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Research Paper

Reliable drug war data: The Consolidated Counterdrug Database and cocaine interdiction in the "Transit Zone"

Kendra McSweeney

Department of Geography, 1036 Derby Hall, 154 North Oval Mall, Ohio State University, Columbus, OH 43210-1341 United States

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ABSTRACT

Background: For almost three decades, a U.S. government dataset has vetted and recorded all known cocaine trafficking events in the massive Western Hemisphere 'transit zone' (including Central America, the Caribbean, eastern Pacific, and Mexico) and tracked all cocaine seizures reported by counternarcotic forces there. This is the "cocaine module" of the Consolidated Counterdrug Database (CCDB), and by U.S. law it is the exclusive source for performance data on key aspects of the drug interdiction mission, one of the foundations of U.S. supply-side drug policy. Nevertheless, the dataset remains poorly known or used among drug policy researchers despite being unclassified. To make the existence and strengths of this dataset better known, this paper describes its provenance, ongoing production, and analytical utility.

Methods: The analysis draws on the archive of reports produced by the Government Accountability Office (GAO), an independent, non-partisan entity that has been tracking U.S. government agencies' drug war accounting for almost 50 years. The analysis also relies on third-party assessments of interdiction, and on correspondence with staff in the Office of National Drug Control Policy.

Results: The CCDB emerged in the 1990s following two decades of drug war failures in the transit zone. It is an "all source" product, which curates data from a variety of sources produced by the 26 U.S. agencies and 20 foreign partners involved in transit zone interdiction. There is a high threshold for inclusion of cocaine trafficking events into the CCDB; it therefore offers a highly reliable yet conservative representation of cocaine trafficking and counternarcotic response. Instances of CCDB data in the public record yield several insights: a) the volume of cocaine moving annually through the transit zone has for the past decade well exceeded 1,000 MT/year; b) cocaine seizures in the transit zone are greater than anywhere else, and significantly higher than indicated by the UNODC's World Drug Reports; c) interdiction appears to have little to no effect on cocaine prices in the U.S.; d) interdiction is highly "outcome-ineffective"; in FY2018, for example, the U.S. and partners intercepted only 6% of the cocaine trafficking events known to have occurred in the transit zone that year; e) traffickers respond quickly and constantly to interdiction by shifting their routes and transport strategies.

Conclusion: The CCDB deserves greater attention from researchers as a high-quality dataset that: a) challenges the "unknowability" of illicit activities and underscores the need for better sharing of unclassified government data; b) opens up new ways of exploring drug enforcement policies and actions in transit areas; c) contradicts rosy assessments of drug interdiction effectiveness by unequivocally demonstrating interdiction's longstanding and persistent failure and thus the need for fundamentally different approaches.

Introduction

Every three months, a remarkable meeting takes place. Usually held in the headquarters of the Joint Interagency Task Force-South (JIATF-S) in Key West, Florida, the meeting convenes representatives from the U.S. executive, military, intelligence, and law enforcement communities, who may be joined by liaison officers from Mexico, from nations of the Caribbean, Central and South America, and by government counterparts from the United Kingdom and other European countries (GAO, 2002; 2006; OIG, 2010; 2016a).

Over several days, they meet to review evidence from the previous quarter about the smuggling of cocaine through the Western Hemisphere "transit zone"—the more than seven million square mile area that encompasses the Caribbean and Gulf of Mexico, Central America, Mexico and the eastern Pacific Ocean. The transit zone links the so-called South American cocaine "source zone" to the Mexico/U.S. border "arrival zone" (GAO, 2002; 2014; 2018b), although not all cocaine entering the transit zone is destined for the U.S. (DEA, 2018). Of

E-mail address: mcsweeney.14@osu.edu.

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all global spaces through which cocaine is trafficked, this transit area sees both the largest cocaine volumes and the most interception (ONDCP, 2016; Seelke *et al.*, 2011). The meeting includes representatives of all the key U.S. agencies and international partners involved in the cocaine interdiction mission, and they meet to ensure that all known information about transit zone trafficking events—whether intercepted or not—is properly validated for official curation into the "cocaine module" of the Consolidated Counterdrug Database (CCDB) (GAO, 2019; USCG, 2017).

The meeting is noteworthy for several reasons. For one, it is an unusually sustained example of focused inter-agency cooperation within the federal government: some version of this meeting has been held for at least a quarter-century. Second, the meeting demonstrates the seemingly unparalleled care taken by the U.S. government to work with multiple other nations to document the extra-territorial transport of an illicit commodity. Third: the CCDB—the product of these meetings—is by law the exclusive source of performance data on key aspects of the drug interdiction mission (GAO, 2018b), which is one of the most sustained and costly pillars of the long-running U.S. 'drug war.' It is therefore remarkable that the CCDB, its purpose, and the conditions under which it is produced appear to be poorly known outside of the federal counterdrug agencies. For example, the CCDB is not listed in 'Federal Sources of Drug Data' (Manski *et al.*, 2001) or in Data.gov. Nor is it cited in the United Nations' annual World Drug Report. Besides its use by the author and colleagues (e.g., Magliocca *et al.*, 2019; Sesnie *et al.*, 2017), a Google Scholar search yielded no other academic publications that use CCDB data.

The goal of this paper is to draw attention to this dataset, for three reasons.

(1) To critically engage drug researchers' assertions that reliable data on clandestine activities are either non-existent or classified, and that the conditions under which the U.S. and other countries produce data on the drug war are so opaque, or so politicized, that the results are inevitably dubious (see, e.g., Reuter and Greenfield, 2001; Robinson and Scherlen, 2014; Thoumi, 2005). In contrast, I describe how the CCDB emerged from a well-documented push-and-pull between U.S. drug control agencies and Congress that was mediated by the Government Accountability Office (GAO), resulting in the CCDB's explicit design as a dispassionate and vetted corrective to prior data problems. I show that the conditions under which the dataset is produced today are knowable, and that the resulting dataset, while imperfect, is sufficiently robust and declassified to merit greater use and critical engagement by researchers, especially in comparison with better-known but more problematic sources of drug data.
(2) To help correct for the relative analytical neglect of transit spaces in the already sparse research on the nature and impacts of drug enforcement (see, e.g., Caulkins, 2017; Greenfield and Paoli, 2017). Compared with attention to law enforcement in spaces of cocaine production or cocaine consumption, very little research has focused on U.S.-led interdiction efforts in the spaces between, despite the fact that transit areas are where drug volumes concentrate, where traffickers are most vulnerable, and where the drug war apparatus is particularly well-developed (Paterson and Robinson, 2014). Since the CCDB logs all known cocaine shipments through the transit zone and records all successful seizures there, it offers an unparalleled means to 'open up' the dynamics of military and law enforcement activities in this "black-boxed" portion of the cocaine supply chain.
(3) Finally, the paper explores how CCDB data represent both an authoritative and scathing indictment of interdiction effectiveness—revealing, for example, that in FY2018, the U.S. and partner nations intercepted only "six percent of known drug movements" through the transit zone (Faller 2019:12). As such, greater awareness of the high-quality, vetted CCDB archive should catalyze and inform a clear-eyed re-assessment of alternatives. This is particularly urgent because interdiction and associated 'drug war' initiatives are deeply implicated in a devastating array of social, economic, political, and ecological harms in transit-zone countries (Bartilow and Eom, 2009; Keefer and Loayza, 2010; McSweeney *et al.* 2014; Paoli, Greenfield, Reuter, 2012).

To meet these goals, I draw from two types of public information.

Reports by government "watchdogs." The U.S. Government Accountability Office (known until 2004 as the General Accounting Office) has produced 50-odd reports on transit zone interdiction and related operations since at least 1979; all are available on-line. The GAO was founded in 1921 as an independent, non-partisan entity that investigates how and with what efficiency taxpayer dollars are spent. GAO reports are initiated either by specific requests from Congress, or are mandated by law (Norton and Murphy Smith 2008). For example, the GAO must routinely exam the programs and operations of the White House's Office of National Drug Control Policy (ONDCP), the Department of Defense's (DoD) own assessments of its anti-drug activities, and the Coast Guard's interdiction performance goals (GAO, 1988b, 2010b, 2018a). The GAO's role in auditing interdiction activities appears to have expanded since 2010's Government Performance and Results Modernization Act, "which requires agencies to develop annual and long-term goals and measures and to report annually on progress towards them" (Lewis and Steinhoff 2019:23).

