

Analysis of strategies used to smuggle illicit drugs into Europe via shipping containers, current and future trends, and what counter-measures are being implemented in ports to seize them

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*“Finding drugs in containers is like finding a needle in a haystack.
Criminal networks have taken advantage of this security gap and
are likely to continue doing so.”*

ABSTRACT

The illicit drug trade unquestionably poses a great challenge to global security and public health.

This study explores the current practices and challenges associated with maritime shipping container inspections and the different approaches carried out to enhance drug detection capabilities.

The maritime shipping industry and containerization play a crucial role in global trade, being the most effective, fastest, and cheapest way to move goods around the world. Unfortunately, drug traffickers have taken advantage of this vast network to transport their illicit drugs (mainly cocaine) from producing nations to wherever there is a demand.

This project explores the various methods and techniques used for smuggling drugs into Europe via maritime shipping containers, as well as emerging tactics and adaptations observed in recent years, shedding light on the challenges faced by law enforcement agencies, highlighting the importance of better and more advanced inspection and detection methods in ports, and what the future trend is going to be in the coming years, including an assessment of the shifting drug market dynamics, changes in trafficking routes, and the diversification of smuggling methods.

The findings of this project also will try to provide insight into the evolving strategies employed by criminal organizations to smuggle narcotics into Europe, as well as highlighting the importance of constant innovation in counter-measures to stay behind as little as possible of the ever-changing tactics used by drug traffickers and safeguard the European continent from the influx of illicit drugs as much as possible.

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1. Antwerp and Rotterdam as primary points of entry for cocaine

By the end of 2022, both Dutch and Belgian authorities decided to jointly reveal their annual cocaine seizures. Figures revealed seizures in Antwerp went up from 90 tons in 2021 to an all-time high of 110 tons, hence taking over Rotterdam as Europe's leading port for cocaine seizures with 70 tons seized in 2021 and then dropping to 52,5 in 2022. (Armstrong 2023)

"It's coming to us, and we are trying to stop the most"- said the Deputy head of Belgian customs Stephan Legein - "Every way to smuggle cocaine is possible, just invent it, think of it, and they will do it. Every year it's growing and growing, and we are doing more and more controls and still, we seize more cocaine".

When asked if that feels like fighting an impossible battle: *"We will never win this battle. We do the best we can, and we will do every year better and better."*

In Antwerp, only around 2% of maritime containers overall and 10% of the containers originating from Latin America are physically checked. Rapidity is crucial because many of the goods are perishable and will rot if not shifted quickly. That is why Antwerp has had to increase its number of scanners to cope with the increase in cocaine seizures. (Cocaine: Flooding Europe 2023)

1.1. Antwerp as today's Europe cocaine capital

In 2022 the port of Antwerp made headlines because officials claimed not to have enough incinerator capacity to cope with rising seizures of such drug at the port. As a result, Belgian port authorities were worried that organized crime gangs, who are known to have corrupt police and port workers on their books, could plan to steal hundreds of millions of euros worth of cocaine stored in secret depots near the port waiting to be destroyed.

"We are urgently looking for extra incineration capacity" said Minister of Justice Vincent Van Quickenborne in 2022, adding that the incinerators could not destroy too large quantities of drugs at once. (Daly 2022a)

While Spain has always been the preferred point of entry of cocaine to Europe by Latin American Traffickers since the 80s due to its obvious linguistic and cultural links, Spain has now been eclipsed by Antwerp and Rotterdam as traffickers have grown aware of the advantages of these ports: firstly, their efficiency, secondly, their excellent transport infrastructure that can rapidly place a container anywhere in Europe, and lastly the enormous volume of containers flowing through these ports, which provides endless opportunities to camouflage their consignments. (McDermott 2021a)

It is estimated that only around 10 percent of the cocaine smuggled through Antwerp is intercepted. According to Kristian Vanderwaeren, Belgian head of Customs, *“Their business model is to ship massively in as many containers as possible and then they know they are going to lose the 10 or 20 percent”*.

Not that many businesses would be able to afford such a loss of product, but drug traffickers, just like legitimate companies, rely on the infrastructure and logistics of large ports such as the Port of Antwerp which has now 160 km of quayside for loading and unloading operations and is currently the second most important port in Europe when it comes to the number of TEUs being moved, with 13,5 million TEUs moved in 2022 according to official figures (Port of Antwerp-Bruges stable in 2022 [no date]) , and most inland port in Europe. (The Economist, 2022) Port of Rotterdam still holds the first position with 15,3 million TEUs moved in 2022 (Facts and Figures | Port of Rotterdam 2022), and the Port of Hamburg today holds the third position.

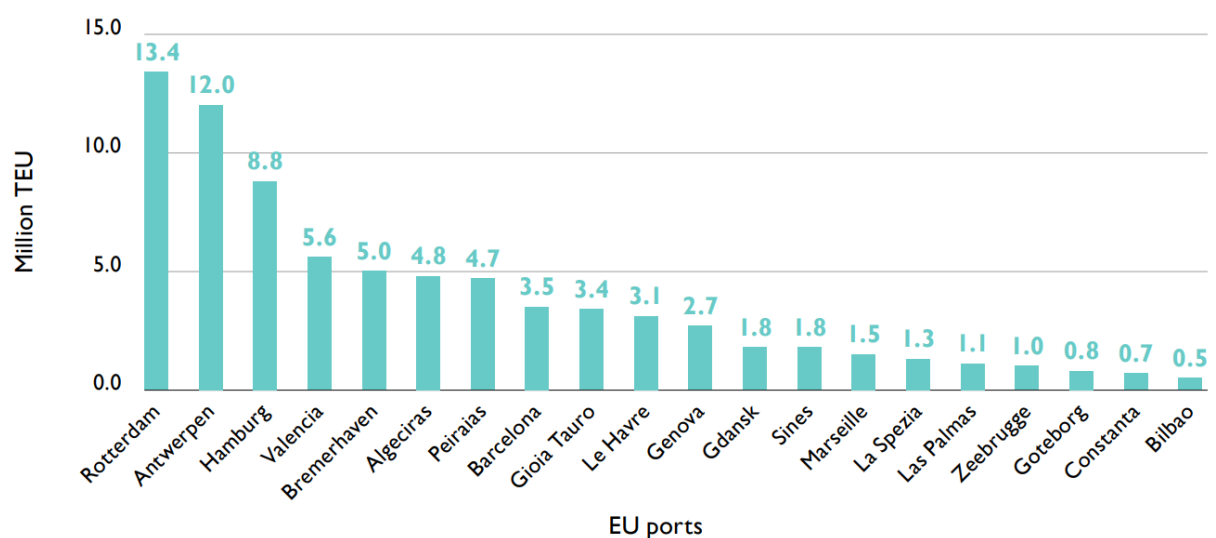


Figure 1: Top 20 EU port - volume in (in million TEUs) of containers handled in 2021
(source: Eurostat - table: mar_mg_am_pvh, 15/11/2022)

Figure 1: Top 20 EU ports by volume in 2021 (in million TEUs) (Source: Europol)

Port of Antwerp-Bruges authorities are well aware of the problem: *“Port of Antwerp-Bruges is a gateway to Europe. Antwerp and Zeebrugge are surrounded by an extensive network of international motorways (...). Unfortunately, the advantages that make Port of Antwerp-Bruges an easily accessible world port also mean it has to contend with a portion of the international drug trafficking”* (Anti-drugs policy | Port of Antwerp-Bruges 2022).

They also state that the port is committed to tackling drug trafficking and committed to scanning as many suspicious containers as possible by purchasing more scanners. Nevertheless, they know that will only have a limited effect on drug trafficking: *“Customs is committed to scanning as many suspicious containers as possible. To achieve this, customs are purchasing more scanners. But there is no miracle solution to stop drug trafficking. This is why it is essential to tackle the drug problem on several fronts at the same time.”* (Anti-drugs policy | Port of Antwerp-Bruges 2022)

According to the Dutch daily newspaper De Volkskrant, corrupt port workers in Antwerp can earn 75.000 to 125.000 euros per drug shipment they help to move. (Tops, Tromp 2018)

2. Cocaine shift to Europe: a business no-brainer

When Mexico’s drug cartels forced Colombian traffickers out of the US cocaine market, they seized control of the highly desired prize in the global drug trade. But the smartest traffickers began to turn elsewhere, to a market with higher profits, where the risks were lower and the potential for growth was immense: Europe.

Currently, Europe is arguably the most attractive cocaine market in the world, and its size and importance only continue to grow. (InSight Crime 2021)

Western and Central Europe have emerged as primary consumer markets for cocaine. As a matter of fact, seizures of cocaine in Western and Central Europe surpassed those in North America for the first time in 2019. In terms of the number of users, Western and Central Europe is estimated to account for around 21 per cent of the estimated number of cocaine users in 2020.

Several indicators suggest that during the period 2016-2017, there was a turning point from which an ongoing expansion of the cocaine market in Europe took place. The COVID-19 pandemic definitely had a temporary restraining effect on the cocaine market growth in Europe, as it is frequently used in social settings, without stopping the ongoing longer-term expansion which continued afterward. (United Nations Office on Drugs and Crime 2023)

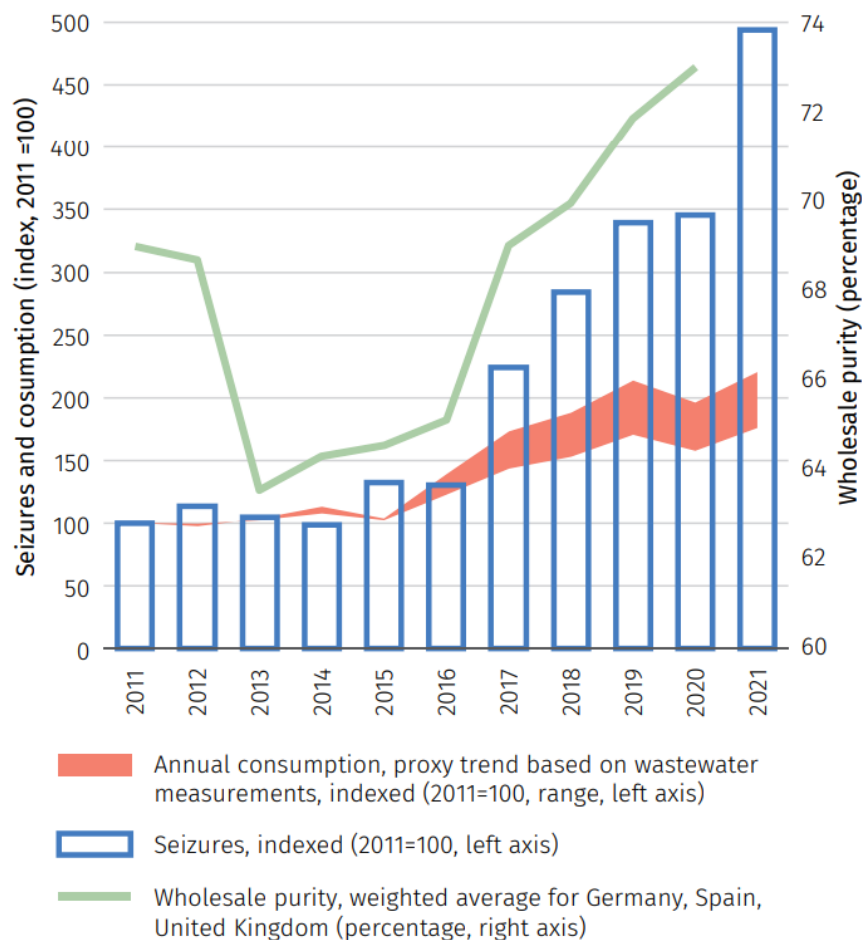


Figure 2: Trends in selected supply and demand indicators, Western and Central Europe, 2011-2021 (Source: United Nations Office on Drugs and Crime)

Illicit markets operate in many of the same ways as licit markets. And the same ports that are used to move in legitimate goods are also the ones used to smuggle illicit substances.

Whether it is cocaine, methamphetamine, or counterfeit medicine, ports like the Port of Antwerp and the Port of Rotterdam are excellent hubs for distribution across Europe. This made it especially attractive for cocaine traffickers when its consumption started skyrocketing in Europe over the last few years.

Not only that, but the price of a kilo of cocaine in Europe is much higher than it is in the United States, and therefore, from a business perspective, trafficking cocaine to Europe is far more lucrative than to the United States.

It is also worth mentioning, that the risk of interdiction and risk of extradition is much lower in Europe. In conclusion, more rewards and fewer risks. (*Why Belgium is now the cocaine capital of Europe 2022*)

While a kilo of cocaine in the US can cost up to \$28.000 wholesale, the same kilo of cocaine in Europe may be worth between \$40.000 on average and as much as nearly \$80.000.

To have a clearer idea, from a maximum price of 2.000 USD per kilo of pure cocaine in Latin America, that same kilo of cocaine is being bought for an estimated 25.000 USD (wholesale) in Antwerp. The price doubles to 50.000 euros up to as nearly as much as 70.000 euros from wholesale to retail. Each kilo of pure cocaine is then cut two or three times from which small packages of 1 gram are made and later sold for 50 euros each in the streets of Western and Central Europe. Thus, the initial kilo of pure cocaine with a maximum cost of around 2.000 USD has now a street value of around 150.000 euros. (*McDermott 2021a; Inside Belgium's war on cocaine gangs making Antwerp Europe's drug smuggling capital 2023*)

2.1. From producing countries to the ports of Europe

Cocaine is produced in Colombia, Perú and Bolivia and then transported to ports on the Pacific coast of South America (ports in Colombia, Ecuador, Perú or Chile) and from there smuggled through the Panama Canal to Europe, or it is transported directly from the producing nations to Brazilian ports and from there shipped straight to Western Europe (mainly to Rotterdam or Antwerp) or to West Africa (Senegal, Mali, Morocco...) and from there to Spain (with an increased deployment of go-fast boats using the well-established hashish routes between North Africa and Spain).



Figure 3: Map of cocaine exports to Europe (Source: InSight Crime)

Most of the drugs are entering through Antwerp, which is nowadays considered the cocaine smuggling capital of Europe. From all the cocaine being imported in Antwerp, about 90% goes straight to the Netherlands from where it is distributed all over Europe.

The Belgian government estimates that just 11% of the cocaine that enters Europe through Antwerp is seized (data from 2022).

