AT THE CROSSROADS OF LICIT AND ILLICIT

Tramadol and other pharmaceutical opioids trafficking in West Africa
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<th>Abbreviation</th>
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<tr>
<td>AQIM</td>
<td>Al Qaeda in the Islamic Maghreb</td>
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<tr>
<td>CCP</td>
<td>Container Control Programme</td>
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<tr>
<td>CDSCO</td>
<td>Central Drugs Standard Control Organisation (India)</td>
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<td>DEA</td>
<td>Drug Enforcement Administration (United States)</td>
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<td>ECOWAS</td>
<td>Economic Community of West Africa States</td>
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<td>IDP</td>
<td>Internally displaced person</td>
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<td>INCB</td>
<td>International Narcotics Control Board</td>
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<td>ISIS</td>
<td>Islamic State in Iraq and Syria</td>
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<td>JAITF</td>
<td>Joint Air Interdiction Task Force</td>
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<tr>
<td>NAFDAC</td>
<td>National Agency for Food and Drug Administration and Control (Nigeria)</td>
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<td>NDLEA</td>
<td>National Drug Law Enforcement Agency (Nigeria)</td>
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<td>NDPS Act</td>
<td>Narcotic Drugs and Psychotropic Substances Act (India)</td>
</tr>
<tr>
<td>NENDU</td>
<td>Nigerian Epidemiological Network on Drug Use</td>
</tr>
<tr>
<td>NGO</td>
<td>Non-governmental organization</td>
</tr>
<tr>
<td>OCRTIS</td>
<td>Office central de répression des trafics illicites de stupéfiants (Niger)</td>
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<tr>
<td>UNODC</td>
<td>United Nations Office on Drug and Crime</td>
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<td>WCO</td>
<td>World Customs Organization</td>
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<td>WHO</td>
<td>World Health Organization</td>
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<td>WENDU</td>
<td>West African Epidemiology Network on Drug Use</td>
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Executive Summary

This report presents the results of a research study conducted on the trafficking of tramadol and other pharmaceutical opioids in West Africa between September 2018 and July 2019. It provides an in-depth assessment of tramadol trafficking in the region and seeks to address a knowledge gap with regard to this phenomenon and its links to transnational organized crime.

In recent years, trafficking of pharmaceutical opioids and their non-medical use have reached an alarming state in West Africa. The prominence of the issue is clearly demonstrated in countries where recent drug use data is available. In Nigeria and areas of Lomé (the capital of Togo), pharmaceutical opioids, especially tramadol, were identified as the second most misused drugs after cannabis in 2017. In Niger, where the non-medical use of tramadol is widespread, a 2018 study on the general public’s perception and knowledge of drugs found that tramadol was the best-known narcotic in the country.

The profile of non-medical users of tramadol and other pharmaceutical opioids is varied. Available data and reports from civil society organizations highlight the non-medical use of tramadol among people of all ages – although it is most frequently used by young adults – and genders, both in urban and rural areas.

The causes of this expansion, which began in the 2000s, are multiple: the involvement of profit-motivated businesspeople in the supply chain; extensive availability at street markets, coupled with networks of pharmaceutical products retailers dispersed throughout the region, both in cities and rural areas; past use and misuse of other pharmaceuticals from the benzodiazepine family; stereotypes and popular representations of tramadol as safe and not addictive, given that it is available as a legal medicine; low prices and widespread availability; and primary and secondary effects of tramadol, including dependency, on users.

Some non-medical users consume tramadol for its calming and analgesic effects, in order to improve intellectual, physical and work performance, or to lessen the need for sleep and decrease appetite. In farming communities, there are reports of tramadol being used by humans and fed to cattle to enable them to work under extreme conditions. Others use tramadol as a recreational drug on account of its stimulant, pleasurable and euphoric effects, or to improve sexual stamina.

Recent seizures highlight the scale of tramadol trafficking. The amount of tramadol seized in Nigeria almost doubled between 2016 and 2017, from 53 tons to more than 92 tons. In 2018, law enforcement agencies reported the seizure of about 22 tons of tramadol in the country. In Côte d’Ivoire, around 44 tons of tramadol were seized at street markets in 2018, while more than 16 million tablets were intercepted in Niger. According to replies to UNODC’s Annual Report Questionnaires and other official data, overall seizures of tramadol in Western Africa were equivalent to 87 per cent of all tramadol seizures carried out in Africa and 77 per cent of all tramadol seized globally in 2017. Tramadol also accounted for 82 per cent of all quantities of pharmaceutical opioids seized in Western Africa in 2016 and 91 per cent in 2017. Available data show that most of
the tramadol seized in West Africa in and prior to 2018 originated in India and, to a much lesser extent, China.

Most pills circulating in the region come in unapproved dosages: 120 mg, 200 mg, 225 mg, 250 mg and even higher, according to local sources. These pills and capsules are not available through the legal supply chain but instead are imported by criminal networks before being distributed through illicit channels. Imports for informal markets in the region are carried out by sea and air, using different methods of concealment, bypassing controls and exploiting States’ vulnerabilities, including corruption. Moreover, both legitimate and unapproved pharmaceutical supply chains are intertwined in West Africa.

As a contribution to the fight against illicit trafficking, on 26 April 2018, India brought tramadol under the control of the Narcotic Drugs and Psychotropic Substances (NDPS) Act of 1985, requiring exported tramadol to be regulated as a controlled drug.

This change in legislation, coupled with seizures in Nigeria, contributed to decreased availability and, consequently, higher prices for tramadol on the illegal market. Another consequence has been the arrival and circulation in West Africa of tablets that are similar to tramadol but that contain other painkillers. One of these is tapentadol, an opioid analgesic that also acts as a norepinephrine reuptake inhibitor, similar to tramadol. This drug has the potential to replace tramadol in common use if the tramadol supply is interrupted. There have also been detections of tablets containing the nonsteroidal anti-inflammatory diclofenac, drug known under its trade names Voltaren or Cataflam. This is not an opioid and does not have any known psychoactive properties, so its sale is more likely to be a form of fraud.

Considering that the aim of any drug supply reduction strategy is to reduce availability and access to illegal narcotics – and that one good and illustrative indicator is an increase in the product cost – the revision of the Indian legislation seems to be a significant step forward. On one hand, it appears to have curbed illegal exports of tramadol to West Africa through increased export controls in India due to the obligation that the importing State must provide authorization when the product is under national control. On the other hand, it ensures the availability of the analgesic imported for medical and scientific purposes. This further highlights that transnational approaches and solutions are fundamental in addressing international trafficking issues.

Non-medical use and trafficking of pharmaceutical opioids remain, nonetheless, serious challenges. Firstly, the regulation of supply chains in West African countries is weak, allowing users to buy tramadol and other pharmaceutical opioids with lower dosages in pharmacies – without prescription – or, more commonly, on informal street markets. Secondly, criminal networks are adaptable, as evidenced by traffickers’ ever-changing strategies and methods in West Africa and elsewhere and the production of tablets mimicking tramadol. Thirdly, the pharmaceutical supplier market goes beyond borders, with manufacturers across the world. The global nature of this supply chain increases opportunities for traffickers. Lastly, the risk of more potent opioids, such as fentanyl and its analogues, reaching West Africa to fill the void that might be left by tramadol and codeine must be taken into account.
Given that pharmaceutical opioids used for non-medical purposes are both imported and trafficked at a transcontinental scale, and also diverted from the legal pharmaceutical sector, responses should:

- Aim to reinforce law enforcement agencies’ capacities to reduce trafficking, especially at regional entry points. This could include specific training programmes on strengthening institutional capacities and fostering interagency and international cooperation for evidence-based investigation and prosecution. In parallel, better awareness and knowledge of products in circulation, improved collection, analysis, and sharing of intelligence for forensic analysis and investigation are of primary interest, in particular to identify new trends.

- Improve national and regional regulations and controls on pharmaceutical supply chains in West Africa, without impeding access to high-quality opioid analgesics for medical and scientific purposes. In this context, improved medical and pharmaceutical regulation and legislation are key priorities to guarantee access and reduce the risk of diversion. Integrated approaches focusing on market-based solutions at both national and regional levels should also be prioritized.

In both areas, coordination and cooperation are fundamental. At the national level, relevant administrations and agencies under the ministries of security, health, justice and economic affairs need to better work together. In addition, since trafficking and misuse of pharmaceutical opioids are regional issues, a comprehensive regional approach is critical to address organized crime and strengthen the health care and pharmaceutical sectors in West Africa.

Lastly, although drug demand reduction aspects are at the margin of this research, prevention programmes on the non-medical use of opioids and treatment programmes for narcotic-addicted persons are key and should receive adequate funding and resources. Likewise, far more comprehensive health care systems are needed in most West African countries to supply patients in need with required painkillers and deter reliance on informal markets.
Introduction

Tramadol is a synthetic opioid analgesic that is primarily prescribed to treat mild to severe pain in both acute and chronic cases. In addition to being a painkiller, tramadol also has mood enhancement properties. First introduced in West Germany in 1977 by the company Grünenthal GmBH, its market presence expanded in the 1990s. With an estimated potency of about one-tenth that of morphine, tramadol is not included in international drug control schedules.

After increasing reports of widespread non-medical use, tramadol is now considered a serious health issue in many parts of the world. Consequently, it has been placed under control at national levels and classified as a prescription drug in several countries. Since 1992, tramadol has also been considered for review multiple times by the World Health Organization (WHO) Expert Committee on Drug Dependence. The latest critical review was published in November 2018. It acknowledged that non-medical use, dependence and overdose emerged as serious public health concerns across several regions, particularly in a number of African and Middle Eastern countries, and that tramadol use – dosage-related – led to a similar dependence profile as morphine and other opioids, while its withdrawal symptoms included those typical of other opioids, such as pain, sweating, diarrhoea and insomnia. Though the Expert Committee was concerned by the “increasing evidence of tramadol abuse” that “would warrant scheduling”, it was equally concerned by the lack of availability of alternative analgesics in a number of countries and emergency and crisis situations. Against this background, the Expert Committee on Drug Dependence recommended against scheduling tramadol, to avoid an adverse impact on access to the medication; however, at the same time the Committee also directed the WHO Secretariat to continue to keep tramadol under surveillance and collect information on the extent of the problems associated with tramadol misuse. The Committee also called for further review of tramadol at a future meeting.

1 According to the 2019 edition of the World Drug Report, “Opioids” is a generic term that refers both to opiates and their synthetic analogues. Opiates are naturally occurring alkaloids found in the opium poppy, such as morphine, codeine and thebaine, as well as their semi-synthetic derivatives, such as heroin, hydrocodone, oxycodone and buprenorphine. The term “opioids” also includes synthetic opioids, which are structurally diverse substances. Some are used in medicine mainly for the management of pain resulting from conditions such as trauma, surgery and cancer, and are thus also referred to as pharmaceutical opioids, indicating their medical use.” (UNODC, 2019 World Drug Report, Vienna, booklet 3, p. 9); World Health Organization, “Critical Review Report: Tramadol”, Expert Committee on Drug Dependence, Forty-first meeting, Geneva, 12–16 November 2018. It should be noted that, according to this report, there is limited and low-quality evidence of the effectiveness of tramadol for use in different pain conditions.


3 Tramadol has some affinity for the µ-opioid receptor, whereas its active hepatic metabolite O-desmethyltramadol (M1) has high relative intrinsic efficacy and greater affinity for the µ-opioid receptor. The affinity of morphine is approximately 10- to 100-times greater than M1 and 300-times greater than tramadol. Tramadol is approximately 10-fold less potent than codeine, 1,000-fold weaker than methadone and 6,000-fold weaker than morphine. The analgesic potency of tramadol is about 10 per cent that of morphine following parenteral administration but more potent if administered orally because of the activity of M1 (WHO, Critical Review Report: Tramadol, Expert Committee on Drug Dependence, Forty-first Meeting Geneva, 12–16 November 2018, p. 16).

4 Ibid., p. 30–33.

5 Ibid.

6 Ibid.
In West Africa, the non-medical use of tramadol has attracted attention for the past 10 years. Newspapers frequently publish articles and stories about seizures and misuse of pharmaceutical opioids, and in recent years, international organizations have called for greater focus on the issue. Despite growing attention and the publication of studies on tramadol misuse and related challenges for policymakers and State agencies in West Africa, the “problem associated with the non-medical use of synthetic opioids such as tramadol in developing countries has remained under-researched and has so far gone largely unnoticed.” More precisely, unequal attention has been devoted to the various aspects of the tramadol crisis, with some issues benefiting from more in-depth analysis than others. Among the less explored topics is the criminal supply chain. While literature provides some information on actors and networks involved in pharmaceutical drug trafficking, as well as the way they function and are organized in many countries or regions, publicly available data on trafficking of pharmaceutical opioids in West Africa remain poor. Moreover, some contestable narratives, such as the alleged role of Boko Haram in tramadol trafficking, remain common, despite a lack of evidence.

To fill these gaps, increase knowledge and improve national and international responses, the Research and Awareness Section of the UNODC Regional Office for West and Central Africa, in partnership with the UNODC Country Office for Nigeria and with the support of the UNODC Research and Trend Analysis Branch, conducted research on tramadol and other pharmaceutical opioids trafficking in West Africa between September 2018 and July 2019. This research was carried out under the framework of the UNODC Regional Programme for West Africa 2016–2020 and the workplan of the European Union-funded and UNODC-implemented project “Response to Drugs and Related Organized Crime in Nigeria”. The research was also conducted under the auspices of the UNODC Opioid Strategy, launched in November 2018, which aims to provide a timely and comprehensive organization-wide response to the current global opioid crisis.

The methodology called for a first phase of data collection and review of open-source literature, and a second phase of field missions. In both phases, particular attention was paid to the cross-referencing of information.

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8 INCB, “Tramadol, review of the situation”, Alert 7, June 2018. Another example is given by the UNODC Regional Office for West and Central Africa: UNODC, “Sahel and beyond: UNODC sounds the alarm on the increase in trafficking and consumption of tramadol and its security and health implications”, 11 December 2017.
The literature review included books, reports and data from UNODC and other international organizations, data provided by national authorities on tramadol imports and exports, seizures, arrests, prosecutions and convictions, papers from academics, think tanks and NGOs, as well as press articles and reports to complement documents from official sources. Open-source documentation was selected based on general searches on Google and Google Scholar – utilizing key terms that are frequently used in the context of non-medical use and trafficking in medicine and related to the geographical area concerned – both in English and French. This literature review provided a basis for planning field missions. However, as mentioned above, one of the major difficulties the research team faced was the scarcity of available information on pharmaceutical opioids, criminal networks, tramadol supply chains, and the ways those networks function and are organized. Another limitation was the paucity of available quantitative data, including on seizures and drug use.

During the second phase of this project, some interviews were conducted in Senegal and India, but most of the information contained in this report was collected on field missions in Benin, Burkina Faso, Guinea, Ghana, Côte d’Ivoire, Niger, Nigeria and Togo. These eight countries were selected because of the availability of data on seizures and because they are main regional entry points. As such, they provide insight on regional and comparative trafficking patterns and the non-medical use of tramadol and other pharmaceutical opioids. In each country, four types of stakeholders were interviewed: officials from different ministries and State agencies; members of the civil society, including drug users and/or people involved in trafficking; diplomats; and foreign experts. Interviews were semi-structured, based on a questionnaire addressing five topics: (1) pharmaceutical opioids in circulation, their use and the regulatory framework; (2) trafficking routes and modi operandi used; (3) actors involved in trafficking; (4) State responses to drug trafficking and related challenges, and more generally pharmaceutical opioid misuse; and (5) effectiveness and gaps in international cooperation. Several focus group discussions were also organized using the same method. One important limitation was that all field visits and interviews took place in capital cities, which, in effect, excluded smaller towns and rural areas. However, researchers made sure to ask specific questions about the situation outside capital cities.

This report aims to shed new light on the nature and extent of organized crime in pharmaceutical opioid trafficking. The topic is at the crossroads of several rising trends: the misuse and trafficking of prescription pharmaceutical products, the emergence of new synthetic drugs and the changing patterns of organized crime in West Africa. However, it should also be stated that, by focusing on trafficking, this report excludes two related key issues: drug demand reduction and the regulation of the legal pharmaceutical supply chain.

Lastly, tramadol, as the most used pharmaceutical opioid in the region, is at the core of this research. However, other pharmaceutical opioids are also taken into consideration, including codeine and, to a lesser extent, some non-opioid medications circulating in the region, such as diclofenac and benzodiazepines like diazepam and clonazepam.


15 See the annex 2 for more details on the institutions and stakeholders consulted. During field missions, researchers collected observational data on street markets and observed medications branded as tramadol.
I. The West African pharmaceutical opioid crisis

Attention from the international community on the non-medical use of tramadol is fairly recent. However, tramadol has been available and widely used for many years in West Africa. Imports rose in the 2000s, due to transnational businesspeople and local demand. Since then, tramadol use gradually spread across the whole region through informal sales networks to become one of the most common drugs in the area, raising health and social concerns.

A. The genesis of a crisis

Interviews for this report with non-medical users and social and health workers indicate that tramadol reached the West African informal drug market in the mid-2000s. At first, the products imported to West Africa complied with the legal limit of either 50 mg or 100 mg per tablet. But in the late 2000s, an Indian manufacturer recalled: “People started requesting far higher doses.” That led producers to manufacture and export tablets with potencies of 120 mg, then 200 mg, 225 mg and up to 250 mg.