GAO reports typically feature some historical contextualization of the target issue and close analysis of qualitative and quantitative data, which the Office is empowered to compel from government agencies. Written in a dispassionate and sometimes acerbic style, GAO reports are deliberate checks on the "spin" that characterizes individual agencies' own reports of their cost- and outcome-effectiveness, which is a well-documented problem in the case of the drug war (see, e.g., Andreas and Greenhill, 2010; Robinson and Scherlen, 2014; Thoumi, 2005). All told, GAO reports represent some of the most accessible and synthetic public records of the activities of federal drug war actors.

But GAO reports do more than simply scrutinize counterdrug agency performance. One of the strengths of the GAO—and in contrast to its less powerful counterparts in the UK and elsewhere—is that it also has the power to compel federal agencies to respond in writing to their reports, and submit those responses to the GAO and to two Senate and two House committees (Norton and Murphy Smith 2008). These (sometimes prickly) responses are then included in the final GAO reports, and can then serve as a baseline against which the target agency is evaluated in the next round. This published intra-government back-and-forth reveals the extent to which the GAO acts to push agencies to more rigorously and transparently account for their activities. As such, the archive of interdiction-related GAO reports is a dataset in its own right, showing how counternarcotic agencies have evolved their activities and accounting procedures in response to Congressional pressures and auditors' scrutiny.

Other government reports consulted here include those produced by agency-specific inspector generals (e.g., DODIG, 2019) and by the Congressional Research Service (a component of the Library of Congress).

Other data sources: a) Third-party analyses and audits of interdiction performance proved useful for understanding how the CCDB is structured and maintained. These reports were commissioned by government agencies such as ONDCP and the Department of Homeland Security (DHS) but produced by think tanks and data analytics firms such as the RAND Corporation, Institute for Defense Analysis, and Abt Associates; b) On-line materials found through Google searches, including military-school theses, Congressional testimonies, and job ads. These helped to shed light on the circulation of CCDB data and the scope and role of the civilian contractor network that maintains it; c) On three occasions between 2013 and 2019, I requested declassified CCDB data from responsive ONDCP staff. That correspondence, mainly

conducted by email, helped to clarify issues of data access, structure, and reliability. The CCDB User's Manual itself is classified.

The next section describes how the CCDB came about. Part III responds to the call by Andreas and Greenhill (2010) for critical assessment of data produced by the state about criminal activities. I describe the dataset itself, and the multi-stage process by which cocaine trafficking events are sourced and vetted for the cocaine module, and by whom, with attention to the resulting biases, conservatism, and overall reliability. Part IV then explores what CCDB data tell us about drug war dynamics; Part V concludes with a review of how the CCDB: a) underscores the need for better sharing of unclassified government data; b) opens up new ways of exploring drug enforcement policies and actions in drug transit areas; c) demonstrates the long-term failure of interdiction and the critical need for policy alternatives.

Origins of the CCDB

The U.S. has a long history of attempting to intercept illicit commodities heading for its shores (Andreas, 2013). The modern era of interdiction began about 1965, when federal budgets for drug law enforcement increased (GAO, 1979). President Nixon extended that mandate in 1971 with his "war on drugs," and the Drug Enforcement Agency (DEA) was created in 1973 to lead it. Cocaine was an early target, and the Coast Guard was tasked with intercepting shipments then moving primarily through the eastern Caribbean. Originally only a law enforcement operation, the drug war was effectively militarized in 1986 during the so-called "crack epidemic," when the DoD became the lead federal counternarcotics agency (GAO, 1988a, 1991a). By 1988, inter-agency frictions around drug war strategies led to the creation of ONDCP as an executive oversight office to guide counterdrug policy and report to Congress (GAO, 2002). In 1994, the DoD formed the Joint Inter-Agency Task Forces (JIATFs). JIATF-South (originally JIATF-East), under the U.S. Southern Command, was tasked with the improved coordination of counterdrug field operations, especially interdiction, in the Western Hemisphere (GAO, 1996; 2002; 2019).

International interdiction of cocaine has been a bedrock of U.S. counternarcotic 'supply-side' policies from the start. Other supply-side approaches include crop eradication, anti-money laundering initiatives, foreign assistance sanctions, and more (Wyler, 2008). The logic for interdiction seems straightforward. By seizing cocaine destined for the U.S., interdiction should cause costly disruptions to traffickers' business and should lead to supply shortages (GAO, 2006). This should increase the street price of cocaine in the U.S., dissuading its use. From the very beginning, however, achieving these effects proved elusive. Cocaine volumes seized offshore in the 1970s and 1980s were tiny relative to quantities consumed in the U.S., and proved ineffective in reversing the steady decline in U.S. cocaine prices (GAO, 1988a).

The reasons for that ineffectiveness are well documented in the government record. Reports with titles such as *Drug Control: Interdiction Efforts in Central America have had Little Impact on the Flow of Drugs* (GAO, 1994) laid out how counter-drug forces faced inconsistent funding, aging assets, poor inter-agency operational coordination (GAO, 1992; 1997), inter-agency frictions around intelligence and asset sharing (GAO, 1983), and a general inability to reliably patrol the vast and growing transit zone (GAO, 1993a). So-called "partner nations," moreover, had inadequate law enforcement capabilities, political will, or legal structures, and they struggled with corruption (GAO, 1997). Meanwhile, traffickers enriched by massive drug profits were reported to outfox counterdrug efforts at every turn—financially, technologically, organizationally, and operationally (GAO, 1983, 1988a, 1991a).

Nevertheless, funding for interdiction surged in the 1980s (Boyum and Reuter, 2005; GAO, 1988a; 1991b). Congress' willingness to approve funding without demonstrable results was (in part) the result of repeated assertions by DoD, DEA, ONDCP and the Coast Guard that, first, interdiction exercises held symbolic value by demonstrating the "national will" to "protect the security and well-being of U.S. citizens" (GAO, 1993a:19). Second, they argued that they could "win" the drug war if they were just well enough resourced to meet their targets: in 1989, the goal was to intercept 50% of incoming cocaine by 1999, a year later, the goal was 65% (GAO, 1991a; 1993a).

One of the problems that counternarcotics agencies faced, however, was that they couldn't reliably calculate that interception rate. They had good data on how many kilograms they were seizing, but lacked reliable 'denominator' data about the overall northward cocaine flow: "After nearly six years of military surveillance…the government remains unable to obtain such essential information as the amount of cocaine shipped to the United States" (GAO, 1993a:24). Absent this information, the ONDCP was unable to properly fulfill its mandate. For two decades (1980s and 1990s), the GAO consistently pointed out that meaningful interdiction performance assessment required improved understanding of trafficker activities, including better intelligence assets to generate data on trafficking and better infrastructure for managing and using the data—a key part of which was to understand how much drugs traffickers were actually moving (see, e.g., GAO, 1983, 1988a, 1991a, 1991b, 1993b, 1997, 1999).

In fact, a method for estimating the total flow of cocaine through the transit zone *had* been in place since 1978. In that year, the National Narcotics Intelligence Consumers Committee (NNICC) was formed to coordinate drug-related intelligence, and, among other things, to supply regular estimates of transit zone cocaine flows (NNICC, 1987). These estimates were eventually used by the ONDCP's mandated Annual Assessment of Cocaine Movement (later known as the Interagency Assessment of Cocaine Movement, or IACM) (ONDCP, 2001). The problem was that these estimates were generated through the 'production-consumption' or 'accounting' method. This method relied on three highly problematic data inputs: a) notoriously inexact estimates of total cocaine production in South America (those problems continue; see, e.g., UNODC, 2018; 2019b); b) dubious estimates of total cocaine consumption in the U.S. (see Midgette *et al.*, 2019 for current state), and c) the amount of cocaine seized en route, where double-counting was a known problem (GAO, 1983). Not surprisingly, the cocaine flow estimates derived by the NICCP propagated the already large error terms in the source datasets, leaving lawmakers frustrated by wide-ranging estimates that were useless for operational or reporting purposes (GAO, 1991a; 1993a; 2002).

