artificially produced in a laboratory and mimic the effects of natural illicit drugs such as marijuana, heroin and cocaine. They are produced commercially by drug manufacturers for valid medical purposes, but some batches are diverted from legal channels. They are also produced in clandestine laboratories to supply the global illicit market.

Produced in a variety of forms, NPSs contain mixtures of different substances which may, at times, include controlled drugs. Like other forms of illicit drugs NPSs can be smoked, ingested, injected or even snorted to produce effects similar to those of the controlled substances they are aimed at emulating.

The term NPS is used differently in different contexts and by different organisations. For the United Nations Office on Drugs and Crimes² it encompasses two broad types of drug:

- Amphetamine-type substances (ATSs) such as methamphetamine, amphetamine and 4-methylenedioxy-N-methylamphetamine (Ecstasy) (MDMA); and
- Novel psychoactive substances³ (NPSs) such as synthetic cannabinoid (Spice/K2), synthetic cathinones (mephedrone), new synthetic opioids and ketamine, among others.

Traditionally, the synthetic drug market was dominated by the ATS-type substances. However, in recent years the definition has narrowed and now refers predominantly to NPSs. In Mauritius, for instance, the term synthetic drug (*la drogue synthétique*) is used specifically for NPS-type substances. This paper employs this definition and uses the term synthetic drug interchangeably with NPS.

NPSs first emerged more than a decade ago, as early as 2004, in the United Kingdom and Europe. However, the United Nations Office on Drugs and Crime's (UNODC) annual seizures data show that they only made their appearance in Africa in about 2013-2014. In Mauritius the first new psychoactive substances were detected by law enforcement agencies in July 2013.⁴

The increasing threat of NPSs globally eventually prompted the UNODC to define them 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 1971 Convention on Psychotropic Substances, but which may pose a public health threat'.⁵ While the term NPS tends to imply that the drugs are a new creation, this is not the case – numerous NPSs were synthesised more than 40 years ago. What is 'novel' is the substances or compounds in the NPSs that have emerged on the market and which are not scheduled under the two international conventions.

The substances are sold by tobaccoists and drug dealers under labels such as 'legal highs'

The substances are sold by tobaccoists and drug dealers under labels such as 'legal highs', implying some form of legitimacy, which, in turn, creates a perception that the risks associated with their use are low. For these reasons, NPS producers tend to avoid detection by law enforcement agencies and also steer clear of legislation prohibiting the sale and use of the drugs. Another crucial factor in the proliferation of NPSs is the way the drugs are marketed and sold.

Features of the synthetic drug market

Several features characterise the uniqueness of the synthetic drugs market. They include the fact that the drugs are simple to produce, the ingredients are easily available and the molecular compounds used can be replicated from the available precursors in a multiplicity of ways.

Synthetic drugs can be manufactured anywhere from a homemade laboratory in a kitchen or garage to large-scale production in a factory. According to the European Monitoring Centre for Drugs and Drug Addiction (EMCDDA), China is the major producer and exporter to the chemical and pharmaceutical companies that sell them openly.⁶ India has also entered the market.⁷

Another interesting feature of the marketing and distribution of NPSs is that they challenged the traditional buyer-seller context. While traditional drugs

such as heroin, cocaine or even crystal meth were bought illegally on the street from a dealer, NPSs could be sold openly (and, in some countries, still can) in tobacco shops, convenience stores, petrol stations and various other outlets.⁸

The internet also became a key source of supply. Another aspect contributing to their popularity is the fact that NPSs are often marketed as something they are not. For instance, they are sold as 'herbal incense' and the label on the package might read 'it emits a pleasant, very relaxing smoke when burned' and/or 'Not for human consumption'.

Types

Although numerous types of NPS are available on the illicit drug market they are usually classified in three main categories: synthetic cannabinoids, synthetic cathinones and synthetic opioids.⁹

Synthetic cannabinoids

When they first emerged on the drug scene in Europe and the US in the mid-2000s synthetic cannabinoids were sold as replacements for cannabis. Marketed in attractive packages, they carried labels such as 'herbal incense', 'K2', 'Black Mamba' and 'fake weed'.¹⁰

It was only a few years later, in 2008, that it was discovered that these herbal mixtures were spiked with synthetic cannabinoid receptor agonists, substances that have some form of functional similarity to natural cannabis.¹¹ In other words, synthetic cannabinoids mimic the effects of delta9-tetrahydrocannabinol (THC), which is the main psychoactive constituent of natural cannabis (See Appendix for more information).¹² This is the most common NPS found in Mauritius.

Synthetic cathinones

Synthetic cathinones, which emerged on the European illicit drug market in the mid-2000s, are a class of phenethylamines chemically similar to amphetamine and methamphetamine, which aim to reproduce the psychoactive and stimulant effects of these controlled substances.¹³ Synthetic cathinones are the chemical analogues of the compound cathinone, the active ingredient in the leaves of the Khat plant.¹⁴ Currently about 138 different derivative of synthetic cathinones are being monitored.¹⁵

Synthetic opioids

Although synthetic cannabinoids and synthetic cathinones are still the most popular NPSs on the market, synthetic opioids are rapidly emerging as another option¹⁶ and it would be remiss to disregard their impact. Synthetic opioids are powerful substances, the consumption of which can result in overdose, cardiac arrest and death.¹⁷

The synthetic drug market in Mauritius

Mauritius's history of drugs dates back to the abolition of slavery by the British in 1834. Cannabis, also known as *gandia*, was introduced to the island by indentured labourers and opium by Chinese immigrants. It is important to note that these substances were consumed traditionally in a controlled environment by adults in certain areas.¹⁸

Mauritius became the country with the highest prevalence of opioid use (heroin) in Africa

The introduction of 'Brown Sugar' to the island in the 1970s would alter this drug culture. 'Brown Sugar' is a crude form of heroin which originated in South East Asia's Golden Triangle. Smuggled through the airport, seaport and postal services, it created a Mauritian drug sub-culture and what is often termed a 'Brown Sugar' epidemic in the 1980s.

The challenge of drug abuse continued to escalate to alarming levels as Mauritius became the country with the highest prevalence of opioid use (heroin) in Africa.¹⁹ A study carried out in 2015 by PLS revealed that more than half the Mauritians interviewed said their lives were somehow directly or indirectly influenced by the drug problem on the island and listed drugs as the most important social problem in the country.²⁰

In a bid to stem the problem, in 2006 the government decided to adopt a more holistic public health stance by moving away from traditional criminal justice and its 'war on drugs' approach. The new method appeared to be working, a fact reflected in a marked reduction in cannabis and heroin use, but in 2013 the discovery

of the first cases of use of synthetic drugs (synthetic cannabinoids) thwarted the progress.

By 2015 there were 11 types of synthetic cannabinoids in Mauritius.²¹ Although other NPSs, such as synthetic cathinones, have been seized at ports of entry, synthetic cannabinoids remain the predominant type available.²² According to law enforcement officials, when synthetic cannabinoids first appeared on the island they came in attractive packets labelled 'not for human consumption', similar to the 'Spice' product in Europe shown in Figure 1.

However, as it became more difficult and expensive to import such products, dealers started importing precursor chemicals directly from China, India and,

to a lesser extent, South Korea. Despite the efforts of customs and law enforcement to prevent the drugs from entering the country, these synthetic chemicals and precursors found their way in through courier services.

While the drugs themselves are illegal and are controlled substances, in most instances the ingredients used to make them are not. For example, in one incident someone found in possession of thinners, acetone and tea leaves had to be released because no actual drug could be found.²³

Since synthetic cannabinoids were first identified the market has evolved and now the NPSs are mixed on the island (for more information, see Cannabinoid section in the Appendix).