According to some interviewees, Nigeriens played an important role in the regional expansion of the non-medical use of tramadol from the Sahel to the Gulf of Guinea. In Benin and Togo for instance, tramadol might have been introduced by Nigerien lorry drivers who took it to help themselves travel longer without feeling pain or fatigue. Two other factors contributed to the spread of non-medical tramadol use across the region:

- Tramadol is a highly lucrative product. In West Africa, prices for pills that exceed legal dosages vary over time and by place. However, a sharp increase in prices has been observed since the end of 2018 (see Box 3 for more details on prices and recent trends).
- A number of factors fostered local consumption, including: (1) the existing misuse of other prescription drugs from the benzodiazepine family; (2) stereotypes and common misconceptions of tramadol as being a medicine that does not cause harm, even when not prescribed by a doctor or taken not according to medical specifications; (3) the cheap cost of pills, at as low as XOF 50 ($0.086), before prices rose in 2018; and (4) the multiple effects of tramadol. Indeed, some non-medical users take tramadol for its calming and analgesic effects, to improve intellectual, physical and working performances, or to reduce the need for sleep and decrease appetite. In farming communities, there are also reports

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16 Interviews, tramadol users and social and health workers, Abidjan, Cotonou, and Lomé, December 2018, January and February 2018.
17 Ibid.
18 Interviews, members of the civil society, Cotonou and Lomé, December 2018 and January 2019.
19 The consumption of codeine among Nigerian youth follows the same pattern. Most of consumers have a misconception of codeine cough syrup, being unaware of the risks of addiction and overdose, and perceiving it as an unharmful way to get high and “have fun” (interview, NGO worker, Abuja, November 2018).
of tramadol being used by humans and fed to cattle to enable both to work under extreme conditions.\textsuperscript{20} Others use tramadol as a recreational drug on account of its pleasurable and euphoric effects, or to improve sexual stamina. Drug users can also take tramadol as a substitute for heroin, to ease withdrawal symptoms and cravings.\textsuperscript{21}

B. The structural roots of a crisis

The history of tramadol use and misuse is closely linked to informal drug markets, self-medication practices, and overall poor access to other analgesics and health care facilities. Transnational criminal networks capitalized on these weaknesses, leading to widespread tramadol misuse and dependency.

1 | Medicine markets and informality

Buying and selling drugs outside the legal framework established by governments is by no means a new phenomenon. In the 1940s, the illegal acquisition and sale of pharmaceutical products caused major concerns for French colonial officials in several West African colonized territories.\textsuperscript{22} After independence, the unregulated trade of pharmaceuticals increased, driven by historical convergences and external shocks. For instance, until 1972 in Benin, the public sector was the main actor in the pharmaceutical sector, though there were a few private wholesalers and pharmacies.\textsuperscript{23} Following the establishment of a military regime, the private sector declined, and the government imposed a State monopoly on the pharmaceutical sector. Because of shortages, an informal sector grew, and vendors began buying medicines outside formal structures, including from neighbouring countries like Nigeria.\textsuperscript{24}

To explain the success of the informal pharmaceuticals market, researchers have highlighted several factors:\textsuperscript{25} (1) economic – lower prices compared to medicines bought in pharmacies and credit facilities;\textsuperscript{26} (2) geographic – extensive presence of vendors even in remote areas, insufficient

\begin{thebibliography}{99}
\bibitem{20} In Cameroon, farmers say they take large amounts of tramadol and give some to cattle to plough the soil for longer (Laura Salm-Reifferscheidt, “Tramadol: Africa’s opioid crisis”, \textit{The Lancet}, Vol. 391(10134), p. 1982–1983. The same practice has been reported in Nigeria (interviews, Nigeria, November 2018).
\bibitem{21} Interview, drug user, Abidjan, February 2019.
\bibitem{26} Observation from the authors about the availability of tramadol 50 mg in Guinea.
\end{thebibliography}
number of health centres and shortages of medication in official structures; (3) pragmatic – quick sales and availability; (4) social – social proximity, discretion about health problems and low dependency on medical practitioners; and (5) cultural – similarity between sellers’ and buyers’ perceptions of health. Some researchers also point to the link between corruption and the success of the informal pharmaceutical trade, and the perceptions of local populations regarding the sale and purchase of medication acquired illegally on informal markets.

Some markets have a regional dimension and operate as a system at both national and international levels. With over 1,000 pharmaceutical wholesalers and about $250 million in drug stock, according to researcher Kristin Peterson, Idumota Market in Lagos, Nigeria, is considered “one of the largest markets in the world,” in which “manufacturers sell directly to traders and from there they sell to the rest of West Africa [and] even Central Africa as far as Kinshasa.” Unlicensed pharmaceutical wholesalers from Idumota buy directly from manufacturers and then sell to wholesale clients, including health professionals and large-scale traders operating in other informal Nigerian markets, such as Onitsha, Kano and Aba. Another example of an informal market with regional scope is Madina in Conakry, where drugs are stored before being distributed across Guinea and exported to neighbouring States. Others are national in scope, such as Adjame Market in Abidjan, where a parallel marketplace called Roxy Market is a well-known spot to purchase pharmaceutical products. According to figures from the Côte d’Ivoire Ministry of Health, as quoted in press reports, purchases at Roxy represent 30 per cent of all medicine sales in the country, with about 8,000 unlicensed vendors operating there.

**Box 1 | Characteristics and organizations of informal pharmaceutical markets**

Large informal markets are points of import, distribution and transit for illegal medicines. They are highly organized, with entrenched hierarchies structured around networks of multinational and multi-ethnic economic players. Schematically, markets are controlled by wholesalers that own warehouses on the outskirts of markets. They purchase large, bulk quantities of drugs and control drug retailing in their market. To pool resources and efforts to obtain supplies and protect interests, wholesalers in these markets are organized as cooperatives (as is the case in Abidjan’s Roxy Market) or as unions (like the Madina Market in Conakry).

Wholesalers supply an army of unlicensed vendors inside and outside of markets, ranging from those owning small stores, to those selling only a few tablets in stalls alongside other products like coffee, tea, food and consumer goods. Itinerant vendors in rural areas also buy products in city markets. Such markets can have their own informal banking services to support traders.

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29 Kristin Peterson, op. cit. Some traders of Onitsha buy directly from manufacturers, but the majority of them purchase drugs from Idumota traders.
30 Interviews, national expert on trafficking and the civil society, Conakry, May 2019.
I. The West African pharmaceutical opioid crisis

There are also many intermediaries, conveyors and forwarders who mingle with drug traders and play roles in the economic activity. Some retailers sell products in plain view, while other have embraced more discrete selling practices, using communication technologies like WhatsApp, and selling only to known and regular customers. These practices have been developed in recent years as a result of police crackdowns on street vendors and increased seizures. Although variations exist between countries, vendors are predominantly poor, uneducated, sometimes illiterate women, without medical skills or knowledge, who are attracted by profits.32

2 | A practice of self-medication

A second structural factor that has paved the way for tramadol misuse is the common practice of self-medication, with people ingesting drugs without consulting health professionals. Self-medication is sometimes considered a response to dysfunctional formal health systems, and is “a symbol of self defence against disease when organized health care does not exist or is not available.”33 Indeed, it is not always a matter of choice but instead a lack of options, due to poor access to drugs and/or high prices, poor organization and low accessibility to public health facilities, etc.34 Self-medication, especially in non-Western countries, leads to the non-medical and/or abusive and dangerous use of medicines, including prescription drugs. According to experts at the WHO, tramadol use over an extended period of time (more than few weeks to months) results in dependence, with a higher risk for individuals who have a history of substance abuse. Some local consumption practices are also key drivers of dependence.35 A 2012 Nigerien study on drug addiction among adolescents and young adults living on the streets of Niamey revealed that of 61 youth respondents, 47 (77 per cent) were using tramadol and that, of those, 46 suffered from addiction.36

3 | Poor access to analgesics

The pharmaceutical opioid crisis is not just an issue of medical use outside the formal sector. In fact, the lack of availability of alternative analgesics to tramadol contributes to the crisis.37 Data provided

36 Djibo Douma Maiga, Ali Ousmane Moussa, and Amadou Sidikou, “Mésusage du tramadol par les adolescents et jeunes adultes en situation de rue”, The Pan African Medical Journal, Vol. 13, 2012. On 47 tramadol consumers attached to health centres of the Service éducatif, judiciaire et préventif (SEJUP) of Niamey, interviewed as part of a study published in November 2012, the average consumption was 1,450 mg per day (in two divided doses), with one person consuming 4,500 mg per day.
37 Ibid., p. 30–33.
by the INCB show that licit per capita use of internationally controlled opioids amounted to just 174 SDDs (single daily doses) per million inhabitants per day in Africa between 2015 and 2017. This is clearly lower than licit consumption in other regions, equivalent to about 5 per cent of licit per capita use of internationally controlled opioids at the global level, 2 per cent of the average in Europe and 1 per cent of the average in North America.\(^3\) In most West African countries, licit per capita use of internationally controlled opioids is even below the already extremely low African average, including – in descending order – Cabo Verde, Ghana, Benin, Togo, Burkina Faso, Cote d’Ivoire, Chad, Nigeria and Sierra Leone. The median among West African countries amounted to just four SDDs per million inhabitants per day. Only Senegal reported licit per capita opioid use of substances under international control that was slightly above the African average (215 SDDs per million inhabitants per day).\(^4\) In this context, opioids that are not under international control, notably tramadol, seem to have been filling this void, often supplying substances for medical and non-medical purposes to end users – without prescriptions from medical doctors – via informal markets.

### C. A mass-consumption drug

Data on drug use in West Africa are scarce. However, the limited data available show that pharmaceutical opioids (first and foremost tramadol) are among the most used drugs in the region. In Nigeria, the only West African country with recent scientific data on illicit drug use, pharmaceutical opioids (including tramadol, codeine and morphine) were the second most misused drugs after cannabis in 2017, with 4.6 million people using.\(^5\) And in this category, tramadol was the most popular substance: according to data from the Nigerian Epidemiological Network on Drug Use (NENDU), 71 per cent of opioid consumers in the country in 2015 were using tramadol pills or capsules.\(^6\) Nigeria is not an isolated case. A small-scale survey conducted by a Togolese NGO in two districts of Lomé revealed that tramadol was the second most used illicit drug, after cannabis, with 37 per cent of people between 12- and 24-years old having used tramadol at least once in their life.\(^7\)

Some discrepancies between countries exist, which highlights the need to conduct more national surveys and gather more data. In Niger, where non-medical tramadol use is widespread, a 2018 study on the general public’s perception and knowledge of drugs found that tramadol was the best-known drug in the country.\(^8\) On the other hand, in Senegal, where the licit use of internationally controlled opioids is above the African average, the tramadol crisis seems to be less acute than in neighbouring countries, despite seizures in border areas in 2018 and 2019, and some local demand at mining sites in the Kédougou region.\(^9\)

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38 Data for other regions: Asia 317; Central America and the Caribbean 408; South America 735; Europe 8,812; Oceania 12,563; North America 30,814 SDD per million inhabitants (INCB, Narcotic Drugs 2018, New York, 2019, Table XIV.1.i, p. 216.)

39 Ibid., p. 248–249.


42 For a presentation of the research and its results, see: https://www.ancetogo.org/sante-publique-3/lutte-contre-les-drogues/collecte-de-donnees-sur-les-drogues/. In Burkina Faso, according to one street health worker, 30 per cent of young people experimented or were regularly using tramadol, with a peak at 60 per cent for youth working as street vendors (interview, Ouagadougou, March 2019).

43 Official survey consulted by the authors in Niamey, April 2019.

44 Interviews, law enforcement officials, Dakar, 2018 and 2019.
Consumer profiles are diverse. Data and interviews with the civil society highlight that non-medical use of tramadol affects people of all ages – although it is most frequent among young adults – genders and, despite a stronger prevalence in lower income groups, socioeconomic classes, both in urban and rural areas. Recent investigations have also shown that the use of pharmaceutical opioids like tramadol and codeine is an increasingly widespread phenomenon among children, including in schools. Some communities or professional groups are particularly affected. This is the case for people with physically demanding and difficult work conditions, including herders, farmers, taxi and lorry drivers, itinerant traders, market sellers, security personnel and sex workers. In Nigeria, non-medical use of tramadol is reportedly widespread among internally displaced persons (IDPs) who fled the Northern Region following the Boko Haram insurgency. According to several accounts and testimonies, abuse of tramadol is also prevalent in Muslim communities – including among women – because, unlike alcohol or cannabis, it is odourless and difficult to detect, enabling people in this community to evade religious restrictions.

D. A public health and social issue

Side effects of tramadol use are dosage dependent and variable, but include nausea, constipation, headaches and mood enhancement. In countries where tramadol misuse has been reported as problematic, overdose from tramadol is disproportionately higher than overdose from other substances. For instance, in the Islamic Republic of Iran, tramadol overdose has become one of the most common causes of poisoning admissions to emergency departments. The lack of medical data in Africa makes it difficult to quantify the death toll associated with tramadol misuse. There are, however, anecdotes of people having convulsions and dying, and about healthy people having heart attacks after abusing tramadol. Moreover, there are media reports that the number of deaths from tramadol overdose outnumber those from heroin overdose in some countries, and there have been reports of deaths from codeine overdose.

Health consequences are aggravated by the concomitant use of alcohol and other substances. Polydrug use is indeed common among people who abuse tramadol in West Africa. According to the UNODC 2019 World Drug Report, “one pattern of such use is the concurrent use of two or more depressants, such as the use of alcohol and benzodiazepines with opioids, to self-medicate or potentiate the effects of the opioid.” In Nigeria, for instance, more than half of the opioid users interviewed as part of a survey on drug use reported concurrently or sequentially ingesting four to five substances, including cannabis, pharmaceutical opioids (tramadol, codeine and morphine),

46 Interview, member of the civil society, Abuja, November 2018.
47 Interview, NGO worker, Abuja, November 2018.
50 Interviews, members of the civil society and NGO workers, Ouagadougou and Niamey, March and April 2019.
51 Natalie Tecimer, “Tramadol: The Dangerous Opioid from India”, The Diplomat (United States), 19 January 2018.
cough syrup and tranquilizers. Tramadol is also often diluted in tea, coffee or energy drinks. Another aggravating factor is that pharmaceutical products bought in street markets are not always stored in required conditions. They can be exposed in the open air to sunlight, humidity, heat, dust and insects. Many tablets are also sold unpacked, which can make it impossible to identify and trace the active ingredient, or to ascertain the expiry date.54

Opioid misuse also results in indirect deaths. According to a 2016 press report, in Garoua, Cameroon, hospitals attributed 80 per cent of all traffic accidents resulting in hospital visits to tramadol.55 Indeed, a specific effect of tramadol is that it alters the perception of danger. “I had the feeling to be very strong and that I could stop a car with my bare hands,” remembered a tramadol user interviewed for this report. “I went in the middle of the road, with legs apart and my arms stretched forward. The car was coming but I still wouldn’t move. I thought I could stop it. Finally, the driver swerved. I was crazy.”56 A corollary is the impact of tramadol on public order. Hence, according to the Ghanaian Food and Drug Authority and Nigerien authorities, the tramadol crisis fuels crime and gang problems.57 Drug-dependent users attack people in search of money to buy narcotics. Others are brutally assaulted by gangs of delinquents who lose awareness of the value of human life, etc. Moreover, in Nigeria, a significant portion of respondents to a survey conducted by the NGO International Alert shared a perception that politicians exploit drug users to engage in electoral violence or intimidate political opponents during electoral campaigns.58 The validity of this assessment cannot be confirmed, but several interviewees in Guinea mentioned that young people were given tramadol and similar opioids to mobilize them during political demonstrations and campaign events.59

54 Field observations and interviews with law enforcement officers, drug users and members of civil society carried out in 2018 and 2019. See also the documentary broadcast on RTI (Côte d’Ivoire), entitled “52 minutes pour comprendre le marché d’Adjamé”, op. cit.

55 Natalie Tecimer, art. cit.

56 Interview, tramadol user, Abidjan, February 2019.


59 Interviews, officials and members of the civil society, Conakry, May 2019.
II. The scope and characteristics of tramadol trafficking

What types of tramadol are circulating in West Africa? What is the dosage of the active ingredient? Does tramadol sold in informal markets come from the legal supply chain or not? In recent years, hundreds of tons of this substance have been seized in West Africa. These seizures give an idea of the flows of tramadol entering the region and provide information on the types and origin of tramadol being trafficked in the area. Moreover, several forensic analyses have identified active ingredients contained in tramadol pills and capsules and assessed their quality.

A. Hundreds of tons seized

Hundreds of tons of tramadol have been seized in West African countries in recent years. In 2012, the INCB reported that “under the UNODC/World Customs Organization Container Control Programme, a total of 24 containers with a total of more than 132 tons of tramadol preparations were seized between February and October 2012 […] Of those, 16 containers were intercepted in Lomé, 7 containers in Cotonou, Benin, and 1 container in Dakar.”60 Since then, trafficking has continued, as shown by seizures carried out by law enforcement agencies. The largest annual seizures reported by national authorities occurred in Nigeria, with about 54 tons seized in 2016, 92 tons in 2017 and 22562 kg in 2018. Other countries are also affected. In February 2019, after several years without reporting any seizure, the Port Control Unit of Cotonou seaport seized four containers with more than 59 tons of tramadol in transit to Niger and Nigeria. In Côte d’Ivoire, around 44 tons of tramadol were seized in 2018 (see table below), primarily in informal markets and on trucks at land borders.

Selection of tramadol seizures in West Africa (national data 2011–2018)

<table>
<thead>
<tr>
<th></th>
<th>Togo</th>
<th>Nigeria</th>
<th>Ghana</th>
<th>Benin</th>
<th>Guinea</th>
<th>Côte d’Ivoire</th>
<th>Niger</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>3,704 kg</td>
<td>*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2012</td>
<td>75,835 kg</td>
<td>*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2013</td>
<td>65 kg</td>
<td>*</td>
<td>7,531.6 kg</td>
<td>0.67 kg</td>
<td>295.80 kg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2014</td>
<td>0</td>
<td>*</td>
<td>10,428.26 kg</td>
<td>6.26 kg</td>
<td>2,593.33 kg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2015</td>
<td>4.92 kg</td>
<td>*</td>
<td>111,820.09 kg</td>
<td>7.09 kg</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2016</td>
<td>10,320 kg **</td>
<td>53,804 kg</td>
<td>–</td>
<td>5.89 kg</td>
<td>845.47 kg</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2017</td>
<td>7.8 kg</td>
<td>92,259 kg</td>
<td>26.36 kg</td>
<td>0.00028</td>
<td>26.12 kg</td>
<td>366.86 kg</td>
<td></td>
</tr>
<tr>
<td>2018</td>
<td>22,562 kg tons</td>
<td>12.11 kg</td>
<td>0.07 kg</td>
<td>43,942 kg</td>
<td>838.25 kg</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* No data is available, because tramadol and codeine seizures were not recorded independently of other medicines.
** These containers were seized in 2014.