By the beginning of the 1990s, ONDCP was under pressure: its Congressional reauthorization was contingent, in part, on its ability to "develop performance measures to evaluate major drug control efforts… [and] incorporate those measures into future drug control strategies" (GAO, 1993b:3). In response, the Office created the Interagency Counterdrug Performance Assessment Working Group to "maintain a database of known drug shipments in the transit zone." Data would be compiled from a variety of existing databases, domestic and foreign (GAO, 1992; 2002).

Thus was born what would become known as the CCDB, the first source for estimates of international cocaine flow based exclusively on intelligence-based and operational awareness of *actual* cocaine trafficking events (Bybee *et al.*, 2011; ONDCP, 2001). (Developed first for cocaine, other drug modules would later be added to the CCDB data structure. In what follows, all references to "CCDB" refer to the cocaine module only.) The 1997 Interagency Assessment of Cocaine Movement was the first to integrate some data from the new CCDB (GAO, 2002; ONDCP, 2002).

From its inception, the CCDB offered larger and more accurate estimates of cocaine flow than production/consumption estimates, exceeding the latter by as much as 700 metric tons (MT) (Bailey *et al.*, 2016; ONDCP, 2001). But U.S. interdiction agencies were slow to adopt the improved denominator data in measuring their performance. A GAO report (2010a:32) suggests why:

> In fiscal year 2009, the Coast Guard revised its methodology for measuring drug interdiction performance by using the Consolidated

> Counter Drug Database (CCDB)… Coast Guard states that the CCDB quarterly, event-based estimates are historically more than 60 percent higher than the annual production- and consumption- based estimates which had previously been used. This could make it appear as though Coast Guard performance dropped from fiscal year 2008.

In other words, by adopting the larger and more accurate CCDB denominator data, national drug control agencies' interdiction efforts were shown to be less effective. Perhaps as a result, many agencies, including ONDCP, persisted in their use of "problematic" production/consumption estimates for many years after CCDB data became available (GAO, 2006:25).

Over the past decade, however, an increasing number of counternarcotic agencies have adopted the CCDB, often under pressure to comply with new standards for performance reporting (OIG, 2016a; 2016b; GAO, 2006; 2010b). Within the DHS, the Coast Guard adopted the CCDB in 2009 to generate its "cocaine removal rate" (USCG, 2017:14; OIG, 2016a). By 2010, the ONDCP was mandated to use the CCDB as the "sole" source for its annual summary of cocaine flow and interdiction performance in the transit zone (ONDCP, 2010). Within the DoD, JIATF-South routinely uses CCDB data in its 'Performance Summary Reports' (see, e.g., DODIG, 2017), for which it has been praised as unusually compliant for a DoD unit (GAO, 2019; DODIG, 2019).

How the CCDB records cocaine trafficking in the transit zone

Before describing how CCDB data are populated, vetted, and mobilized, it is helpful to look more closely at the process of transit zone interdiction itself. Here is how the GAO (2018b:30) sums it up:

> A typical case…could start with receipt of actionable law enforcement information from the Drug Enforcement Administration. This information prompts the deployment of a Customs and Border Protection or Coast Guard plane that subsequently detects and monitors a suspect vessel until Joint Interagency Task Force South can deploy a Coast Guard, U.S. Navy, or allied government's ship with an on-board law enforcement detachment to investigate. When the deployed ship arrives at the vessel's location, the Coast Guard assumes control of the investigation. If the suspect vessel is not registered in the United States, the Coast Guard commander implements a bilateral agreement with the vessel's country of registration to confirm the vessel's nationality and to stop, board, and search the vessel for drugs. If drugs are found, the State Department, Department of Justice, and the vessel's country of registry coordinate jurisdiction over, and disposition of, the vessel, drugs, and crew.

This hypothetical transit zone cocaine interdiction scenario emphasizes the degree of inter-agency and international coordination and cooperation required (see also GAO, 2014). All told, interdiction operations involve 26 US agencies and 20 foreign partners (GAO, 2018b; see also Tidd, 2018). It is the job of U.S. Interdiction Coordinator (USIC), appointed by the ONDCP Director, to oversee, *ex post facto*, the process by which every known drug trafficking event and its aftermath is officially recorded in the CCDB, ideally within three months of the event's occurrence (GAO, 2002). Reporting to the USIC is the Chair of the CCDB, who works closely with the DoD's Defense Intelligence Agency (DIA) to develop the data collection and validation protocols used across the CCDB data infrastructure (Bybee *et al.*, 2011). The Chair also coordinates with the combatant commands that manage the area-specific drug modules. The cocaine module is managed out of the JIATF-S because its area of responsibility encompasses all cocaine production areas and the air/sea routes along which the drug is first exported from South America (GAO, 2019).

The CCDB Chair also compiles agency-specific performance summaries into an annual interdiction Performance Assessment Review "based solely on Consolidated Counterdrug Database" (ONDCP, 2010). That classified report then informs the USIC's annual Reports to Congress on the success and scope of National Drug Control Programs. Those classified reports then inform the National Drug Control Strategy and other ONDCP products, public and classified (ONDCP, 2010).

Data security and access

The CCDB is not currently publically searchable. However, CCDB data are de-classified a year after being vetted by the Working Group (GAO, 2002). I requested aggregate CCDB data via emails to the Interdiction Coordinator's office at the ONDCP. Despite the staff's helpfulness, the process was ad-hoc and long (months to years). This was apparently partly due to the classified information that remains embedded within the CCDB data structure, which identifies original data providers, including undercover agents or informants (GAO, 2002). Those identifiers have to be stripped prior to public dissemination, a slow process that could be made slower by source-data discrepancies—especially in older records—that analysts had to reconcile when aggregating data in response to my specific data requests. According to ONDCP staff, it is preferable to obtain CCDB data via Freedom of Information Act (FOIA) requests, presumably because that process officially prioritizes the request and possibly initiates a formal data cleaning process.[1]

Populating the database

Database structure. The CCDB contains unique identifiers for each vetted cocaine trafficking event, from early 1991 to the present (ONDCP, 2001). Corresponding to each are fields including: dates, times, geographical details (on origin, trajectory, and end point), the type and identifying features of the conveyance(s) used, and the volume of cocaine present, given in kg or metric tons (MT) (Bybee *et al.*, 2011; GAO, 2002; 2017). Also recorded is whether the cocaine was "delivered" (i.e., no interdiction), "seized" (taken into custody) or "lost" (meaning that the drugs were jettisoned, destroyed by traffickers, or that the traffickers were turned back). "Seized" and "lost" cocaine is considered to be cocaine that is "removed" from the supply chain (ONDCP, 2016).

If the smuggling event originated in South America it is labeled a "primary movement"; if its origin is from (a transshipment point within) the transit zone, it is labeled as a "secondary" movement (cocaine hydrochloride is not produced in any meaningful quantities within the transit zone). Movements are labeled as "maritime" or "air" depending on the conveyance type. Each event record also identifies which interdiction actor—U.S. or foreign—first logged it (i.e., the "event creator" or "data owner") and the "detection asset" that initiated an operational response to it. A narrative of any interdiction action can also be included (Bybee *et al.*, 2011).

Source data. The CCDB is an "all source" product, meaning that it consolidates data on cocaine smuggling from any reliable source, domestic and foreign (GAO, 2019). In most cases, events are first logged by U.S. agencies based on a variety of intelligence sources, including wiretaps, satellite imagery, radar data, and financial transactions. Especially important is the so-called "human intelligence" on impending trafficking events that is provided by on-the-ground informants and channeled through the DoD's Tactical Analysis Teams, which are based in U.S. consulates and embassies throughout the region (GAO, 2006; 2018b; Munsing and Lamb 2011). A majority of these observations are first logged in to the DIA's classified HELIOS database as "drug movement alerts" (DODIG, 2018; 2019; GAO, 2019).