As previously mentioned, in 2022, an all-time high of 110 tons were seized in the Port of Antwerp, and during the previous year, nearly 90 tons. That is not only because port authorities have better equipment and tools at the moment, but also because the total amount of cocaine arriving in Antwerp has increased. (*Inside Belgium's war on cocaine gangs making Antwerp Europe's drug smuggling capital 2023*)

"On average 12 million containers move in and out of Antwerp each year, and only around 2% are physically checked by the authorities" (*Why Belgium is now the cocaine capital of Europe 2022*)

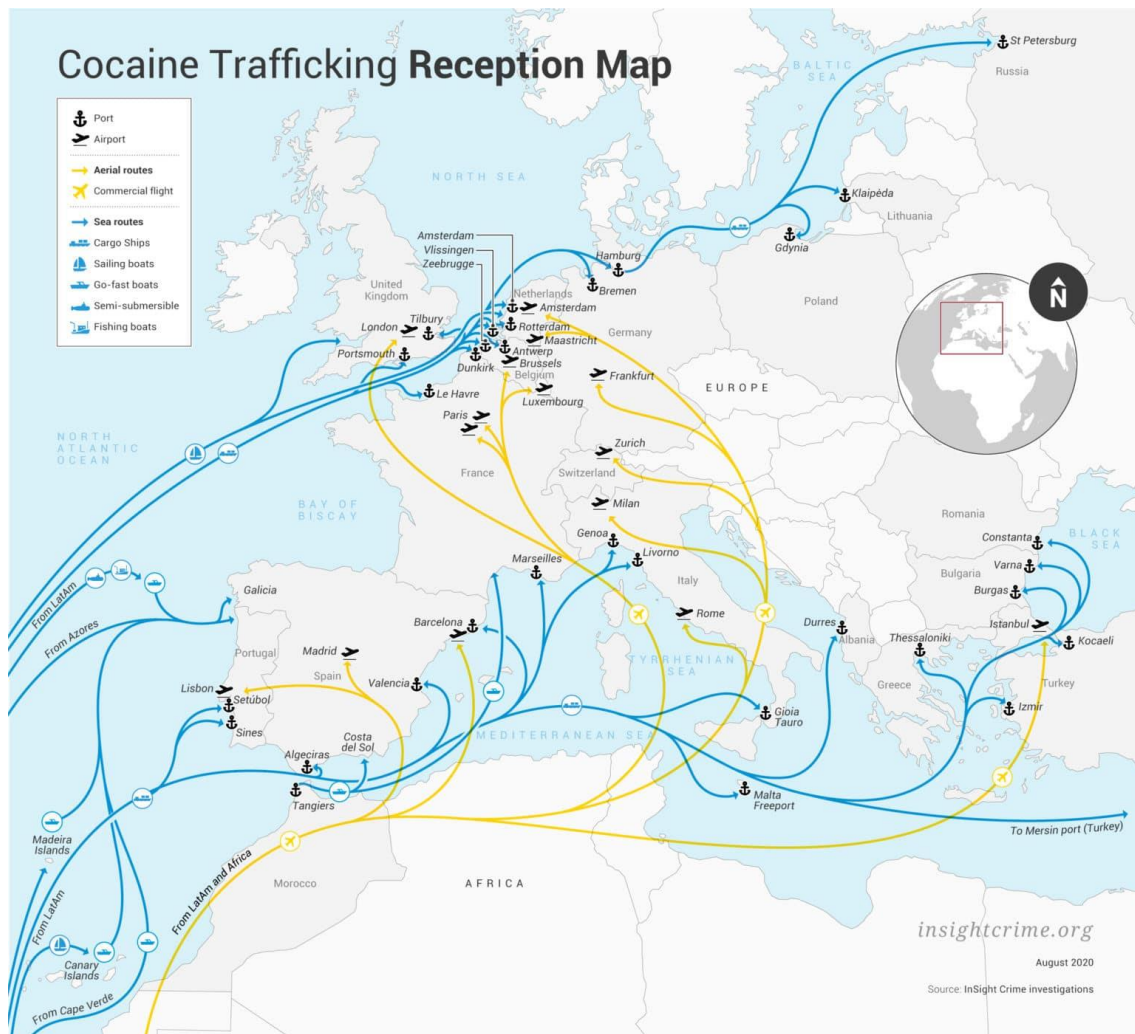
According to the Co-founder and Co-director of Insight Crime Jeremy McDermott "The port of Antwerp makes its money because it can get a container off the ship and onto transport to its next destination in an extremely short time. It's simply not possible for

them to search millions of containers. And this is what the traffickers are depending on and have traditionally depended on” (*Why Belgium is now the cocaine capital of Europe* 2022). That is because the shipping industry currently accounts for 90% of the global trade and that puts enormous pressure on ports, terminals, shipping companies and customs authorities to ensure that global trade runs smoothly and it runs quickly.

Every time a container is opened, that slows down the trade, this sometimes prevents security services and customs officials from really digging in the containers and examine them thoroughly as they move through this system. (*How a Balkan Drug Cartel Infiltrated Global Shipping* 2022)

Reception in Europe has seen a diversification throughout the years. Spain has historically been the natural home for Latin American traffickers due to its linguistic and cultural links. From the late 80s, Spain became the principal entry point for cocaine in Europe from the late 80s onwards.

Spain has now been eclipsed by Belgium and the Netherlands, where traffickers have taken advantage of the ports of Antwerp and Rotterdam that together with its excellent transport infrastructure, has allowed quick transportation of any container throughout Europe. However, due to increased seizures in these ports, traffickers are now focusing on secondary ports where there is much less scrutiny of incoming containers. (*McDermott 2021a*)



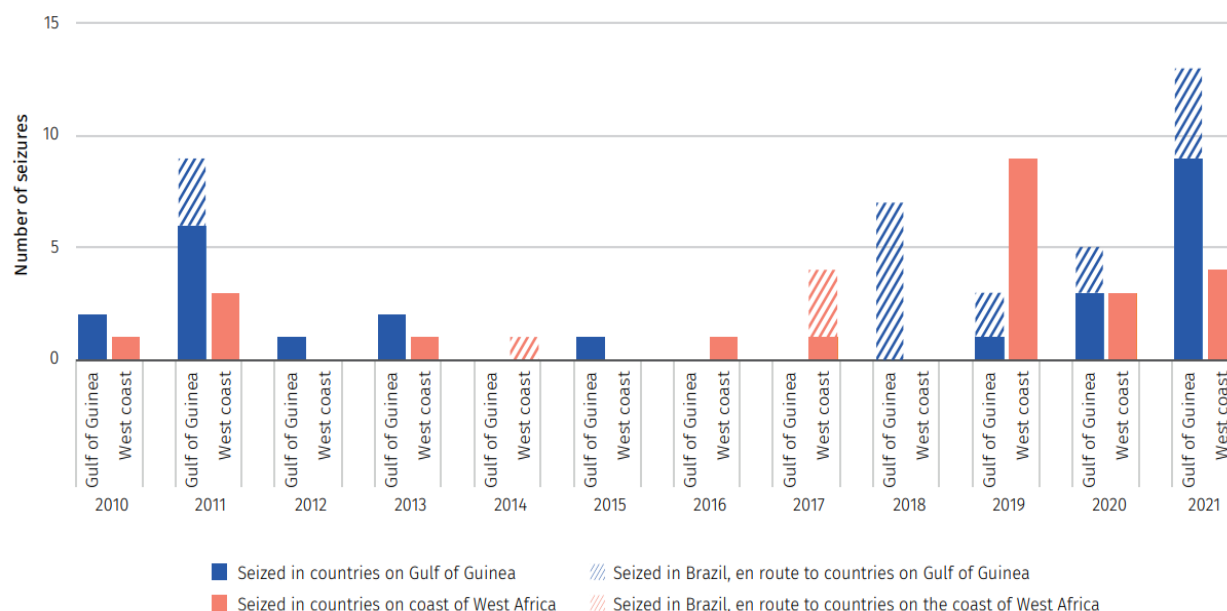
Drug smugglers have also increased the number of drug shipments indirectly to Europe via Western and northern African countries. (McDermott 2021a) The continent continues to play a significant role in the global cocaine market. Although an important reason for this is its role as a transit region to the European market, its role has also contributed to the development of its own local markets.

Seizure data shows that the role of Africa as a transit zone, especially countries in West and Central Africa, has picked up substantially since 2019, with a temporary drop coinciding with the COVID-19 pandemic.

West Africa is the natural closest stopover point for cocaine *en route* to Europe, especially for vessels departing from Brazil, the shortest distance between the two continents being approximately 2.850 km. The area around this Westernmost extremity of Africa, including Cabo Verde, Gambia, Guinea-Bissau, and Senegal is one of the major arrival zones for cocaine in Africa, alongside the coast on the Gulf of Guinea (from Côte

d'Ivoire eastwards). Data on individual cocaine seizures suggest that the Gulf of Guinea is gaining importance as an entry point for cocaine into the continent.

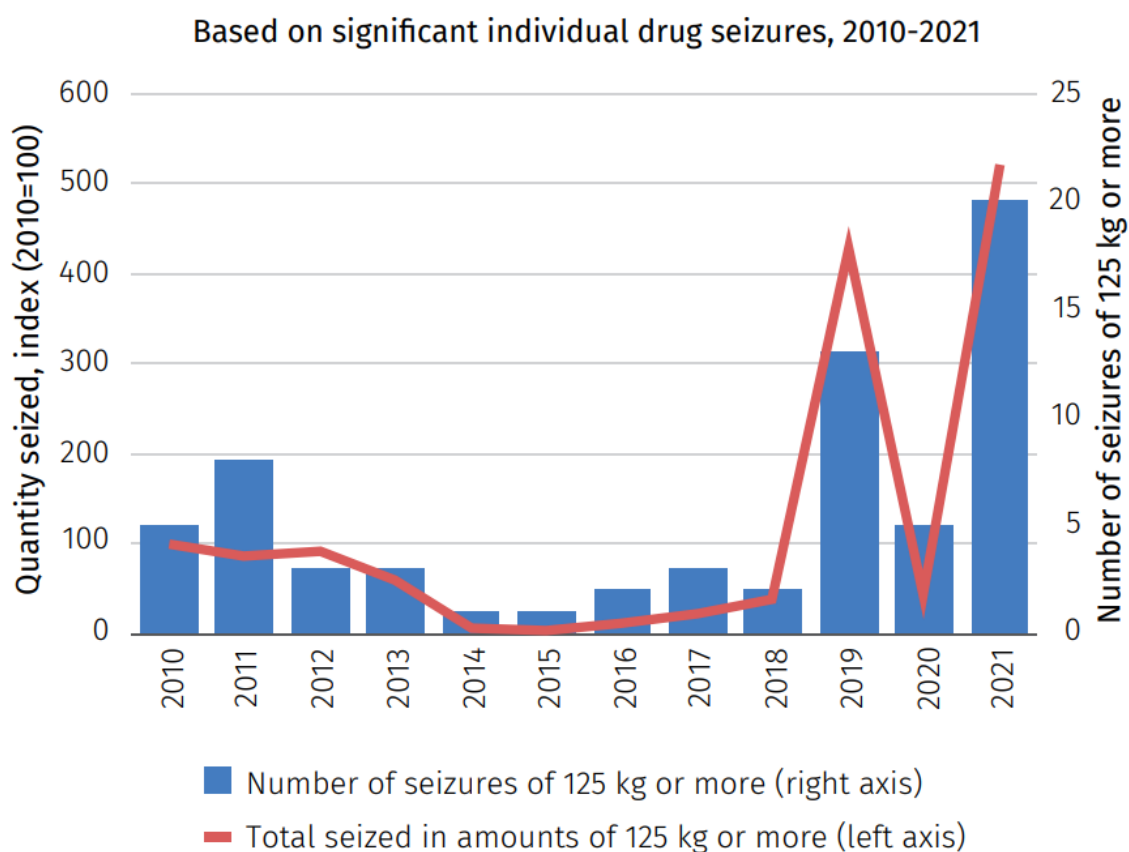
Number of large cocaine consignments seized in or intended for West and Central Africa, by arrival zone, 2010–2021



Note: Based on seizures of 100kg or more.
Source: UNODC, Drugs Monitoring Platform.

Figure 5: Large cocaine seizures in or for West and Central Africa (Source: UNODC, Drugs Monitoring Platform)

Over the period 2019–2021, 13 cocaine seizures of 100 kg or more were reported in African countries with a coastline on the Gulf of Guinea and another 16 in the more westerly arrival zone centered around Guinea-Bissau. Some of the largest seizures took place in, or close to, Cabo Verde (9,5 tons in February 2019, 2,3 tons in August of the same year and 5,7 tons in April 2022), Côte d'Ivoire (6 tons in March 2021), Senegal (5,1 tons in April 2020) and Gambia (3 tons in January 2021). In the case of Côte d'Ivoire, the seizure was made in the open sea from a cargo ship coming from Sao Paulo (Brazil) bound for Côte d'Ivoire, but the narcotics were supposed to be recovered at sea by a boat coming from Nigeria.



Note: In view of potentially incomplete and uneven coverage, time series is based on large seizures only.

Source: UNODC Drugs Monitoring Platform.

Figure 6: Quantity and number of drug seizures from 2010-2021 (Source: UNODC Drugs Monitoring Platform)

Aside from cocaine shipments from Latin American countries, quantities of cocaine seized in Europe and identified as coming from the United States, Canada, Mozambique, Côte d'Ivoire, Turkey, or Spain suggest that trans-shipment of cocaine is being done in such countries to lower the risk profile of containers. (*United Nations Office on Drugs and Crime 2023*)

3. The move to shipping containers

In the 80s, the Colombian cartels favored using light aircrafts to smuggle cocaine into the US. However, transporting drugs across the Atlantic to reach Europe is a completely different story.