Sources: Replies to annual UNODC report questionnaires and other official Government data.

B. Tablets with unapproved dosages

According to interviews with users and law enforcement agencies in all countries covered by this research, most tramadol tablets trafficked and misused have higher dosages than what is legally available according to existing regulatory frameworks. In Ghana, for instance, where tramadol approved for medical use must not exceed 100 mg, most tramadol pills and capsules seized in 2017 had higher dosages: 7,190 were dosed at 50 mg; 830 at 100 mg; 210,400 at 120 mg; 93,160 at 200 mg; and 97,900 at 225 mg.\textsuperscript{61} In Nigeria, data on tramadol capsules reportedly shipped between January and May 2015 followed a similar pattern: out of 790,213,006 capsules, only 66,185,384 (8 per cent) contained the approved dosage.\textsuperscript{62} More generally, almost all products observed in the context of this research – either seized by police, bought by the authors or provided by drug users during meetings – had a dosage from 120 mg to 250 mg and were thus stronger than the allowed medical dosages of 50 mg to 100 mg.\textsuperscript{63}

Official data on Indian tramadol exports to West African countries show a similar pattern.\textsuperscript{64} From January 2013 to August 2018, of 2,632 shipments with a dosage declared, 1,889 contained tramadol with a dosage of more than 100 mg (mainly 120 mg, 200 mg and 225 mg, and, to a lesser extent, 250 mg).\textsuperscript{65} In other words, more than 70 per cent of declared shipments of tramadol exceeded approved medical dosages of 50–100 mg.

### Tramadol authorized dosages, prescription, and essential medicines control list

<table>
<thead>
<tr>
<th>Country</th>
<th>Tablets and capsules</th>
<th>Injectable form (amp)</th>
<th>Prescription required</th>
<th>Tramadol is an essential medicine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Benin</td>
<td>50 mg and 100 mg*</td>
<td>N/A</td>
<td>Yes</td>
<td>N/A</td>
</tr>
<tr>
<td>Burkina Faso</td>
<td>50 mg and 37.5 mg (+ paracetamol)</td>
<td>100 mg/mL–2 mL</td>
<td>Yes</td>
<td>No (codeine is on the list)</td>
</tr>
<tr>
<td>Côte d’Ivoire</td>
<td>50 mg</td>
<td>100 mg/mL–2 mL</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Ghana</td>
<td>50 mg and 100 mg</td>
<td>50 mg/mL–2 mL</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Guinea</td>
<td>50 mg</td>
<td>100 mg/mL–2 mL</td>
<td>Yes</td>
<td>No</td>
</tr>
<tr>
<td>Niger</td>
<td>50 mg and 37.5 mg (+ 500 mg of paracetamol)</td>
<td>100 mg/mL–2 mL</td>
<td>Yes</td>
<td>N/A</td>
</tr>
<tr>
<td>Nigeria</td>
<td>50 mg and 100 mg</td>
<td>50 mg/mL–1 mL and 2 mL, 100 mg/2 mL–2 mL</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Togo</td>
<td>50 mg and 100 mg</td>
<td>N/A</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

* The Beninese national medicine regulatory agency DPMED previously approved tramadol in dosages of 150 mg (manufactured by the Indian IPCA laboratory) and 200 mg (under the name “Dolora 200”, manufactured by the German lab Salutas Pharma GmBH). But these pills are no longer in circulation, according to the DPMED.

Sources: interviews (November 2018–June 2019); national list of essential medicines published by the WHO.

\textsuperscript{61} UNODC, 2018 World Drug Report, op. cit., booklet 3, p. 28.

\textsuperscript{62} Confidential document from the NDLEA, 2015.

\textsuperscript{63} UNODC, op. cit.

\textsuperscript{64} Namely Benin, Burkina Faso, Côte d’Ivoire, The Gambia, Ghana, Guinea, Guinea Bissau, Liberia, Mali, Mauritania, Niger, Nigeria, Senegal, Sierra Leone and Togo.

\textsuperscript{65} Official export data of tramadol from India to West African Countries (January 2013–August 2018) provided to UNODC by the Government of India. It should be noted these data are for Electronic Data Interchange (EDI) ports only and do not include any information of non-EDI ports.
II. The scope and characteristics of tramadol trafficking

Misuse is, of course, not limited to high dosage tablets. According to INCB, Côte d’Ivoire also reported diversions of tramadol from legal channels in 2017. In Ghana, the Food and Drug Authority investigated pharmacies in the Ashanti Region, concluding that tramadol was being improperly sold over the counter, in contravention of national regulations requiring a prescription.66 However, observations of dosages shipped and seized in recent years suggest that tramadol smuggled in the region is not primarily destined for the legal market, and that diversion from pharmacies is not the primary source of tramadol abuse. In other words, the main source of supply for users has not been diversion from the legal distribution chain, but instead the illicit pharmaceutical market supplied by criminal networks.

Box 2 | Bans of codeine cough syrup in Ghana and Nigeria: What was the impact on trafficking?

In May 2018, a few days after the broadcast of a BBC documentary on trafficking and misuse of codeine cough syrup in Nigeria,67 the Nigerian President imposed a ban on codeine cough syrup import and production. One month later, in the aftermath of the Ghanaian National Medicines Policy review, the Ghanaian Health Minister announced that all production and import of codeine syrup would also be banned.68

The bans undoubtedly helped to curb both demand for this specific opiate, which could once be bought in pharmacies without prescription, and its supply, by stemming flows of codeine cough syrup available on national informal markets. These were, therefore, effective measures, both in terms of drug use prevention and the fight against drug trafficking at a national level. However, these bans were hampered by the lack of accompanying measures and weak border controls, notably at the regional level. Indeed, syrup can be smuggled through porous land borders from neighbouring countries where it is still available, underlying the need for harmonized regulations across the region.

In addition, the bans have contributed to skyrocketing prices for codeine syrup on the illegal market. Following the bans, prices for 200 ml bottles of codeine on the Nigerian informal market increased from between Naira 250 to 800 ($0.69 and $2.22) to between Naira 2,500 ($6.95) to 5,000 ($13.90)69. Though this price increase has had a deterrent effect on users, it has also made trafficking codeine syrup more lucrative – and attractive – for organized crime syndicates. In late July 2018, the Nigeria Customs Command in Lagos seized 498 cartons – each containing 200 bottles – of codeine cough syrup imported from the United Kingdom. Likewise, in Ghana 864 bottles of codeine cough syrup were seized from a passenger at Kotoka International Airport in March 2019.70

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67 BBC, "Sweet Sweet Codeine – inside Nigeria’s deadly cough syrup trade", op. cit.
68 According to a Ghanaian Food and Drug Authority official, the ban was justified by the fact that there are alternative codeine-free syrups available on the legal market with the same effects, efficiency and at similar prices, so that people in need of such medication (for medical reasons) would not be penalized by this measure (interview, official, Accra, May 2019).
69 This price was observed on Ibadan campus, in November 2018 (interview, professor, Lagos, November 2018); before the ban, the price of bottle was between Naira 250 and 800 ($0.69 and 2.22), depending on the demand and the availability of products.
70 Phone conversation, law enforcement official, March 2019.
C. Most widespread products and others

Tramadol is referred to by many code names and nicknames: *1 giga, para-para, elephant, table à gaz, para-blanc, commando, para-rouge, tomato, red boy, red Mum, Dadis and green beret*, among many others. Some are country-specific and others region-wide, but all indicate the effect users seek, with colours indicating dosage: green capsules with a dosage of 120 mg or red and white pills with 200 mg, 225 mg and 250 mg (see pictures below and in annex 1). Most packaging has pictures or drawings that suggest tramadol promotes health and makes people stronger: a man running; the body of a strong man; a lion; an eagle; and fruits, including red apples, strawberries or cherries.

In addition to the common tramadol products that can be found in informal markets, less common products were also seized in streets markets, such as effervescent pills with 50 mg or 37.5 mg dosages in Benin, Côte d’Ivoire and Togo. These dosages were legal, according to national regulations, but, in the cases of Côte d’Ivoire and Togo, the seized products lacked marketing authorization, rendering them illegal. At the other end of the spectrum, several publications and some interviewees mentioned the availability of 400 mg and 500 mg tablets, and the Ghanaian Food and Drug Authority reported the seizure of tramadol tablets at 325 mg. These reported high dosages cannot be confirmed by the authors because no such pills were physically observed during the course of this research and authors did not have access to the analyses of these pills.

Two widespread products in West Africa

Lastly, while packages of popular tramadol products have slight variations in text, pictures and strip size, the overall appearance remains the same (see Annex 1). For instance, a picture of a man running may be slightly smaller or larger, his stance or its colour may vary, the font and characters may have slight differences, and strip sizes may vary, etc. These differences reveal: (1) the existence of many imitations, underlining the likely large number of pharmaceutical companies and laboratories supplying West Africa with tramadol; and (2) manufacturers make products that are easily recognizable by consumers, using the same visual codes to instil confidence.

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71 Interviews, law enforcement officials, Abidjan and Lomé, January and February 2019.
72 Interview, Ghanaian official, Accra, May 2019.
73 It should be noted that tramadol with a dosage of 300 mg and 400 mg in extended-release form is available in India. As stated, pills with such dosages were, however, not observed by the authors in West Africa (interview, Indian official, Delhi, June 2019; see also: https://cdscoonline.gov.in/CDSCO/Drugs).
D. The chemical content of tablets

Often discussed is the chemical properties of tramadol tablets circulating in West Africa. Is it really tramadol? Is the dosage consistent with what is indicated on tablets and boxes? Several recent analyses provide a preliminary assessment of both the accuracy of the active ingredient and the presence of other substances in tablets.

1 | Assessing the active ingredient

Recent analyses carried out in West Africa confirm the presence of tramadol in most capsules and tablets labelled as such. Of four samples tested in Senegal in December 2018, all contained tramadol, with a purity level from 86 to 93 per cent. Two additional analyses carried out in Côte d’Ivoire, one in August 2018 on tramadol AAROL-X at 225 mg, and the second in March 2019 on tramadol 250 mg (red pills), came to similar conclusions. The second issue concerns the dosage contained in tramadol pills.

Three series of data consulted as part of this research show that, in most cases, tramadol is dosed in accordance with what is indicated on strips and boxes.

- Of 11 samples of tramadol pills coming from unlicensed vendors and analysed by a European pharmaceutical laboratory, eight tabs were rated as “complied to label” for their dosage. The three remaining were under-dosed, with less than half of the stated tramadol dosage. As such, more than 70 per cent of tramadol pills analysed revealed a dosage consistent with indications provided.

- Of nine samples analysed in Niger in 2017, eight contained tramadol. The only sample without tramadol was an effervescent tablet. However, in the absence of further details about this product, it is impossible to know if it was marketed and sold as tramadol. All other samples contained 100 mg of tramadol or more, including two at about 100 mg and the others at about 200 mg. Of the two samples with 100 mg of tramadol, at least one was identified as a 120 mg green capsule (113.8 mg according to the analysis).

- Of five samples tested in Ghana in April 2018 – three pills with a dosage of 200 mg, and two with a dosage of 225 mg – all passed the identification and assay tests, but three failed the dissolution test. This failure meant the rate of release of the active ingredient did not meet the standard according to which the drug was manufactured, and that the right amount of the drug would not be absorbed in the blood.

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74 Axel Klein et al., *Tramadol in Africa. Scarcity and Excess of Pain Medication in a Poorly Regulated Market*, op. cit., p. 52–53. The laboratory that carried out the analysis was Grünenthal GmBH.

75 Data communicated to the authors in September 2018 by the Nigerien police laboratory, Interview, Nigerien official, Niamey, April 2019.

76 Data communicated to the authors in December 2018. Mail exchanges, Food and Drug Authority officer, January 2019.
2 | The presence of other substances

The above-mentioned European pharmaceutical laboratory, which analysed 10 samples of tramadol from West African informal markets, identified the presence of methylparaben and propylparaben, which are common excipients used by the pharmaceutical industry. Some analyses of tramadol pills carried out in Egypt also identified substances commonly used in pharmaceutical tablets, such as CaSO₄ (gypsum), sodium and calcium bicarbonate, and starch. However, less common substances have also been identified, such as the colorant copper 3:6 octachlorophthalocyanine, which is approved as paint, but not as a food or drug additive in Egypt.⁷⁷

Recent analyses in Senegal also highlight the presence of potentially dangerous substances in unapproved tramadol pills and capsules sold in the country.⁷⁸ In one pill, traces of levorphanol, an opioid used to treat moderate to severe pain, were detected. This substance is considered four to eight times as potent as morphine and scheduled under the 1961 Single Convention on Narcotic Drugs.⁷⁹ Another pill contained pyrovalerone, a psychoactive drug with stimulant effects acting as a norepinephrine-dopamine reuptake inhibitor used for the clinical treatment of chronic fatigue and lethargy.

Although it is not possible to draw definitive conclusions from the above, these findings raise concerns about the quality of some pills and capsules, and highlight the possible willingness of manufacturers to generate specific effects.⁸⁰ For example, the presence of pyrovalerone, due to its stimulating effect, reinforces the excitement described by some users and further activates tramadol properties “of being an opioid while also acting on the serotonergic and noradrenergic receptor system.”⁸¹ In this context, more analyses are needed to increase knowledge of the different substances found in pharmaceutical products available on informal markets.

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⁷⁸ Interview, law enforcement officer, Dakar, February 2019.
⁸⁰ This is not specific to tramadol or products illegally imported in West Africa. According to various interviewees from health authorities in the context of this research, some medicines with an authorisation do not conform to national and international standards… but are nonetheless benefiting from a marketing authorisation.
⁸¹ UNODC, 2019 World Drug Report, op. cit., booklet 3, p. 25. As a consequence, “tramadol [is] perceived by people using it for non-medical purposes as an energy and mood booster”.
III. Geography of production

Tramadol is lawfully produced in some West African countries, but most of the pills and capsules sold in the region originate from Asia, mainly India. There are also strong indications of local clandestine laboratories and/or assembly plants, although no tramadol production facility has been dismantled so far. In April 2018, under its Narcotics and Drugs and Psychotropic Substances Act of 1985, India introduced more restrictive control measures for tramadol. The Act gave more powers to law enforcement and, in particular, enabled authorities to enter the premises of tramadol laboratories and prosecute those who manufacture tramadol without permission.82

A. Imports from Asia

Tramadol is manufactured in several countries around the world. According to available data on both tramadol exports and seizures, the largest share of tramadol – both approved and non-approved – sold in West Africa in recent years appeared to have originated in India.

Often, boxes of tramadol available on the informal market do not state the manufacturer and display a fake QR-code. Moreover, when there are labels, they are often false or misleading. For example, in 2018, Nigerian authorities seized a shipment of 225 mg tramadol pills under the brand Super RolmeX, allegedly manufactured by Sintex Technologies Ltd. in London. However, according to press reports, that company closed in 2012.83

Data from the Ghanaian Food and Drug Authority show that at least 87 per cent of tramadol seized in that country in 2017 originated in India. No country of origin could be identified for the other 13 per cent. Data from UNODC’s Container Control Programme (CCP) indicate the same: with one exception, all containers of tramadol seized in West Africa between 2011 and February 2019 originated from Indian seaports.84

Moreover, official export data provided by the Indian Narcotics Control Bureau show 537 shipments to West Africa of tramadol with a dosage higher than 100 mg in 2013, 390 shipments in 2014, 261 shipments in 2015, 143 shipments in 2016, 378 shipments in 2017 and 180 shipments in 2018 (from 1 January to 25 August).85 This decline in reported exports of stronger tramadol pills from India to West Africa may have several possible explanations.

82 Ibid., p. 57.
84 CCP internal database.
85 Official export data of tramadol from India to West African Countries (January 2013–August 2018) provided to UNODC by the Government of India. These data are for Electronic Data Interchange (EDI) ports only and do not include any information on non-EDI ports.
India’s pharmaceutical industry is the third largest in the world by production volume and the tenth by value. There are around 10,000 registered manufacturing units in the country. If cosmetics, traditional medicine (Ayurveda and Unani) and homeopathy are included, this number reaches 18,000, with about 800,000 licensed wholesalers and retailers. The sector has grown between 10 and 12 per cent per year over the past five years. Some producers are specialized in the manufacturing of specific types of products, while others offer a wide range of pharmaceuticals.

Licensed manufacturers include, for example, Analytica Control Services Pvt Ltd (ACS) and QCS Lab LLP, both in Mumbai, and Silis Labs Pvt Ltd, located in Ahmedabad. All three are also registered with the Nigerian National Agency for Food and Drug Administration and Control (NAFDAC). Other manufacturers produce tramadol without being licensed.

The distinction between companies that manufacture for the official market those that produce for the informal market can be difficult to ascertain, and often of limited value when it comes to falsified medicines. One firm might produce pharmaceuticals that eventually end up on both markets. There are also reports of drug manufacturing plants producing both authorized and unauthorized medicines. For instance, some companies may use forged documentation to justify the manufacture of products without the required license. A manufacturer may also use cheaper chemicals that mimic the effects of medicines they are purporting to sell.