[1] The ONDCP has processed many FOIA requests in recent years (topics unknown); there are backlogs (see https://www.whitehouse.gov/wp-content/uploads/2018/03/2018-Report.pdf)

CCDB analysts are also tasked with pulling "candidate trafficking events" from the network of databases maintained by U.S. agencies, including—among others—the Defense Information Systems Agency's ADNET-Plus, the DIA's HELIOS, the DHS's Regional Information Sharing System, the DEA's National Seizure System, and the Federation Aviation Administration's Aircraft Registration System (DODIG, 2018; GAO, 1992; 1998). CCDB analysts also source data from the interdiction reports of Coast Guard and other JIATF-S members, intelligence reports from the Coast Guard's Atlantic and Pacific Maritime Intelligence Fusion Centers, "and other authoritative sources for cocaine production, trafficking, and consumption information" (USCG, 2017:A-10).

An unusual feature of the CCDB is the extent to which it consolidates data from foreign sources. Because the transit zone includes Dutch, British, and French island territories, and because cocaine is transshipped through the region to ports in Spain, Belgium, and the Netherlands (and elsewhere), the CCDB also includes records contributed by INTERPOL, the United Kingdom's Serious Organized Crime Agency, EUROPOL, the World Customs Organization, and the EU's Maritime Analysis and Operation Centre (Narcotics) (Joint Chiefs of Staff, 2007; ONDCP, 2015). Data are also sourced from military and law enforcement agencies in transit zone partner nations. This type of inter-country data-sharing is facilitated by the fact that the U.S. has invested heavily in supporting the intelligence-gathering capabilities of Mexican, Central American, and Caribbean governments, and in developing a data-sharing infrastructure to facilitate the integration of that intelligence into the CCDB and other federal data repositories (GAO, 2008; INCSR, 2004; Tidd, 2018).

Data completeness. Source data are not always complete. To fill in missing data fields, CCDB analysts may estimate conveyance type, cocaine volume, and destination. For example, specific boat type might be imputed from the boat's known speed and trajectory (its 'operational profile'). Similarly, unless a known event resulted in a drug seizure, analysts estimate the volume of cocaine on board from the known cargo capacity of that type of boat or aircraft (GAO, 2017; USCG, 2017).

Data validation

"Candidate" trafficking events that are uploaded into the database are reviewed at the CCDB Working Group's meeting, when they are judged on whether they meet the intelligence threshold for permanent inclusion in the CCDB. According to the GAO, "…the accuracy of the [CCDB] comes in large part from the opportunity for interagency discussion and review of information in the database" (GAO, 2002:25).

Almost half of candidate trafficking events are rejected. For example, between FY2013–2018, an average of 5,509 drug movement alerts per year were logged into the HELIOS system—that is, actual or impending instances of cocaine smuggling (by air or water). Of these, 46% were excluded from the CCDB for lack of sufficient corroborating evidence of cocaine on board (DODIG, 2017, 2019; see also Bybee *et al.*, 2011; GAO, 2006).

Data compatibility over time. Since the CCDB's inception, there have been changes in how data are gathered, the rules used to vet data for inclusion, and changes to the ways that data, once included in the CCDB infrastructure, are categorized. For example, in 2004, improvements in "intelligence cueing" allowed JIATF-S to identify and monitor more smuggling events (Munsing and Lamb 2011); in the same year, analysts set a higher threshold for the subsequent inclusion of suspect drug trafficking flights (GAO, 2006). Also: for many years, vetted data were assigned a ranking based on the Working Group's level of confidence in the accuracy of the information, distinguishing between "confirmed," "substantiated," and "suspect" events (Bybee *et al.*, 2011; GAO 2017a). This categorization system created reporting confusion and analytical uncertainty (e.g., Bailey *et al.*, 2016; Kilmer *et al.*, 2014). The system now appears to have lapsed: since about 2015, all CCDB-listed cocaine smuggling events have been deemed "high confidence" (DODIG 2019:12). Overall, these changes can complicate longitudinal analysis of CCDB data, particularly before 2015, and can result in significant variation in reported interdiction effectiveness rates prior to that year.

Data uniqueness and de-confliction. The complexity of the inter-agency interdiction mission makes it likely that different agencies log the same event in their own internal databases, raising the possibility of double-counting when data are aggregated in the CCDB. A major task for CCDB analysts is to "de-conflict" redundant data (GAO, 2002). A related and long-standing problem is that more than one agency might seek to claim primary credit for either detecting or interdicting a given trafficking event. A crucial part of the CCDB Working Group meetings is therefore to adjudicate any inter-agency tensions about the attribution of drug movement detections and drug seizures (GAO, 2002).

Database accuracy

The CCDB aspires to capture the universe of cocaine trafficking across a vast area. Not surprisingly, there are at least three types of gap in its coverage (ONDCP, 2001). First: it does not routinely capture the unknown amount of cocaine that is smuggled in container ships and other commercial vessels (GAO, 2017; ONDCP, 2002). This is in part because JIATF-S concentrates its intelligence-gathering and interdiction on the anomalous boat-traffic patterns that better signal smuggling events (GAO, 2014; 2019).

Second, as a database that is informed by JIATF-S activities and overseen by its staff, it is most reliable in recording JIATF-S' primary target: bulk cocaine trafficking events heading northward out of South America (GAO, 2014). While partner nations and U.S. law-enforcement (e.g., DEA) contribute data on subsequent secondary trafficking events and seizures along overland or coastal routes, these are relatively under-reported in the database (GAO, 2006; ONDCP, 2001).

Third, counternarcotic forces in the transit zone know the most about cocaine trafficking in places where intelligence-gathering and interdiction assets are concentrated. Those places include specific geographical "choke points" or otherwise heavily-used smuggling routes (e.g., GAO, 2014). Thus the CCDB is likely to under-represent (to an unknown degree) smuggling through areas not 'spotlighted' by interdiction operations; an intelligence weakness that CCDB staff refer to as the "spotlight effect." As a result, "The CCDB is as much a measure of situational awareness as of actual movements and is sensitive to resource allocation and distribution of intelligence and collection assets" (Bailey *et al.*, 2016:54; see also GAO, 2014; ONDCP 2001). Further, counterdrug intelligence can be slow to pivot its focus when traffickers shift their routes to new areas, leading to temporal gaps in the coverage of trafficking (Bailey *et al.*, 2016; GAO, 2008).

These gaps in coverage mean that the CCDB presents only a partial picture of transit zone smuggling (GAO, 2014), and the ONDCP acknowledges that the CCDB will always be a "conservative baseline" of cocaine flow. However, the careful vetting of trafficking events prior to their inclusion in the CCDB is considered the database's greatest strength (Bybee *et al.*, 2011; GAO, 2017), such that

> The CCDB event-based estimates are the best available authoritative source for estimating known illicit drug flow through the Transit Zone. All event data contained in the CCDB is deemed to be…as accurate, complete and unbiased in presentation and substance as possible…(DODIG, 2018:12).

Certainly, as a database populated with corroborated observations of cocaine trafficking events, the CCDB is far more reliable than U.S. government datasets that indirectly estimate some other parts of the cocaine supply chain (Finklea, 2019; GAO, 2006). For example, figures on South American cocaine production and on U.S. cocaine consumption are not measured directly but are derived from proxy sources that invariably yield more uncertain estimates (see Robinson and Scherlen 2014; Kilmer *et al.*, 2014; Midgette *et al.*, 2019). CCDB data are also a far better source for transnational cocaine flow estimates than those produced by the United Nations Office on Drugs and Crime (UNODC)