According to the United Nations Office on Drugs and Crime (UNODC), traffickers started sending small quantities of cocaine to Europe using “mules” who flew to Europe in commercial flights. Larger cocaine shipments, meanwhile, were often dispatched on “motherships” which were usually fishing vessels that were met on the high seas by go-fast boats, which would then bring the drugs back to land. Such a technique was quickly perfected by Galician smugglers in Spain. (Ramírez 2021) Galicia today continues to be one of Spain’s major drug strongholds with most of the cocaine still entering the region via speedboats. (Carretero 2018)

Over the last decade, container shipping has become the preferred method of drug trafficking into Europe. Around 750 million containers are shipped globally every year and only around 2% of them are physically inspected. That has provided drug traffickers the perfect opportunity to export illegal drugs around the globe. (Ramírez 2021)

“When Europe became more important in the world market, containers became an advantage. (...) There was a reorganization of the cocaine business and it became more international” Damián Zaitch, a University of Utrecht professor and expert on organized crime, told media organization InSight Crime which seeks to deepen the debate and inform about organized crime and citizen security in Latin America by providing investigations, regular reporting, analysis, data, and policy suggestions on how to tackle the challenges they present. (Ramírez 2021)

Cocaine seizures in Europe increased rapidly between 1998 and 2006, from 32 tons to 121 tons, and saw a sudden decline from 2006 to 2009, from 121 tons to 53 tons. However, other indicators such as street prices, use rates, and purity levels remained stable or increased, as it is shown by UNODC data, which suggest that cocaine continued to flow uninterrupted right under the authorities’ noses. (Transatlantic_cocaine_market.Pdf, n.d.)

When seizure rates began to rise again, shipping containers were the main trafficking method chosen by drug traffickers. According to the European Monitoring Center for Drugs and Drug Addiction (EMCDDA) and Europol 2016 EU Drug Market report, maritime seizures in shipping containers rose from 10 percent in 2006 to 75 percent in 2012 and 2013.

The switch to shipping containers was just a response to authorities' security measures, because drug traffickers grew aware of the advantages and because the volume of cocaine needed to feed the booming European market required the type of bulk transport capabilities offered by shipping containers. On top of that, *“finding drugs in maritime shipping containers is like finding a needle in a haystack”*, and *“criminal organizations have taken advantage of that and are likely to continue doing so”* said Damián Zaitch. That has resulted in an elaborate game of hide-and-seek, as traffickers use different techniques to conceal their drugs among the millions of containers that reach Europe every year. (Ramírez 2021)

3.1. Switching Ports and Departure Points

When authorities began to understand the importance of container shipping in the drug smuggling business, they started to look closely into which lines were most often used to smuggle illegal drugs to Europe coming from Latin America and regard them as “hot routes”. Traffickers responded by fanning out across the region in search of new ports to export drugs that raised fewer suspicions.

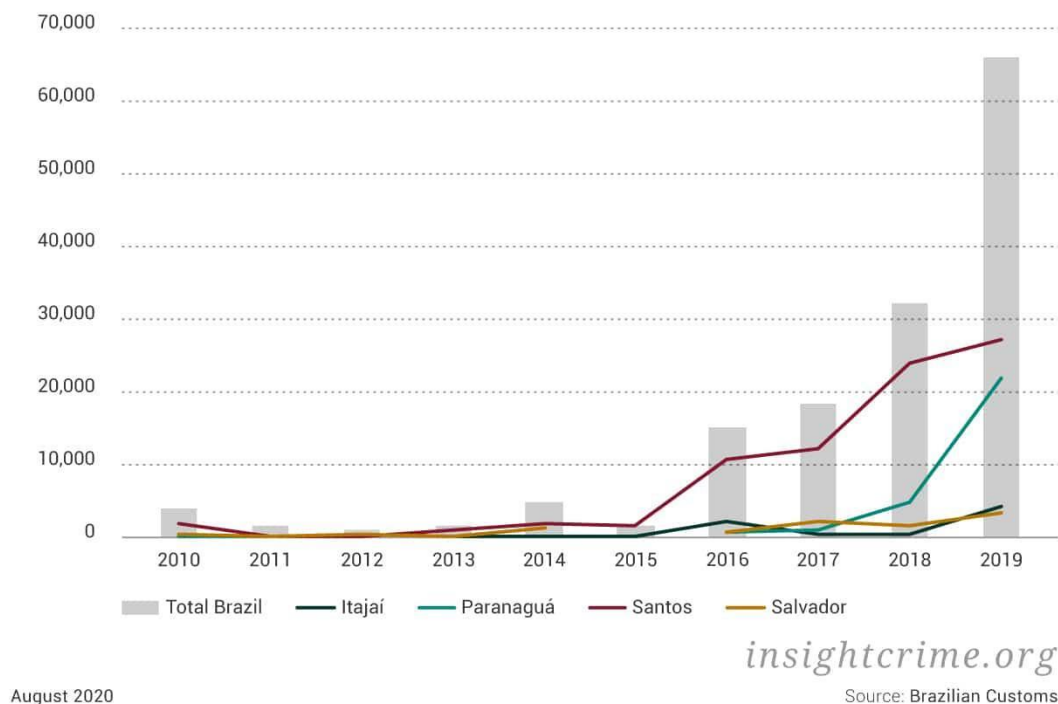
Traditional hotspots like the Colombian ports of Santa Marta, Turbo, Cartagena, and Buenaventura, as well as Peruvian ports such as Callao, offer proximity to main cocaine production zones, active shipping lines to European countries and highly sophisticated, long-standing criminal networks and infrastructure. Unluckily for them, European authorities have them red-flagged and shipments coming from such ports undergo more advanced security protocols.

As a response to increased controls, drug traffickers decided to export their drugs from other ports that raised fewer suspicions such as Ecuador, Costa Rica, the Dominican Republic, Panama, and above all, Brazil.

Brazil's direct connections with main production regions in Colombia, Peru, and Bolivia together with the numerous Atlantic coast container ports, made it an attractive prospect for drug traffickers seeking new drug routes to Europe. Add to this a powerful and rapidly evolving organized crime landscape, and you have all the elements necessary for a perfect cocaine bridge to Europe.

The port of Santos became one of the first hotspots for cocaine exports to Europe, then other ports followed such as Paranaguá and Itajaí. Seizures, according to Brazilian Customs data, soared from 4,5 tons in 2010 to 66 tons in 2019. (Ramírez 2021)

Cocaine Seizures (Kg) in the Ports of Brazil 2010 - 2019



August 2020

Figure 7: Cocaine seizures (Kg) in the ports of Brazil 2010-2019 (Source: Brazilian Customs)

This change of cocaine export ports by drug traffickers continues to this day, with evidence of them turning to ports elsewhere with a relatively clean shipping export history and that are currently ill-prepared to stem the flow of cocaine, such as Chile, Argentina, and Uruguay. (Ramírez 2021)

As far as receptor countries in Europe are concerned, with stricter measures being implemented in the mega-ports of Antwerp and Rotterdam, drug traffickers are looking at secondary European ports.

The “borderless” European Union is a major advantage to drug traffickers as when in one nation drug trafficking is stiffened, traffickers quickly shift to another where their illegal activities are more likely to succeed, meaning that the overall cocaine flow to Europe is maintained and so does its market price.

Therefore, greater cooperation between nations is necessary to tackle this problem, not just within the European Union, but also with other nations outside EU borders such as those in the Balkans with strong mafias involved in the cocaine trade. (McDermott 2021b)

Le Havre is one of these secondary ports experiencing a trafficking surge so strong that is now earning comparison with the nearby European cocaine hubs of Antwerp and Rotterdam with more than 10 tons of cocaine being interdicted in 2022.

Since recent years there are fueling fears that Le Havre is turning into the French version of its northern European counterparts Antwerp and Rotterdam and that it will be overwhelmed with hard drugs.

The number of shipping containers being unloaded in Le Havre has risen from 1,5 million in 2004 to more than 3 million in 2022. As the volume of legal shipments has increased, so have the shipments of illicit drugs. Just in 2022 10,5 tons were seized, triple the amount detected in 2019. *(Ford 2022)*

4. Concealment methods used by drug criminal networks

Drug smugglers are constantly responding to security measures implemented by authorities by changing and improving their trafficking techniques. As soon as authorities adapt, traffickers always come up with new alternatives.

4.1. Within the load

An early technique of container trafficking is called “within the load”, in which cocaine is camouflaged in everyday goods.

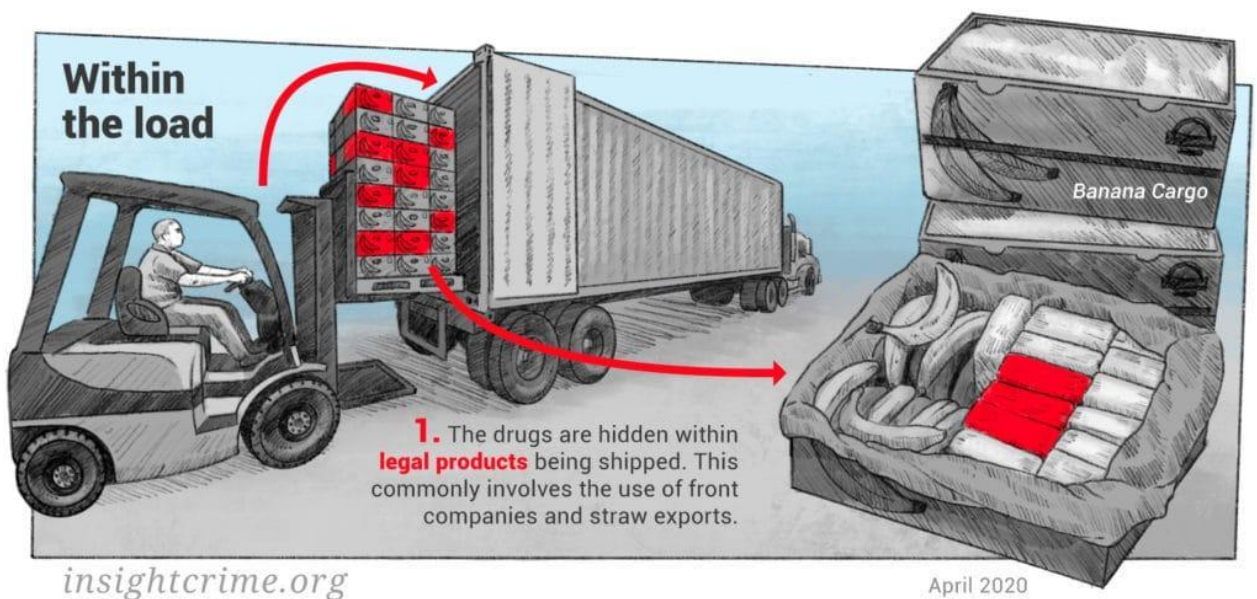


Figure 8: Within the load technique (Source: InSight Crime)

Such a technique requires drug traffickers to run front companies set up by themselves or to buy existing ones with a long history of clean exports. By doing so, that allows them to have direct control over the shipment. Then they proceed to hide the drugs between the cargo, sometimes stuffing bricks into boxes, but in other instances, traffickers come up with more creative methods such as hollowing out pineapples and later stuffing them

with drugs, to barrels of hazardous chemicals, to even chemically transform drugs to disguise it as other goods such as fertilizer, pet food or charcoal. (Ramírez 2021; United Nations Office on Drugs and Crime 2023)



Figure 9: Pineapples stuffed with cocaine intercepted by the Spanish Police in 2018 from a shipment coming from Costa Rica. (Source: Policía Nacional)

4.1.1. Why is perishable cargo being used to smuggle drugs?

Very commonly shipments of bananas are a good cover-up for drug traffickers to smuggle cocaine into Europe since both cocaine and bananas are sourced from Latin America and high demand consumables in European countries.

Drug traffickers will either infiltrate legitimate banana shipments with cocaine packages for them to be retrieved once they arrive at their port of destination, or set up their own shipments using front companies or fake documentation.

The reason why banana shipments are commonly used as means to smuggle drugs is because as perishable goods, they need to move through ports as quickly as possible, putting pressure on customs authorities. On top of that, bananas are shipped into refrigerated containers where cocaine can be hidden either in the cooling units or their thicker walls.



Figure 10: Packages of cocaine concealed in banana shipments. (Source: National crime agency / Border force / Czech Police / Government of Montenegro)



Figure 11: Hidden packages of cocaine found inside the cooling unit of a reefer container. (Source: Ringaskiddy Port Customs)

Despite authorities being aware that this fruit is widely being used by smugglers as cover to smuggle cocaine they cannot search every consignment and therefore have to use intelligence. (Daly 2022b)

Just on Tuesday 16, 2023, Italian authorities announced they had just seized 2,7 tons of cocaine smuggled in a batch of bananas at the port of Gioia Tauro. The drugs were discovered inside shipping containers coming from Ecuador thanks to specialized scanners and with the help of sniffer dogs. (Italy police seize 2.7 tons of cocaine in banana shipment 2023)



Figure 12: Italian police using a sniffer dog that was instrumental in discovering the cocaine hidden among bananas (Source: Guardia di Finanza)

4.1.2. Chemical camouflaging

Some of the most sophisticated techniques to conceal narcotics involve impregnation into a carrier material such as textiles, skin, or even paper and cardboard. Even though trafficking of cocaine hydrochloride impregnated in clothing was detected decades ago, drug traffickers have been getting increasingly sophisticated and have come up with new methods of mixing cocaine with beeswax, plastics, charcoal, herbs, and various liquids making it extremely difficult for authorities to detect. (*United Nations Office on Drugs and Crime 2023*)



Figure 13: A Spanish police inspector displays a cocaine-impregnated fruit box (Source: Fernando Villar / EPA)

In June of 2021 Spanish police broke up a drug ring that smuggled cocaine into Europe by disguising it as charcoal. Their modus operandi involved using a complex chemical process carried out in illegal laboratories in Mexico and Colombia to camouflage the drug as charcoal.

“The drug became almost undetectable because its shape and color were so similar to that of charcoal. Furthermore, the characteristic smell of cocaine had been eliminated, meaning it could not be picked up by specialist narcotics dogs.” the Spanish police said in a statement. (Jones 2021)



Figure 14: Cocaine camouflaged as charcoal intercepted from two shipping containers being transported from Portugal to Spain. (Source: Policia Nacional)

Once the camouflaged cocaine is delivered to its destination, an extraction process is carried out in illicit laboratories to separate the cocaine from the other substances. Large extraction laboratories have been uncovered in Europe during the last few years, suggesting this process is becoming increasingly widespread. (*United Nations Office on Drugs and Crime 2023*)

4.2. Rip-on/rip-off method

Since authorities began investigating and profiling export companies looking for any suspicious patterns, the “within the load” technique became quite risky for drug traffickers.