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86 Official data from the Indian Central Drugs Standard Control Organisation, consulted in Delhi, June 2019.
87 ibid.
China is also a supplier of tramadol to the informal market. According to Egyptian authorities and drug users, a portion of the tramadol seized and used in the country in recent years originated in China.\(^90\) In West Africa, however, China does not seem to be a major source of unapproved tramadol. In fact, the CCP database mentions only one container with tramadol coming from China. It was seized in Cotonou in August 2013 and contained 4.61 tons of tablets with dosages of 100 mg and 200 mg. The pills were mixed with other goods in the container.

According to a trafficker arrested in Ghana, products coming from China are cheap counterfeits, and are therefore more lucrative.\(^91\) Data on manufacturers of tramadol hydrochloride with Active Pharma Ingredients (API) licenses confirm China’s minor role in the global legal production of tramadol.\(^92\)

Nonetheless, in recent years several Chinese citizens have been arrested for trafficking falsified medical products in the region: in Togo and Côte d’Ivoire, for instance, there were several seizures of illicit medicines in Chinese-owned shops and houses, and some Chinese nationals were sentenced for selling illicit medicines. In these cases, there was no reference to tramadol, though it is likely that authorities did not make inventories of the seized products.\(^93\) Moreover, in cities such as Guangzhou, an important West African community is active in trade, including of pharmaceuticals.\(^94\)

**B. West African production**

Not all of the medicine available in West Africa is imported from abroad; indeed, a local pharmaceutical industry exists in the region. More than 50 per cent of the medicine sold in Nigeria and Ghana is manufactured locally. In other countries, like in Mali and Niger, only 30 per cent of pharmaceutical products are manufactured locally.\(^95\) Some of these locally manufactured products are misused in the region. According to media reports, in 2018, NAFDAC shut down three Nigerian pharmaceutical firms involved in the production and trafficking of prescription-only codeine cough syrup (Peace Standard Pharmaceutical Ltd, Bioraj Pharmaceutical Ltd and Emzor Pharmaceutical Industries Ltd).\(^96\)

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91 Interview, law enforcement officer, Accra, May 2019.


93 Interviews, law enforcement expert, Lomé, January 2019.


Another example is diazepam manufactured by a company based in Accra. These yellow pills can be purchased in street markets or from drug dealers in Togo, Côte d’Ivoire, Niger and Benin.97

Tramadol is locally and legally produced in Ghana and Nigeria.

- In Ghana, two local manufacturers import ingredients to assemble tramadol. Seven companies also import tablets, capsules and injectable solution. Import volumes of powder have been small over the past years, with the exception of 2015; 200 kg in 2014, 2,000 kg in 2015, 200 kg in 2016 and 60 kg in 2017.98

- Several Nigerian manufacturers are authorized to produce tramadol, including one in Kano, which imported raw materials in 2015 and 2016.99 The national legal production seems quite low, according to data on officially imported powder. It is very likely that declared imports of tramadol powder represent only a portion of the quantities actually imported. However, the large number of pills and capsules coming from Asia and seized in Nigeria in recent years suggests that illicit production in the country is relatively limited.100

Portions of tramadol produced for licit consumption can be diverted to the informal market. In the above-mentioned case of codeine cough syrup being diverted in Nigeria, some manufacturers’ employees were selling lawfully produced bottles on the informal market before the ban of May 2018. “When somebody is addicted to something – you get me? – and he needs it, the price I don’t think is an issue on this,” said Chukwunonye Madubuike, a business development executive at Emzor Pharmaceuticals, to undercover reporters. “This is a product that I know that if I have 1 million cartons, I can sell it in a week.”101 However, there is a basic difference between codeine and tramadol. Unlike codeine, the high-strength products sought by most tramadol users are neither available in pharmacies nor legally produced in the region.

C. Suspicions of clandestine labs

In West Africa, the production of drugs and pharmaceutical products in clandestine labs is not a new phenomenon. In July 2009, Guinean authorities uncovered chemicals and large equipment used in the illicit manufacturing of ecstasy (MDMA).102 Two years later, in July 2011, Nigeria became the first West African country to officially report illicit methamphetamine production after the raid of a clandestine laboratory.103 Concerning pharmaceuticals in particular, in Côte d’Ivoire, the Transnational Crime Unit dismantled a clandestine pharmaceutical assembly plant in the district of Cocody, Abidjan, in October 2017. The workshop was located in a private house and contained a machine used to manufacture drug blisters. Illegally imported raw materials were also found.104

97 Observations and interviews by the authors during field missions.
100 Interview, NAFDAC officer, Abuja, November 2018.
102 UNODC, *West Africa. 2012 ATS Situation Report*, Vienna, June 2012, p. 11. Following this first dismantlement, other laboratories were raided in Nigeria and suspicions remain that labs exist in other countries such as Côte d’Ivoire.
103 Ibid.
104 Interviews, law enforcement officers, Abidjan, February 2019.
The import of small quantities of loose tablets or powder highlights a technique used by couriers to reduce the risks at checkpoints and border posts. In Madina Market and the periphery of Conakry, clandestine assembly plants have also been uncovered, including one in which falsified tablets of amoxicillin – made of talcum powder – were assembled.105

None of the cases reported so far concern the illicit manufacturing of tramadol in West Africa. Yet the following considerations should be taken into account:

◆ Organized crime groups involved in the production and trafficking of synthetic drugs have access to materials and expertise that can be used to produce counterfeit medicines.106 There are indeed examples in Europe and Southeast Asia where “criminal manufacturers of amphetamine-type substances have been involved in the production and distribution of falsified medical products.”107

◆ Several interviewees in West African countries referred to the existence of clandestine labs manufacturing tramadol. Although Nigeria is the country in which suspicions are strongest, this issue concerns the whole region. According to a Beninese user of tramadol, clandestine laboratories run by Asians may be active in a residential district of Cotonou.108

◆ In recent years, raw materials (including blisters, loose tablets, powder, etc.) have been imported into Nigeria and Ghana. These products were likely for legal manufacturers.109 But illicit powder has been seized around the world, including 2.5 tons concealed in plastic bags inside 100 barrels at Jebel Ali Port (Dubai) in 2015.110 The destination was unknown.

D. Export regulations as game changers

Until April 2018, tramadol was listed as a Schedule “H-I” drug under the Indian Drugs and Cosmetics Act of 1940. The production of tramadol for export was subject to a specific No Objection Certificate (NOC), issued by the Central Drugs Standard Control Organisation (CDSCO), the country’s national drug regulatory agency. This document was submitted by the importer on behalf of the manufacturer exporter and, following the granting of the NOC, the State Licensing Agency (drug controller) issued the manufacturing license.111

On 26 April 2018, following reports of abuse and diversion of tramadol internationally sourced from India,112 the country scheduled tramadol in its Narcotics Drug and Psychotropic Substances Act of

105 Interviews, law enforcement officer, Conakry, May 2019.
108 Interview, tramadol user, Cotonou, December 2018.
109 Official export data of tramadol from India to West African Countries (January 2013–August 2018) provided to UNODC by the Government of India and email exchanges with the NAFDAC, June 2019.
110 WAM, “Dubai Customs foils smuggling attempt of 35 m tramadol pills and 2.5 tons of powder tramadol”, Gulf News (UAE), 5 September 2015.
111 Interviews, Indian officials, Delhi, June 2019.
112 Mail exchange, Indian official, February 2020.
1985 in order to regulate and increase law enforcement authority over the production, import, export and sale of tramadol, and to impose criminal penalties for breaches of these regulations.\textsuperscript{113} Twelve days later, on 8 May 2018, public notice 73/2018 was released. According to this document, tramadol and/or its components could no longer be exported outside India without an export authorization issued by the Narcotics Commissioner. Indeed, according to Rule 58 (1 and 2) of the \textit{NDPS Act}:

(Sub-Rule 1) “No Narcotic Drug or Psychotropic substance shall be exported out of India without an export authorization issued by the issuing authority in respect of the consignment, in Form No. 5 appended to these rules”; (Sub-Rule 2) “The exporter applying for an export authorization under Sub-Rule (1) shall submit: (a) Where the export authorization relates to Narcotic Drug, along with his application, the original or an authenticated copy of the excise permit issued by the concerned state government, and (b) The import certificate in original issued by the government of the importing country certifying the official approval of the concerned government.”\textsuperscript{114} According to vide notification SO 3448(E), dated 13 July 2018, the effective date with regard to control over tramadol for licensed manufacturers, importers and exporters of tramadol was extended by 120 days from 26 April 2018.

This change in Indian legislation was not intended to end the export of legal and approved tramadol to West Africa. According to official data, 70 shipments to West African countries were thus authorized in 2019. With the exception of Nigeria (44 shipments, 12,278 tons exported) and Guinea (five shipments, 15,048 tons exported), all other concerned countries combined recorded less than 400 kg of imported tramadol.\textsuperscript{115} At the same time, some exports were blocked by Indian authorities because of their non-conformity with the new legislation: in autumn 2018, Indian authorities seized a shipment of 225 mg tramadol that was destined for Benin;\textsuperscript{116} one year later, they stopped a shipment to Nigeria of 25 kg of tramadol HCL 50 mg because the import certificate was forged.\textsuperscript{117}

This legislative revision and strengthening of controls had tangible effects on the non-medical supply chain of tramadol in West Africa.

- First, reports from Ghana, Nigeria and several neighbouring countries have indicated a significant decrease in border seizures of the drug as well as reduced availability and increases in prices for tramadol on informal markets (see Box 3). This has not been the case consistently across West Africa, however, with countries such as Benin still reporting large seizures of tramadol in the first half of 2019, suggesting that trafficking of the drug remains active in the region.\textsuperscript{118}

- Second, the beginning of 2019 saw the arrival on West African illicit markets of tablets similar to tramadol but containing other substances. In April 2019, diclofenac pills were seized in Dosso (Niger). They were red with an “R” on one side. The dealer selling them claimed the pills were tramadol. However, he recognized that users complained about

\textsuperscript{113} UNODC, \textit{The Growing Complexity of the Opioid Crisis}, op. cit., p.5.
\textsuperscript{114} Rule 58 (Sub-Rules 1 and 2), \textit{Narcotic Drugs and Psychotropic Substances (NDPS) Act of India, 1985}.
\textsuperscript{115} Official export data of tramadol from India to West African Countries (1 January 2019 – 31 December 2019) provided to UNODC by the Government of India in February 2020.
\textsuperscript{116} Interview, Indian official, Lagos, July 2019
\textsuperscript{117} Official data provided to UNODC by the Government of India in February 2020. Three other shipments were blocked in 2019: one for Afghanistan and two for Somalia. In all of these cases, import certificates were forged.
\textsuperscript{118} UNODC, \textit{The Growing Complexity of the Opioid Crisis}, op. cit. p.5.
the absence of usual tramadol effects. Green capsules containing 100 mg of diclofenac have also been seized in Côte d’Ivoire and Togo. The packaging was very similar to that of 120 mg tramadol capsules, with black and red bands and the picture of a running man. Another example comes from Nigeria, where red pills containing 225 mg of diclofenac were seized in February 2019 in Lagos. One interesting point in this case was that one of the suspects arrested was also involved in the import of unapproved tramadol. In mid-2019, the Nigerien anti-drug unit also seized boxes of “Tafrodol”, an imitation of tramadol. The pills were not analysed but, according to labels on the boxes and strips, each contained 200 mg of acetaminophen and 25 mg of tapentadol, an analgesic opioid with a potency similar to tramadol.


Sources: National law enforcement agencies.

Box 3 | The tramadol price hike in 2018 and 2019

Although tramadol is a cheap drug, which partly explains its popularity, its price on the informal market started rising in 2018. In Côte d’Ivoire, according to a study conducted in the cities of Yamoussoukro, San Pedro and Bouaké between November and December 2018, under the Ivorian National Programme Against Tobacco and Other Addictions, one tramadol tablet cost about XOF 50 ($0.086). In February 2019, consumers in Abidjan said the most common price for a tablet had risen to XOF 150 ($0.26), with average prices varying from XOF 100 to 1,000 ($0.17 to $1.70), depending on availability and brand. In Benin, the price of a 120 mg tramadol tablet was between XOF 150 and 200 ($0.26 and $0.34) in December 2018, and XOF 300 ($0.51) for a 225 mg pill. According to users, a few months before, prices ranged from XOF 50 to 100 ($0.086 and $0.17).

119 The capsules were tested in Côte d’Ivoire and Nigeria. The presence of diclofenac was confirmed by forensic analysis, also certifying the absence of tramadol. The dosage of 225 mg for diclofenac pills seized in Nigeria was also confirmed (interviews and phone calls with law enforcement officers from Côte d’Ivoire and Nigeria, May–June 2019).
120 Interview, law enforcement expert, Delhi, June 2019.
121 Phone conversations, law enforcement official, November 2019.
However, prices vary widely across the region. At the end of 2018, tablets of the tramadol brands X-Tamol and Royal sold for between XOF 1,500 and 2,000 ($2.57 and $3.42) in Arlit, in the Agadez region of Niger. At gold mining sites, prices were even higher: at Tchibarakaten, northeast of Arlit, the price of a tablet reached XOF 3,000 ($5.13). The same applies to boxes of pills. In 2017, at the border between Niger and Nigeria, a 50,000-pill box cost XOF 800,000 ($1,368).123 Two years later, prices were much higher. According to the Nigerien anti-drug unit, during the early months of 2019, and depending on the product, dosage and brand, the price of a tramadol box reached XOF 12 million ($20,527) in Niamey and at the border with Nigeria, XOF 20 million ($34,212) in Agadez and XOF 25 million ($42,765) in Libya.124 Other sources interviewed for this study mentioned slightly different prices. But all interviewees highlighted an upward trend, most likely fuelled by reduced availability following important seizures in Nigeria and the new Indian export regulation.

123 Phone conversations, member of the civil society, December 2018.
124 Interviews, Nigerien police officers, Niamey, April 2019.
IV. Overview of transnational routes

Transnational routes used for tramadol trafficking can be identified by two main sources. First, using official data, including export data and reports of seizures in West Africa and elsewhere, when West Africa is listed as the final destination for the cargo. The second source of information is based on interviews with actors involved in trafficking or those close to traffickers. Both sources underline that after entering the region through seaports and airports, the drug is moved over land routes in order to be sold or transported.

A. From Asia to West Africa

Eighty per cent of global trade is transported on container ships. Similarly, most tramadol coming from Asia to West Africa is shipped in containers on maritime routes. However, some is transported on airplanes.

1 | Maritime routes

According to official Indian export data from between January 2013 and August 2018, the majority (1,870) of the 2,879 declared shipments of tramadol – all dosages included – from India to West African countries departed from the Port of Nhava Sheva, on the outskirts of Mumbai. Containers can be in transit for months before reaching their final destination. Main transit points identified in the context of this research are located in Asia, including Sri Lanka, Singapore, the Jebel Ali Free Zone in the United Arab Emirates and Malaysia. In September 2018, the Royal Malaysian Customs Department seized eight containers in Port Kelang, with 122.6 million high-strength tramadol pills, 600 litres of tramadol liquid and 38.8 million additional pills declared as common medicines and general merchandise. The medicines were shipped from the Port of Nhava Sheva, with Nigeria listed as the final destination. According to the Royal Malaysian Customs Department, the stopover in Malaysia was possibly intended to falsify export documents.

Once out of the Indian Ocean, containers can follow two different maritime routes to reach West African coasts. A first route passes through the Red Sea and the Mediterranean Sea, before heading south and reaching West African seaports. Some stopovers can occur, for instance in Egypt and

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125 Unlike other illegal trades, such as cocaine, high dosage tramadol trafficking is “partially legal” activity.
127 Official export data of tramadol from India to West African Countries (January 2013–August 2018) provided to UNODC by the Government of India. These data are for Electronic Data Interchange (EDI) ports only and do not include any information from non-EDI ports. The area around Mumbai as well as the neighbouring state of Gujarat, located in Western India, are major centres of India’s pharmaceutical industry, and most of the tramadol seizures reported by India took place in an around Mumbai in recent years (UNODC, 2019 World Drug Report, op. cit., p. 57).
128 In two cases, reported in April and September 2018, customs authorities in Sri Lanka intercepted 200,000 and more than 15 million tablets of tramadol, respectively, that had been shipped by sea from India. Libya was the destination for a portion of the tramadol.
Morocco. In Tanger, the Royal Gendarmerie seized 25 million 225 mg tramadol pills in 2018, coming from Asia to a West African country, according to media reports.\(^{130}\) A second route passes the Cape of Good Hope before reaching West Africa. Southern African countries can be used as transit places.\(^{131}\) Trajectories are numerous and constantly shifting, but usually following main commercial routes. It should also be noted that a significant number of containers are transported directly from Asia to West Africa without stopovers, part of the multitude of commercial exchanges taking place every day between the two continents.\(^{132}\)

2 | Air routes

Tramadol is also shipped to West Africa by air. At least 539 declared and authorized air shipments of tramadol with dosages between 120 and 250 mg were transported from India to West Africa between January 2013 and August 2018.\(^{133}\) Destination countries were Benin, Côte d’Ivoire, Guinea, Niger, Nigeria and Togo. As the table below illustrates, the main destinations during this period were Benin, followed by Nigeria. Several shipments of tramadol destined for Nigeria were seized at Lagos International Airport between 2013 and July 2018: 438 kg in December 2013; 311 kg in May 2016; 928 kg in May 2017; 4,423 kg in May 2018; and 555.32 kg in August 2018.\(^{134}\) No seizure was reported in Benin. Stopovers in the Middle East and East Africa are common. Some secondary routes were also identified, passing via North Africa and Southern Africa. For instance, a shipment coming from Cairo, Egypt was seized in May 2017 at the Lagos airport. In Niger, customs identified another air route in 2013, with boxes of tramadol shipped from India through Morocco. The final destination would have been Maradi.\(^{135}\) In 2019, officials of the Narcotics Control Board at the Kotoka International Airport in Accra, Ghana, seized codeine coming from South Africa in a passenger’s luggage.\(^{136}\)

### Number of air shipments of tramadol with a dosage higher than 100 mg declared for export in India (January 2013 – August 2018)

<table>
<thead>
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<th>Benin</th>
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<th>Guinea</th>
<th>Niger</th>
<th>Nigeria</th>
<th>Togo</th>
</tr>
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<td>1</td>
<td>1</td>
<td>1</td>
<td>233</td>
<td>11</td>
</tr>
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</table>

Source: Official export data on tramadol from India to West African Countries provided to UNODC by the Government of India. These data are for Electronic Data Interchange (EDI) ports only and do not include any information on non-EDI ports.