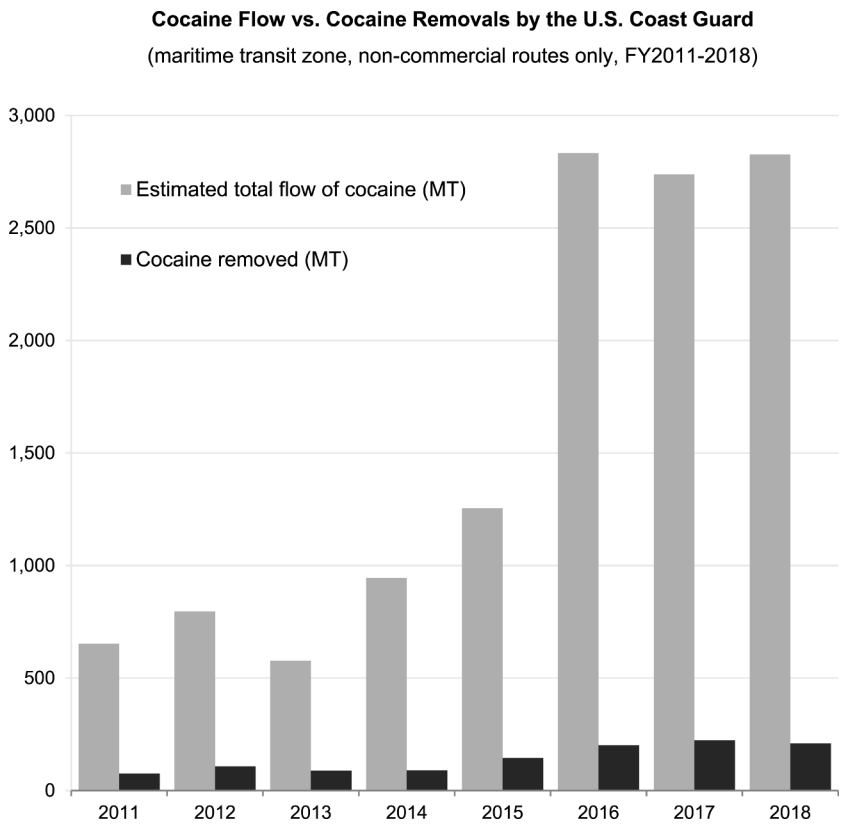


Fig. 1. CCDB-derived estimates of total volume (MT) of cocaine moving through the maritime transit zone in non-commercial vessels (light gray) with the amount intercepted by the Coast Guard (dark gray), FY2011-2018. Source: OIG (2016, 2017, 2019).

for its annual World Drug Reports, because the latter are based largely on member countries' "very uneven" reported cocaine seizures (UNODC, 2019b:50) (UNODC does not systematically source data from the CCDB).

Insights from the CCDB

What does the CCDB tell us about the cocaine trade and related counternarcotic efforts? Below, I pull examples from the public record; where possible, I briefly highlight how and why those insights might differ from accounts derived from other drug datasets.

Cocaine flows

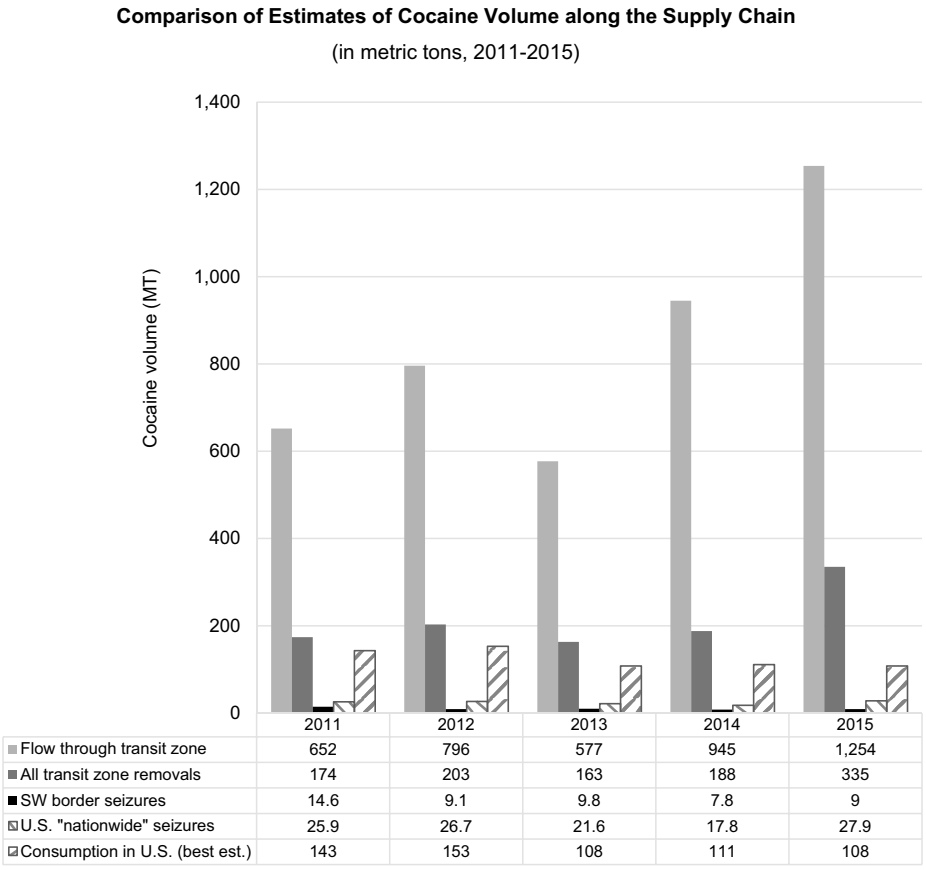
CCDB data reported by the Coast Guard suggest that an average of 1,500 MT of cocaine per year were trafficked through the non-commercial maritime routes of the transit zone between 2011 and 2018 (Fig. 1). This number may seem unrealistically high to readers familiar with government estimates of cocaine consumption in the U.S., which in the same period rarely exceeded 200 MT/year (Midgette *et al.*, 2019 see Fig. 2). Some of the discrepancy is explained by the fact that a portion of that transit zone flow is intercepted overseas or in the U.S., some is consumed en route, and some is trans-shipped to non-U.S. markets (Bailey *et al.* 2016; ONDCP, 2016). Even so, it remains difficult to reconcile the significant gap between estimated flow volumes and consumption estimates. The problem has been noted by some analysts, who have explained it by emphasizing uncertainties and inconsistencies in the CCDB data (Bailey *et al.* 2016; GAO 2014; Kilmer *et al.* 2014). To date, these explanations have stood unchallenged (see, e.g., Atkinson, Kress, & Szechtman, 2017).

With a better understanding of the CCDB's fundamental reliability and conservativism, and with improved CCDB data since 2015, however, other explanations for the discrepancy between transit flow volumes and U.S. consumption estimates merit further exploration. These include but are not limited to the possibilities that: (1) there is stockpiling and creative inventory management by traffickers (see, e.g., Kilmer *et al.* 2014); (2) the transit zone has become a more important international transshipment point for cocaine than is typically recognized, especially in light of growing markets in Europe, Asia, and elsewhere (Bagley, 2015; DEA, 2018); and (3) more cocaine is used in the U.S. than is currently captured by government consumption estimation models, which are recognized to have significant weaknesses (Manski *et al.* 2001; Midgette *et al.*, 2019).

Cocaine removals

CCDB data also offer a fine-grained and geo-specific picture of U.S. and partner nations' ability to "remove" cocaine from the transit zone flow. Over twenty years (1996–2015), for example, transit zone cocaine removals totaled 3,679 MT, or about 43% of all cocaine seizures worldwide and considerably more than was seized in South America in the same period (ONDCP, 2016; see Fig. 3). Also, as cocaine production has recently surged in Colombia, the U.S. and partner nations are intercepting more than ever: 335 MT in 2015, which was then an all-time high (OIG 2016b); in 2017, the Coast Guard alone seized an agency record of 224 MT (USCG, 2017).

CCDB data include all known cocaine seizures, regardless of attribution, whether seized within specific countries or on the high seas. They can therefore be difficult to compare with cocaine seizure data reported by the UNODC in its annual World Drug Reports, which rely



	2011	2012	2013	2014	2015
Flow through transit zone	652	796	577	945	1,254
All transit zone removals	174	203	163	188	335
SW border seizures	14.6	9.1	9.8	7.8	9
U.S. "nationwide" seizures	25.9	26.7	21.6	17.8	27.9
Consumption in U.S. (best est.)	143	153	108	111	108

Fig. 2. Comparing cocaine flow, seizure, and consumption estimates, 2011–2015 (date range for which comparable data available). Not shown: estimates of cocaine consumption in transit zone. Source data: (1) Transit-zone flow: OIG (2016, 2017, 2019); data given by Fiscal Year; (2) Cocaine removals in transit zone: ONDCP (2016:180); data given by Calendar Year (CY); (3) Seizures on the Southwest (SW) border and within the U.S.: DEA (2018:52); data by CY, converted from kg; (4) Consumption estimates: Midgette *et al.* (2019: xiv); data by CY; "best" or mid-range estimate used.

on unverified reports of domestic seizures that are submitted by an irregular subset of member states (UNODC 2019b).