That led drug traffickers to favor the use of the so-called rip-on/rip-off method by which traffickers avoid profiling by breaking open containers of legitimate exports to transport their drugs and then using cloned customs seals to conceal the tampering.

To do so, a suitable container must be identified in Latin America carrying legitimate cargo bound for Europe. The container of course needs to be in an accessible position in

the dock area, and in order to avoid suspicions, the security seal needs to be replaced with a duplicate to avoid obvious signs of tampering.

Once the container has made it to its destination in Europe, the drugs need to be retrieved from the container. This can be done in a variety of ways: either by corrupt port workers or by unauthorized people who gain access to the container terminal mainly by slipping into trucks' secret compartments (a method commonly referred to as “trojan horse”).

In order to retrieve the hidden drugs, the rip-on/rip-off team needs to know the location of the container, its container number, and must also be accessible, which usually requires a corrupt port or company worker to manipulate the position of such container.

Once the rip-off is complete, the container will either be left open or resealed with another false or duplicate seal. (Ramírez 2021)

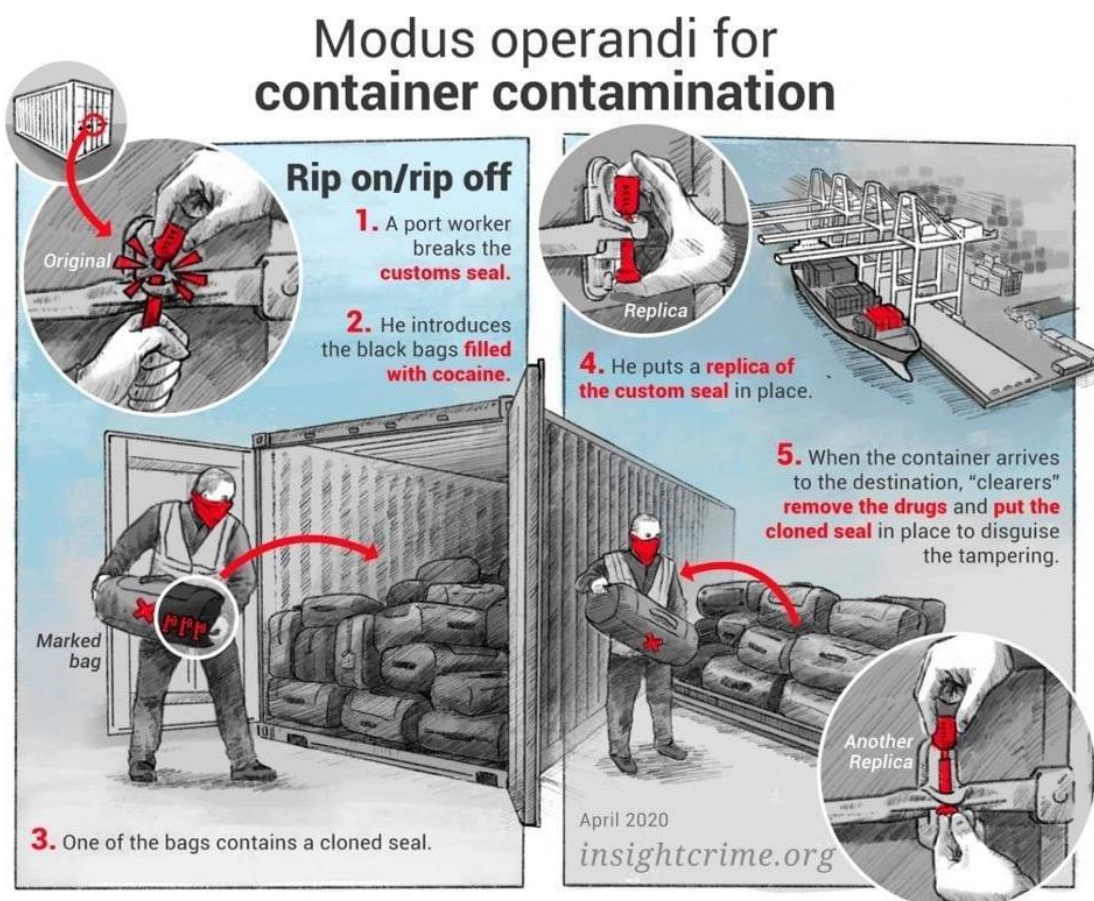


Figure 15: Modus operandi for container contamination (rip-on/rip-off) (Source: InSight Crime)

In other cases, traffickers will not even need to enter the port premises to contaminate the containers bound for Europe. In Latin American countries such as Costa Rica, criminal organizations recruit corrupt drivers and transport companies to load their drugs into containers as they travel from the agricultural zone of San Carlos and the port of Limón. However, they may also rely entirely on corrupt yard workers to contaminate the containers themselves.

Failures to retrieve the concealed drugs from the container at one of its destinations are not uncommon. In one case, described by a Belgian prosecutor that granted an interview to UNODC, a container in the port of Antwerp turned out to be inaccessible for the so-called drug collectors. A criminal organization had two rip-off extractions of cocaine stashes planned for that day, and while one was successful, the other failed because the container was placed out of reach on top of two other containers. Smugglers contacted a crane operator who asked for a financial compensation of 1 million euros. Since the smugglers refused to pay such a big sum of money, they decided to abandon the cargo. *(United Nations Office on Drugs and Crime 2023)* Similar errors and lack of coordination among traffickers might cause drugs to remain within licit cargo and move on to the next port.

4.3. Trojan horse

A variation of the rip-off method involves one or more people, so-called “drug extractors”, who manage to infiltrate the ports by hiding inside empty containers to retrieve drugs concealed in other laden containers. The extractors await inside the container to be informed via smartphone of the number and location of the container which the drugs need to be retrieved from. The cocaine is then extracted and stashed into the previous empty container, which is subsequently retrieved from the port area. *(European Monitoring Centre for Drugs and Drug Addiction 2022)*



*Figure 16: Group of cocaine collectors caught trespassing on Kramer in Rotterdam
(Source: Kramer Group)*

Just in Rotterdam, according to data from January 2022, authorities arrested over 400 so-called “drug extractors”. The extractors are brought into the port premises inside “hotel containers”, which are declared as empty on the shipping manifest although in reality they contain basic amenities. (Dalby 2022). In these so-called “hotel containers”, the collectors might stay in one for days where they eat, drink, and do their necessities in there. (The ‘cocaine collectors’ retrieving smuggled drugs in Rotterdam 2021)



*Figure 17: Inside of a so-called “hotel container” in Kramer Terminal in Rotterdam.
(Source: BBC News)*

On some occasions, they do not physically take the cocaine out of the port, but instead, their job is to transfer the drugs to another container earmarked by the gang with the help of a corrupt worker within the port, which will then be transported out of the port by truck.

In September 2021, 110 drug extractors were apprehended in the port area in just over a month. But unless they were caught red-handed, they used to be charged with a fine smaller than 100 euros for trespassing. Some of the collectors even carried cash on them to be able to pay the fines on the spot in case they get caught.

In 2022 a new law came into force as a response to deter the collectors, with which any unauthorized person found in the port area can face up to a year in jail. But given the high amounts of cash that can be earned as a collector (an estimated 2.000 euros for every kilo of cocaine they collect), it is highly unlikely that it will crack down on this activity.

According to Andre Kramer, CEO of Kramer Group, one of the various container terminals in the Port of Rotterdam, upping the penalties and threatening a prison sentence may provoke violence in the port area. *"Today, the collectors will leave quietly. But it's going to be grim when they will use anything to try and get away - weapons, knives..."* (The 'cocaine collectors' retrieving smuggled drugs in Rotterdam 2021)

4.4. Switch method

This new so-called "switch method" has been increasingly observed over recent years. This modus operandi involves the transfer of narcotics from a non-EU shipping container to another container often one from intercommunity transport from one EU country to another with fewer or no risk of being inspected. Alternatively, also empty, transshipment, or export containers are used. (Europol 2023)

4.5. Container cloning

Another variation of the "switch method" is the cloning of containers. This rather sophisticated method involves a container scheduled for a scan and inspection by customs. When the container is transported to the scanner, the original is taken out of the port area and replaced by a replica container with the same registration number as the original one. (Europol 2023)

In some instances, cloned containers have even had extra items added to them as a way of making their weight identical to the original shipment and not raising any suspicions. *(Nearly 1,600 kg of cocaine found in shipments of car tires, fruit at Rotterdam port | NL Times 2023)*

Both the "switch method" and container cloning highly rely on the support of insiders operating in the port. The insiders include corrupt port workers but can also include extraction teams brought in with a "Trojan horse container" sometimes days before the arrival of the stash of narcotics. (Europol 2023)

4.6. Hidden within the container structure

Drug traffickers are increasingly making use of the structure of the container itself to hide their drugs by stuffing them into cavities in the walls, ceilings, floors, doors, and very commonly in the insulation or cooling equipment of refrigerated containers. That last one being particularly popular among drug smugglers since this compartment can be opened and closed without having to break the seal of the container. (Ramírez 2021)

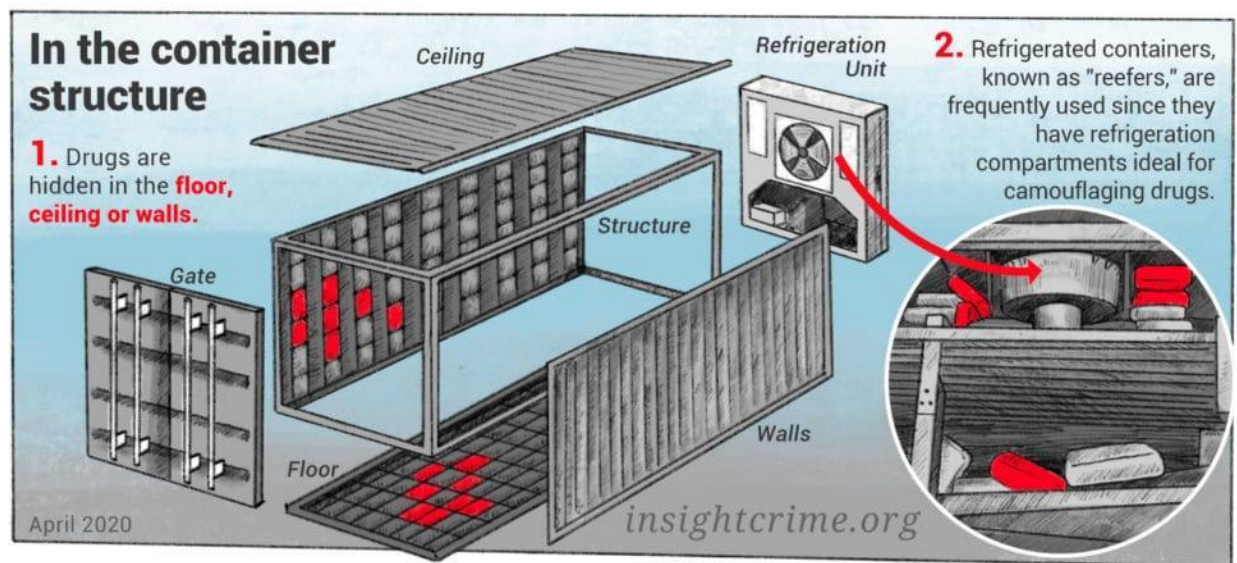


Figure 18: Concealment of drugs within the container structure (Source: InSight Crime)

By doing so, drug traffickers lower the risk of port authorities detecting fake customs seals. However, this technique requires having people inside shipping companies or container yards being complicit.

Some of these criminal organizations have even set up their own front container maintenance companies to tamper with containers.

Authorities responded to these sophisticated trafficking methods by increasing the use of scanners in ports. Even so, drug smugglers have come up with new alternatives. That is the case in some locations, such as the port of Santos in Brazil where traffickers are able to contaminate containers after they have been inspected by cracking them open at the last moment before being loaded onto the vessel. (Ramírez 2021)

4.7. Drop-off

As a response to increased scanning and other security measures carried out within container terminals, there have been reported cases of drop-offs, or contamination of the containers while the vessel is underway at sea after it has left the port. That is exactly what was believed to happen with the MSC Gayane shipment. The success of this technique relies on the complicity and corruption of the crew although authorities in Ecuador also report that armed bands are now boarding container vessels and forcing crews to take loads at gunpoint. (Ramírez 2021)

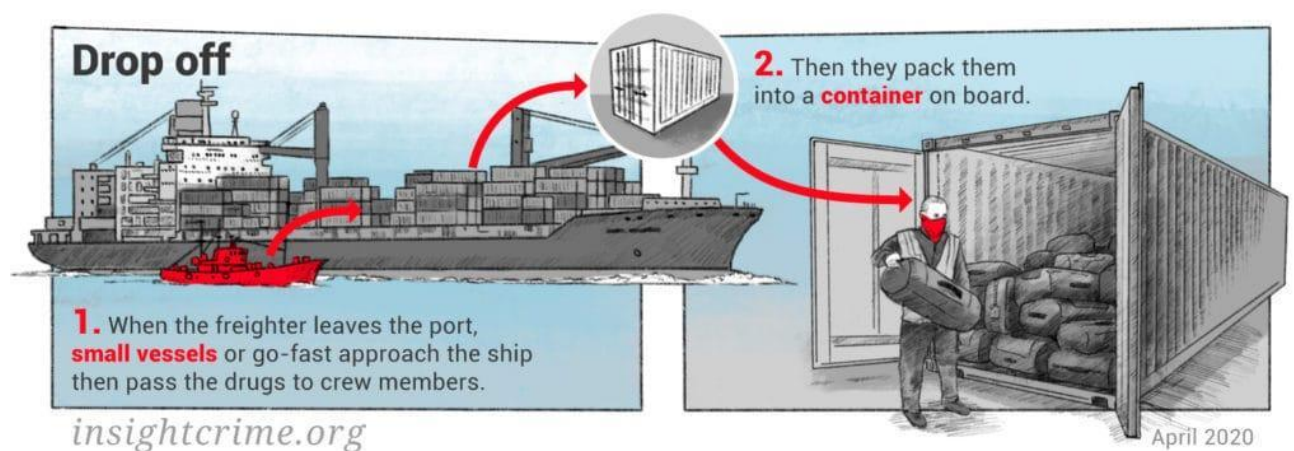


Figure 19: Drop off technique (Source: InSight Crime)

The drop off method is exactly what was deployed in June 2019 with the MSC Gayane when over 20 tons of cocaine with a street value of over 1 billion dollars were seized from inside shipping containers aboard the vessel when it called in Philadelphia. The container ship owned by the Swiss firm Mediterranean Shipping Co. (MSC) which is today the largest container shipping company with a vessel line-up of over 645 container ships (Network 2023). So far it is the largest cocaine seizure in US history ever made. (AP 2019)

In that case, crew members were bribed with 50.000 USD each to collaborate with the smugglers and haul the bricks of cocaine inside containers on the high sea where the vessel was approached by boats while sailing at night along the coast of South America. The drugs were then hoisted up and brought onboard by means of the ship's crane. Replacement seals were used to cover up the tampering of the container that needed to be opened.