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131 Interviews, law enforcement officials, Accra and Lagos, November 2018 and May 2019.


133 Official export data of tramadol from India to West African Countries (January 2013–August 2018) provided to UNODC by the Government of India. The data are for Electronic Data Interchange (EDI) ports only and do not include any information on non-EDI ports.

134 Data presented by Nigeria authorities during a workshop organized in Abuja by the UNODC, August 2018.

135 These seizures were made by customs, which was not yet part of the Joint Air Interdiction Task Force (JAITF) at Niamey Airport. This route can be linked to the 2012 seizures in Togo of containers bound for the city of Maradi.

Box 4 | Air routes and exports of tramadol from West Africa

Several seizures of tramadol leaving West African airports took place in recent years. In Lagos, for instance, between 2013 and July 2018, the National Drug Law Enforcement Agency (NDLEA) made 12 seizures of outgoing tramadol: four shipments were heading to Middle Eastern countries, two for Central Africa, three for Europe, two for South Africa and one for South Asia. Quantities ranged from 40 kg to less than one kg. In another case, a Beninese citizen traveling to France was arrested at Cotonou International Airport with boxes of 120 mg tramadol. Such arrests and seizures highlight the use of air routes to move small quantities of tramadol from West Africa to other regions in Africa and outside the continent. Twice in April 2019, tramadol pills were seized from luggage at Abidjan airport. It is likely that such trafficking of small quantities of tramadol is also taking place at other West African airports.

B. Main regional entry points

From 2012 to 2018, seizures of tramadol in West African ports occurred primarily in three countries: Togo, Benin and Nigeria. During this period, however, changes in points of entry occurred. Following the 2012 seizure of more than 75 tons of tramadol in Togo, no seizures were reported at the Lomé seaport until 2016, although that 2016 seizure involved two containers blocked for entry in 2014.137

In Benin, a similar trend was observed, albeit with some delay. Between 2012 and 2015, many tons of tramadol were seized in the seaport of Cotonou. These seizures suddenly stopped until the first quarter of 2019, with the seizure of more than 59 tons in four containers. This could be a consequence of the increase in seizures in Nigeria between 2016 and 2018, which may have forced traffickers to shift routes and entry points.

Official data on seizures at entry ports and within West African countries, along with the available data on declared Indian exports and interviews, show that between 2013 and 2018, there were two primary and two secondary entry points into the region:

- The primary regional entry points were Nigeria and Benin, two countries that are closely linked due to their geographical proximity, the activities of Nigerian criminal groups in Cotonou’s seaport and airport, and the heavy flow of goods crossing their common border.138 Most of the shipments of tramadol with a dosage higher than 100 mg arrived in these two countries, with 975 shipments to Nigeria and 527 shipments to Benin between January 2013 and August 2018.139 Moreover, several seizures of products smuggled from Nigeria and, to a lesser extent from Benin, occurred in Niger, Côte d’Ivoire and Ghana.

- The two secondary entry points are Niger and Guinea. In Niger, 104 shipments containing tramadol dosages of more than 100 mg were declared in 2013, 68 shipments in 2014,

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137 Interviews, law enforcement officers, Lomé, January 2019.
139 Official export data on tramadol from India to West African Countries (January 2013-August 2018) provided to UNODC by the Government of India. These data are for Electronic Data Interchange (EDI) ports only and do not include any information of non-EDI ports.
30 shipments in 2015 and only two shipments in 2017. In other words, the number of legally exported tramadol shipments from India to Niger decreased from 2013 to 2017. On the other hand, Guinea recorded a significant increase in the number official shipments between 2015 and 2018: 12 shipments in 2015, 30 shipments in 2016, 47 shipments in 2017 and 68 shipments in 2018.

Highlighting the increasing role of Guinea as a regional entry point over the last few years, several seizures of tramadol exported from India to Guinea occurred in Senegal, Côte d’Ivoire and Mali in 2017 and 2018. Some tramadol arriving from India was also seized in the first half of 2019. That product was to be smuggled to Niamey, either to be sold locally or shipped to the Agadez region and neighbouring Libya. This is a likely consequence of seizures in Benin and Nigeria between the end of 2018 and the beginning of 2019, which increased the attractiveness of Guinea as a transit country in Western Africa. One side effect of ongoing regional demand has been both a shortage of supply and an increase in tramadol prices in Guinea. In May 2019, a seller in Madina Market declared to the UNODC research team that the shortage in tramadol green capsules and red pills was due to “foreigners [who] have eaten [them] all.” Instead, other brands of tramadol at unapproved dosages coming from European countries – according to labels on boxes – that had not been seen anywhere else in the region were sold at Madina Market.

The two main points of entry into West Africa, Nigeria and Guinea, are not disconnected. Indeed, some containers of tramadol bound for Nigeria were rerouted to Guinea, indicating a link between the two countries. “Some wholesalers in Guinea here are connected with those in Nigeria,” said an observer of criminal dynamics in the country. “Some Nigerians are also doing business in Guinea or serve as intermediaries for manufacturers or pharmaceutical industries in Nigeria.”

140 Interviews, law enforcement officers, Dakar, Abidjan, and Bamako, 2018 and 2019.
141 Interviews, traffickers and members of the civil society, Niamey and Dakar, April and June 2019.
142 Interview, medicine vendor in the Madina Market, Conakry, May 2019. It is possible to easily find tramadol with a dosage of 150 mg in Madina, including brands coming from the European Union not observed elsewhere in the region (personal observation from the authors about Madina Market).
143 Observations from the authors, Madina Market, Conakry.
144 Interview, NDLEA officer, Lagos, June 2019.
145 Phone conversation, law enforcement expert, June 2019.
IV. Overview of transnational routes

Main receivers of declared shipments from India (more than 100 mg, 2015–2018)

Identified transit ports / airports

Maritime routes

Air routes

Sources: Prepared by UNODC based on officially reported data by export and import countries.
Box 5 | Guinea: Reducing the number of pharmaceutical wholesalers

In 2017, 97 pharmaceutical wholesalers and distributors of pharmaceutical products were registered with the Ministry of Health of Guinea. Of those, 93 had been subject to administrative review. An assessment conducted by national authorities with the support of USAID and the U.S. President’s Malaria Initiative revealed important shortcomings in compliance with existing regulations. For example, only one company had a creation request completed and signed by a pharmacist appointed by the Executive Board, while just 12 had respected a rule stipulating that pharmacists must be major shareholders. The operational component of this assessment also identified several deficiencies, including: in storage systems, promotional campaigns that favoured certain products and cases of diversion of medicines from the legal pharmaceutical sector to illegal markets.146 By early 2019, the number of pharmaceutical wholesalers would have grown further to over 100;147 however, the Guinean President reduced the number of wholesalers to just three, in line with other Francophone countries in the region.

C. West African routes

Once unloaded at seaports and airports, most tramadol is moved within West Africa. Traffickers use two main axes – which are not particular to tramadol and other fraudulent drugs – that follow main commercial or smuggling routes. One axis follows the coastal corridor, as highlighted by the number of seizures at border areas in Gulf of Guinea countries. For instance, on 19 February 2019, the Togolese police seized 9,950 tablets of 225 mg tramadol in a taxi at Sanvee-Condji border post (Togo-Benin). The car was coming from Ghana and heading to Nigeria.148 A second axis traces coastal countries inland. For example, a merchant based in Ouagadougou (Burkina Faso) reported that a portion of the tramadol available in Burkina Faso comes from Nigeria and transits through Benin.149

There are also reported cases of tramadol being transported on waterways, using vessels such as pirogues. In Côte d’Ivoire, a woman smuggling illicit medicine from Nigeria by water (using a pirogue) was arrested in the locality of Bonoua, in Grand-Bassam Department (east of Abidjan). She had settled at the water’s edge, establishing an artisanal warehouse containing several tons of illicit medicines.150 This mode of transport is also used to connect other countries, and likely to move tramadol between Guinea and Sierra Leone.151

Routes can make detours, for instance via Mali or Burkina Faso to move tramadol from Guinea to Côte d’Ivoire. Such deviations depend on demand for the drug and connections of criminal

146 Dr. Sory Ballia Conte (rapp.), “Évaluation et revue des agréments des sociétés grossistes répartiteurs pharmaceutiques de Guinée”, National evaluation committee and review of approvals of wholesale pharmaceutical companies of Guinea (Health Ministry), with the support of the USAID and the U.S. President’s Malaria Initiative, September 2018. About 40 per cent of companies assessed (operationally) have refused to declare their turnover.
148 Mail exchanges, Togolese official, February 2019.
150 Interview, law enforcement expert, Abidjan, February 2019.
151 Interview, police officer, Conakry, May 2019.
networks. Unrest also affects trafficking routes: traffickers transporting small quantities of tramadol on the Niger River or on the roads of central Mali en route to the Timbuktu area (northern Mali) may make a detour through Niamey (Niger) because of insecurity in the Mopti region (central Mali). Niamey is, however, not the only regional transit hub. Maradi, Zinder and Agadez in Niger, Kano in Nigeria, Ouagadougou in Burkina Faso, and Gao and Bamako in Mali also serve as regional transit hubs for tramadol trafficking.

As a hub between West and North Africa, Niger plays a vital role in tramadol trafficking routes. Some products coming from Nigeria and Burkina Faso are exported to Algeria and Libya. In and around Agadez – a major transit point for products destined to southern Libya – tramadol is repackaged as other products. The drug then leaves Niger in large trucks, 4×4s or pick-ups. According to local sources, in April 2019, several shipments with dozens of tramadol boxes were delivered to Libya using these means. A secondary route to Libya passes through the Termit and the Kaouar, between Agadez and Chad. Once in Libya, tramadol is consumed or transported to other countries including Tunisia and Egypt. Some tramadol trafficked through Niger is moved to Algeria, but quantities are thought to be smaller than those shipped to Libya.

Moving tramadol in West Africa: Overview of main regional routes

Main receivers of declared shipments (2014–2016, from India, more than 100 mg) Important transit country Land routes


152 Interviews, law enforcement experts, Abidjan, February 2019.
153 Interviews, members of the civil society, Dakar, April 2019.
154 Kano State is the main supply region for traffickers with big warehouses, but the Sokoto State is also a place of trafficking.
155 Phone conversation, member of the civil society, May 2019.
156 Interviews, members of the civil society, Niamey, April 2019.
157 Interview, law enforcement expert, Niamey, April 2019.
V. Modi operandi of traffickers

Traffickers use a broad range of modi operandi to move tramadol and other pharmaceutical opioids. Each mode of transport – maritime, air and land – has unique features, though they also share some common characteristics. In addition, whatever the method used, criminals exploit vulnerabilities in West African countries, and corruption is a key tool for traffickers at all levels.

A. Maritime transport

The main trafficking and concealment methods by sea include: (1) false information on the container’s manifest, claiming to carry legitimate items (like general goods, legal medicines, medical equipment, etc.); (2) false legal documentation such as import licenses (e.g. false declarations, consignee’s contact details, etc.); (3) fraudulent packaging (e.g. illegal tramadol tablets have been found hidden in boxes labelled as food or with international organizations’ emblems); (4) concealment of illicit drugs among legally imported pharmaceutical medicines; and (5) the use of transit places, which can serve several purposes depending on the stage of the journey.

Efforts are also made to prevent law enforcement from geo-targeting and to mask countries of origin and/or destination. There have been cases in which shipping manifests were allegedly modified during transit to list a different destination than the one initially declared. Other details can also be changed, including the nature of goods being transported; for example, at departure, tramadol may be declared in the manifest, but when docking in West African seaports, this may contain different information. Another method used during transit – but not reported in the case of tramadol – is the repackaging of medicine into boxes labelled in local languages that meet the legal requirements of destination countries and hide the provenance of the products.158 Importers of illegal tramadol also use West African transit points either to switch the seaport of arrival or to declare the container in transit to a landlocked country in order to reduce the risk of control by customs and law enforcement agencies at seaports.

B. Air transport

Air transportation takes many forms, including cargo flights, couriers and postal parcels. Each of these methods has been detected in West Africa, although cargo flights are the most used means of air transit in the region. The use of couriers and postal parcels must also be closely monitored because these transport methods have been used in the trafficking of pharmaceutical opioids and other drugs in West Africa and all over the world.

158 Camille Niaufre, art. cit., p. 7.
1 | Cargo flights

Modi operandi used for cargo flights are the same as for sea containers. Importers use false declarations and legal documentation, fraudulent packaging, etc. In Nigeria, for instance, a few years ago the NDLEA seized tramadol declared as “general merchandise”.159

More broadly, the falsification of data and information is common in air freight, and traffickers may have accomplices in airport facilities.160 The seizure of 4 tons of tramadol at Murtala Muhammed International Airport in Lagos in May 2018 exemplifies these modi operandi. First, information on the manifest was false and incomplete, indicating only the name of a company but no contact information. Second, neither the importer nor the clearing agent came to claim the shipment, highlighting the involvement of informants. “We collected the consignments from the Skyway Aviation Handling Limited (SAHCOL) shed today [Thursday],” the NDLEA commandant at the airport told journalists, “and we got to know of the consignment even before it arrived in the country through our foreign intelligence. Since then, we have been monitoring it and waited for either the importer or any clearing agent to come forward for clearance, but no one came.”161

2 | Couriers

Several outgoing couriers have been arrested in West African airports attempting to board planes while carrying tramadol. However, to date no tramadol has been seized from inbound passengers on flights from Asia.

Over the last few years in the Middle East, a number of passengers have been arrested carrying tramadol. Human couriers use several methods to smuggle drugs, including concealing products on their bodies and inside luggage, with illegal products packed inside legal manufactured goods, fruits, etc. Such modi operandi are also used for smuggling drugs such as cocaine and methamphetamine.162

In one case investigated by the NDLEA, non-consenting or abused couriers were used to export tramadol from West Africa during the Hajj, the annual Islamic pilgrimage to Mecca in Saudi Arabia, which – given the harsh penalties for drug trafficking in Saudi Arabia (and some other countries) – can be particularly problematic for victims. In December 2018, Saudi police arrested a Nigerian woman in Medina. She was accused of illegally transporting 2,000 packs of tramadol in a bag tagged with her name that had been left at the airport. Subsequent investigations eventually led to the arrest of six officials working at Mallam Aminu Kano International Airport in Nigeria, who had planted illicit drugs in travellers’ luggage.163

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159 Interviews, NDLEA officers, Lagos, November 2018.
160 Interviews, law enforcement experts, Abuja and Lagos, November 2018.
161 “NDLEA impounds four tonnes of imported Tramadol at Lagos airport”, PUNCH.ng (Nigeria), 18 May 2018. The drugs arrived in the country on Etihad Cargo in two batches. The first batch arrived Nigeria on 23 April 2018, while the second consignment arrived at the airport on 25 April.
162 Mail exchanges, international expert on drug trafficking, February 2019.
3 | Postal parcels

In Europe and the United States, medicines are illegally imported by postal parcels. The use of postal packages to import falsified medicines or drugs is not uncommon. According to the U.S. Food and Drug Administration, there has been an increase in recent years in pharmaceutical opioids entering the country illegally by post. Similarly, in Europe, 41,800 packets containing 1.5 million non-authorized pills were seized at Paris Charles de Gaulle Airport in 2016.

In West Africa, according to data collected in the context of this research, only one postal package with tramadol has been seized. It was shipped from Nigeria, destined for India. It is likely that the package contained samples in order to start production. Other drugs have been found on several occasions in postal packages. This method for smuggling tramadol and other pharmaceutical opioids, therefore, could become more relevant as online orders and subsequent postal shipments rise.

C. Land transport

All modes of transportation are used to move tramadol between West African countries, including trucks, buses, taxis, cars, motorcycles, bicycles, cattle, pedestrians, etc. Traffickers use two main types of routes: commercial ones, and tracks or back roads.

1 | Commercial routes

A large portion of tramadol is moved via commercial routes, among the flow of persons and goods. In Côte d’Ivoire, several women with luggage full of tramadol boxes were arrested in buses coming from Guinea. Taxis are also used, as was the case in the above-mentioned seizure at the Sanvee-Condji border post between Togo and Benin in February 2019. In this instance, tramadol was hidden in black plastic bags. Tramadol can also be hidden behind or within other goods, such as in food boxes.

To move drugs between countries some traffickers use trusted intermediaries who are sometimes involved in licit commercial activities. On 31 December 2018, the Niger anti-drug office (OCRTIS) arrested a merchant of second-hand clothes and shoes returning from Lomé (Togo) by bus. The merchant had diazepam, dynawel and gebedol tablets hidden among his legal products. Under the scheme, he would take possession of drugs in Lomé on behalf of a buyer, then deliver them to that

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164 Kate Snyder, “Drug trafficker received packages with thousands of pills”, *Reporter* (United States), 23 April 2018. According to the journalist, the supplier has not been arrested.


167 Interview, law enforcement expert, Lagos, November 2018.


169 Interviews, law enforcement experts, Abidjan, February 2019.

170 Interviews, law enforcement experts, Abuja, November 2018.
V. Mod operandi of traffickers

Buyer at Niamey station. From there, the drugs would be stored in the buyer’s house before being transported to other locations in Niger and sold.\(^{171}\) Although this case did not involve tramadol or pharmaceutical opioids, it illustrates the porosity between legal and illegal trade, and the way traders involved in licit businesses can move illicit substances across regional borders.