Nevertheless, comparison of the two datasets suggests that the widely-circulated UNODC data may significantly misrepresent the total amount of pure cocaine that is seized annually world-wide, and for geographically misattributing those seizures. For example, data tables provided online with the latest World Drug Report (UNODC 2019a) show that between 2012 and 2014, 18 countries in the transit zone reported cocaine seizures ("purity unadjusted") that totaled 271 MT (Fig. 4). During the same period, CCDB data reported by ONDCP (2016)

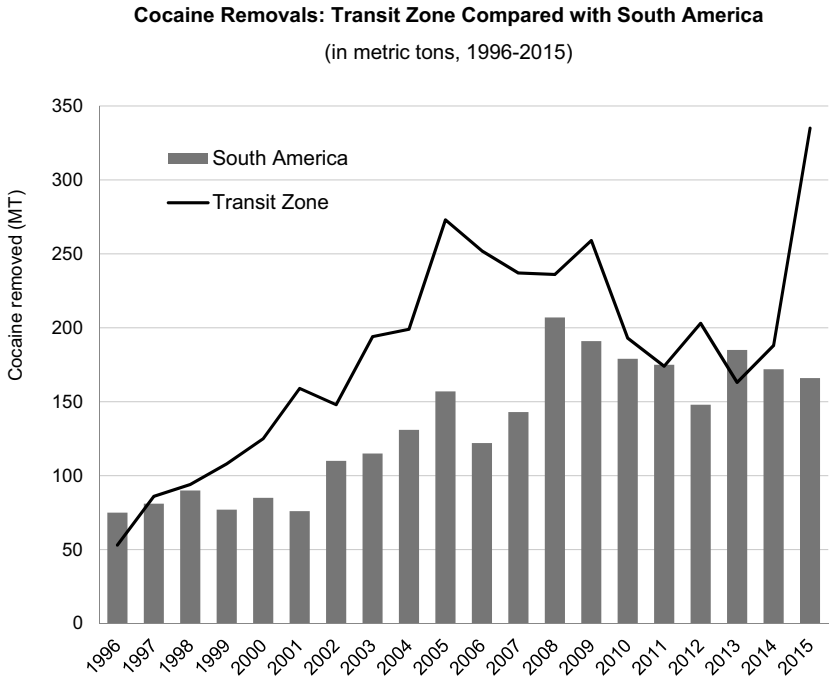


Fig. 3. CCDB-derived estimates of metric tons of cocaine removed (seized or lost) from transit zone and from South American countries (FY1996–2015). Source: ONDCP (2016).

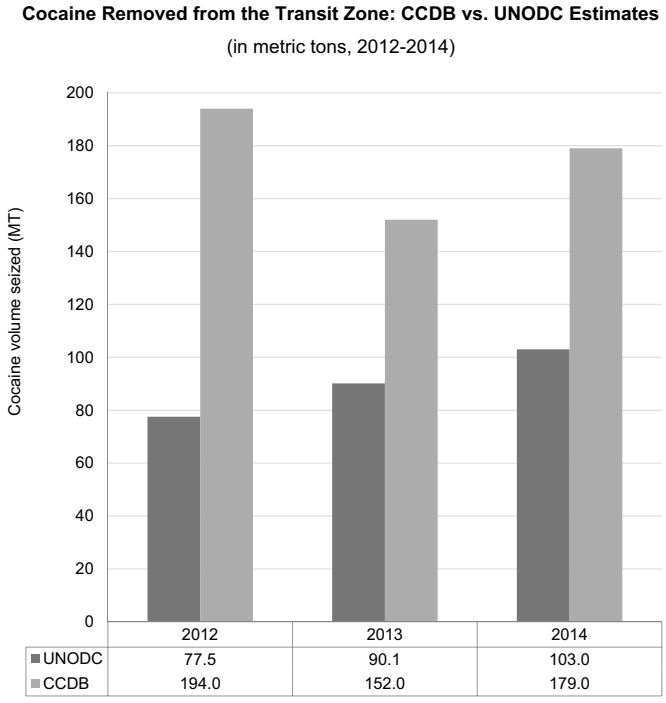


Fig. 4. Cocaine seizure volumes (MT) in the transit zone: CCDB vs UNODC based estimates, 2012–2014. Sources: (1) For CCDB data: ONDCP (2016); (2) for UNODC data: downloaded from https://dataunodc.un.org/drugs/seizures-2017. Notes: CCDB data include all verified cocaine removals (seizures and losses; the share of each is not given) in the "Transit Zone to U.S. Markets" category, which includes "Mexico, Central America, high seas along the Mexican/Central American Corridor (including eastern Pacific), and the Caribbean Sea" (ONDCP, 2016: 180). UNODC data include all reported seizures of cocaine salts or seizures of "non-specified" "cocaine-type" drug. Seizures of crack cocaine and coca paste/cocaine base not included; seizures converted from kg to MT. Countries/territories reporting: Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama, Mexico, Aruba, Bahamas, Cuba, Dominica, Dominican Republic, Grenada, Haiti, Jamaica, Puerto Rico, Trinidad & Tobago. Not all countries reported seizures in all years.

suggest more than twice that amount was seized in those countries and in surrounding waters: 525 MT ("high purity"). While this comparison is necessarily crude, other significant discrepancies[2] between UNODC's and ONDCP's reports on international cocaine seizures suggest systemic problems with the reported UNODC data, notwithstanding their ongoing importance in assessing global drug policies (see, e.g., UNODC, 2019a).

The effect of interdiction on cocaine prices

In 2001, the ONDCP commissioned a report that used CCDB data to assess the impact of interdiction operations on cocaine prices (ONDCP 2001). The results showed that coordinated military operations in the transit zone had, at best, ephemeral and localized effects on wholesale cocaine prices in the U.S., which continued their significant decline over the study period, from about $46/gram in 1991 to under $30/gram in 2000, despite steadily increasing funding for interdiction (ONDCP, 2001). No more recent work appears to have replicated this CCDB-based approach (cf. Pollack and Reuter, 2014).

The outcome-effectiveness of interdiction

How effective is the interdiction mission at intercepting cocaine in the transit zone? The DoD's performance audits show that, on average, all counternarcotic actions only intercepted 7.5% of CCDB-listed cocaine smuggling events over six years (2013–2018) (DODIG, 2017; 2019; see Fig. 5). Similarly, the Coast Guard's seemingly impressive 2017 seizures represented only 8.2% of the transit zone cocaine flow that it targeted (non-commercial, maritime). In other words, while the Coast Guard may have removed 224 MT from the supply chain that year, at least 2,500 MT more moved unimpeded (see also Fig. 1).

How can we think about these numbers? By agencies' own estimates, they routinely fall below the decreasing targets that agencies set for themselves, as they did throughout the 2000s (GAO, 2010c). For example, in nine years of setting "realistic" CCDB-based cocaine removal targets (GAO, 2014:19), the Coast Guard has exceeded its target only once (Fig. 6). Tellingly, the anomalous result was considered an artifact of spotlight bias in the CCDB data rather than improved Coast Guard performance (GAO 2014:20-21).

These data tell a very different story about law enforcement effectiveness than do ONDCP's public statements (see Robinson and Scherlen 2014). They also differ sharply in message from the most recent World Drug Report produced by the UN Office on Drugs and Crime (UNODC). That Report offers data on production and seizures[3] that—notwithstanding significant variations in purity—appear to suggest that as much as 64.5% of global cocaine production is seized. The Report interprets this as an indicator of the effectiveness and efficiency of law enforcement and international counternarcotic cooperation (UNODC, 2019a:1,19). CCDB data show that in the transit zone at least—where the world's greatest volume of cocaine is trafficked and intercepted—the actual cocaine removal rate is almost an order of magnitude smaller.