Figure 1: Synthetic cannabinoids – spice and street names



Source: Erowid; L'express; Le DefiMedia and author interviews²⁴

As one interviewee noted, people involved in the manufacture/production of the substance have some form of chemistry qualification. In 2018 forensic scientist Aadeel Toofany said that there were no clandestine laboratories in Mauritius capable of producing synthetic cannabinoid substances such as JWH-018 as the technology was not available on the island at the time.²⁵ The debate about whether the ingredients or precursors for synthetic cannabinoids can be manufactured on the island is ongoing.

Table 1 shows the growing presence of synthetic drugs on the island, with 195.04g seized in 2013 and 12kg in 2018. An interesting point to note is that the amount of heroin seized always appears to be higher than that of NPSs, leading to the perception that heroin presents the greater challenge. However, an examination of the way in which synthetic cannabinoids are prepared corrects this perception to some extent.

Table 1: Synthetic cannabinoid vs heroin seizures

Year	Synthetic cannabinoid	Heroin
2013	195.04g	14.1 kg
2014	253.9g	12 kg
2015	897.81g	13.1 kg
2016	1 kg	17.1 kg
2017	6.8kg	173.1kg
2018	12.839kg	131.9kg
2019	9.150kg	N/A

Source: Mauritius Statistics²⁶

One gram of synthetic cannabinoid can produce 300g of herbal mixture. Applying this formula to the amounts in Table 1 indicates the magnitude of synthetic drugs compared to heroin. For instance, in 2017 the 6.8kg of

synthetic cannabinoid would equate to approximately 2 040kg of NPS mixture.

Since their emergence on the Mauritian drug market synthetic drugs have grown in popularity, predominantly because of the low cost and powerful effects. In terms of pricing, a *pouliah* (packet) of NPS – which is around 0.2g – would cost about Rs100-200. This makes it particularly attractive to young people, especially students, who contribute money from their lunch allowances to buy a *pouliah* and smoke it among themselves.²⁷

Table 2: Drug prices – a comparison

Drugs	Price per gram (Rs)
Cannabis	2 500-3 000
Heroin (good quality)	6 500-7 000
Heroin (impure)	4 000-5 000
Synthetic	1 000-1 800
Methamphetamine	1 800-2 500
Tramadol	400-500 per tablet

Source: Author's interviews and *L'Express*²⁸

According to users, one of the disadvantages of NPSs is that while they have a higher euphoric effect than heroin the duration is quite short. One user said the difference was between one hour for a synthetic drug and five to seven hours for heroin, making heroin the drug of choice for users seeking a longer 'high' and who can afford it. The fact that heroin is the most expensive drug on the market also makes it an attractive source of profit for dealers and traffickers, who are willing to face the high risks involved.

While methamphetamine can also produce good profits, it is not as popular among users as NPSs or heroin. Among the reasons for this are that the chemicals used to manufacture it are easily detected at ports of entry and users are often uncertain of how much to take in order to avoid overdosing.²⁹ Furthermore, cooking methamphetamine in a home laboratory would probably make the neighbours suspicious.³⁰

Another interesting finding that emerged from the research relates to the non-medical use of Tramadol and its availability on the black market. As one dealer explained, Tramadol is sourced legally by means of a prescription from a doctor. Once obtained, the pills are sold at almost ten times the price to willing individuals.

From the above it can be ascertained that there are some predominant factors responsible for the proliferation of synthetic drugs in Mauritius. Firstly, advances in technology have greatly improved the life of citizens but have also been exploited by criminals in the drug market. NPSs and their precursors can be obtained by means of a click on the computer and/or sending a message via WhatsApp, Telegram, Facebook or other similar apps.

Another element is the fact that manufacturers can alter molecules or compounds of the NPS substance to bypass legislation and keep ahead of law enforcement. Government responses are crucial if the proliferation of synthetic drugs on the island is to be curbed.

Responses to the drug challenge

As suggested above the proliferation of synthetic drugs is becoming increasingly difficult to monitor and address. The fact that Mauritius is a consumer destination rather than a hub for drug trafficking further complicates matters.³¹ The growing burden on the health system, coupled with the criminal elements of the illicit drug market, have led the government to adjust its responses to the issue over the years. These have usually focused on law enforcement/criminal justice and public health.

Criminal justice response in the 1980s

A few years after the advent of 'Brown Sugar' there was a drugs crisis in Mauritius that culminated in the 'Amsterdam affair', in which four members of Parliament were arrested in Amsterdam for heroin smuggling.

The commission identified a web of corruption between the police and traffickers

The government was compelled to set up a commission of inquiry into drug trafficking in 1986. The inquiry would later be referred to as the Rault Commission, named after the chairperson, former Chief Justice Sir Maurice Rault. The commission lasted for three months, hearing the testimony of more than 100 witnesses, who implicated high-level politicians. Their evidence also revealed the links between smugglers and kingpins in India, Europe and the nearby island of Reunion.³²

The commission identified a web of corruption between the police and traffickers, revealing that some senior officers were 'at the beck and call of the notorious traffickers'.³³ The section of police that was highlighted was the Flying Squad, which was responsible at that time for combating drug trafficking.

The commission recommended that it be disbanded and replaced with a new unit, the Anti-Drug and Smuggling Unit (ADSU), under the oversight of the deputy commissioner of police. The main task of the unit was/is to 'stop the proliferation of illegal drugs and disrupt drug related activities'.³⁴ This task is further broken down into three objectives:

- Adopt a zero-tolerance approach in the fight against illegal drugs;
- Increase public awareness and educate the public on the effects of drug abuse; and
- Strengthen local, regional and international cooperation and intelligence-sharing networks.

In pursuing the first objective the ADSU aims to target the supply aspect of the illicit drug market by operating at entry points such as the harbour and the airport and points around the island. The unit has effected a number of arrests related to synthetic drugs, as indicated in Table 2.³⁵

In the aftermath of the commission the existing drug laws were replaced by the Dangerous Drug Act (DDA) of 1986, which prescribed the death penalty for those convicted of drug trafficking. In 1995 the DDA was amended to replace capital punishment with a 20-year prison sentence.³⁶

The Act was re-enacted in 2000 and since then it has been amended three times, two of these amendments the result of the emergence of NPSs on the island. In 2013 synthetic cannabinoids and cathinones and their derivatives were included in Part 2 of Schedule 1, while in 2015 Pregabalin was added to Schedule 2. In 2019 the DDA was once again amended to include the chemical diversity of the NPSs such as synthetic cannabinoids and synthetic cathinones. It is the only piece of legislation dealing with law enforcement to combat the illicit drug market and is coordinated by the ADSU.

Some sections of the DDA are pivotal to the work of the ADSU. They are s 5, which deals with the cultivation of drugs; s 21, which deals with possession; s 30, drug dealing; s 33, precursors, materials and equipment; s 34,

unlawful use of drugs; s 39, money laundering and s 41, aggravating circumstances.

Table 3: Arrests related to synthetic cannabinoids

Year	Number of persons arrested
2013	6
2014	19
2015	104
2016	261
2017	533
2018	1 034
2019	1 032

Source: Author³⁷

The typology of drug offences

In terms of the criminal justice system drug offences are divided into three categories – consumers, dealers and traffickers.

Consumers

Consumers are usually charged in a district court with possession, with the sentence a fine not exceeding Rs500 000 (US\$12 500) and imprisonment for a term not exceeding 15 years.

Dealers

Dealers are charged in an intermediate court and can be sentenced to a fine not exceeding Rs1 million (US\$25 000) and imprisonment for a term not exceeding 25 years. For NPS drugs the sentence for dealing is also Rs1 million but the prison sentence cannot be less than five years and not more than 25 years.

There is, however, a grey area in the DDA with regard to the difference between a 'user' and a 'dealer'. The definition is not clear and has resulted in many users being sentenced as dealers despite only being in possession of small amounts of drugs.