MSC Gayane was following a particular route going from the west coast of South America through the Panama Canal, up to Philadelphia and from there to Rotterdam and Antwerp.

8 crewmembers were arrested for their involvement in the smuggling operation including the Chief mate who played a key role since had the authority to put together for example the schedules of crew men and could get the crew that he knew were in on that operation, working for example all at night to be there to load the cocaine. The Chief mate also has a lot of information about the stowage plans, so he knows which containers are going where. US authorities did not arrest the captain who was not involved in the operation and had no knowledge of it.

US authorities also made seizures on other MSC ships: the MSC Carlotta at Port Newark where they seized 1,6 tons of cocaine in February 2019, and MSC Desiree at the Port of Philadelphia where they seized half a ton of cocaine in March 2019 which they believed operated in exactly the same way (*How a Balkan Drug Cartel Infiltrated Global Shipping* 2022; *Drug Trafficking and Container Terminal Safety* 2022)

Authorities are now tackling this trafficking technique by using the vessel's GPS device which provides information about the ship's speed, so if there is any sudden decrease in speed or sudden stop, it will get registered.

Drug traffickers though are already coming up with new alternatives such as the so-called "switch" technique, with which they are swapping drugs to non-flagged containers in transit. The risk is especially high in Panama where drugs can be switched as they move by rail between the Pacific and Atlantic coasts, as it has been reported by port officials to InSight Crime. (Ramírez 2021)

4.8. What do seizures in ports tell us about concealing methods?

Antwerp and Rotterdam accounted for almost 65% of the cocaine seized in all EU ports in 2020. Further analysis confirm that criminal networks continue to attempt to circumvent controls by focusing on smaller secondary ports in the EU such as Vigo (Spain), Sines (Portugal), Livorno (Italy), or Vlissingen (the Netherlands), where profiling and control measures might be viewed as easier to overcome by drug traffickers.

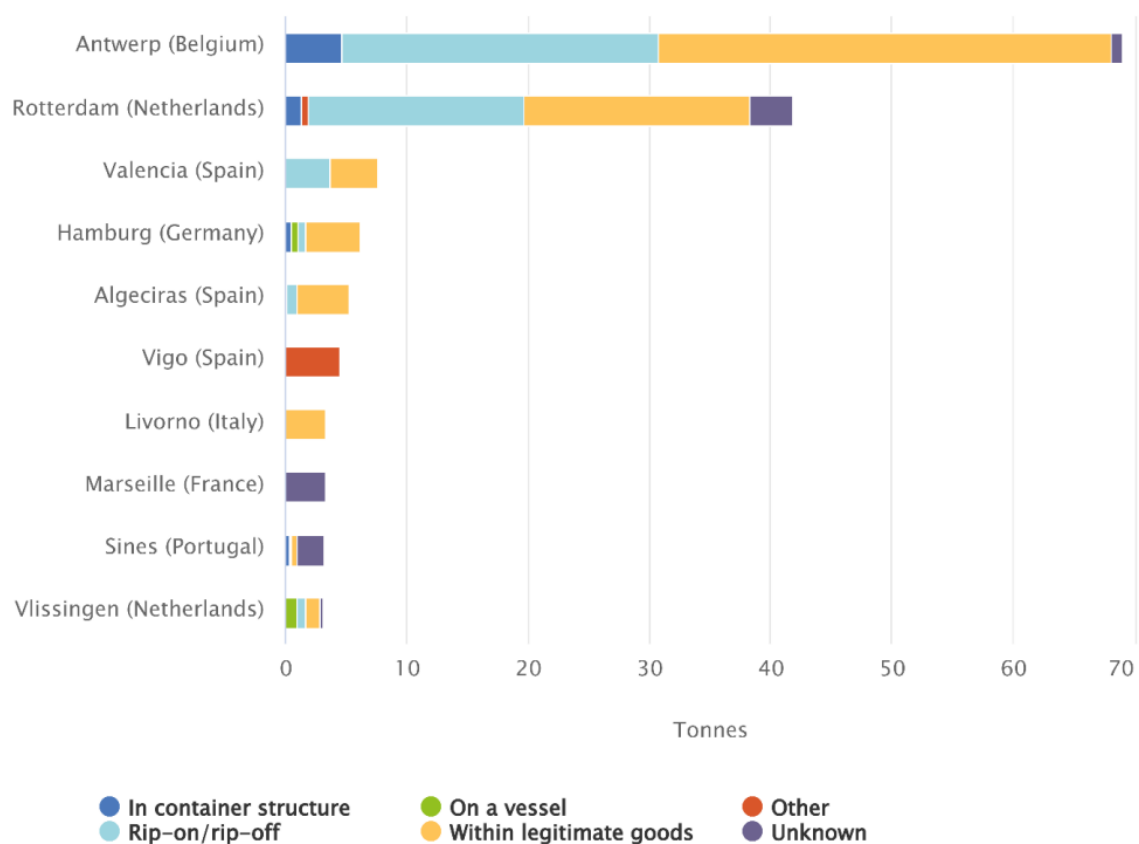


Figure 20: Top 10 EU seizing ports for quantity of cocaine in 2020 (Source: European Monitoring Centre for Drugs and Drug Addiction 2022)

The available data also indicate that the largest seized quantities of cocaine bound for Europe took place in Guayaquil (Ecuador) and Santos (Brazil) which clearly shows both ports are used intensively by cocaine trafficking criminal networks.

Similarly to European ports, drug traffickers also use a wide range of smaller secondary ports in Latin America such as Turbo and Buenaventura (Colombia), Vila do Condé (Brazil), or Villeta (Paraguay) in an attempt to avoid interception and seizure.

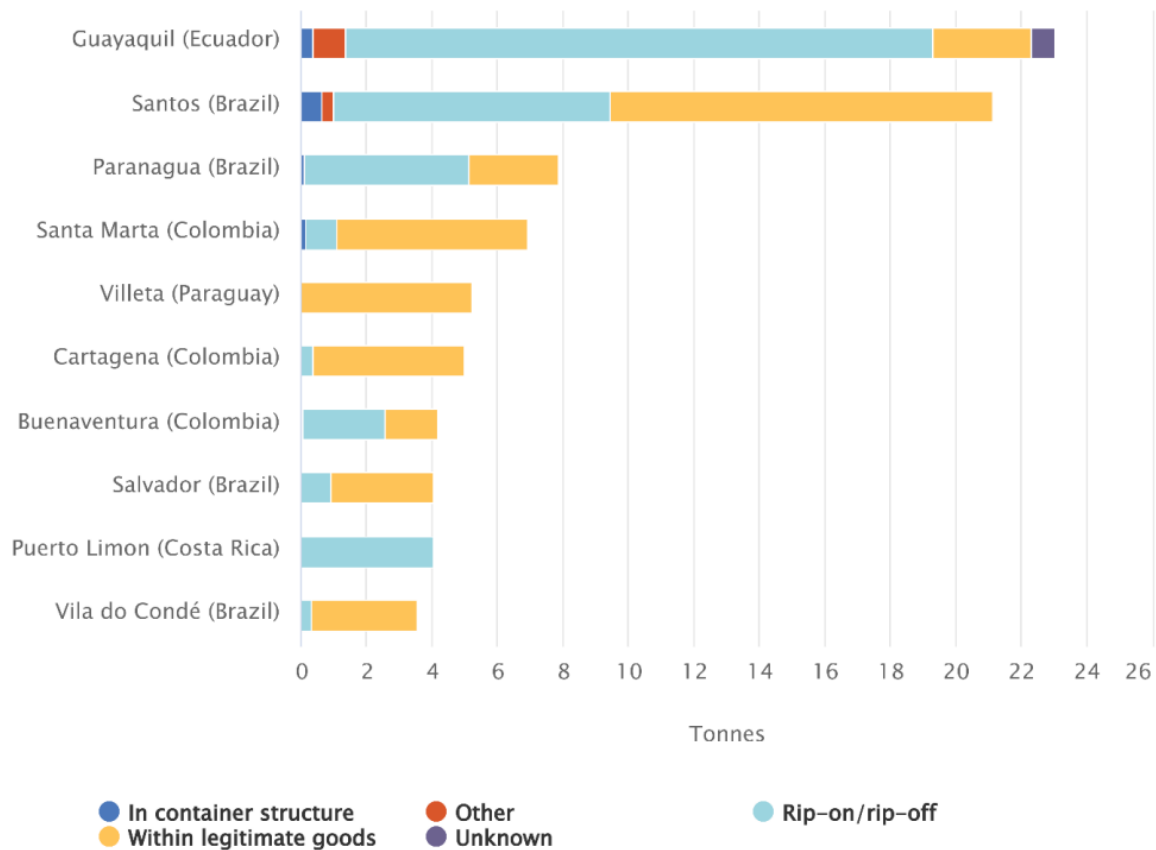


Figure 21: Top 10 Latin American seizing ports for quantity of cocaine destined for the EU in 2020. (Source: European Monitoring Centre for Drugs and Drug Addiction 2022)

Analyzing current data, we can conclude that the largest quantities of cocaine are smuggled via shipping containers and mainly by using two particular modi operandi: within legitimate goods and the rip-on/rip-off method. In 2020 most of the cocaine seized in containers destined for the EU was smuggled within legitimate goods (around 132 tons), followed by the rip-on/rip-off method (around 108 tons). What concerns authorities the most is the large number of rip-on/rip-off seizures since corruption is key in carrying out this method.

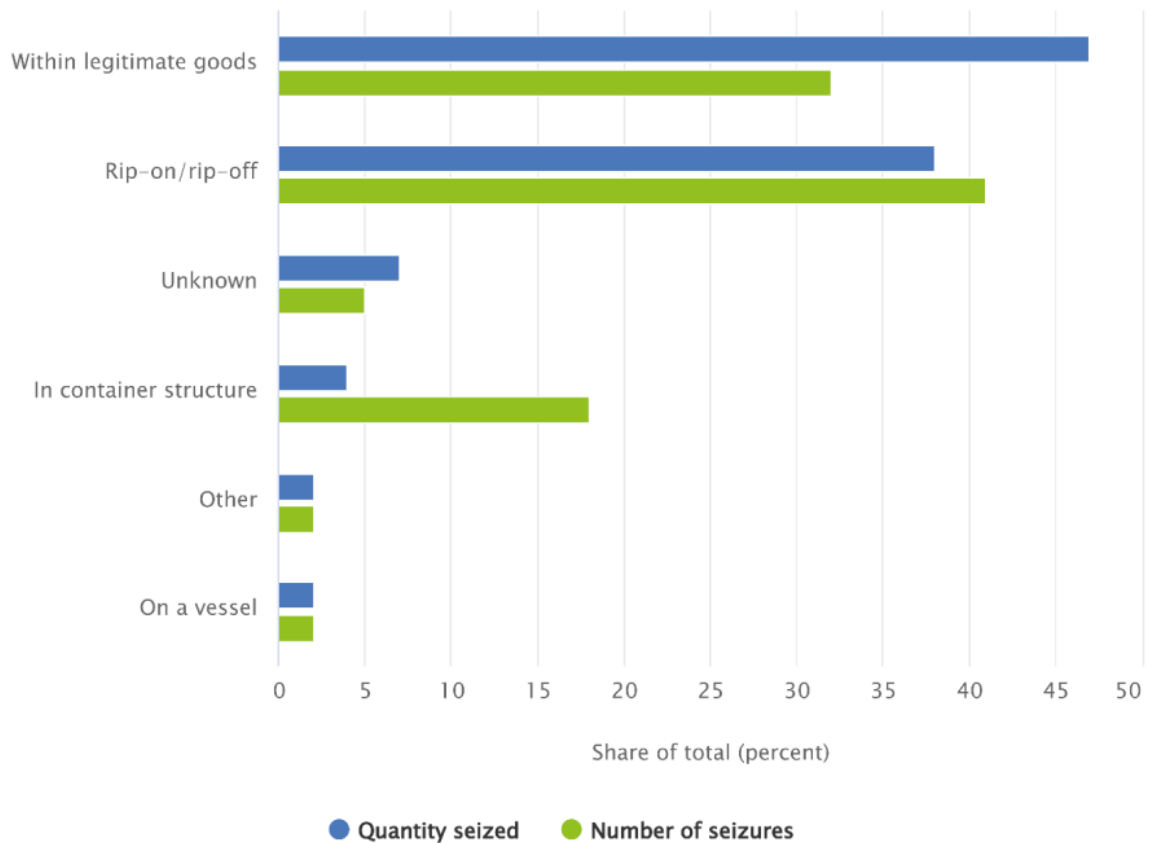


Figure 22: Quantity and number of seizures made by smuggling method. Breakdown by concealment method (% of total) (Source: European Monitoring Centre for Drugs and Drug Addiction 2022)

Current data clearly indicate that Antwerp is today the main entry point for cocaine smuggled into Europe from where it is destined initially to the Netherlands for further distribution to other European countries.