That said, some reports that do reference CCDB data post interdiction success rates well above 60%. For example, an Institute for National Strategic Studies report describes the "stellar performance" of JIATF-S, which "was able to disrupt 87 percent of all events it monitored" (Munsing and Lamb 2011:1, 69). Similarly, the DoD's latest auditor report indicates that 69% of "detected [cocaine trafficking] events were successfully handed-off to interdiction and apprehension sources" (DODIG, 2019:11; see also GAO, 2019).

These elevated rates reflect the DoD's practice of measuring aspects of the interdiction process, not its outcome. Thus actual instances of cocaine seizure are not measured against the total number of trafficking events, but against the (tiny) subset of those events for which DoD ships and planes have been able to directly monitor the trafficking vessel and to initiate a response. The numbers are important for highlighting the effectiveness with which counternarcotics forces deploy scarce assets and for demonstrating the success of targeted operations. However, if circulated without reference to this context, these numbers can be mistaken for evidence of the rate at which all cocaine trafficking events are intercepted, thus misrepresenting the overall success of the interdiction mission (see, e.g., Wyler, 2008).

Traffickers' response to interdiction

Why are counternarcotic actions so ineffective? Military and policy analysts alike have long pointed to traffickers' ability to innovate in response to enforcement effort, particularly in terms of how they move through space (Toth and Mitchell, 2018; Windle and Farrell, 2012; GAO 1979; GAO, 2008). CCDB data offer quantitative corroboration of this dynamic. In the 1990s, for example, CCDB data showed that smugglers responded to a decade of aggressive interdiction operations by

[2] Compare, for example, Table 156 (ONDCP 2016) with Fig. 9 (UNODC 2019a).

[3] The Report describes 1976 MT of (pure) cocaine produced globally in 2017, of which 1,275 MT (purity unadjusted) were seized (UNODC, 2019a:1,318).

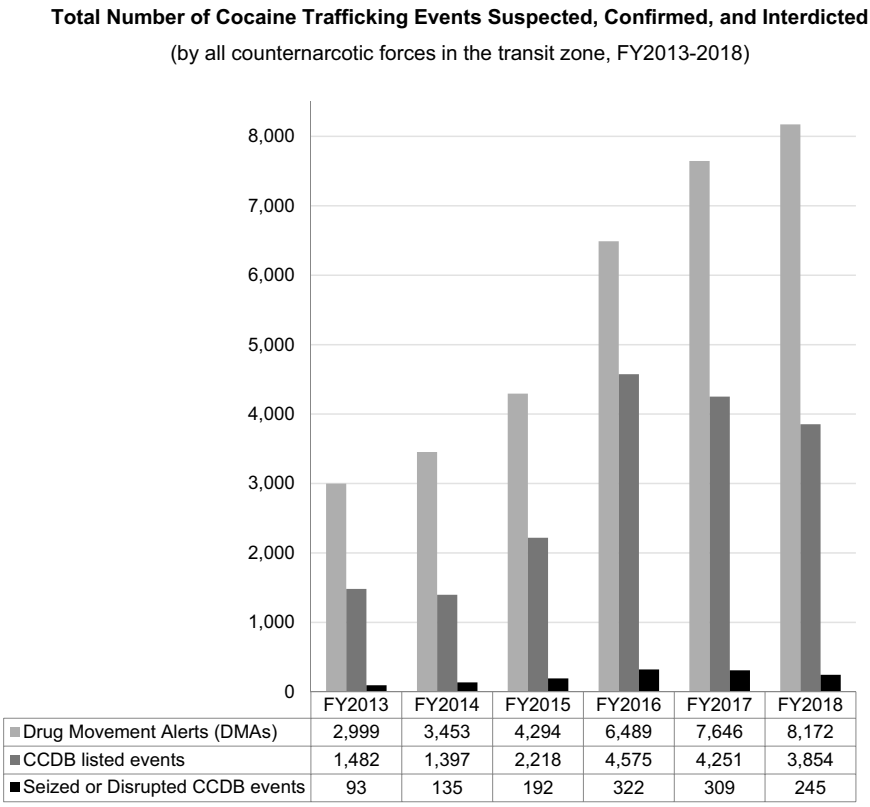


Fig. 5. Total number of maritime and air trafficking events logged in the Western Hemisphere Transit Zone as "drug movement alerts," with the share of those that were eventually included in the CCDB, and of those, the number that resulted in a successful interdiction. Source data: DODIG (2018, 2019).

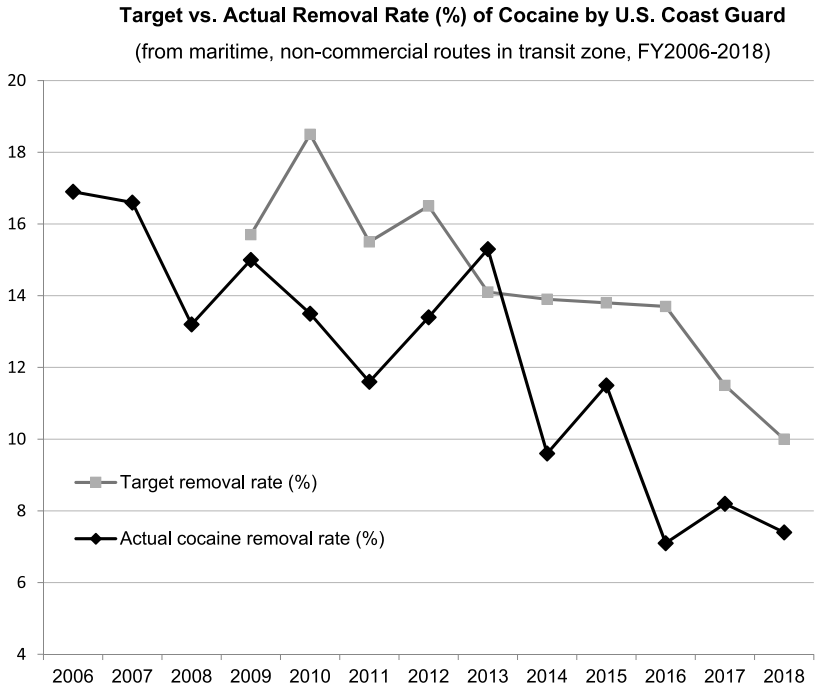


Fig. 6. Share of cocaine removed by the U.S. Coast Guard from the total amount known to be moving through the non-commerical routes of the transit zone: actual vs. target rates (%) (FY2009–2018). Source data: OIG Series 'Review of U.S. Coast Guard's FY—Drug Control Performance Summary Report' (2014, 2016, 2017–2019), and US Coast Guard Performance Summary Reports (2009–2011).

developing new air and maritime routes through the eastern and western Caribbean, and by initiating new multi-modal (maritime/air/road) routes through Central America and the eastern Pacific (GAO, 1996, 1997; see also UNODC 2012).

A 2001 ONDCP report using CCDB data showed that those spatial adjustments could be rapid: over only one year (1998), traffickers changed their primary routes and the types of planes/boats they used, and in the process expanded the trafficking area beyond the size of the contiguous U.S. (ONDCP 2001). Newer research updates and corroborates these findings by marshalling CCDB data to calibrate an agent-based model of traffickers' spatial adaptation to interdiction efforts. The study concludes that "narco-trafficking is as widespread and difficult to eradicate as it is because of interdiction, and increased interdiction will continue to spread traffickers into new areas" (Magliocca *et al.* 2019: 7784).