Multiple modi operandi are often used on one single route. In December 2018, the Nigerien OCRTIS dismantled a criminal network operating between Burkina Faso and Libya.\(^{172}\) Tramadol pills were hidden in a truck among other goods for the segment from Ouagadougou to Niamey. In Niamey, a conveyor working for a company involved in the transport of people collected the tramadol and delivered it to a bus driver en route to Agadez, in the north of the country. In Agadez, a third person received the tramadol and was tasked with sending it to Dirkou (northeast) and ultimately to Libya.

Some interviewees mentioned various caches in vehicles, for instance inside the driver’s seat or car doors.\(^{173}\) This highlights the use of techniques already employed in the region for the illegal trade of other drugs as well as the involvement of garages. Another – albeit unconfirmed – modus operandi reported in Niger was the transport of tramadol tablets that were diluted in water cans.\(^{174}\)

2 | Tracks and back roads

Traffickers often avoid official border posts while crossing borders. Instead, some travel on uncontrolled backroads. According to Burkinabe authorities, a high rate of tramadol trafficking occurs over the border between Togo and Benin, with traffickers using motorcycles to move the product.\(^{175}\) At the border between Nigeria and Niger, traffickers also use backroads. In particular, one modus operandi observed in Agadez region is the use of empty vehicles to clear the road for a second vehicle loaded with the drug. In September 2017, Nigerien Customs seized a pick-up truck with 3 million tramadol pills coming from Nigeria. It was preceded by a first vehicle that cleared the road and protected the second in the event of police control. One particularity of this seizure was that the initials “U.N.” were written on the cartons.

It is also important to note that traffickers quickly adapt to new situations: routes and modi operandi are, therefore, constantly changing in response to law enforcement activity. Indeed, following the seizure of tramadol pills from Nigeria in Niger, the route shifted, and traffickers changed their modi operandi;\(^{176}\) One last hypothesis, albeit unverified, is that traffickers may use

\(^{171}\) Interview, Nigerien police officer, Niamey, April 2019.
\(^{173}\) Interviews, law enforcement experts, Niamey, April 2019.
\(^{174}\) Interview, police officer, Niamey, May 2018.
\(^{175}\) Interviews, police and custom officers, Ouagadougou, March 2019.
\(^{176}\) Interview, law enforcement expert, Niamey, April 2019.
transhumance corridors to move tramadol as well. Indeed, interviewees reported the smuggling of tramadol among herds of cattle.  

Box 6 | Tramadol cartons labelled with “U.N.”

No photographs exist of the cartons seized in Niger in September 2017, but they could be similar to boxes seized in Nigeria and Ghana in 2018. In January 2018, the Nigerian NDLEA seized containers with 225 mg tramadol tablets inside white cartons with two arrows and the letters “U.N.” printed on them. According to investigators, the objective was to deter controls at main entry points (with the claim of diplomatic immunity) and to provide an alibi during road transport (i.e., the “medicines” would be distributed to internally displaced persons (IDPs) in the north of the country). Identical cartons were seized in Accra, Ghana, in the raid of a drug dealer’s house. It is probable that both the Ghanaian and Nigerien tramadol smugglers had the same supply chain in Nigeria, only several months apart.

D. Exploiting vulnerabilities

Institutional vulnerabilities create an environment of low risk and high reward for traffickers. At seaports, only a minority of containers are checked and searched. In Port of Cotonou, for instance, the UNODC-supported interagency unit has a theoretical capacity to check 1 per cent of all incoming containers. Moreover, in a competitive environment between regional seaports, priority is given to timeliness, and law enforcement units are under pressure to not slow the flow of goods. Interagency cooperation is another issue in seaports. For instance, in June 2018 in Nigeria, NAFDAC publicly complained that Nigeria Customs Service refused to grant NAFDAC access to 24 containers suspected to be loaded with high-dosage tramadol tablets. The case was not isolated: some interviewees in other countries also deplored the lack of cooperation with customs, as well as the absence of pharmacists in their ranks to correctly identify medicines.

Once tramadol is unloaded and collected from ports of entry, traffickers use poorly controlled borders to move merchandise across the region. There are no scanners at most land border posts. In addition, law enforcement officers often regard deployment to border areas as an opportunity to make money and supplement low income. Between States, existing trade facilitation mechanisms can aid illicit trafficking. A few years ago, the following modus operandi was used: Beninese retailers travelled to Nigeria to buy medicines from a wholesaler. They commissioned Nigerian intermediaries to deal with formalities (storage of drugs, transport and customs clearance). The merchandise was distributed between several lorry drivers who transported it to Cotonou, where it was ultimately collected by the buyers. The cost of the operation was fixed.

177 Interviews, members of the civil society and NGO workers, Abuja, November 2018.
178 These cartons were shown on Nigerian news on 14 January 2018.
179 Interview, law enforcement expert, Accra, May 2019.
182 Interviews, various countries, 2018 and 2019.
regardless of the type of merchandise transported. This system is not specific to Benin: in Togo, truckers can cross borders with a legal global customs clearance (i.e., one price per truck regardless of what goods are carried).

E. Corruption as key facilitator

Corruption is a main facilitator of trafficking, allowing illegal cargo to evade control and seizure. According to media reports, in 2018, a Nigerian customs agent was offered a bribe of Naira 50 million to clear a container of tramadol. In Côte d’Ivoire, the price for a truck loaded with medicines to cross the border with Ghana could reach XOF 700,000 to 1 million.

One corollary is the capacity of some criminals to build effective and lasting relationships with law enforcement agents at border posts. Petty traffickers can rely on one or two agents to cross borders regularly without being controlled, as was observed at the border between Niger and Nigeria. For their part, traffickers can rely on relationships in different countries. “A good supplier in the region is strong,” said a wholesaler living in Ouagadougou (Burkina Faso). “He has a lot of relations in border posts in Nigeria, Niger, Burkina, and Mali. That is normal in this business.” Most important dealers are also directly connected to powerful people, who act as facilitators, for example, by intervening to allow an import when a cargo is flagged.

Corruption is not exclusively used in the transport of illegal goods. Two other aspects of corruption concern the safety of seized products before their destruction and the justice system.

- Early in 2019, the Gendarmerie seized more than 120 tons of tramadol on a truck bound for the city of Kankan (Guinea). The product was then sealed by the judicial authority, before being fraudulently released. This was not an isolated case in the region. In 2017, according to a local media, two police officers at Agadez (Niger) were arrested for stealing tramadol from the police department warehouse to resell it. Two years later, four people were arrested at Gouré (Niger), including two court clerks and one transporter, following the disappearance of 14 cartons of tramadol and 32,000 pills.
UNODC interviewers were told of several cases of corruption being used to avoid trial or reduce sentences. In Cotonou (Benin), according to a taxi-moto driver, a Nigerien whose house contained illegal tramadol was arrested in mid-2018 and released with his goods after he paid a bribe. In Ghana, a journalist mentioned the case of a street drug seller arrested then released with his products, including tramadol, after having paid a bribe of GHS 200 (about $38). When it is not possible to avoid trial, bribes might help reduce sentences.

192 Interview, taxi driver, Cotonou, December 2018.
193 Interview, journalist, Accra, May 2019.
194 Interviews, law enforcement and justice experts, Niamey, April 2019.
VI. Organized crime networks and traffickers’ profiles

According to a UNODC report on transnational organized crime in West Africa, “investigations have revealed a wide range of participants in fraudulent medicines manufacturing and distribution. From former high-level executives in the pharmaceutical industry right down to mom-and-pop shops, the trade has proven attractive to all manner of opportunists.”

Hence, a wide variety of actors are involved: manufacturers, international dealers, distributors, official and non-official wholesalers, conveyors, pharmacists and informal sellers, State officials, businesspeople involved in other illegal enterprises and, to lesser extent, members of jihadist groups.

A. A tangle of networks

At the top of the pyramid are barons, who import the largest quantities of drugs. In a 2009 article, Stephen Ellis identified three characteristics of a drug baron, which can be applied to those trafficking medicines: he/she must be able to buy products in a source country; he/she must have strong networks and support in countries where the drug is sold or transits through, to secure the cargo and change routes when required; he/she must have enough resources to finance the entire operation. The baron often relies on a striker – this term is used in Nigeria in reference to many forms of trafficking, not just drugs – who is an intermediary, able to mobilize a wide range of contacts and organize transport logistics. Such networks are changing and flexible, occasionally constituted on an ad hoc basis. The involvement of traditional transnational and non-African organized crime groups and their diversification from drugs to international medicine trafficking, including tramadol, is possible. However, this has not yet been confirmed.

The links between countries of production and import can be built in various ways, as illustrated by Nigerian importers of Chinese medicines. First, importers travel to Asia to canvass partners, including exporters and forwarders. After a while, travel becomes less frequent and trusted intermediaries based in Asia place orders on behalf of importers.

Another method is the reliance on the West African diaspora in Asia. In 2012, Nigerian officials seized 40 cartons of Coartem in an electronic shop in Lagos that had been sent by a Nigerian trader living in the Chinese town of Guangzhou, known for its street markets and pharmaceutical industry. One year later, an import of Coartem, ibuprofen and Maloxine from China was intercepted by police

199 In 2009, it was estimated that there were about 20,000 Africans traders living long term and thousands more visiting the city regularly. Most of these African traders were Nigerian Igbo who “usually stay for longer periods in China and sometimes manage to open multiple shops in China.” (Yang Yang, “African Traders Guangzhou, China: Routes, Profits, and Reasons”, *art. cit.*, p. 1).
in Lagos. Conversely, Asians based in Africa are also involved in drug import. They identify new products, sign contracts and build contacts with local businesspeople to secure shipments. “I knew an Indian [involved] in tramadol trafficking before 2013,” said one Nigerien trader. “He was in Niamey and [...] organized many imports from Benghazi in 2011 and 2012.”

The biggest transcontinental importers are supported by networks acting at regional or national levels. They are specialized in transport or resale – or both. For instance, in 2018 in Mali, a Guinean was arrested in the region of Kayes. He imported tramadol from Guinea and sold it to resellers at gold mines. One feature of the tramadol market in recent years was its openness. Barriers were considerably lower compared to the closed circuits used to move high-value products like cocaine, with the possibility of buying on credit. “A friend of mine at Agadez asked me to look for tramadol to sell him,” said a trafficker interviewed in Niamey. “Another friend, at Ouagadougou, told me that he could find this product and bring it to Niamey. I would have paid him after the selling of the product. [...] I know this Burkinabe [...] through my activities of cars selling. I don’t think he’s selling tramadol, he has probably been solicited.” Among the most organized regional networks are those exporting tramadol from Niger to Libya, which handle transport from the border with Nigeria to the southwest of Libya. However, there are also many smaller opportunistic networks or actors, attracted by money, trying to get into tramadol trafficking.

As a consequence, it is more appropriate to speak about criminal networks rather than unified organizations controlling the whole supply chain. We also note a relationship between core networks and more or less autonomous peripheral networks. Most transnational organized criminal groups have the capacity to analyse market opportunities within West Africa, switching from one country to another depending on demand and law enforcement efficiency. Other networks – including professional or occasional traders – arrange their business in the whole region or elsewhere. In this sense, we can speak of the coexistence of: (1) hierarchical networks built around a chief who controls all activities; and (2) peripheral and flexible actors who are in contact with bigger networks and with each other, collaborating depending on needs and opportunities.

B. Overlapping of the legal and the illegal drug sectors

The legal and illegal sectors overlap at different levels. For instance, most manufacturers legally produce and export high-dosage tramadol from India. During transport, however, the import declaration can be changed and, once in West Africa, tramadol is sold on the unauthorized market.

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201 Interviews, law enforcement experts, Conakry and Lagos, November 2018 and May 2019.
202 Interview, trader, Niamey, April 2019.
203 Interview, law enforcement expert, Dakar, April 2019.
204 Peter Tinti, “New trends in tramadol trafficking in Niger”, *art. cit.*
205 Interview, tramadol trafficker, Niamey, April 2019.
206 Official export data of tramadol from India to West African Countries (January 2013–August 2018) provided to UNODC by the Government of India.
Importers of tramadol also rely on regular forwarders active in West Africa, while some local intermediaries and official wholesalers are involved in pharmaceutical opioids trafficking.\textsuperscript{207}

Pharmacists can illegally sell licit pharmaceutical opioids containing codeine and tramadol (without prescription or without permit to do so). Furthermore, they can place orders to get discounts and/or make more profit, and then resell part of the merchandise on street markets. In Madina (Guinea) and Roxy (Côte d’Ivoire) street markets, it is possible to buy medicines coming from the legal supply chain, including tramadol and codeine, far cheaper than in pharmacies. In Conakry, for instance, a box of 10 capsules with 300 mg of paracetamol and 37.5 mg of tramadol costs GNF 15,000 ($1.64) in pharmacies; meanwhile, the same box can be bought for GNF 10,000 ($1.10) in Madina Market.\textsuperscript{208}

We should therefore distinguish tramadol with higher dosages from products coming from the legal supply chain that are diverted. However, this research highlights how the legal and illegal sectors overlap at all the levels of the supply chain, through the involvement of manufacturers, forwarders, medicine professionals, pharmacists, merchants and traders. Accordingly, an interlocutor in Burkina Faso mentioned the arrest of people who used their legal activities (oil, food, trade, etc.) as fronts for the import or sale of illicit medicines.\textsuperscript{209}

C. State officials and trafficking

State officials may be involved in tramadol trafficking through corruption or as actors within criminal networks. A trafficker can run for national office or seek appointment as a civil servant to cover up his/her illegitimate business, while obtaining social recognition and influence. Likewise, attaining the support of traffickers is of primary interest for politicians seeking to win elections that are not publicly funded. Indeed, election candidates tend to “own” political parties, funding them with private resources or raising support from friends, regional allies and from their ethnic base, including traffickers.\textsuperscript{210} As stated in a 2014 report from the West Africa Commission on Drugs, “Traffickers seem to connect easily with people of influence and are able to establish and operate informal social networks, allowing them to avoid detection by the formal security apparatus or co-opt it when necessary.”\textsuperscript{211}

While this assessment refers to drug trafficking, it also applies to other lucrative forms of trafficking, including pharmaceutical opioids. Religious and political authorities may indeed be linked with medicines trafficking, as highlighted by several examples:

- According to media reports, in Senegal in 2017, the Union of Private Pharmacists denounced the existence of illegal warehouses and the climate of impunity in and around the city of Touba. This followed the restitution by authorities of 1.2 tons of medicines

\textsuperscript{207} Interviews, law enforcement experts, Abuja and Lagos, November 2018.
\textsuperscript{208} Observations from the authors, Madina Market (Conakry), May 2019. Interview, Abidjan, February 2019.
\textsuperscript{209} Interview, law enforcement expert, Ouagadougou, March 2019.
\textsuperscript{210} West Africa Commission on Drugs, Not Just in Transit. Drug, the State and Society in West Africa, June 2014, p. 22.
\textsuperscript{211} Ibid.
seized as part of the Interpol-led Operation Heera, as well as the seizure of two trucks loaded with illicit medicines on 11 November in Touba Belel, near the headquarters and holy city of the Mouride brotherhood.\textsuperscript{212} The union also criticized the April 2019 pardoning by presidential decree of a truck driver who had been sentenced to five years in prison for trafficking medicine.\textsuperscript{213}

- In Benin, the main suspect in a trial of seven wholesalers in 2018 was elected to serve as a representative in the National Assembly. He owned the warehouses where illicit medicines were stored.\textsuperscript{214} That November, he was sentenced in appeal to six years in prison and ordered to pay a fine of several billion West African francs.

- Media also reported the June 2019 arrest in N’Djamena of three high level officials of the Chadian Foreign Ministry after they attempted to free a Chadian national arrested in Benin following the seizure of containers of tramadol at the Port of Cotonou in February 2019.\textsuperscript{215}

It is clear that there are few prosecutions of transnational traffickers and even fewer convictions. While causes are diverse, they frequently are related to the ability of traffickers to interfere with investigations and/or prosecutions. And when cases actually result in convictions, these can be politically motivated, or may be intended as a means of clearing the way for others who seek access to the same resources. Most commonly, it is users, petty dealers and mules who are prosecuted. Across the region, members of the general public widely believe senior officials and politicians are linked to drug trafficking, which erodes confidence in public institutions and officials.\textsuperscript{216}

D. Terrorist groups and tramadol: reassessing the debate

A common topic that emerged in the course of this research was the involvement of terrorist groups in medicine trafficking. Are they active? If so, how and to what extent? Does medicine trafficking finance terrorism? Reports acknowledge the involvement of Hezbollah and the Irish Republican Army,\textsuperscript{217} and newspapers mention the engagement of Al Qaeda in the Islamic Maghreb (AQIM),

\begin{itemize}
\item Ashoka Mukpo, \textit{Out of the shadows: Adopting a peacebuilding approach to the social effects of drug use in Nigeria}, op. cit. Observations of the authors in countries concerned by the research.
\end{itemize}
VI. Organized crime networks and traffickers’ profiles

Boko Haram and Islamic State in Iraq and Syria (ISIS) in the trafficking of medicine.\(^\text{218}\) One argument is based on the fact that Al Qaeda’s leaders asked their supporters to trade counterfeit products to finance operations.\(^\text{219}\) Another claim is that terrorists need and use medicines to conduct operations and to treat wounded fighters. There are several reports of Boko Haram fighters who used tramadol before attacks.\(^\text{220}\) Media have also reported seizures of tramadol allegedly intended for Boko Haram, as was the case of 600,000 pills seized in August 2017 in Cameroon.\(^\text{221}\)

Despite these assertions, there is a lack of evidence of large-scale and widespread involvement of terrorist groups from the Sahel and the Lake Chad areas in tramadol trafficking. Rather, they seem to be secondary or peripheral actors.

- Along the Nigeria-Niger border, locals from Diffa speak of the involvement of terrorist fighters – without, however, knowing if they are working on their own or for terrorist organizations – despite the fact that main tramadol trafficking routes do not pass through areas where terrorist groups are active.\(^\text{222}\) Additionally, there are no local reports of tramadol warehouses in Diffa region.