Traffickers

Trafficking, which refers to the importation of drugs to the island, is usually punished with the harshest sentences – a fine not exceeding Rs2 million (US\$50 000) and imprisonment for a term not exceeding 60 years. In recent years the DDA has been criticised for its

prohibitive sanctions as critics believe they feed into the 'war on drugs' narrative, which has proved to be ineffectual in countering the drug-trafficking problem in the long run.

Reducing the demand

Education

In addition to its attempts to stem the supply of synthetic drugs, the ADSU focuses on reducing demand. Its methods include empowering citizens through education cells conducted around the island.³⁸

The aim of these sensitisation campaigns is to educate the population, especially students, who are frequently the target of traffickers, about the dangers of drugs.³⁹ Students are alerted to the issue of peer pressure and the dangers of drug use. One of the successes of the campaign is the increasing demand for ADSU members to conduct similar campaigns in schools and communities.

Public health responses

Decades of repressive measures in dealing with drug users have had a serious impact. By 2000 Mauritius was facing a growing HIV/AIDS epidemic, with the main mode of transmission people who inject drugs (PWIDs). While in 2002 PWIDs accounted for 14% of new cases of HIV, the number rose to 68% in 2003.

Decades of repressive measures in dealing with drug users have had a serious impact

In 2005 the government was faced with a crisis when it was discovered that PWIDs accounted for 92% of new cases of HIV.⁴⁰ The crisis forced the government to consider an alternative response to drug use. The Ministry of Health and Quality of Life, together with non-governmental organisations (NGOs), introduced harm-reduction services such as methadone substitution therapy (MST) and needle and a syringe programme (NSP) in 2006, making Mauritius the first country in Africa to do so.

The NSP provided PWIDs with clean syringes to prevent the spread of HIV and other infections. At its inception

the programme encountered the conundrum that the DDA (the only drug policy at the time) continued to criminalise the possession of paraphernalia such as needles, thus preventing PWIDs from accessing these services.⁴¹ The adoption of the HIV/AIDS Act of 2006 remedied this.⁴²

The MST was set up in 2006 for male clients only; it was only made available to women two years later. The medication most commonly used is methadone.⁴³ There are about 42 methadone dispensing sites on the island, three of them in prisons. They treat about 4 000 clients. The MST programme has been commended nationally and internationally for its coverage and quality and has achieved some successes, especially in containing the HIV epidemic.⁴⁴

The government has been committed to funding these harm-reduction programmes since their inception in 2006. For instance, in the 2018-2019 budget speech the Finance Minister pledged an amount of 'Rs10 million for a new Synthetic Drugs Prevention Programme to sensitise students, workforce and the community and Rs30 million for the Rehabilitation Programme for Alcoholics and Drug Addicts'.⁴⁵ However, it remains to be seen how the funds are used and what amount has been spent on these projects.

In 2016 the government replaced the MST programme with a Suboxone-Naltrexone-based detoxification programme, citing 'complaints regarding loitering and antisocial behaviours of some beneficiaries at the methadone dispensing sites'.⁴⁶ Since then NGOs have reported high levels of relapse.⁴⁷

A year later the government reintroduced the MST programme.⁴⁸ These well-established harm reduction programmes have resulted in some reduction in cannabis and opioid use, but the emergence of NPS 2013 has altered this trend. For instance, in 2017, while cannabis accounted for 66 inpatients and opioids for 199, 536 patients were admitted for NPS use.⁴⁹

The use of NPSs has resulted in a significant increase in cases of drug abuse presenting at public health institutions since 2015. In 2017 the number of cases of suspected multiple drug use rose to an alarming 47% over the previous year.⁵⁰

Of these cases, 44% related to the suspected use of NPS and at least 17% were associated with the use of opioids and opiates. Seventeen people were reported to have died of drug-related problems. Drug abuse

was also the cause of a range of health problems such as mental and behavioural disorders, as well as other systemic diseases.

In most cases, patients admitted for NPS abuse are provided with MST by government institutions and some NGOs. Other NGOs, such as the *Centre D'Acceuille de Terre Rouge*, are opposed to methadone treatment for any form of drug use. The reason, according to Mr Ah-Choon, director of the centre, is that 'methadone itself creates a form of dependence much like heroin itself.

He further notes that there have been incidents where outpatients on methadone have broken into centres in attempts to steal the substitute drug to satisfy their cravings. He also believes that methadone is not as effective a substitute for NPSs as it is for heroin. Instead he gives his patients Tramadol, which he believes is less addictive and is effective in the treatment of synthetic drug abuse.

Overdose is the wrong term;
the term that should be used
is 'poisoned'

He contends that '*c'est un laguerre ki no pe perdi avec nou ban zeness* [it is a war that our youth is losing]' and highlights the public health crisis '*syntétiques*' are causing in the country. As if to exemplify this, during one of our interview sessions Mr Ah-Choon received a phone call informing him that one of his former patients, a 20-year-old man, had died of an NPS 'overdose'. In fact, he believes overdose is the wrong term; the term that should be used is 'poisoned'.

Recognising that the problem of the scourge of NPS on the island can only be resolved through a comprehensive and collaborative strategy, the government has developed a National Drug Control Master Plan.

A new commission

In 2015, almost three decades after the Rault Commission of Inquiry, the government established a second commission of inquiry into drug trafficking. Former Supreme Court Judge Paul Lam Shang Leen was selected to chair the commission. This time the mandate was to 'inquire into and report on all aspects of drug trafficking in Mauritius'.⁵¹

The commission's task was to examine the scale and extent of illicit drug trafficking and consumption. This entailed investigating the sources, points of origin and trade routes of the drugs and probing the distribution methods, including in prisons.

Its other task was to investigate new synthetic drugs and the links between drug trafficking, money laundering, terrorist financing and other crimes and to examine existing legislation and policy and the adequacy of law enforcement units in charge of combating drug trafficking.

The commission's findings were explosive, revealing that drug trafficking extended right to the top of the political echelons and naming and linking politicians, police and lawyers to drug traffickers, revealing a web of corruption within the trafficking trade.

Some of the predominant issues it highlighted are the ability of traffickers to conduct their operations from inside prisons, the need to establish a new centralised coordinating unit for drug policy on the island and the lack of collaboration among the various anti-drug-smuggling and narcotics units of the police and customs.

The commission's report contained 460 recommendations and, as at 2018, the government had implemented about 80 and were planning to implement another 120. According to the prime minister, about 95 recommendations would require legislative amendments before they could be implemented. Some of the recommendations were deemed to be impractical or impossible to implement.⁵²

One of the recommendations that has been implemented is the establishment in November 2015 of the National Drug Observatory (NDO), which monitors illicit drug use, drug abuse and drug trafficking and published its first report in 2016.

In its report the Commission of Inquiry lamented the fact that the country does not have a single clearly defined drug policy and recommended that a National Drug Policy Commission be set up to be responsible for all drug policy.⁵³ The report also noted that the development of a National Drug Control Strategy requires collaboration between the government, the private sector and civil society organisations in order for it to be successful. This, in turn, provided the foundation for the 2019-2023 National Drug Control Master Plan (NDCM).⁵⁴

One of the most comprehensive and collaborative strategies to date,⁵⁵ the NDCM aims to enhance the response to drug trafficking through prevention, harm reduction and treatment and to reduce the demand while targeting the supply through law enforcement initiatives. It is one of the few drug control policies that aim to strike a balance between prohibitive measures and harm reduction initiatives while at the same time respecting human rights.⁵⁶

While the government and various stakeholders are pioneering innovative responses there is also a need to address the limitations. The next section recommends some ways of addressing these limitations.

Recommendations

Given the limited resources and the lack of knowledge about NPSs when they first emerged, the response of the Mauritian government in addressing the issue should be commended. For instance, three months after the first NPS was detected on the island the Dangerous Drug Act was amended to include synthetic cannabinoids and synthetic cathinones.