Discussion: the CCDB in research and policy

This paper describes a dataset that is little-known outside of U.S. counternarcotic agencies. Drawing from the rich record of GAO reports, I show how the CCDB grew out of decades of lawmaker frustration with the lack of meaningful metrics by which to assess the effectiveness of a crucial pillar of the drug war. At that time—the early 1990s—the idea was that better measurement of trafficker behavior and agencies' response was the key to getting the interdiction mission right (Holden-Rhodes, 1997). The CCDB exceeded its mandate. For almost 30 years it has recorded every validated instance of drug trafficking known to the U.S. and its counternarcotic allies. Its event log gives a reliable if partial view of how, where, and when cocaine traffickers move cocaine over a vast expanse of land and water, and with what success. Despite its built-in conservatism, the database chronicled no less than 17,777 cocaine trafficking events in six years (2013–2018)—or about eight per day (DODIG, 2017–2019). The careful production, vetting, and curation of these data involves a staggering cross-section of federal and foreign authorities.

And yet far from helping to correct the flaws of interdiction, CCDB data have served to put the mission's failure in even sharper relief. CCDB data reveal interdiction efforts to be egregiously outcome-ineffective (OIG, 2018), with no long-term impact on declining cocaine prices in the U.S. (see also Reuter, Pollack, & Pardo, 2016). CCDB data also help to quantify and visualize how counter-narcotic operations in the transit zone have made traffickers more, not less, widespread. Moreover, this withering assessment is not one animated by the "ideological antagonism" of "people who despise law enforcement" (Caulkins, 2017:158). Rather, it is a cool, consistent, and multi-vocal assessment made by the very bureaucracy that is required by law to enact and review the drug war. Below, I review three implications of these findings for drug policy and related research.

The data are there

The CCDB cocaine module is not secret, and it is not classified. Neither, presumably, are data from the CCDB's other components, including the module for amphetamine-type substances that is managed by JIATF-West (GAO, 2019), and the "opiate module" (Bybee *et al.* 2011:1) whose data have been reported most recently in the context of Indian Ocean heroin seizures (DODIG, 2018; 2019).

Greater awareness of the CCDB and the conditions of its production should alleviate some of the cynicism that appears to dominate many drug policy researchers' views about the existence, availability, and trustworthiness of official data on drug trade dynamics. To be sure, this repository of observed trafficking events seems exceptionally reliable and complete, especially in contrast to more well-known sources of data on cocaine trade and use—data sources that would surely be enriched through corroboration and triangulation with the independent CCDB record.

Why, then, has the CCDB been so little-used? First, it was never intended as a source of public information; it was designed as an accounting and reporting tool for inter-governmental compliance and performance assessment. Even in this role, it took time to be embraced. As shown here, U.S. counternarcotic agencies were slow to adopt the CCDB in part because of what the data revealed about their performance. It is only in the past decade, under increased Congressional pressure, that more agencies are referencing the CCDB in the public record. Still, many CCDB-reliant reports fail to directly credit it explicitly (see, e.g., DEA, 2018). This effectively obscures the dataset's existence and may foster the belief that whatever the source dataset is, it is classified. The fact that the CCDB is not used as a source dataset for the World Drug Report is probably related to difficulties in fitting an all-source data product—with its emphasis on multi-actor, extra-territorial seizures—into the UNODC's state-based framework.

Whatever the reason, the CCDB's obscurity highlights a longstanding problem whereby drug policy research is deprived of the empirical support it deserves and needs (Holden-Rhodes 1997; Manski *et al.*, 2001; IDPC 2018). At issue here is how existing, de-classified drug source data can become readily available to civilian, third-party researchers, ideally as a de-identified online resource that does not require FOIA application. To avoid redundant and inefficient individual data extraction requests, a first step would be for the ONDCP to (finally) heed the National Academy of Sciences' recommendation that "all funding agencies should ensure public access to non-identified [i.e., anonymized] data" (Manski *et al.* 2001:276).

The law enforcement side of drug policy

The CCDB draws much-needed attention to two under-explored elements of the cocaine supply chain. First, it opens up to greater research scrutiny the "black boxed" spaces of drug transshipment (see also McSweeney *et al.*, 2018). For example, the CCDB's high-quality longitudinal record on cocaine volumes, movement, and seizures through the transit zone would go far in shedding new light on persistent drug policy puzzles, such as how localized drug war dynamics shape drug prices and drug consumption globally (see, e.g., Costa Stroti and De Grauwe, 2009). So too, the data can help to assess the relationship between interdiction enforcement and specific harms in transit countries, including violence, human rights abuses, impunity and corruption (see Greenfield and Paoli, 2017; IDPC, 2018; Pollack and Reuter, 2014).

Second, the detailed accounting of trafficker activities that is logged in the CCDB raises questions about a criminology truism: that the success of a criminal activity such as smuggling requires that the perpetrators avoid detection. But in fact, detection seems irrelevant to the success of bulk cocaine smugglers leaving South America. After all, JIATF-S was able to map 8,172 drug movement alerts in 2018 alone, of which 3,854 qualified for the CCDB (DODIG, 2019)—in military parlance, then, JIATF-S would appear to have a high degree of "domain awareness" (Johnson-Freese and Walski, 2014). For their part, traffickers are surely aware that they are being tracked in real time, in part because JIATF-S' 'spaghetti charts,' which are maps of the approximate trajectories of cocaine smuggling boats and planes, are regularly featured in Latin American news media (see, e.g., El Heraldo, 2016).

Why can't counternarcotic forces turn traffickers' real-time conspicuousness into a greater interception rate? Based on the GAO record, the constraints on law enforcement appear to be little changed from the early 1990s (cf. GAO, 1993a; OIG, 2016b). These constraints are rooted in a basic fact of prohibition: illicit goods are so profitable that those who trade in them will always have the resources to out-maneuver their pursuers (see also Keck and Correa-Cabrera, 2015; Toth and Mitchell, 2018; Windle and Farrell, 2012). Beyond this basic insight, however, researchers continue to know far too little about the behavior, effectiveness, and impacts of (militarized) law enforcement (Reuter, 2017; Ritter and Stevens, 2017). This can have dire consequences for drug policy-making (Greenfield and Paoli, 2017)—as when problematic UNODC data allow the global drug policy community to remain convinced that cocaine interdiction is an effective drug enforcement strategy.

Alternative futures

A common argument for continued U.S. spending on transit zone interdiction holds that every cocaine seizure—no matter how small a portion of the overall supply—keeps roughly that same amount of cocaine from enriching traffickers or landing on U.S. streets, thus averting ER visits, overdose deaths, and incarceration costs (see, e.g., Tidd, 2018). However, the argument does not stand up to close scrutiny, for many reasons. Among them is the fact that it is not clear how much of the cocaine seized in the transit zone was ever intended for U.S. markets, especially as demand for cocaine grows in Europe and Asia (see

Section 4.1). Moreover, traffickers adjust their shipment volumes and purity in response to interdiction effort; cocaine losses in the transit zone do not presuppose corresponding declines in retail supply or in traffickers' profits (Pollack and Reuter, 2014).

What are the alternatives to transit zone interdiction? The current global prohibitionist drug policy regime seriously cramps the ability of states to experiment with policy options (Bagley, 2015). Nevertheless, the U.S. and multilateral organizations have contemplated a major paradigm shift: the idea of drawing down on transit zone interdiction effort (see, e.g., ONDCP 2001; OAS, 2013). Their analyses suggest that if applied uniformly across spaces of transshipment, the lessening of law enforcement and military pressure could stabilize drug routes and associated cartel territories, dampening the otherwise perpetual spread of corruption and violence (see also Reuter, 2014; Shiner 2016).

At the same time, interdiction budgets could be re-directed to supporting a host of non-militarized alternatives, both bilateral and multilateral, which analysts suggest can mitigate the harms associated with the drug trade in countries of transshipment (see Greenfield and Paoli, 2012; 2017). They include but are not limited to building states' institutional capacities, particularly around community policing, criminal investigation, and (re)building functional justice systems (Chatwin, 2018; Isacson, 2015). With this institutional scaffolding, anti-corruption efforts and anti-money laundering efforts—also crucial—have a far greater chance of sustained success (see, e.g., EC, 2019; WOLA, 2019). However, all of these initiatives will take time and considerable political will (Isacson, 2015), and there is no clear path towards achieving the multilateral coalition that would be required (Horowitz, 2015). However, what is clear is that no truly rational, "evidence-based" drug policy regime in the Americas could possibly justify the continued prioritization of transit zone cocaine interdiction.

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