- The prevalence of tramadol users within societies is significant, so it is not surprising to find users in the ranks of terrorist groups. In addition, there are high numbers of petty sellers and traffickers among terrorist groups’ recruits. Testimonies from former Boko Haram fighters confirm the use of tramadol by some within the armed group and indicate that members/cells trade weapons and ammunitions for the tramadol tablets they use.\(^\text{223}\)

It cannot be denied, however, that there may be a link between tramadol trafficking and terrorist groups. Traffickers and terrorist groups may be in contact and collaborate, and there are reports of tramadol trafficking in some areas under control of terrorist groups.\(^\text{224}\) In addition, terrorist groups recruit criminals and drug users. Lastly, such groups can benefit from the money generated by tramadol and other pharmaceutical opioids trafficking in areas under their control. But presenting terrorist groups as the main actors and beneficiaries of tramadol trafficking is reminiscent of the narcoterrorism thesis on terrorist groups in the Sahel, and this masks, or underplays, the

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\(^{218}\) One of the best examples is: Angela Giuffrida, “Italian police intercept €50m Tramadol haul potentially bound for ISIS”, The Guardian (United Kingdom), 3 November 2017, [https://www.theguardian.com/world/2017/nov/03/italian-police-intercept-tramadol-haul-isis-libya](https://www.theguardian.com/world/2017/nov/03/italian-police-intercept-tramadol-haul-isis-libya) (accessed 21 November 2018). There have also been reports of captagon being the drug of the jihadist.

\(^{219}\) Union des Fabricants (Unifab), [op. cit.](https://www.unifab.fr)


\(^{222}\) Phone conversation, researcher, December 2018.

\(^{223}\) Interview, Nigerian from Kano state, Lagos, July 2019. It can be noted that Boko Haram leader Abubakar Shekau prohibited the sale and use tramadol at the beginning of the insurgency. Therefore changes must have occurred or local chiefs did not endorse the strict prohibition of tramadol inside the group (interview, Dakar, June 2019).

\(^{224}\) Interview, regional law enforcement expert, Dakar, June 2019.
involvement of other actors. Moreover, the argument that members of terrorist groups use of drugs to perpetrate attacks fuels the misperception of terrorism and “kamikaze” actions widely shared by people in West Africa that “if some fight for this group, if they are ready to die, that is because they are mad and/or drugged.” This widespread belief is a problematic and simplistic explanation of why terrorist groups can seduce and recruit members.

E. Tramadol traffickers and other types of trafficking

People involved in tramadol trafficking in West Africa can be engaged in other types of trafficking or criminal activities. The most visible connection concerns trafficking in other medicines. In markets, sellers supply tramadol alongside other medications, coming from both the legal supply chain and illicit channels.

One example of this that of the Interpol-led Operation Heera. In January 2019, in Ouagadougou (Burkina Faso), authorities seized 28.4 tons of medicines, including 120 mg tramadol pills and other medications presumably coming from the legal supply chain. In other seizures in Nigeria and Ghana, tramadol was found along with codeine, diazepam and other products misused in the region, all stored together in warehouses.

Another connection exists between traffickers of pharmaceutical products and drug dealers. A trafficking route between Nigeria and Ghana is used to smuggle both illicit tramadol and Ghanaian skunk (cannabis). Traffickers import skunk to Nigeria and return to Ghana with illicit tramadol. This link between tramadol and internationally controlled drugs is also visible with sellers who supply both products.

One of the most discussed aspects of the nexus between pharmaceutical opioids trafficking and other types of trafficking relates to migrant smuggling. This has become most evident in northern Niger, following the implementation, on 26 May 2015, of a law on the illicit smuggling of migrants. As a result of that legislation, trafficking of synthetic drugs such as tramadol has become an alternative and/or an additional source of income for migrant smugglers. The 2015 law is, however, not the only trigger. The lure of higher profits in light of tramadol price increases has also been a powerful driver for trafficking. With the same routes used both in the trafficking

226 Interviews, officials (Interior and Health Ministries), Ouagadougou, March 2019.
227 Interviews, law enforcement officials, Abuja and Lagos, November 2018.
of migrants and opioids, in 2018 some traffickers smuggled both migrants and tramadol at the same time between Niger and Libya, to make more money.\textsuperscript{230}

An important question concerns the involvement of traditional drug trafficking criminal networks in tramadol and other pharmaceutical opioids trafficking. Following the rise in tramadol prices, some interviewees stated that individuals already involved in drug trafficking from the Sahel to Libya have engaged in tramadol trafficking as well.\textsuperscript{231} While not confirmed, this is probable for several reasons: only a few persons are in a position to secure convoys between Niger and Libya without using the weekly military convoy connecting Agadez with eastern parts of Niger; major drug traffickers in the Sahel are already involved in different kinds of trafficking, for instance cannabis resin and cocaine; they have the necessary connections to secure the transit of dozens of boxes of tramadol across West African countries, and are able to evade arrest and seizures by authorities.\textsuperscript{232} As summarized by a Nigerien policeman in Agadez: “A cartel [representative] does not come to settle in a country like that. He prepares the ground. He creates friendships. He structures a network and when he manages to settle, it means that he thinks he has acquired certain immunity.”\textsuperscript{233}

\textsuperscript{230} Interview, researcher, Niamey, May 2019.

\textsuperscript{231} Interviews, members of the civil society, Dakar and Niamey, June 2019.


\textsuperscript{233} Quoted in Ibrahim Yser, art. cit. ("un cartel ne vient pas s’installer dans un pays comme ça. Il prépare le terrain. Il crée des amitiés. Il structure un réseau et lorsqu’il arrive à s’installer cela veut dire qu’il pense avoir acquis une certaine immunité").
VII. The way forward

The increase in seizures, international pressure and the 2018 Indian legislation have changed the ecosystem of tramadol trafficking. In this last section, we argue that the emergence of diclofenac as an alternative to tramadol is only the first and most visible consequence. Indeed, criminals are adaptable, and diversion from the legal supply chain, as well as the use of alternative opioids already misused elsewhere, provide opportunities for both traffickers and users. This highlights the need to deploy comprehensive approaches that go beyond the fight against tramadol trafficking and law enforcement capacity building.

A. Adaptive criminal networks

Criminal networks are adaptive. Despite the new legislation in India and an increase in regional seizures, tramadol and pharmaceutical opioids used as substitutes are likely to continue to enter West Africa through new trafficking methods due to possible changes in both products and the supply chain.

1 | Trafficking methods

History demonstrates that traffickers adapt to exploit gaps in law enforcement responses. They can use new routes, transit areas, entry points and modi operandi to avoid seizures and arrest. In the case of tramadol, they also take advantage of the overall lack of knowledge about the functioning and regulation of the legal drug supply chain and market.

Of interest are, in particular: (1) the use of transit countries that are initially declared as destination countries, in which established criminal networks already operate and are, for example, engaged in the trafficking of methamphetamines from West Africa (in particular Nigeria) to Southeast Asia; (2) the import of powder to produce tablets and capsules in clandestine production facilities in West Africa; (3) the use of mules, such as those involved in the trafficking of methamphetamines and other drugs; and (4) the use of the Internet and postal services.

According to a 2015 Interpol report, a global trend “is the increasing use of the Internet to sell medicines [that] partly explains the augmenting involvement of informal networks, rather than traditional hierarchical groups, in pharmaceutical crime.” A specific issue relates to the Darknet, where prescription drugs are offered for sale – including high-dose tramadol and other pharmaceutical opioids such as oxycodone, codeine, hydrocodone, morphine and different forms of fentanyl. Various deceptive techniques are employed for transport, such as a “smell neutralizer” presented as “effective against detection/sniffer dogs.” With a high growth potential, these emerging online contraband markets capitalize on the efficiency

235 Ibid., p. 17.
of postal services and the possibility to order small individualized quantities, which reduces risks for distributors and other actors.

This evolution of the transnational criminal landscape highlights the importance of fostering international cooperation in terms of investigation and prosecution, as well as collectively building upon lessons learned and good practices for combating illicit trafficking networks. The sharing of information on trafficking methods used in North Africa, the Middle East and North America is of particular interest, especially considering the involvement of African criminal networks, primarily Nigerian ones, in global drug trafficking.

2 | Shift in products and production

To circumvent the new Indian legislation and associated constraints, criminal networks can turn to other sources. Another possibility is to move medicine manufacturing plants to other locations, including countries in Southern, Central or Western Africa. Moreover, criminal networks can turn to other pharmaceutical opioids, such as tapentadol.236

If the strategy of criminal networks during the first half of 2019 was apparently to import other pharmaceutical substances to replace tramadol, an alternative option would be to turn to manufacturers located in countries with weaker regulatory frameworks for the production and export of tramadol.

B. Diversion as alternative supply source

As stated above, diversion from the licit supply chain is currently not the core issue in terms of tramadol trafficking and consumption in West Africa. However, if we consider the pharmaceutical opioid crisis as a whole, the lack of availability coupled with increasing prices of tramadol on the informal market could foster the use of both tramadol at legal dosages and other pharmaceutical opioids. This highlights the importance of working on the legal supply chain too. According to a pharmacist in Guinea, in early 2019 pharmacies were seeing growing demand for tramadol and medicines based on codeine, both in the form of tablets and cough syrup.237 Another example is the December 2019 seizure at an informal market in Côte d’Ivoire of approved Nigerian tramadol capsules with a dosage of 100 mg.238

In order to better control the authorized pharmaceutical sector, and considering interlinkages with the informal one, two aspects must be distinguished:239

- First, it is easy in West Africa to buy pharmaceutical opioids in pharmacies, both because pharmacists deliver products without prescription and because prescriptions can be easily

237 Interview, pharmacist, Conakry, May 2019.
238 Phone exchange, police officer Côte d’Ivoire, December 2019.
239 Sjaak Van der Geest, Anita Hardon, Susan Reynolds Whyte, “Planning for Essential Drugs: Are We Missing the Cultural Dimension?”, art. cit.
falsified. In most West African countries, controls of pharmacies are poor, partly owing to underfunded health monitoring systems, despite initiatives to better regulate the legal distribution sector. For instance, to prevent falsification, the Pharmacists Council of Nigeria and the Medical and Dental Council of Nigeria were, at the end of 2018, jointly developing an ad hoc numbered prescription form for pharmaceutical opioids. The establishment of specific premises for opioids distribution is also planned in order to better control access.\textsuperscript{240} In Ghana, the Pharmacy Council has taken disciplinary action against non-compliant pharmacies and drug retail outlets, although this is difficult given the lack of human resources. Moreover, raids by interagency teams led by the Food and Drug Authority on unauthorized market vendors were widely publicized.\textsuperscript{241} A system of internal and external checks would make it more difficult, though not impossible, to buy and sell pharmaceutical opioids without prescription. However, according to a study on tramadol misuse in Africa, three out of 10 pharmacists interviewed in Ghana said that “they would use their professional discretion to sell tramadol to a patient who was in obvious pain and unable to attend hospital.”\textsuperscript{242} Far more problematic was the case of a Ghanaian who poorly falsified prescriptions for 100 strips of tramadol and went undercover to wholesale outlets. Several wholesalers delivered the quantity of tramadol asked for, despite the fact that they were not allowed to sell products to individuals.\textsuperscript{243}

- Second, some of the medicines purchased by wholesalers and pharmacists end up on informal street markets. As mentioned above (part VI, B.), it is indeed possible to buy products on the streets at lower costs than in pharmacies. Tramadol is legally imported by wholesalers and pharmacists, but is then diverted to increase profits (the larger the quantity purchased to the manufacturer, the lower the cost).

C. Toward stronger opioids?

The misuse of tramadol and codeine in West Africa has created a population of people who are opioid dependant. If these substances become more difficult to procure, users might shift to other opioids, including heroin. According to Egyptian treatment centres’ admission data, some patients already resort to heroin to relieve cravings and withdrawal symptoms associated with stopping tramadol.\textsuperscript{244} Another concern is about stronger synthetic opioids. There have been no reported sizable seizures of these products in West Africa to date, but small quantities are circulating. According to the NDLEA, a hydrocodone pill was seized in northern Nigeria (though no specific information on the location and date of the seizure is available).\textsuperscript{245} A shipment of fentanyl to Nigeria was also intercepted.\textsuperscript{246} This product, at the epicentre of the opioid crisis in the United

\textsuperscript{240} Interviews, officials and pharmacists, Abuja and Lagos, November 2018.
\textsuperscript{241} Quoted in Axel Klein \textit{et al.}, \textit{Tramadol in Africa}, op. cit., p. 18.
\textsuperscript{242} \textit{Ibid.}, p. 19.
\textsuperscript{243} Interview, member of the civil society, Accra, May 2019.
\textsuperscript{245} Interview, NDLEA officer, Lagos, November 2018.
\textsuperscript{246} Interview, international law enforcement expert, Dakar, May 2019.
States, is 40 to 50 times more potent than heroin, and it is cheaper: one gram costs around $3.50. According to media reports, some clandestine laboratories may already exist in West Africa, following China’s decision to place a large number of fentanyl analogues under control. Fentanyl and its analogues can indeed be synthesized in rather small clandestine laboratories, as shown by those dismantled in recent years in the United States, Europe, Asia, the Caribbean and Mexico.

D. The need for a comprehensive approach

To effectively address drug issues, countries must develop public policies that are comprehensive, integrated and multisectoral. Improving law enforcement efficiency in detecting and blocking the illegal import of pharmaceutical opioids is necessary, especially with regard to investigational capacities and the application of appropriate sanctions. At the same time, repressive responses only focusing on trafficking have limitations, as shown, for instance, by the consequences of the codeine ban in Nigeria (see Box 2). “Repressive responses can succeed in creating temporary shortages without eliminating [long-term] supply,” state authors of a research report on tramadol misuse and regulatory issues in Africa.

From this perspective, four key issues must be taken into account:

- First, there is a need to develop and implement policies that balance control and access. As a pain medication, tramadol used for legitimate medical purposes plays a great role in the region, which suffers severe shortages in the licit availability of other opioid painkillers. As mentioned above (Part I, B. 3), licit per capita use of internationally controlled opioids amounted to just 174 SDDs (single daily doses) per million inhabitants per day in Africa over the 2015–2017 period, and the situation is even worse in almost all West African countries.

  In this context, medical practitioners interviewed by a team of researchers in Ghana and Nigeria about their experiences treating moderate to severe pain all reported a challenge in accessing morphine, which cannot be found at all in some rural facilities. Moreover, seven out of 11 respondents said that they would use tramadol as an alternative to strong opioids if required, and nine considered it an essential medicine.

- Second, because the tramadol crisis and, more generally, the fight against falsified medicines are regional phenomena, a coordinated, integrated and harmonized approach on drug policy and control should be a prerequisite. In practice, it is less the authorized dosages (which are already more or less harmonized across the region) than the types of medicines permitted and drug import requirements that should be aligned. One way

250 Axel Klein et al., Tramadol in Africa, op. cit., p. 4.
251 INCB, Narcotic Drugs 2018, op. cit., p. 248–249.
to limit misuse would be to have regional uniform drug import requirements and a list of approved products and producers managed at the regional level. Another corollary is the enhancement of regional cooperation for intelligence sharing, investigations and prosecutions.

- **Third**, drug use policies need to develop and/or strengthen demand reduction strategies. In practice, only a few NGOs are involved in this issue, and they often suffer from a lack of capacity and support. Most treatment programmes are provided in hospital psychiatric services (sometimes with a single service for a whole country) as well as by traditional and faith-based facilities, which tend to be overcrowded (and where some abuses have been reported). Moreover, these interventions need to specifically target the prevention of non-medical use of what is perceived as a “medicine” and therefore not harmful. This may require the adoption of different prevention programmes than those used for “traditional” drugs.

- **Fourth**, further efforts need to be undertaken to shut down drug street markets and to replace them with functioning health care systems. This must include a system by which medical doctors issue prescriptions for painkillers and licit pharmacies distribute such painkillers at affordable prices. This will be a rather long-term undertaking because, despite identifiable health problems related to the existence of street markets, they remain fundamental pillars of local economies and are deeply entrenched in the sociocultural fabric of many West African countries.

**Box 7 | The dismantlement of Adjégounlè Market in Benin**

Until it was demolished in February 2017, Adjégounlè Market, located inside Dantokpá Market of Cotonou, was a major site for the illegal sale of pharmaceuticals. According to authorities and civil society organizations, its demolishment led to a real decrease in the availability of unauthorized pharmaceuticals in public spaces and to higher prices on the informal market, pushing non-medical users to increasingly turn to legal pharmacies to get their medications. At the same time, the dismantlement of Adjégounlè and crackdown against informal vendors have generated more hidden supply networks using methods based on confidential relationships: (1) many unlicensed vendors now store their merchandise at home or in remote warehouses and receive orders by WhatsApp or phone calls from regular customers; and (2) some unauthorized street vendors continue to sell drugs covertly, but only to known customers who use code names for the products.

In conclusion, the dismantlement of Adjégounlè Market reduced the size of the unauthorized market without solving the problem of drug demand or providing economic alternatives to drug sellers.

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254 Interview, NGO worker, Accra, May 2019.
255 The dismantlement took place during the Interpol-led Operation Pangea IX.
VIII. Conclusion

Tramadol is a synthetic opioid pain medication of the benzenoid class, used to treat moderate to moderately severe pain. In West Africa, tramadol misuse has emerged as a major public health threat over the last decade. At the crossroads between legal medicine and illicit drugs, this product is consumed widely in unapproved dosages, and without any form of medical supervision. But tramadol is not the only pharmaceutical opioid of concern. Codeine, for example, both in syrup and tablet form, is also misused in several countries of the region. Other opioids are also in circulation and subject to non-medical use, though to a lesser extent. Indeed, in the past few years, tramadol has been the most widely used drug, according to quantitative data on narcotics consumption, and its trafficking represents a source of extremely lucrative and attractive income for criminal networks.