Focusing exclusively on cocaine seized in producing nations and destined for Belgian ports in the 2018-2021, a variety of modi operandi can be observed to conceal the drug in the 10 main shipping ports:

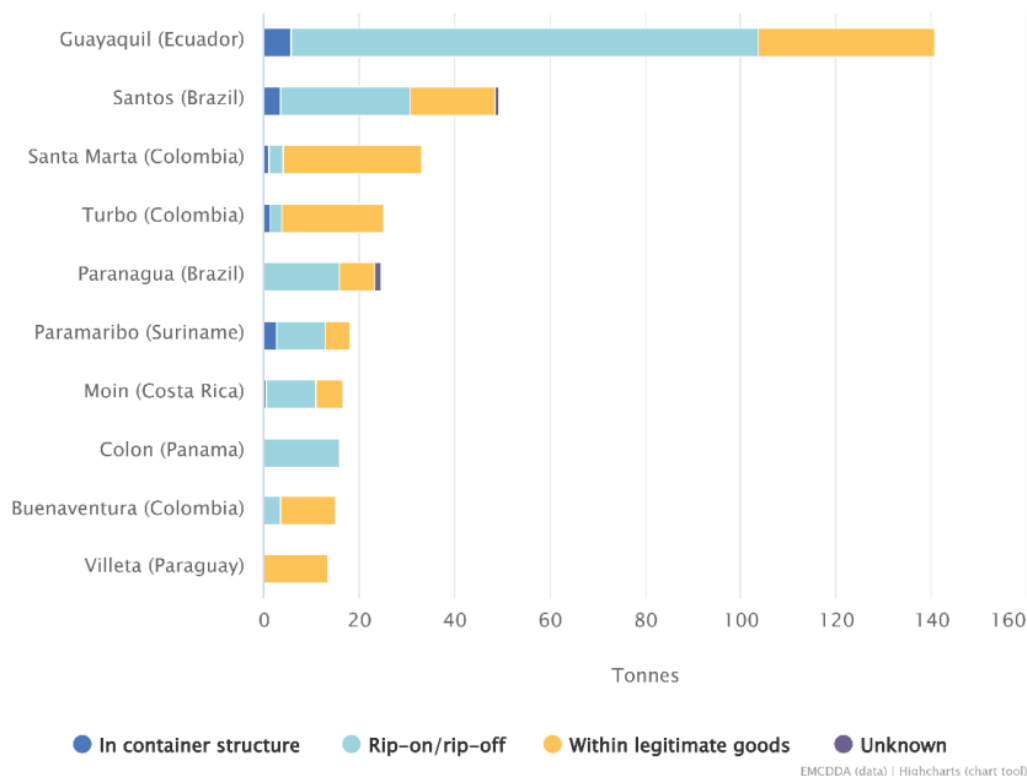


Figure 23: Top 10 source ports for quantity of cocaine destined for Belgian ports, seized in 2018-2021. (Source: European Monitoring Centre for Drugs and Drug Addiction 2022)

As shown in the above graphic, there has been a striking development in the increase in the quantities shipped from Guayaquil, the largest container port in Ecuador, towards Antwerp using the rip-on/rip-off method, from 6 tonnes in 2018 to almost 56 tonnes in 2021. Ecuador, which shares borders with two of the three main cocaine-producing nations: Colombia and Peru, has transformed in the last decade or so from a transit country into a major trafficking hub. On top of that, it is now emerging as a cocaine-producing country. (European Monitoring Centre for Drugs and Drug Addiction 2022)

4.8.1. Corruption in ports and container terminals

The involvement of corrupt officials within the shipping industry poses a great threat in detecting and intercepting drug shipments.

Criminal networks infiltrate ports by corrupting personnel who are:

- directly active in the port such as port workers, terminal operators, security, customs, and police.
- employed in logistic companies, in port authorities, or in semi-public and public authorities with access to port data systems or container reference numbers.
- from third-party companies with access to the port area such as truck drivers or maintenance personnel. (*Europol* 2023)

Port workers that are employed in relevant positions are the ones that are most exploited by drug traffickers for their drugs to pass through the port without being intercepted. These people often work for transport companies, shipping companies, port terminals, forwarding offices, or security companies and allegedly misuse their respective functions to pass on important information or to provide services to drug traffickers in exchange for money. (*Hope* 2021)

Corruption in EU ports has been identified as a key threat in the latest European Union Serious and Organized Crime Threat Assessment (SOCTA) report made by Europol, with almost 60% of criminal organizations estimated to use this type of corruption as a facilitator.

Even more worrisome is the large number of cocaine seizures involving the rip-on/rip-off method, which proves that criminal networks have well infiltrated ports in both source and destination countries, considering that for the success of such a technique, corruption is an indispensable element as criminal actors in departure ports must obtain the collaboration of port workers to identify a container that will be shipped to a port of interest in the EU.

Other smuggling techniques may also require corruption as a facilitator. That is the case, for example, when concealing drugs in the container structure, like in the cooling compartment, which requires similar actions as the rip-on/rip-off method; or when using the drop-off method, requiring the collaboration of the crew of a vessel to pick up the drugs in Latin America or from a mother ship somewhere in the Atlantic Ocean, and later throw them in the water close to a desired shore in Europe. (*European Monitoring Centre for Drugs and Drug Addiction* 2022). That is most likely what

happened in April 2023 out the coast of Sicily when Italian police found 400 million euros worth of cocaine bobbing off the Sicilian coast.



Figure 24: 70 waterproof packages held together by fishermen's nests and equipped with a luminous signaling device were picked up by Italian authorities off the coast of Sicily. (Source: Guardia di Finanza)

Concealing drugs within legitimate goods inside a container may also require corruption. For instance, in order to be informed and take necessary action if the container has been selected for physical inspection, or to receive customs clearance without such inspection. (*European Monitoring Centre for Drugs and Drug Addiction 2022*)

According to a law enforcement official from Seaport Police, a unit of the Dutch Police who was interviewed in the press in 2021, 220 acts of corruption involving workers from shipping companies were identified in the port of Rotterdam in the previous two and a half years. (*Hoofd Zeehavenpolitie over corruptie in Rotterdamse haven: "Het staat gewoon open"* - NRC [no date])

Maybe the most well-known investigation that uncovered the largest corruption network in an EU port took place in 2020, when an ex-governor, a harbor master, three police officers, and a lawyer were among the 22 suspects arrested during an operation that led to the seizure of 11,5 tons of cocaine in the port of Antwerp. (*Recordvangst van 11,5 ton cocaïne gevonden in onderzoek naar ex-rijkswachter Willy Van Mechelen 2020*)

Workers in other large EU ports like Le Havre (France) or Alicante (Spain) have also been targeted by criminal networks and engaged to facilitate cocaine importation. Recruitment into corrupt activities is mostly carried out by offering large sums of cash or other valuable assets or services, but it can be also achieved using violence and intimidation. In fact, kidnappings and murders of port workers have been reported in recent years in various EU ports. (European Monitoring Centre for Drugs and Drug Addiction 2022; *Un docker havrais assassiné sur fond de trafic de stupéfiants* 2020)

According to prosecutors in Le Havre, truckers can receive a cut of between 10.000 and 20.000 euros for taking out the goods, while a crane driver can expect 50.000 euros, and the docker in charge of recruiting labor can expect between 150.000 and 200.000 euros. Dock workers are paid by drug traffickers to authorize the exit of containers or to move the ones with concealed drugs out of range of security cameras. Others lend their security access cards to the gangs in exchange for money for them to gain access to the terminal and carry out their operations. (Samuel 2023)

At the largest port in Europe in 2018, law enforcement authorities in Rotterdam began increasingly receiving reports of containers being stolen, disappearing, delivered at wrong addresses, or found abandoned in unexpected locations. The ports of Antwerp and Hamburg were also concerned.

The reason: criminal organizations had detected a vulnerability in the logistics chain, allowing them to illegally retrieve container reference codes, which are required to pick up containers at the terminals.

Shipping companies produce a unique container reference number for each shipping container once the transport has been paid. The code is transferred to the importer or the freight forwarder working on behalf of the importer, and from the freight forwarder/importer to the transport company picking up the container at the port of destination. The code will also be sent to the container terminal where the container will arrive so that the terminal can check if the container reference number provided by the transporter matches and the container can be handed over.

By using mainly corruption, criminals are able to infiltrate the companies involved in the logistics process and obtain the reference numbers of the containers where their drugs are transported. However, in some cases, they might even resort to hacking or phishing.

The codes are then provided to a corrupt truck driver working for a transport company, who picks up the container from the container terminal. Outside the port, the drugs are retrieved from the container and afterward, criminal networks will try to deliver the

container to the rightful owner to avoid raising suspicions. In other cases, containers are made to disappear or be abandoned somewhere.

According to Europol, law enforcement authorities in main EU ports suffer from a substantial underreporting of this modus operandi, so misappropriation of container reference codes or similar modi operandi goes largely undetected.

The highest bribes are logically paid to the most important actors in the logistics chain. For example, for the rip-on/rip-off or “switch method”, this could be a crane operator placing the container in an accessible location or a yard planner providing the exact stack position to the criminal organizations; for misappropriation of container reference codes, it is the employee with access to the code.

Although criminal organizations prefer using bribery as a method to convince port personnel to cooperate and to remain cooperative, when compromised personnel want to step out of a corruption network, criminals will not hesitate to resort to intimidation, blackmail, and even physical violence. (*Europol* 2023)

5. Indicators of concealed drugs inside shipping containers

Terminal de Reconocimientos Aduaneros de Alicante (TRAA) is a private firm that belongs to the Romeu group and has a state concession to perform customs services and serve as a custom warehouse in the Port of Alicante. TRAA has 3.469 m³ of warehousing facilities, office space, and yard where cargo can be immobilized until all necessary documentation is sorted out, all necessary inspections are carried out or all necessary samples are taken by the competent authorities such as health or phytosanitary authorities which will decide whether the cargo needs to be destroyed (in that case TRAA will contact a destruction company) or can be allowed to enter the country . That is usually the case, for example, of food products, medicine, plants, wood...

In the case of encountering any illicit drugs, law enforcement will be authority responsible to impound that cargo and proceed to its destruction.

One TRAA employee who preferred to remain anonymous agreed to grant a short interview which was mainly focused on indicators of concealed drugs inside shipping containers and techniques to detect them.

According to this source *“Identifying factors that a shipping container might contain illicit drugs requires a combination of intelligence, risk profiling, and targeted inspection strategies. None of the previously mentioned guarantees the presence of cocaine or other illicit substances, although there are several indicators that may raise suspicion and prompt further scrutiny.”*

The main indicators that may lead customs officers and law enforcement agents to believe shipping containers might carry illegal drugs are the following:

5.1. Suspicious origin or route:

As explained throughout this project, shipments coming from certain nations are prompted to raise more suspicions than others because they are considered high risk-countries. These are those regions known for drug production or trafficking activities. These high-risk routes are often referred as “hot routes”. In this category we could include shipments coming from Colombia, Bolivia, and Perú. But actually, nations that are associated with known drug transit routes and that are not main producing nations themselves or not producing nations at all such as Ecuador, Brazil, Suriname, Panama, Costa Rica, or Paraguay, are the ones with the highest probability of carrying illegal drugs.

5.2. Inconsistencies in documentation:

Shipments with discrepancies or inconsistencies in shipping documents are also prompted to raise suspicions. *“The process is fully automated. Within the EU, customs use a software named Taric SaaS which raises an alert in case there are discrepancies of documentation such as mismatched cargo descriptions, inaccurate manifest details, or incomplete paperwork. That can raise many suspicions. And if the system gives us a red alert, we will immediately call the Civil Guard for them to have that container inspected”.*

5.3. Unusual container characteristics

Any signs of tampering, alterations to the container structure, damage, any signs of tampering with the container seal, or suspicions of hidden compartments might suggest an attempt to smuggle drugs. *“If we see clear signs of tampering with the container seal, that will immediately be reason enough to take it to one of the warehouse’s loading docks and call in the Civil Guard and have the container inspected. It will be up to them whether to use sniffer dogs or not. If scanning is required, Customs (Agencia Tributaria) will show up too with a mobile scanner unit. In any case, we must be present the whole time for them to carry out the operations. The first thing they will do is to go over the documents, manifest, and seal number. If they need to seize any cargo believed to contain narcotics, they will wrap it up with a special black plastic packing and take it with them, if it is not related to drugs, they will wrap it in special packing too but leave it at the depot until the required process is completed (waiting for any samples to be analyzed, issuing the necessary fees to the customer or awaiting its destruction, for example)”.*

5.4. Abnormal weight discrepancies

Containers that are significantly overweight or underweight in relation to their declared cargo in the manifest can be a red flag. This might indicate that additional cargo, with the possibility of being illicit drugs, have been concealed within the container.

5.5. Unusual sealing or packing

As previously mentioned, if the sealing of a container appears to be tampered with, broken, or resealed using different methods, suspicion will be raised and an inspection of the contents of the container will be carried out.

Similarly, irregular packing methods, such as excessive use of wrapping materials or unusual cargo arrangements, may indicate efforts to hide illicit drugs.

Typically, legitimate shipments are organized and packed in a logical manner or a specific system to ensure efficient use of space and easy access to the goods. However, *“if customs officers identify a shipping container in which cargo appears to be randomly stacked, lacks a clear organization pattern or notice an imbalance weight distribution within the container, it may raise concerns about potential drug smuggling”* said the TRAA employee.

As far as wrapping is concerned, the presence of excessive wrapping materials, such as multiple layers of stretch film, plastic wrap or padding around cargo units, can indicate attempts to hide illicit drugs from customs officers and law enforcement agents. *“Drug smugglers might try to use additional layers around their drug shipments to act as a barrier to mask the scent of drugs from sniffer dogs or to challenge inspection officers attempting to identify suspicious items using X-ray or gamma-ray imaging technologies”*.

5.6. Intelligence-based information

Very likely the most valuable information and the one that can lead to the biggest drug busts. Intelligence gathered by law enforcement operations, informant tips, or international cooperation can provide crucial leads on specific containers containing cocaine hauls.

6. Inspections used to detect drugs in shipping containers

6.1. Visual inspection

Visual inspection is the most basic method in shipping container inspection. It involves the manual inspection of both the exterior and interior of the container to look for signs of tampering or suspicious activity. *“Inspectors look for irregularities such as broken seals, signs of forced entry, or any hidden compartments”* said the TRAA source. However, visual inspection alone in most cases is insufficient to detect concealed drugs as smugglers have become increasingly creative in their smuggling methods. This method is usually used in combination with sniffer dogs to increase its effectiveness. If it is necessary, cargo will be taken out of the container to create a passage for authorities to have access to the entire length of the container and facilitate its inspection.