What follows are recommendations that may further assist in curbing the growing scourge of synthetic drugs on the island.

Decriminalisation

Various individuals consulted during the research process noted the prohibitionist approach of the drug control legislation. As noted above, the sentences for possession are harsh and the problems in the DDA with differentiating between 'possession' and 'dealing' further demonstrate the 'war on drugs' approach used by the government.

Between June 2016 and July 2017 the ADSU had effected 2 084 arrests, of which 1 574 were for possession and 486 for dealing. Furthermore, in 2018 the courts convicted a total of 1 401 people of possession, 87 of dealing and nine of trafficking.⁵⁷

Decriminalisation should be considered in cases of possession for personal use.⁵⁸ The penalties currently imposed could be replaced by fines or referral for treatment or there could be no penalties at all.

However, offences such as dealing and trafficking should continue to be penalised. Currently it is the

users who are the chief target of arrests, while few dealers and traffickers – those who control the illicit drug market – are apprehended.

Advocates of decriminalisation argue that it would reduce the rates of recidivism, free up police resources and allow law enforcement to focus on targeting perpetrators higher up the criminal value chain.

Furthermore, if possession was decriminalised there would be more resources available to treat users. One aspect that should be reviewed is the lack of clarity in the DDA about the difference between a user and dealer. The words should be clearly defined.

In the course of the research it was found that the term decriminalisation was often confused with legalisation. Proponents of legalisation believe that one way to curb the threat of NPSs is, for instance, to legalise cannabis.⁵⁹ However, interviewees believed legalising cannabis would do little to alleviate the problem of NPSs.⁶⁰

Decriminalisation should be considered in cases of possession for personal use

NPS users, for instance, say cannabis does not provide the same euphoric effect as NPSs or heroin. In one interview a former synthetic-drug user and dealer remarked: 'If I want to relax or chill then I would take cannabis but I take drugs to be high. It is only synthetic drugs or heroin that gives me that high and cannabis comes nowhere close.'⁶¹

While law enforcement officials interviewed agreed that legalising cannabis would not obviate the threat of NPSs, their reasons were different. The main argument is that legalising cannabis 'will open a floodgate' that will lead to other problems. They cited, by way of example, the case of methadone, which can become an addictive substance in its own right.

It is unlikely that cannabis will be legalised in the near future. In an interview in 2019 the Minister of Health's statement that Mauritius 'is not yet ready for the legalisation of cannabis'⁶² is typical of the stance of past and present (and probably future) governments on the topic.

Supply reduction

Despite the efforts by law enforcement and customs officers, together with forensic laboratories, to detect and identify NPSs, some countries, including Mauritius, continue to be unable to identify and monitor these synthetic drugs.

The evolving NPS market makes it essential that they become able to do so. To this end there is a need to improve their ability by training them to keep abreast with new developments in both NPSs and their precursors. In order to do so, Mauritius should develop a National Early Warning System similar to the UNODC's Early Warning Advisory (EWA) to monitor and detect emerging NPS threats so as to be able to provide timely responses.

Another aspect that contributes to supply reduction is information sharing. This becomes critical, especially in the monitoring and detection of NPSs, and is key to the effective implementation of a strategy like the NDCM.

The research revealed that there have been problems in this regard. To remedy this a network of practitioners or a platform on which law enforcement, customs and other agencies can share and access information should be established. This will require collaboration and coordination on the part of all the stakeholders involved.

Regional coordination

While it is important to share information among the different agencies at a local and national level, regional collaboration is also a crucial element if the proliferation of NPSs in the region is to be curbed. This requires a rapid exchange of information among countries in Southern Africa.

To this end, a regional warning system could be established that would enable law enforcement and customs officials in the region to share new chemical and toxicological information on NPSs and promote collaboration in research initiatives.

Countries could use such a platform to share their experiences, challenges and success with regard to NPSs in their respective countries. In the Southern African Development Community (SADC) region the SADC Drug Control Committee (SDCC) is meant to play that role.

The SDCC was established in 1999 to oversee the implementation of the SADC Protocol on Combatting

Illicit Drugs.⁶³ It is also responsible for monitoring the drug-control situation and gathering, storing and disseminating drug-related information to member states.

A lack of funding has greatly constrained the committee's ability to achieve its objectives. Its last project was the European Union-funded SADC Drug Control Programme (2005-2010).⁶⁴ The SDCC needs to resume its duties with a wider mandate that incorporates information sharing and collaboration among SADC states. This, in turn, would create a regional framework to help states deal with the problems entailed in reducing the supply.

Legislation

The rapid rate of emergence of NPSs globally has tested international drug control systems. In an effort to stem the NPS market countries have adopted an array of legislative responses. These usually fall into two groups: individual listing of NPS substances and NPS-specific legislation.

The rapid rate of emergence of NPSs has tested international drug control systems

The first option, used by the majority of countries, is an individual listing system whereby countries adapt their primary national drug-control legislation to ban NPSs. This model is based on international drug conventions according to which substances are listed once they have been assessed and are divided into schedules based on criteria such as medical use, abuse potential and risk of dependence.⁶⁵ Most African countries, among them South Africa and Mauritius, fall into this category.

The advantages of this approach are that controlled substances are mentioned individually, an efficient method in countries in which there few NPSs and where the quantities are not likely to grow. The limitation of this approach, however, is that the legislative process necessary to list a controlled substance is lengthy and by the time the substance is listed manufacturers have already developed an alternative.

The current trend in Mauritius suggests that it is foreseeable that new NPSs will proliferate on the

island and the current legislative approach will not be sufficient to address the problem. The government may have to adopt the second approach – specific NPS-related legislation.

The primary objective of such an approach is to prevent the manufacture and supply of synthetic drugs. The legislation is not concerned with criminalising drug use or possession of drugs for personal use and, for that reason, differs from drug-control legislation. The benefits are that such legislation moves away from the traditional ‘war on drugs’ approach, as possession is not usually a punishable offence. It also makes it easier, more flexible and faster to update the lists of controlled substances.

Conclusion

Since their emergence in 2013 synthetic drugs have not only changed the dynamics of the drug market, they have created a public-health crisis in Mauritius. The low prices and easy availability of the drugs makes them attractive both to seasoned users and to young people.

Despite the various timely responses of law enforcement, traffickers and dealers are always one step ahead. The fact that the drug problem in Mauritius goes back to the 1970s means that traffickers have had more than four decades in which to perfect their trade and

synthetic drugs are just another product, but one that carries higher profits and fewer risks.

Government should be commended for establishing the second commission of inquiry, in 2015. It was a step in the right direction in curbing the proliferation of NPSs. However, government’s commitment to eradicating the scourge will be tested by its implementation of the commission’s recommendations.

One of the key strategies for combating the scourge of NPSs is the NDCM and implementing it will no doubt be a complex endeavour given how entrenched corruption and drug trafficking have been on the island for decades.

With the country facing a growing crisis of NPS proliferation the drug master plan is one of the most important policies to address it. The success of this endeavour rests on the effective implementation of the NDCM through the collaboration and partnership of government, the private sector and NGOs.

Given the fact that the illicit drug market has adapted to changes throughout the years, there is no doubt that the odds are against them. Unless the problem of NPSs is challenged and curbed, the market will continue to expand to the point where any strategy and policy will become ineffective.

APPENDIX

Types of psychoactive substances

Synthetic cannabinoids

Natural cannabis produces THC, which binds to the cannabinoid receptors, namely, CB1 and CB2. Most importantly, CB1 is responsible for the psychotropic effects of cannabis.⁶⁶ Synthetic cannabinoids have a much higher affinity for CB1 receptors and can be two to 100 times more potent than THC. These NPSs may also cause severe side effects such as 'nausea and vomiting, shortness of breath or depressed breathing, hypertension, tachycardia, chest pain, muscle twitches, acute renal failure, anxiety, agitation, psychosis, suicidal ideation, and cognitive impairment'.⁶⁷

Usually a synthetic cannabinoid such as JWH-018 or HU-210 (or any in the table below) is sprayed onto or mixed with a herbal plant material. The synthetic cannabinoids can be obtained through online orders from China and are usually in powder form (Figure 2a).