Tramadol sold in West Africa in recent years was manufactured primarily in Asia. It is not possible to specify the quantity of tramadol manufactured and exported legally or illegally from the region to West Africa. Nonetheless, there are indications that significant quantities of the tramadol produced and exported were legal, and only later shifted into illicit channels to enter the region and be smuggled across countries. Available data also suggest that the two main regional entry points are Nigeria and Benin on one side, and Guinea on the other. Several smuggling methods are used, but the largest quantities seem to be imported with false customs declarations.

Corruption often facilitates the safe passage of containers, and traffickers often rely on facilitators within countries’ administrations. In addition to massive shipments, which supply several countries, smaller quantities are also being trafficked, often with the same methods as those used for the smuggling of other synthetic or hard drugs.

Tramadol trafficking within West Africa involves a multitude of networks of various sizes operating throughout the whole region, ranging from wholesalers to small retailers. Some networks are transnational, such as those moving tramadol from Nigeria to Libya via Niger. Two main types transport can be distinguished: either tablets are hidden in vehicles travelling along main trade routes, or they are moved outside the main transport corridors by pick-ups, motorcycles, bicycles, pedestrians and even cattle. Hard evidence on the involvement of terrorist groups is not available; however, when they are involved, they seem to be at the margins of this business. Moreover, despite testimonies on internal incentives to use tramadol, the existence of users within these terrorist groups appears to be a consequence of the widespread use of tramadol in most West African countries.

On 26 April 2018, India placed tramadol under the control of its Narcotic Drugs and Psychotropic Substances (NDPS) Act of 1985. Among the collateral effects of this legislative change was the switch to diclofenac and tapentadol pills and capsules, which mimic the look of tramadol boxes, strips and pills. Moreover, recent history shows that bans and increased regulation alone do not prevent access to fraudulent tramadol or codeine-based medication. The diversionary opportunities from legal medicine supply chains and the presence of clandestine laboratories in West Africa highlight
the possible emergence of other potential sources of supply for pharmaceutical opioids, including tramadol and codeine.

Therefore, it must be acknowledged that pharmaceutical opioids trafficking and non-medical use in West Africa are far from over.
IX. Policy implications

Overall, this research suggests that the following avenues could be pursued by West African countries to improve their anti-opioids trafficking and drug use prevention policies and programmes. Though some relate to law enforcement actions, it must also be stressed that a comprehensive approach is needed, based on a balance between control and access to medicines, repression, regulation, and national and international responses, and an increased involvement of NGOs and grassroot communities at the local level.

1. Improve awareness and data collection mechanisms as a prerequisite

At the regional level, there is still a lack of knowledge and awareness of the problems that stem from tramadol misuse. In some countries, authorities are already committed to resolving this issue. In others, the non-medical use of pharmaceutical opioids remains low on government agendas, and there is a widespread belief that tramadol is still only used by a narrow, marginalized segment of the population, such as moto-taxi drivers – despite surveys and reports providing evidence that misuse of tramadol is already far more widespread. The first ever comprehensive drug use survey conducted by the Nigerian National Bureau of Statistics and UNODC in 2018 found that 4.7 per cent of Nigerians aged between 15 and 64 had used non-medical pharmaceutical opioids, primarily tramadol, during the previous 12 months.256

A corollary of this is the need for more accurate and comprehensive data and research on the use and misuse of tramadol in Western Africa to correctly assess the problem. To this effect, in 2013, the West African Epidemiology Network on Drug Use (WENDU) established 31 Focal Points, nominated in 2016 by ECOWAS Member States and Mauritania, to collect data on select aspects of drug demand and supply using a validated Country Reporting Form.

Increased awareness about the dangers of purchasing medicines from street vendors or on informal markets is also needed. In many countries, fighting medicines trafficking is still not a priority for most law enforcement units, including police and customs. Moreover, NGOs should be mobilized to reach, inform and involve grassroots communities in the fight against pharmaceutical opioids misuse and trafficking. In particular, a range of interviewees stressed the key role women play in implementing outreach strategies in local communities. The focus should also be on informing targeted population groups about the harms posed by the non-medical use of tramadol, for instance through school and family-based interventions.

2. Enhance the oversight role of law enforcement agencies

Organizing and conducting more trainings on medicines trafficking, including pharmaceutical opioids, is another priority. Some anti-drug units or customs officers met in the course of this research did not even know what tramadol is or looks like and could not distinguish between

approved and unapproved products. This is a main point of concern for tramadol, which is both a medicine and a psychotropic drug, depending on the use and dosage of the tablet. A further challenging issue observed across the region is the lack of investigative capacities and expertise of law enforcement agencies. When seizures are made, products are inappropriately collected and insufficiently analysed, leading to the collection of evidence that does not meet admissibility standards in court. Too often, investigations end at the seizure stage, while most people arrested are simply users or petty sellers, and not key players involved in the trafficking business.

Three specific aspects for capacity building of law enforcement should be prioritized:

- The first is intelligence gathering and analysis, and evidence-based investigations. Capacity of law enforcement agencies should be strengthened for collection of actionable intelligence and seizure of material that is admissible as evidence, leading to increased rates of convictions in court. In parallel, there is a need to address gender roles in tramadol supply chains. Indeed, it is women who often sell tramadol and other medicines in street markets; they are also the mothers and wives of those who buy it. They can, therefore, be convinced to cooperate with investigations and become prime sources of information in the interception of transport trucks or raids of warehouses. For the same reasons, female police officers can play a distinctive role in the fight against street sales of medicines. Another issue is related to forensic analysis. Scarce analyses are undertaken, despite being crucial to assessing changes in the supply chain, and in detecting new trends and substances. Lastly, specific detection and identification capacities need to be strengthened to allow law enforcement officers to effectively target falsified medical products.

- Second, interagency cooperation remains both a priority and a challenge. Joint operations, such as the 2018 Interpol-led Operation Heera in Burkina Faso – a joint endeavour of the National Order of Pharmacists, national and municipal police, the technical and scientific police, Gendarmes, Customs, the National Committee on Drug Abuse, a prosecutor and the Ministry of Health – is an example of good practice to be followed and reinforced. Inter-agency cooperation should become a regular practice. Furthermore, customs services need to be extensively engaged in the process. Despite the fact that customs are key players in the fight against drug trafficking, their involvement is often limited because of a lack of incentives, knowledge and a primary focus on tax collection to raise revenue.

- Third, national capacities for the collection, documentation, packaging, retention and storage of seized material need to be considerably enhanced. The existing set ups with poor storage capacities not only spoil the quality of seized material but also fuel risks of theft and diversion, which, apart from affecting the integrity of evidence, also undermine the general public’s confidence in state institutions.

3. Reinforce and harmonize medicines regulation and drug legislation

In almost all West African countries covered by the research, except for Benin, tramadol authorizations restrict dosages to between 50 mg and 100 mg. Placing this product under national control lists in all West African countries could help reduce illegal imports of tramadol into the region. In Niger and Nigeria, for example, tramadol is considered a narcotic and is on national control lists, which is, in contrast, not the case in Côte d’Ivoire or Guinea. These divergences clearly
provide opportunities for criminal groups to use countries with lower regulations as places of entry, transit or production, to reduce overall risks.

Both the issue of medicines trafficking and the emergence of new psychoactive substances (NPS) – that can be presented and sold as medicines – highlight the need to have robust and appropriate drug legislation and regulation frameworks. As long as tramadol is not controlled under international drug conventions, the MEDICRIME Convention (initially drafted by the Council of Europe) may be considered a useful starting point to improve the fight against non-medical tramadol and other pharmaceutical opioids. It could provide: (1) legal expertise for adapting and strengthening national laws – by bridging the current gap between low criminal penalties and huge profits generated by medicines trafficking; and (2) a framework to foster and improve cooperation at national and international levels. In December 2019, Guinea, Benin and Burkina Faso were the only three West African countries that had ratified the MEDICRIME Convention.

4. Strengthen controls of supply chains without preventing access to medication

Drug supply reduction strategies – without additional measures – reduce the availability of illegal products and access but also have limitations, particularly when alternative sources of supply or other substances are available. Such measures can also fuel a switch to more potent substitutes with even more damaging health effects. Additionally, regulation that is too stringent on tramadol or other pain medications could harm people in need of pain relief. As tramadol is one of the only analgesics available for millions of patients, regional and national agencies must guarantee the availability and quality of tramadol in public health facilities.

Two levels of actions can be distinguished:

◆ The control of national supply chains remains poor in most countries covered by this research. As stated in a 2016 report published by the WHO Regional Office for Africa: “Despite the multitude of regulatory systems strengthening initiatives in the Region, there are still a number of challenges. These include inability to provide clinical trials oversight, marketing authorization, post-market surveillance for medical products, and the increasing circulation of substandard/spurious/falsely-labelled/falsified/counterfeit medical products.” In this context, ensuring proper access, improving controls of the supply chain and guaranteeing the quality of medication through regular and effective tests must be a priority. This could notably reduce risks of diversion and improve user confidence in public health systems. One interesting reform in Nigeria that could serve as a model is NAFDAC’s development of an online Permit for Importation form, intended to help authorities better detect and reduce fraud.

257 Côte d’Ivoire signed it in July 2019, Niger in February 2021 (though neither country has yet ratified the treaty) and it has been under discussion in Mali.

While West African countries will not have the capacity to regulate their pharmaceutical markets in the near term, “other market-based solutions should be pursued.”\textsuperscript{259} Since medicines flow throughout the entire region, a regional approach could be of interest when it comes to pharmaceutical procurement and regulation. One way of limiting non-medical uses and reducing the number of unapproved medicines in circulation, while saving scarce human resources, would be to establish a region-wide list of approved products as well as approved and blacklisted producers, with region-wide marketing authorization and quality control tests. This could reduce the number of unapproved medicines in circulation in Western African countries, improve efficiency of law enforcement agencies and allow countries to focus more on drug controls.

5. Improve international cooperation

To combat transnational trafficking, regional cooperation is paramount. Such cooperation will increase seizures and create bottlenecks in illicit trafficking at regional entry points. Some West African countries are already effectively cooperating, but good practices must be expanded. A good example in the area of judicial cooperation is the West African Network of Prosecutors and Central Authorities (WACAP), which facilitates extradition, mutual legal assistance, and informal exchange of intelligence and best practices. At the same time, cooperation with key stakeholders and the international community, including partnerships with countries of origin, must be pursued to curtail the flow of pharmaceutical opioids into the region.

\textsuperscript{259} UNODC, \textit{Transnational Organized Crime in West Africa: A Threat Assessment}, op. cit., p. 43.

1. Green capsules (120 mg)

Pictures of nine different strips of 120 mg tramadol capsules. These packages are labelled with common codes and symbols (the second package from Togo shares a similar appearance but actually contains diclofenac).
2. Red pills (from 200 to 250 mg)

The brand Royal is among the most used and imitated in the region; the pills are bright red and symbols on the strips are usually apples. The dosage mostly varies between 225 mg and 250 mg.

Côte d’Ivoire

Senegal
3. White pills (225 mg)

These white tablets with a rhombus in a square are said to have appeared on the market more recently.

Benin

Côte d’Ivoire

These white tablets with a cross on one side and the number 225 on the other were seized in Côte d’Ivoire. They were also observed in Ghana.
### Annex 2: List of institutions and stakeholders consulted during field missions

**Nigeria, Abuja (29–30 October 2018) and Lagos (31 October–3 November 2018)**

- NDLEA (Headquarters, investigation unit)
- Nigeria Corrections Service
- Nigeria Customs Service
- Federal Ministry of Health
- Pharmacists Council of Nigeria
- ECOWAS Commission
- State prosecutor
- Embassy of France advisor
- NGO Youth Rise
- Centre for the Right to Health
- Stefano Foundation
- JAITF in Lagos International Airport
- NAFDAC (Narcotics and Controlled Substances Service, Inspection and Investigation Directorate, and Ports Inspection Directorate)
- Researcher from the University of Ibadan
- Researcher from the Nnamdi Azikiwe University

**Benin, Cotonou (17–22 December 2018)**

- CILAS (Comité Interministériel De Lutte Contre L'abus Des Stupéfiants Et Des Substances Psychotropes)
- Office centrale de répression du trafic illicite des drogues et des précurseurs (OCERTID) (Directorate, JAITF)
- JAITF at Cotonou Cadjehoun Airport
- Joint Port Control Unit at the Autonomous Port of Cotonou
- Beninese Customs Service at the Autonomous Port of Cotonou
- DPMED (Direction de la Pharmacie, du Médicament et des Explorations Diagnostiques)
- State prosecutor
- National Psychiatric Centre of the Centre National Hospitalier et Universitaire de Psychiatrie de Cotonou (CNHUPC)
- CAME (Centrale d’Achat de Médicaments Essentiels et Consommables Médicaux)
- The Economic and Financial Brigade
- Interpol NCB
- European Union Delegation in Benin
- Embassy of the United States advisor and United States Agency for International Development (USAID) officers
- SIPHAB (Syndicat indépendant des pharmaciens du Bénin)
- GAPOB (Groupement d’Achats des Pharmaciens d’office du Bénin)
- Zemidjans Union (taxi-moto)
- NGO Terres Rouges
- NGO Plan International
Togo, Lomé (21–25 January 2019)

- CNAD (Comité National Anti-Drogue)
- OCRTIBD Directorate (Office central de répression du Trafic illicite de drogue et du blanchiment)
- JAITF at Lomé-Tokoin International Airport
- Joint Port Control Unit at Port of Lomé
- Customs Service at Port of Lomé
- DPLM (Direction de la Pharmacie, du Médicament et des Laboratoires)
- State prosecutor
- CAMEG (Centrale d'Achat des Médicaments Essentiels et Génériques)
- DCP J (Central Directorate of the Judicial Police)
- Interpol NCB
- Health Ministry General Secretary
- Border Police
- European Union Delegation in Lomé
- Embassy of the United States representative in Lomé
- Embassy of France advisor
- The Order of Pharmacists
- Ubipharm (national private drug wholesaler)
- NGOs including RAPAA, ANCE-Togo, Croix Bleue (group discussion)
- Non-medical opioids users (group discussion)

Côte d’Ivoire, Abidjan (4–8 February 2019)

- UNODC National Coordinator
- UNODC expert on law enforcement
- CILAD (Comité interministériel de lutte contre la drogue)
- DPSD (Direction de la Police des Stupéfiants et des Drogues)
- UCT (Unité de lutte contre la Criminalité Transfrontalière)
- JAITF at International Félix Houphouët-Boigny d’Abidjan Airport
- Anti-drug section of the Gendarmerie
- Anti-drug section of Customs
- DST (Direction de la Surveillance du Territoire)
- DPML (Direction de la Pharmacie, du Médicament et des Laboratoires)
- PNLTA (Programme national de lutte contre le tabac et les autres addictions)
- Ministry of Justice (Prison Administration; Office of Civil and Criminal Affairs; General Prosecutor of Abidjan)
- Prisoners sentenced for tramadol trafficking (prison of Abidjan)
- NGOs, including Espace Confiance, La Casa, Médecins du Monde
- Embassy of France advisor
- Journalist
- Independent expert
### Burkina Faso, Ouagadougou (11–13 March 2019)

- CNLD (Comité National de Lutte contre la Drogue)
- UAD (Anti-drug unit)
- Technical and Scientific Police
- Burkinabe Customs Service in Ouagadougou
- National Pharmaceutical Regulatory Agency
- State Prosecutors
- Interpol NCB
- Prison administration
- Expert on drug demand reduction
- CAMEG (Centrale d’Achat des Médicaments Essentiels Génériques et des Consommables Médicaux)
- NGO Initiative Privée Communautaire

### Niger, Niamey (8–12 April 2019)

- OCRTIS (Office central de répression du trafic illicite de stupéfiants)*
- Customs Service at Niamey
- State prosecutors
- Technical and Scientific Police
- SLCT (Service de lutte contre le terrorisme)
- Prison administration (central administration, and the Governor of Niamey prison)
- Embassy of France advisor
- Prisoners sentenced for tramadol trafficking (prison of Niamey)
- Centre Africain pour les Études Stratégiques
- NGO Fédération nigérienne de lutte anti-drogue
- NGOs working in Diffa and Tahoua regions
- Independent expert on security
- International researcher on migrant smuggling
- Members of the civil society

* The OCRTIS (Headquarters and field officers) were also consulted in June 2019, during a training carried out by one of the researchers.

### Guinea, Conakry (6–10 May 2019)

- Medicrime Brigade (Gendarmerie)
- DCPJ (Central Directorate of the Judicial Police)
- High Commandment of the Gendarmerie
- Interpol NCB
- Customs Services at Port of Conakry (group discussion)
- Customs anti-trafficking unit at Conakry International Airport
- State prosecutor
- Advocate-General at Conakry Court of Appeal
- The Conseil National des Organisations de la Société Civile Guinéenne
- Non-medical opioids users (group discussion)
### Accra, Ghana (15–20 May 2019)

- UNODC National Coordinator
- NACOB (Narcotic Control Board)
- FDA (Ghana Food and Drug Authority)
- The narcotics unit of the Criminal Investigation Department of the Ghana Police Service
- Pharmacy Council, Ghana
- Joint Port Control Unit (JPCU) at Tema Harbour
- JAITF at Kotoka International Airport (KIA)
- Serious and Organized Crime Regional Coordinator (North and West Africa) of the British High Commission
- Embassy of Italy advisor
- Embassy of France advisor
- Wabcharm Ghana Foundation
- Journalist
- Independent expert on law enforcement and drug trafficking

### New Delhi, India (27–28 May 2019)

- UNODC experts from various offices
- NCB (Narcotics Control Bureau)
- Delhi Police
- Indian customs
- Indian Directorate of Revenue Intelligence
- CDSCO (Central Drugs Standard Control Organisation)
- Ghanaian NACOB
- Ghanaian FDA
- Nigerian NDLEA
- Nigerian NAFDAC
- INCB