6.2. X-ray Scanning

X-ray scanning is a widely used non-intrusive inspection method used to detect concealed drugs and other contraband inside shipping containers, which uses high-energy X-rays to penetrate the container, producing images that allow inspectors to identify any hidden objects. X-ray scanners can quickly scan large volumes of maritime shipping containers, producing images that allow inspectors to identify any illicit cargo without physical intrusion required. Trained inspectors analyze the X-ray images in order to look for anomalies or any suspicious shapes that may indicate the presence of concealed drugs.

In cases where suspicious items or areas are identified by the scanner operator, further physical inspection or canine detection may be carried out to confirm the presence of illicit substances.



*Figure 25: New Rapsican Eagle M60 mobile unit scanner at the Port of Barcelona
(Source: Novologistica.com)*

In the summer of 2020, the port of Barcelona added a new Rapsican Eagle M60 mobile unit scanner which is fitted with an extendable arm mounted X-ray system capable of inspecting containers on trucks and other types of vehicles up to 3,6 meters wide and 5 meters high and no length limit. The technology used in this model, which has a power of up to 6 mega electron-volts - which allows it to generate highly penetrating X-rays - and incorporates specific image analysis software, guaranteeing maximum reliability and quality of the images of the container content, clearly differentiating the different materials it contains and facilitating the separation of objects. It also incorporates an automatic recognition system for container codes and truck license plates.

The scanner is operated by driving the mobile unit alongside the container to be inspected with its extendable arm going over the full length of the container mounted on the truck. (*El Port de Barcelona pone en servicio un nuevo escáner para contenedores* / Novologistica.com 2020)

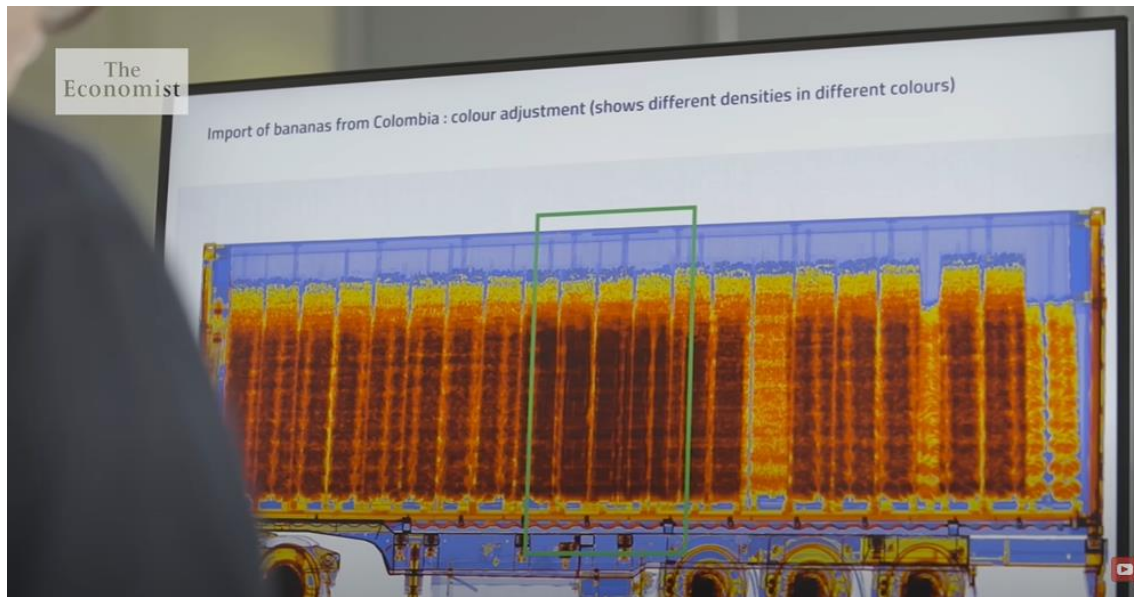


Figure 26: Image produced by the scanner showing a darker mass that turned up to be 2 tons of concealed cocaine within the cargo (Source: YouTube. Why Belgium is now the cocaine capital of Europe 2022)

6.3. Canine detection (Sniffer dogs)

Sniffer dogs are specially trained to detect the scent of drugs and they can be highly effective in container inspections. Sniffer dogs can be used to quickly scan a large number of containers, and their detection capabilities are not affected by the presence of other odors. However, the effectiveness of sniffer dogs can be influenced by factors such as the training quality, weather conditions, and the level of distraction of the inspection environment. (*Detection dog* 2023)

“They can be deployed in a variety of ways: by letting them move free inside the container to sniff through the cargo (they might need to be lifted up to access the contents of the container if the cargo is stacked up high), by taking cargo out of the container to create a passage to facilitate access to all the container contents, or by taking out cargo outside the container for the dogs to sniff it outside” said the source from TRAA.



Figure 27: A customs agent in Le Havre carrying out an inspection in search of concealed cocaine with a sniffer dog inside a shipping container (Source: Charly Triballeau/AFP)

It is important to note that these methods are often used in combination, and their choice strongly depends on factors such as available resources, operational requirements, and the level of suspicion associated with a particular container.

Additionally, ongoing research and development continue to explore new methods and technologies to improve the efficiency and accuracy of concealed illicit drugs in maritime shipping containers.

7. Future trend

Everything indicates that despite all efforts, authorities will never be able to shut down container trafficking since it is impossible to inspect even a small fraction of the hundreds of millions of containers that are moved worldwide. And even if they manage to make it difficult enough for drug smugglers to consider turning elsewhere, traffickers will come up with new methods and turn to other ports with fewer risks.

Sailing vessels which are now becoming more accessible in price and easier to pilot, are increasingly being dispatched from countries such as Brazil, Suriname, Venezuela, and the Caribbean. And in the past few years, European authorities have intercepted for the first time in European waters semi-submersibles built to ship cocaine.

7.1. Growing cocaine production and political chaos throughout Latin America

The supply of cocaine to Europe is not expected to decrease in the near future, as cultivation of coca appears set to remain steady or even increase in the three main producer countries of Colombia, Peru, and Bolivia.

In the main producing nation Colombia, the government is not only struggling to recover economically from the Covid-19 pandemic but also struggling to deal with increased violence and social unrest. The United States, aware of the explosive growth of cocaine production, is pushing to restart the aerial spraying of coca crops in Colombia with glyphosate chemicals. Nevertheless, many sectors of Colombian society oppose this measure because of the damage these chemicals cause to the environment and public health.

On the other hand, Peru and Bolivia are living through their own political crises and civil unrest which lead the fight against drugs to fall far down the list of government priorities despite the alarming rising of coca cultivation. (McDermott 2021b)

7.2. Continuing expansion of the European drug market

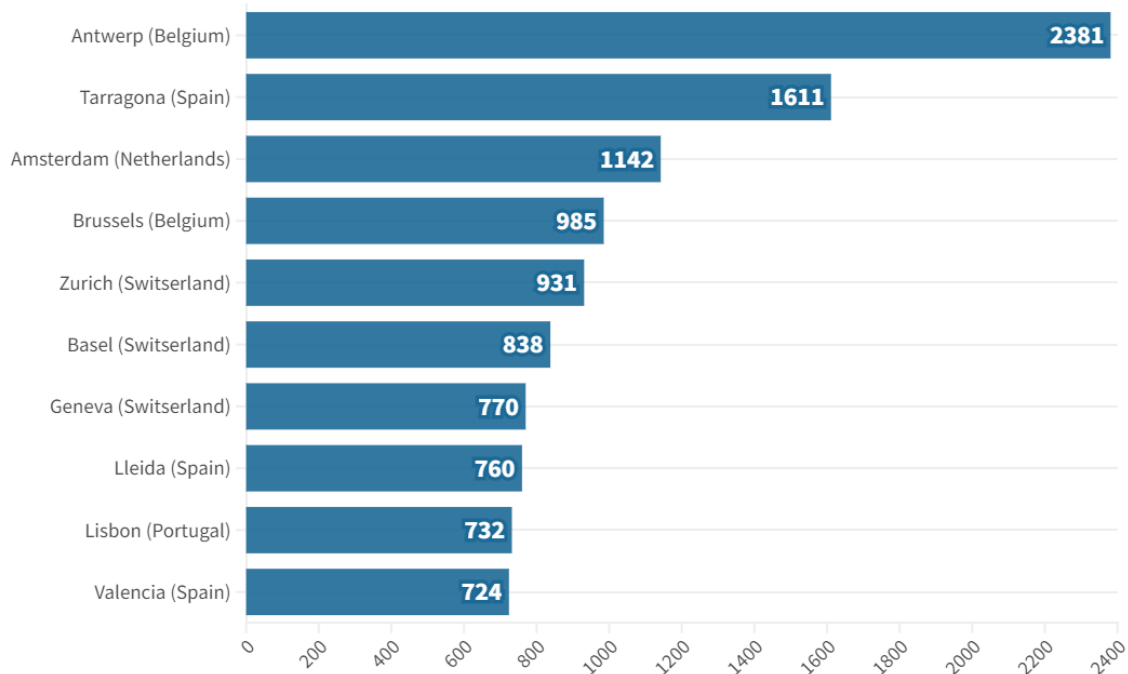
According to statistics from the EU, the availability of cocaine in Europe is at an all-time high, and consumption keeps rising year after year, being Western and Southern European countries the ones with the highest rates.

In 2022, the European Monitoring Centre for Drugs and Addiction (EMCDDA), measured residues of cocaine, as well other drugs, from wastewater treatment plants in 104 European cities for one week. The wastewater findings confirmed that the consumption of cocaine in Europe has increased more than ever before.

Belgium's biggest port city saw a 50% increase in the amount of cocaine detected in its wastewater from 2021 to 2022, with a cocaine concentration of 2.381 milligrams per 1.000 of population per day (almost twice as much as its nearest competitor). (Held 2023)

Cocaine Consumption - Top 10 Cities 2022

■ mg/1000p/day



Source: [EMCDDA](#) • Data from a study in which 104 cities participated

Figure 28: Cocaine consumption – Top 10 cities 2022 (Source: European Monitoring Centre for Drugs and Drug Addiction)

However, the EU's 2019 Drugs Markets Report also reported evidence of expanding retail markets in northern and eastern Europe.

7.3. Development of different smuggling methods

As cocaine seizures increase in ports, traffickers are starting to come up with new methods for transporting drugs across the Atlantic as well as new methods to smuggle them into Europe from transit areas.

According to experts in European law enforcement, once authorities hit 20 percent of seizures, then a tipping point is reached in which traffickers start switching methods, so we may be about to see a change in the system of how cocaine is smuggled into Europe. And that is the case of torpedoes being used, which are stuck to the hull of cargo ships, or narco-submarines, with the first one able to cross the Atlantic to Europe being discovered in 2019 off the Galician coast carrying three tons of cocaine, which served as a wake-up call to all of those involved in fighting drug trafficking. (McDermott 2021b)

7.3.1. More narco-submarines on the way

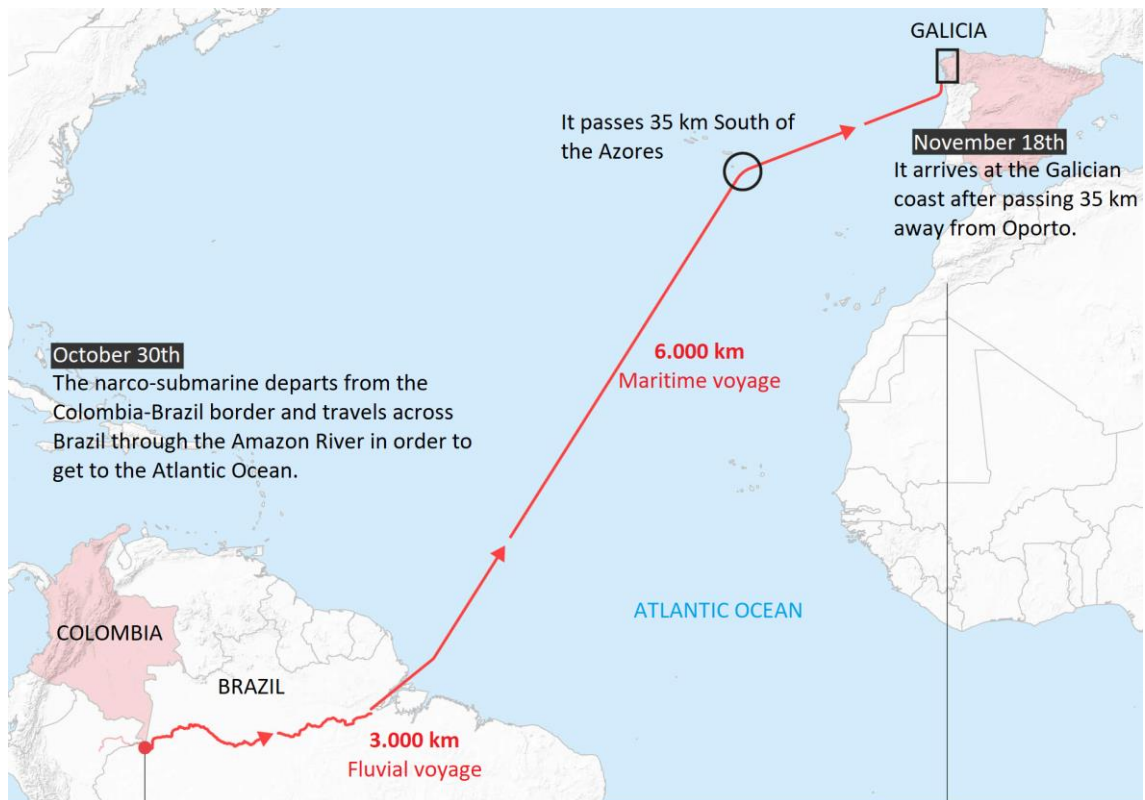
"They are very hard to detect. In fact, in more than 20 years of traffickers using submarines to reach Africa and Europe these two are the first we've seized" said Antonio Martinez Duarte, the chief commissioner of the anti-drug brigade of the Spanish National Police for the BBC.