To increase the potency of the drug and lengthen the drying time acetone is usually added to the powder and the mixture placed in a spray bottle. There have, however, been instances in which 'thinners' and even 'insect killers' have been added to the mixture.⁶⁸

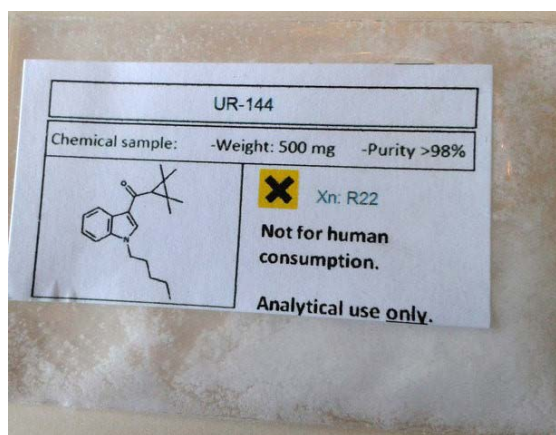
Once the solution reaches the desired consistency it is sprayed onto biodegradable leaves. The end product is shown in Figure 2b. Interviewees revealed that at one stage green tea was the preferred herbal product in Mauritius for mixing synthetic cannabinoid.

Table 4: Frequently reported synthetic cannabinoids

Common name	Chemical name
JWH-018	1-Pentyl-3-(1-naphthoyl)indole
JWH-210	1-Pentyl-3-(4-ethyl-1-naphthoyl)indole
5F-ADB	Methyl 2-(((1-(5-fluoropentyl)-1H-indazol-3-yl)carbonyl)amino)-3,3-dimethylbutanoate
AB-FUBINACA	N-(1-amino-3-methyl-1-oxobutan-2-yl)-1-(4-fluorobenzyl)-1H-indazole-3-carboxamide
UR-144	(1-Pentyl-1H-indol-3-yl)-(2,2,3,3-tetramethylcyclopropyl)methanone
XLR11	[1-(5-Fluoro-pentyl)-1H-indole-3-yl](2,2,3,3-tetramethylcyclopropyl)methanone
AM-2201	1-(5-Fluoropentyl)-3-(1-naphthoyl)indole
RCS-4	1-pentyl-3-(4-methoxybenzoyl)indole
MDMB-CHMICA	Methyl 2-[[1-(cyclohexylmethyl)indole-3-carbonyl]amino]-3,3-dimethylbutanoate
CUMYL-PeGACLONE	2,5-Dihydro-2-(1-methyl-1-phenylethyl)-5-pentyl-1H-pyrido[4,3-b]indol-1-one

Source: EU Drug Market Report, NFLIS⁶⁹

Figure 2(a): UR-144 chemical compound



Source: Erowid⁷⁰

Fig 2(b): Herbal blend with UR-144



It was also reported that to hide the acetone odour air fresheners were sprayed onto the herbal mixture to give it a 'pleasant' fragrance. All these elements contribute to the health-related dangers of these synthetic cannabinoid mixtures.

Another danger is that if the synthetic cannabinoid mixture is not sprayed evenly onto the leaves the result is what is termed 'a hotspot'. Because this hotspot is the most concentrated area in a rolled up 'cigarette' users cannot control the dose they are exposed to, which can result in them taking a fatal dose. In short, one puff can result in severe or deadly consequences. Yet, from the dealers' perspective, producing synthetic cannabinoids is a simple and cost-effective process.⁷¹

Synthetic cathinones

While these NPSs were originally manufactured for medical purposes in the 1930s to treat conditions such as Parkinson's disease, obesity and depression, a trend emerged in the early 2000s of using them to replace controlled drugs such as amphetamines, cocaine and MDMA.⁷² Depending on the context, synthetic cathinones are often used recreationally and/or by people who inject other high-risk drugs such as heroin and other opioids.

Initially the two main types of synthetic cathinones that were in circulation were Methcathinone (CAT) and Mephedrone (4-MMC). They were soon followed by Methylone and MPDV.⁷³ When member states recognised the chemical and psychoactive characteristics of these substances they were declared illegal and placed on national lists of controlled substances.

Responding to this setback, the manufacturers modified the structures of the substances to obtain new analogues in clandestine labs and synthesised cathinones such as butylone, ethylone and buphedrone and 4-MEC (4-methyl-N-ethylcathinone) became the new products on the market.⁷⁴

Another product that emerged at about the same time in 2008 was Flephedrone (4-FMC), which was the result of the modification of the chemical structure of mephedrone. As law enforcement officials continue to discover and ban new synthetic cathinone compounds, clandestine chemists continued to modify their structures to produce new derivatives for the illicit drug market.

Presently, the majority of synthetic cathinones and, more specifically, mephedrone, are manufactured in China and countries on its borders. The drug is transported in powder form to distributors who convert it into tablets, capsules or pills in the final packaging stage. Thereafter the drugs are sold via the internet and delivered by courier. There have also been reports that Europe has emerged as a key packaging destination.⁷⁵

Often found in products labelled as 'research chemicals', 'plant food' and 'bath salts', synthetic cathinones are sold predominantly in powder form. Mephedrone, under the street name of 'm-cat' or 'miaow', and methylone are most commonly found as white powders but there have been instances where it has been made into capsules (see Figure 4).

Unlike in Europe and the US, few synthetic cathinones have been found in Africa. But in March 2017 the Mauritian Customs Authority seized a package being transported by a FedEx Courier Service on a flight from Paris.⁷⁶

Table 5: Synthetic cathinones and derivatives

Common name	Chemical name
3-CMC	3-Chloro-N-methylcathinone
MDPV	3,4-Methylenedioxypropylone
Mephedrone (4-MMC)	4-Methyl-N-methylcathinone
Methylone	3,4-Methylenedioxy-N-methylcathinone
Butylone	1-(1,3-benzodioxol-5-yl)-2-(methylamino)butan-1-one
Ethylone	3,4-Methylenedioxy-N-ethylcathinone
Buphedrone	2-(methylamino)-1-phenylbutan-1-one

Source: EU Drugs Market Report

Figure 3: Mephedrone powder and crystal



Source: Erowid

Figure 4: Methyloone capsule and crystals



Source: Erowid

Synthetic cathinones may be ingested orally or insufflated but may also be injected, snorted and even mixed in drinks.⁷⁷ There have been several reports of adverse effects, including neurological, respiratory and cardiovascular problems.⁷⁸

Some patients have reported vomiting, sweating, migraines and cardiac problems while others noted neurological conditions such as memory loss, panic attacks, aggression, hallucinations and depression.⁷⁹

Common side effects of MDPV, commonly referred to as 'bath salts', are high blood pressure, chest pains, nose bleeds, dehydration and kidney failure.⁸⁰ Various online videos portray people under the influence of 'bath salts' and other synthetic cathinones engaging in violent and strange behaviour, often putting themselves and others at risk.

Synthetic opioids

Synthetic opioids, which imitate natural opiates such as morphine and codeine, are used as pain relievers. Opioids are generally classified according to their origins, namely, natural, semi-synthetics and synthetics.⁸¹ Natural opiates, which are compounds extracted from poppy, include morphine, codeine and thebaine. Semi-synthetic opioids are those synthesised from morphine and include heroin, oxycodone, hydromorphone and oxymorphone.

While semi-synthetics have a similar structure to that of morphine, synthetic opioids are totally different. They can be manufactured legally by pharmaceutical companies for medical use, as is the case with fentanyl, Tramadol, methadone, buprenorphine and fentanyl analogues.

However, they are also created illegally in clandestine laboratories to produce both illicit fentanyl analogues such as carfentanil, acetylfentanyl and furanylfentanyl and benzamide compounds like U-47700 and AH-7921. The latter, identified in Europe between 2013 and

2016, are often referred to as new synthetic opioids (NSOs) and have been the cause of numerous deaths in Europe and the US.⁸² Due to space restraints only two examples, fentanyl and the novel synthetic opioids, are examined below.

Table 6: Synthetic opioids

Common name	Chemical name
Fentanyl	N-phenyl-N-[1-(2-phenylethyl)piperidin-4-yl]propanamide
Acetylfentanyl	N-(1-Phenethylpiperidin-4-yl)-N-phenylacetamide
U-47700	trans-3,4-dichloro-N-(2-(dimethylamino)cyclohexyl)-N-methylbenzamide
Carfentanil	methyl 1-(2-phenylethyl)-4-(phenyl-propanoylamino)piperidine-4-carboxylate
AH-7921	3,4-dichloro-N-[[1-(dimethylamino)cyclohexyl]methyl]benzamide
MT-45	1-cyclohexyl-4-(1,2-diphenylethyl)piperazine
Ocfentanil	N-(2-fluorophenyl)-2-methoxy-N-[1-(2-phenylethyl)piperidin-4-yl]acetamide

Source: EU Drugs Market Report

Fentanyl, with a potency 50 to 100 times that of morphine, was originally used as an anaesthetic in the 1960s.⁸³ Fentanyl can be taken orally in powder, tablet or liquid form and can be smoked and/or injected. It is

reported that fentanyl derivatives are sold in the form of nasal sprays or e-liquid solution for vaping.⁸⁴ Side effects of the drug include dizziness, vomiting, fatigue and constipation amongst others.

Figure 5: Fentanyl liquid and tablet



Source: Erowid

In recent years fentanyl, especially in illicitly manufactured forms, has been responsible for a sharp rise in hospitalisation and deaths from overdose primarily in the United States. The US Drug Enforcement Administration (DEA) has issued nationwide alerts labelling illicitly manufactured fentanyl as a threat to public safety.⁸⁵ The DEA noted that fentanyl and its precursor chemicals, which originate from laboratories in China, are fuelling the current fentanyl crisis in the US.⁸⁶

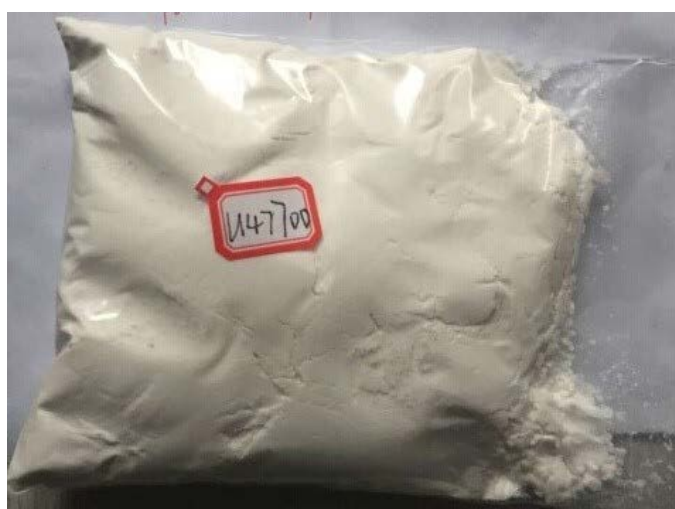
Another fentanyl analogue that is often abused is carfentanil, which is approved to be used only as a tranquiliser for large wild animals such as elephants. Ten thousand times more potent than morphine and 100 times more than fentanyl, carfentanil is one of the most potent synthetic opioids.

Laced with and/or disguised as heroin, the drug has resulted in a high number of overdoses and death in the US and Canada.⁸⁷ With the clampdown on fentanyl and

its products by law enforcement, both users and sellers turned their attention to new forms of synthetic opioids such as U-47700, which are sold as legal substitutes for morphine, heroin and fentanyl derivatives.

Usually referred to as 'U4', or 'fake morphine', U-47700, which is available in powder, tablet and liquid form, first emerged in 2014 in Sweden and later appeared in other European countries and in the US.⁸⁸ It is taken orally, nasally, injected and smoked. The fact that it is at once more potent, cheaper and more readily available than other fentanyl analogues such as the AH-7921 makes it attractive to consumers,⁸⁹ but it has been associated with numerous reported fatal cases of overdose in Europe and the US.⁹⁰

Figure 6: U-47700



Source: *Methy Researchchem*⁹¹

It is worth mentioning that while there have been no reported cases in Africa of new synthetic opioids such as U-47700 or a fentanyl crisis the magnitude of that in the US, African countries are still vulnerable to an opioid crisis. The predominant challenge remains the high incidence of non-medical use of Tramadol. The UNODC reported that 'most of the global seizures of pharmaceutical opioids were recorded in West, Central and North Africa', accounting for 87% of total seizures in 2016.⁹²

Although countries like Nigeria and Ghana feature predominantly in the discussion of Tramadol trafficking and use, other countries are also at risk. In the course of the research there were reports of both dealers and users capitalising on the non-medical use of Tramadol in Mauritius.⁹³

Notes

- 1 PILS, *Image and perception of drugs in Mauritius*, <http://pils.mu/wp-content/uploads/2017/03/TNS-Image-and-perception-of-drugs-in-Mauritius.pdf>, 2018.
- 2 *World Drug Report*, 2017, www.unodc.org/documents/scientific/Global_Drugs_Assessment_2017.pdf.
- 3 NPSs are also referred to in some publications as new psychoactive substances.
- 4 Interview with law enforcement officials, Anti-Drug and Smuggling Unit (ADSU)- Mauritius Police Service 2020; Mauritius Revenue Authorities Annual Report 2014, 65, www.mra.mu/download/AnnualMRAReport2014.pdf.
- 5 UNDOC *World Drug Report*, 2013, www.unodc.org/unodc/secured/wdr/wdr2013/World_Drug_Report_2013.pdf.
- 6 European Monitoring Centre for Drugs and Drug Addiction and Europol, *EU Drug Markets Report 2019*. Luxembourg: Publications of the European Union.
- 7 M Evans-Brown and R Sedefov, Responding to new psychoactive substances in the European Union: Early warning, risk assessment and control measures, *Handbook of Experimental Pharmacology*. London: Springer, 2018.
- 8 O Corazza, Z Demetrovics, W van den Brink and F Schifano, 'Legal highs' an inappropriate term for 'Novel Psychoactive Drugs' in drug prevention and scientific debate, *International Journal of Drug Policy* 24(1), 2013, 82-83.
- 9 Depending on the countries, the main categories may change. For instance, in the US, most of the discussion centres on synthetic cannabinoids and synthetic cathinone. This paper follows the categories used by the EU's European Monitoring Centre for Drugs and Drug Addiction.
- 10 H Jack, The story of spice, *Financial Times*, 2009, www.ft.com/content/1721e2da-f8a0-11dd-aae8-000077b07658, 2009.
- 11 <http://neptune-clinical-guidance.co.uk/wp-content/uploads/2016/07/Synthetic-Cannabinoid-Receptor-Agonists.pdf>.
- 12 V Auwärter, S Dresen, W Weinmann, M Muller, M Putz and N Ferreiros, 'Spice' and other herbal blends: Harmless incense or cannabinoid designer drugs?, *J Mass Spectrom* 44, 2009, 832-837; P Griffiths, M Evans-Brown and R Sedefov, Getting up to speed with the public health and regulatory challenges posed by new psychoactive substances in the information age, *Addiction* 108, 2013, 1700-1703.
- 13 EMCDDA, 'Synthetic cathinones', Drug Profiles, www.emcdda.europa.eu.
- 14 The Khat plant has long been used by the inhabitants of East Africa and the north-eastern parts of the Arabian Peninsula where chewing freshly collected leaves is a symbolic part of the culture and local tradition. See N B Patel, 'Natural amphetamine' khat: A cultural tradition or a drug of abuse?, *International review of neurobiology* 120, 2015, 235-255.
- 15 *EU Drug Market Report*.
- 16 UNODC, *Global Synthetic Drugs Assessment*. UNODC: Vienna, 2017.
- 17 EMCDDA, *European Drug Report 2017: Trends and Developments*.
- 18 *Mauritius Truth and Justice Report* 3, 917, http://pmo.govmu.org/English/Documents/TJC_Vol3.pdf