Law enforcement agencies from Europe and the Americas have evidence of semi-submersible vessels having been used for more than 20 years to transport large quantities of cocaine from producing nations to European countries. They are usually built in the jungle to avoid raising suspicions and later launched across the ocean. In fact, police believe that in the middle of the Atlantic Ocean, around the Canary Islands and the Azores, there is a mass graveyard of cocaine submarines deliberately sunk after successful voyages. (Cocaine: Flooding Europe 2023)



Figure 29: Narco-submarine seized in 2019 off the coast of Galicia (Source: InSight Crime)

The second one to ever be intercepted in European waters coming from Latin America was in November 2022, that one too off the Spanish coast, with a length of 20 m and 3.000 kilos of cocaine on board after a 26-day journey from Colombia to Galicia. (Cocaine: Flooding Europe 2023)



The narco-submarine travels almost 3.000 km of the Amazon River that separate Leticia (Colombia) from Macapá (Brazil) to reach the Atlantic Ocean.

For six days it sails between Fisterra and Aldán awaiting instructions.



After these six days, due to the lack of clear instructions, the crew decides to sink the submarine to come back later and retrieve the drugs.

Figure 30: Voyage made by a narco-submarine carrying 3.000 kg of cocaine on board.

Source (Source: EL PAÍS)

Just last March of 2023, off the coast of Galicia the third-ever intercepted narco-submarine in European waters was found, although this one was empty.

And just last May 2023, the largest-ever narco-sub, with a length of 30 meters and 3 meters wide, was intercepted and decommissioned by the Colombian navy in the Pacific with 3 tons of cocaine found on board. That last one is the 228th semi-submergible or submergible to be decommissioned by the Colombian navy so far since 1993. (*Incautado el semisumergible de mayor dimensión navegando con alcaloides en el Pacífico colombiano* | Armada Nacional 2023)

The current trend suggests that many others may be on the way. And criminal organizations are now said to be developing automated subs to get their drugs to Europe, with no skipper or crew needed. (*Cocaine: Flooding Europe* 2023)

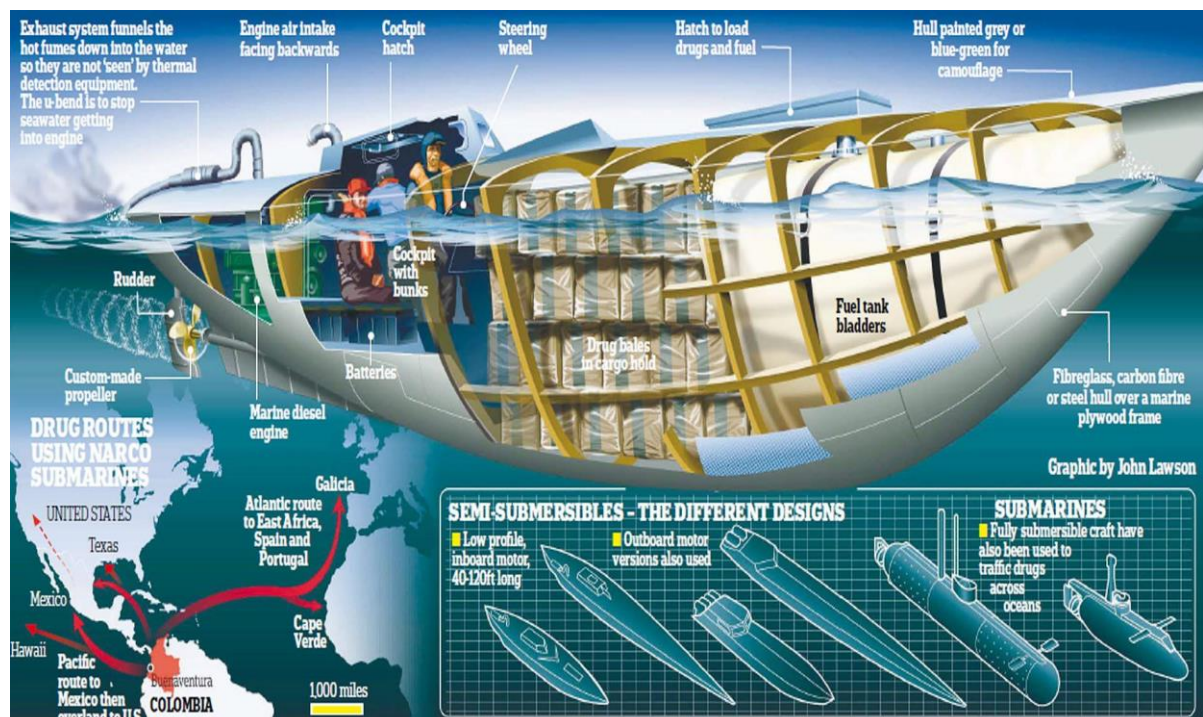


Figure 31: Inside of a narco-sub, typologies, and most common routes for drug smuggling (Source: John Lawson / Daily Mail Online)

7.3.2. Use of well-established hashish traffic routes to smuggle cocaine with go-fast boats

In May 2023, the Spanish Civil Guard from its land-based surveillance system (SIVE) detected a go-fast boat heading towards the coast of Barbate (Cádiz). The drug smugglers managed to escape leaving behind 22 packages of cocaine with a total weight of around 772 kg.

As the Civil Guard pointed out, this attempt to smuggle drugs into Spain is quite significant since it is the first time that a load of cocaine has been intervened on the Cadiz coast using the same go-fast boats used to traffic bundles of hashish. (*Intervenido por primera vez un gran alijo de cocaína en una narcolancha en Cádiz* 2023)

In Southern Spain, cocaine usually arrives via shipping containers through the port of Algeciras or in small recreational vessels, while hashish has always been smuggled with go-fast boats coming from North Africa. (*Llambrich* 2023)

Sources in the Spanish Civil Guard stated back in April 2023 after an investigation, that *“Organizations dedicated to hashish trafficking have established strong links with organizations dedicated to cocaine trafficking”* (*Las gomas del hachís que entran por Cádiz se usan cada vez más para llevar cocaína* 2023). Once they bring the cocaine from South America, they use the African route in both directions by taking advantage of its well-established “infrastructure” said the chief of the cannabis group of the Central Narcotics Brigade of the Spanish National Police José Francisco Podio. According to him, the hashish leaves Morocco in the direction of America and in the opposite direction cocaine travels across the Atlantic landing on the West Coast of Africa, to later be transported to the peninsula by truck, small recreational vessels and now by go-fast boats more than ever. (*Llambrich* 2023)

7.4. Increasingly sophisticated game of hide and seek in container traffic

Container shipping will remain the main way to move large shipments of cocaine into Europe. Even though increasing resources will be destined to improve the tracking, detection, and seizure of illegal drugs, criminal organizations will keep changing their modus operandi to camouflage their shipments.

The diversification of cocaine routes into Europe will continue too, with traffickers focusing on different ports to insert their drugs into containers. Ports in nations such as Uruguay and Chile with little history of drug trafficking are becoming more and more popular for traffickers.

The rip-on/rip-off technique will keep on the rise, and traffickers will keep using shipments from legitimate companies exporting legitimate products to hide their drugs without the knowledge of the owners, avoiding European authorities to profile suspect companies and points of departure. (*McDermott 2021b*)

7.5. Australia, Asia, and New Zealand worth the trek for traffickers

Another reality is that a lot of cocaine is just passing through Europe to be sent on its way to other parts of the world, and some markets such as the Chinese and Australian are being increasingly developed, with the last one being especially lucrative, where a kilo of cocaine, depending on purity, may sell for as much as 400.000 Australian dollars (266.00 USD) in the country's eastern cities and with the drug retailing for as much as 350 UDS per gram according to the Australian federal police in August 2022. Similar prices can be fetched in New Zealand, making the two countries among the most lucrative cocaine markets in the world. (*McDermott 2021b; Mistler-Ferguson 2023*)

The signs of the entry into these markets of big-time traffickers are pretty clear. Previously, countries in Asia and Oceania were mostly fed by small-volume trafficking using mules or courier mail. Now, these countries have begun to see maritime shipping containers arriving at their ports with hundreds and even thousands of kilos of cocaine. In September 2019, Malaysian authorities seized 12 tons of cocaine in one shipment alone. (*Bargent 2021*) And just last March of 2023, 2,4 tonnes of cocaine worth 677 million USD were seized in Australia's biggest ever drug bust after a joint operation between U.S. and Australian authorities. (*Butler 2023*)

7.6. The use of encryption technology

The use of encryption technology has taken a new significance in recent years. With numerous arrests made by the Dutch police in July 2020 when European law enforcement hacked the EncroChat system. (McDermott 2021b)

And huge drug seizures including 10 tons of cocaine. Dutch police made also the gruesome discovery in a Dutch village near the border with Belgium of maritime shipping containers that had been converted by one criminal organization into prisons and a soundproof torture chamber containing a dentist's chair, handcuffs, pliers, and scalpels.

In an increasingly globalized world, EncroChat vastly improved the connectivity of Europe's criminal organizations. Nonetheless, *"its strength was also its weakness; once the police gained access to the network, they were able, in an unprecedented way, to tap into a major nerve center of European organized crime."*

Despite all of that, rival gangs will have no problem stepping into the spaces left by those who got arrested, having put too much trust in an app. (Daly 2020)

8. Actions to address current threats and increase preparedness

To combat international criminal organizations and the high-value targets leading and coordinating, responsible for smuggling narcotics into Europe, international information exchange or operational, strategic, and tactical information is crucial to set up a coordinated approach.

The infiltration of ports by criminal organizations is a major threat for the security of the EU. To tackle that threat, a common Europe-wide approach needs to be implemented, since international criminal organizations will continuously look for loopholes in security, adapting and coming up with new sophisticated techniques to smuggle and pass their drugs through all controls and inspections as much as possible, or they will switch from one port to another seeking more favorable conditions for their operations. (Europol 2023)

8.1. Target the brokers, key facilitators and enablers

These high-value targets play a key role in the current operating model of the cocaine market by facilitating large-scale trafficking of the drug in Europe. Operational actions specially focused on these individuals may have a high impact on disrupting the cocaine market. (*European Monitoring Centre for Drugs and Drug Addiction 2022*)

8.2. Invest in screening technologies

The deployment of the most effective screening technologies for the detection of cocaine in containers, vehicles, and ships needs to be increased at key ports and airports. Higher investment in research and development has the potential to improve the efficiency of screening processes. (*European Monitoring Centre for Drugs and Drug Addiction 2022*)

8.3. Strengthen international cooperation

Further enhance international cooperation and conduct joint operations between member states, the EU, and key international stakeholders working to reduce the supply of cocaine, as well as key international partners including Bolivia, Brazil, Colombia, Ecuador, Peru as well as Mexico, and the United States.

Also invest further in intelligence capabilities to gather and analyze information on cocaine smuggling networks, routes, and coordinate efforts with naval forces, coast guards and international organizations to disrupt drug trafficking networks. (*European Monitoring Centre for Drugs and Drug Addiction 2022*)

According to the chief commissioner of the anti-drug brigade of the Spanish National Police Antonio Martínez Duarte “We are in the midst of a cocaine crisis. All the European countries are fighting together.”

When asked to choose just one thing which he believed could change everything and make it much easier for law enforcement fighting drug trafficking, he stated: *“International cooperation is, I believe the best tool we have to fight against drug trafficking and the drug criminal networks. Drug trafficking goes hand in hand with many problems. Corruption, environmental damage, money laundering, destabilization of countries... Some countries are very badly affected”* (Cocaine: Flooding Europe 2023)

8.4. Invest in awareness-raising, training, and support capacity development at key entry points

Raise awareness and provide training to EU and Member State level to customs, police, and other law enforcement agencies working to fight drug smuggling on drug trafficking routes. The knowledge, expertise, and good practices should also be transferred to smaller ports that can serve as secondary drug entry points with the possibility of becoming main drug entry points in the coming years.

8.5. The use of smart containers as a possible solution

In both the public and private sectors some are betting on technology for solutions.

Some are betting on expanding the use of smart containers, which collect and transmit data on the container’s geolocation as well as temperature fluctuations and door openings, notifying shippers about any suspicious activities such as unexpected containers’ stops on land, theft attempts or any attempts of tampering to the container. (*Traxens container tracking solutions for risk management* 2023). Some others are also betting on the use of electronic custom seals, which send real-time information about the container movements. (Ramírez 2021)

To this day, shipping companies like Maersk, MSC, and CMA have already deployed this technology (developed by Marseille-based start-up TRAXENS) (*Traxens: Shipping container tracking* 2023)

Nevertheless, it is highly unlikely that this technology will ever be implemented at such a level to shut down drug trafficking via containers. The main reason being its high cost

and complications to install. Besides, they can also lose signal at sea, creating a window of opportunity for traffickers to contaminate containers. (*Ramírez 2021*)

8.6. Further invest in public awareness, education and rehabilitation

The most effective way to combat drug smuggling into Europe is to reduce the current high demand of illegal drugs making criminals' operations less profitable.

To do so, countries need to further invest in launching public awareness campaigns as well as promoting drug prevention programs in schools and communities to educate citizens about the dangers of drug use and the harm drug criminal organizations are inflicting to countries, hence reducing overall demand.

On the other hand, there needs to be further allocation of resources for drug addiction treatment and rehabilitation programs to help individuals recover from cocaine addiction and reduce the demand for drugs.

9. Conclusions

The smuggling of illicit drugs into Europe by sea presents a significant challenge to global law enforcement agencies. The methods used by criminal organizations to traffic drugs constantly evolve, demanding continuous improvements in inspection techniques when it comes to drugs being smuggled into shipping containers, and also a change of field of action as we continue seeing new methods of drug smuggling other than using shipping containers like the use of narco-submarines, strapping contraband to vessel hulls or in terms of drop-offs in open waters.

Combating this crisis and disrupting the operations of criminal networks requires the integration of advanced technologies, better preparedness at points of entry of drugs, international cooperation, effective intelligence sharing, the implementation of stringent anti-corruption measures together with the strengthening of legislation and penalties for drug smugglers, and the need for integrity within the maritime industry.

However, while efforts to intercept drug shipments and dismantle trafficking networks are crucial, the end for illicit drugs being smuggled into Europe really comes down to reducing the demand for drugs within the continent. Every other measure will only provide temporary relief.

Reducing demand directly impacts the profitability of drug trafficking organizations, making it less financially viable for them to continue their operations and weakens the incentives for smuggling drugs into Europe.

The demand for illicit drugs in Europe creates a profitable market that entice criminal organizations to engage in drug smuggling into the continent, and as long as there continues to be a high demand for cocaine in Europe, drug traffickers will keep making sure there is enough cocaine feeding the market.

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