- 19 *World Drug Report* 2010, 157, www.unodc.org/documents/wdr/WDR_2010/World_Drug_Report_2010_lo-res.pdf.
- 20 PILS, *Image and Perception of Drugs in Mauritius*, <http://pils.mu/wp-content/uploads/2017/03/TNS-Image-and-perception-of-drugs-in-Mauritius.pdf>, 2018.
- 21 International Narcotics Control Board, *Report*, 2016, www.incb.org/documents/Publications/AnnualReports/AR2016/English/AR2016_E_ebook.pdf.
- 22 Interview with senior law enforcement, Mauritius Police Force, March 2020.
- 23 Interview with custom official, Mauritius, 2020.
- 24 Blue Magic. White Widow, AK47: les drogues de synthèse font des ravages, www.lexpress.mu/article/253046/blue-magic-white-widow-ak47-drogues-synthese-font-ravages; La drogue de synthèse: des jeunes en première ligne pour son élimination, <https://defimedia.info/la-drogue-de-synthese-des-jeunes-en-premiere-ligne-pour-son-elimination>.
- 25 Aadeel Toofany, Scientiste légiste – Drogue synthétique: ‘Le produit le plus dangereux que nous ayons vu’, www.lemauricien.com/actualites/aadeel-toofany-scientiste-legiste-drogue-synthetique-le-produit-le-plus-dangereux-que-nous-ayons-vu/214846/.
- 26 Mauritius Statistics, Crime, Justice and Security Statistics, 2018, http://statsmauritius.govmu.org/English/StatsbySubj/Documents/Digest/Crime_Justice_Security/Digest_CJS_Yr18.pdf. Some information about synthetic cannabinoid seizure statistics in 2013 and 2014 was obtained from the police force as they were not included in the statistic publication.
- 27 Interview with senior law enforcement official, 2020.
- 28 <https://lexpress.mg/31/07/2019/drogue-le-pouliah-de-gandia-vendu-a-prix-dor/>.
- 29 Interview with former dealer, Centre D’Accueil de Terre Rouge, 2020.
- 30 Interview with former user, Centre D’Accueil de Terre Rouge, 2020.
- 31 Interviews with custom officer and rehabilitation centre manager, 2020.
- 32 Mauritius: Drug scandal clouds blue skies, www.upi.com/Archives/1987/02/15/Mauritius-Drug-scandal-clouds-blue-skies/4794540363600/.
- 33 *Report of the Commission of Inquiry on Drug Trafficking*, section 11.1, 127.
- 34 Mauritius Police Force, *Strategic Policing Plan 2015-2018*, <http://police.govmu.org/English/Documents/action%20plan%202015/force2015.pdf>.
- 35 The statistics did not break the number down into dealers/traffickers or possession.
- 36 Amnesty International, *Amnesty International Report 1996 – Mauritius*, 1 January 1996, www.refworld.org/docid/3ae6aa0380.html.
- 37 Interview with senior law enforcement official, ADSU, 2020.
- 38 www.facebook.com/AdsuEducationCell/.
- 39 Lutte contre le trafic de drogue: Adsu et CANS misent sur la technologie en 2019, <https://defimedia.info/lutte-contre-le-traffic-de-drogue-adsu-et-cans-misent-sur-la-technologie-en-2019>.
- 40 Integrated Biological and Behavioral Surveillance, 2017, A Respondent Driven Survey (RDS) among People Who Inject Drugs [PWIDs] in the Island of Mauritius, <http://cut.mu/wpcontent/uploads/2018/12/IBBS-Survey-report-for-PWIDs-2017.pdf>.
- 41 A Krug and K Pollard, The impact of drug policy on young people, Mauritius case study, 2014, http://filesserver.idpc.net/library/IDPC-Youth-RISE-drug-policy-case-study_Mauritius.pdf.
- 42 The HIV/AIDS Act Of 2006, Art 16, states: ‘A person who is caught in possession of a syringe or needle, in compliance with this Act, shall not, by reason only of that possession, be considered as having committed an offence under the Dangerous Drugs Act’, <http://attorneygeneral.govmu.org/English/Documents/AZ%20Acts/H/Page%201/HIV%20AND%20AIDS%20ACT.%20No%2031%20of%202006.pdf>.
- 43 Another medication often used to treat opioid dependence in other countries is buprenorphine. Since it is illegal in Mauritius, it cannot be used for these programmes.
- 44 MHQL, *National Drug Observatory Report*, March 2018, 23, <http://health.govmu.org/English/Documents/2018/National.pdf>.
- 45 Mauritius Minister of Finance, Budget Speech 2018-2019, http://mof.govmu.org/English/Documents/Budget2018-2019/2018_19budgetspeech.pdf.
- 46 *National Drug Observatory Report*, 2018, 28.
- 47 PILS, Submission to the Office of the High Commissioner for Human Rights on the implementation of the UNGASS joint commitment to effectively addressing and countering the world drug problem with regard to human rights, 2018, 3, www.ohchr.org/Documents/HRBodies/HRCouncil/DrugProblem/HRC39/PILS.pdf.
- 48 Mauritius: New Minister of Health announces re-introduction of methadone substitution therapy, <https://idpc.net/alerts/2017/04/mauritius-new-minister-of-health-announces-re-introduction-of-methadone-substitution-therapy>.
- 49 *National Drug Observatory Report*, 2018, 17.
- 50 *Ibid*, 33.
- 51 *Report of the Commission of Inquiry on Drug Trafficking*, 2018, 23, <http://cut.mu/wp-content/uploads/2018/12/Commission-of-Enquiry-on-Drug-Trafficking-Report-optimized.pdf>.
- 52 www.govmu.org/English/News/Pages/Report-of-the-Commission-of-Inquiry-on-Drug-Trafficking-contains-some-460-recommendations,-says-Prime-Minister.aspx.
- 53 *Report of the Commission of Inquiry on Drug Trafficking*, 2018, 192.
- 54 It is important to note that there were previous similar plans such as the one developed in 2014, but it was not as comprehensive as the 2019-2023 plan. See, https://ionnews.mu/wp-content/uploads/2018/07/National_Drug_Control_Master_Plan_Mauritius_04-09.pdf.
- 55 About 11 ministerial departments, NGOs and private sector organisations were involved in the development of the strategy, with the support of the UNODC. See, http://mroiti.govmu.org/English/Documents/Communique/National%20Drug%20Control%20Master%20Plan_Master_04092019%20pdf%20final.pdf.
- 56 D Gunno, Treatment of drug offenders in the Mauritius prison service, 2018, www.unafei.or.jp/publications/pdf/RS_No107/No107_13_IP_Mauritius_2.pdf.
- 57 Of these 482 cases involved heroin, 580 gandia (cannabis) and 339 other drugs, *Mauritius Annual Judiciary Report*

- 2019, 55, [https://supremecourt.govmu.org/pubabout/Annual%20Report%20of%20the%20Judiciary%202018%20\(1\).pdf](https://supremecourt.govmu.org/pubabout/Annual%20Report%20of%20the%20Judiciary%202018%20(1).pdf).
- 58 Global Commission on Drug Policy, *Enforcement of drug laws: Refocusing on Organized Crime Elites Report*, 2020, 23, https://globalinitiative.net/wp-content/uploads/2020/05/FINALEN_2020report_web.pdf.
- 59 The rise of synthetic drugs in Paradise Island, www.lexpress.mu/idee/327154/rise-synthetic-drugs-paradise-island-part-2; LALIT Position Paper for the Legalization of Gandya, 11, www.lalitmauritius.org/modules/documents/files/LalitMauritius-621bf66ddb7c962aa0d22ac97d69b793.pdf; Légalisation du cannabis: la pression populaire s'intensifie, <https://defimedia.info/legalisation-du-cannabis-la-pression-populaire-sintensifie>.
- 60 Interview with users of synthetic drugs, the director of a rehabilitation centre and a law enforcement official, Port Louis, Mauritius, 2020.
- 61 Interview with a former user and dealer, Port Louis, Mauritius, 2020.
- 62 Maurice n'est pas prêt pour la légalisation du cannabis, www.youtube.com/watch?time_continue=21&v=owFHNImfeRg&feature=emb_title.
- 63 SADC Protocol on Combatting Illicit Drugs, Art 9, para 1, www.sadc.int/files/1213/5340/4708/Protocol_on_Combating_Illicit_Drug_Trafficking_1996_.pdf.
- 64 Mauritian National Drug Control Master Plan, 30.
- 65 Commission on Narcotic Drugs, *New psychoactive substances: Overview of trends, challenges and legal approaches*, 2014, www.unodc.org/documents/commissions/CND/CND_Sessions/CND_59/ECN72016_CRP2_V1601405.pdf.
- 66 *Global Smart Programme*, Edition 13, 3, www.unodc.org/documents/scientific/Global_SMART_Update_13_web.pdf.
- 67 M S Castaneto, D A Gorelick, N A Desrosiers, R L Hartman, S Pirard and M A Huestis, Synthetic cannabinoids: Epidemiology, pharmacodynamics, and clinical implications, *Drug and Alcohol Dependence* 144, 2014, 12-41, doi:10.1016/j.drugalcdep.2014.08.005.
- 68 Interview with law enforcement officers, Quatre Bornes, 2020.
- 69 National Forensic Laboratory Information System, Synthetic Cannabinoids and Synthetic Cathinones Reported in NFLIS, 2013-2015.
- 70 www.erowid.org/chemicals/show_image.php?i=cannabinoids/ur-4_powder__i2013e0137_disp.jpg.
- 71 Interview with law enforcement and with a dealer, Mauritius, 2020.
- 72 M Majchrzak, R Celiński, P Kuś, T Kowalska & M Sajewicz, The newest cathinone derivatives as designer drugs: An analytical and toxicological review, *Forensic toxicology* 36(1), 2018, 33-50.
- 73 M J Valente, P G De Pinho, M de Lourdes Bastos, F Carvalho and M Carvalho, Khat and synthetic cathinones: A review, *Archives of Toxicology* 88(1), 2014, 15-45; J B Zawilska and J Wojcieszak, Designer cathinones – an emerging class of novel recreational drugs, *Forensic science international* 231(1-3), 2013, 42-53.
- 74 D P Katz, D Bhattacharya, S Bhattacharya, J Deruiter, C R Clark, V Suppiramaniam and M Dhanasekaran, Synthetic cathinones: 'A Khat and mouse game', *Toxicology Letters* 229(2), 2014, 349-356.
- 75 EMCDDA, Report on the risk assessment of mephedrone in the framework of the Council Decision on new psychoactive substances, www.emcdda.europa.eu/system/files/publications/571/TDAK11001ENC_WEB-OPTIMISED_FILE_280269.pdf.
- 76 Seizure of Synthetic Cathinone/Bath Salt Worth Rs30 Million, www.mra.mu/download/Seizure230218.pdf.
- 77 UNODC EWA, Synthetic cathinones, www.unodc.org/LSS/SubstanceGroup/Details/67b1ba69-1253-4ae9-bd93-fed1ae8e6802.
- 78 P I Dargan, S Albert and D M Wood, Mephedrone use and associated adverse effects in school and college/university students before the UK legislation change, *Oxford Journal of Medicine* 103(10), 2010, 875-879.
- 79 L D Simmler, T A Buser, M Donzelli, Y Schramm, L H Dieu, J Huwyler, S Chaboz, M C Hoener & M E Liechti, Pharmacological characterization of designer cathinones in vitro, *British Journal of Pharmacology* 168(2), 2013, 458-470.
- 80 G Gavriilidis, A Kyriakoudi, D Tiniakos, N Rovina and A Koutsoukou, 'Bath Salts' intoxication with multiorgan failure and left-sided ischemic colitis: A case report, *Hippokratia* 19(4), 363-365.
- 81 J Seither and L Reidy, Confirmation of Carfentanil U-47700 and Other Synthetic Opioids in a Human Performance Case by LCMS-MS, *J Anal Toxicol* 41(6), 2017, 493-497.
- 82 D Fabregat-Safont, X Carbón, M Ventura, I Fornís, E Guillamón, J V Sancho, F Hernández and M Ibáñez, Updating the list of known opioids through identification and characterization of the new opioid derivative 3,4-dichloro-N-(2-(diethylamino)cyclohexyl)-N-methylbenzamide (U-49900), *Sci. Rep.* 7, 2017, 6338.
- 83 T H Stanley, The fentanyl story, *J Pain* 15, 2014, 1215-1226.
- 84 S Salle, S Bodeau, A Dhersin, M Ferdonnet, R Goncalves, M Lenski, B Lima, M Martin, J Outreville, J Vaucel and N Fabresse, Novel synthetic opioids: A review of the literature, *Toxicologie Analytique et Clinique* 2019, 298-316.
- 85 A B Peterson, R M Gladden, C Delcher, E Spies, A Garcia-Williams, Y Wang, J Halpin, J Zibbell, C L McCarty, J DeFiore-Hyrmer and M DiOrio, Increases in fentanyl-related overdose deaths: Florida and Ohio, 2013-2015, *MMWR Morb Mortal Wkly Rep* 65, 2016, 844-849.
- 86 DEA, Emerging threat report mid-year 2016 [DEA Emerging Trends Report], 21 September 2016.
- 87 Heroin laced with elephant tranquilizer blamed for 5 Minnesota overdose deaths, www.startribune.com/lethal-strain-of-synthetic-heroin-has-arrived-in-minnesota/417726313/.
- 88 P Nikolaou, M Katselou, I Papoutsis, C Spiliopoulou and S Athanaselis, U-47700: An old opioid becomes a recent danger, *Forensic Toxicol* 35(1), 2017, 11-19.
- 89 Fabregat-Safont, Carbón, Ventura, Fornís, Guillamón and Sancho, 2017.
- 90 Drug Enforcement Administration, Department of Justice, Schedules of Controlled Substances: Placement of Butyryl Fentanyl and U-47700 Into Schedule I. Final order, Fed Regist 83(77), 20 April, 17486-17488; X Ruan, S Chiravuri and A D Kaye, Comparing fatal cases involving U-47700, *Forensic Sci Med Pathol* 12(3), September 2016, 369-371.
- 91 <https://methyresearch.info/product/buy-u47700-powders/>.
- 92 UNDOC, *World Drug Report 2018 – Analysis of drug markets*, www.unodc.org/wdr2018.
- 93 Based on an interview with a drug dealer, Mauritius, 2020.



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ENACT builds knowledge and skills to enhance Africa's response to transnational organised crime. ENACT analyses how organised crime affects stability, governance, the rule of law and development in Africa, and works to mitigate its impact. ENACT is implemented by the ISS and INTERPOL, in affiliation with the Global Initiative Against Transnational Organized Crime.

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