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Air Traffic Control: How Mexican Cartels are Utilizing Drones to Traffic Narcotics into the United States

Britton Shields

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**AIR TRAFFIC CONTROL: HOW MEXICAN
CARTELS ARE UTILIZING DRONES TO
TRAFFIC NARCOTICS INTO THE
UNITED STATES**

Britton Shields

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I. INTRODUCTION

Drone usage has been a topic of significant debate in recent years.¹ The use of drones has fostered discussions regarding their privacy implications,² public safety concerns,³ and even their use to conduct military airstrikes in foreign nations.⁴ However, a unique trend is emerging regarding drone use that raises novel policy concerns: recent reports have concluded that drones are now being used as a method of trafficking narcotics from Mexico into the United States.⁵

While Mexican cartels have been known to utilize creative methods when smuggling narcotics,⁶ the new method of using drones

¹ Melanie Reid, *ARTICLE: GROUNDING DRONES: BIG BROTHER'S TOOL BOX NEEDS REGULATION NOT ELIMINATION*, 20 RICH. J.L. & TECH. 9 (2014).

² Robert Holly, *States Restrict Drone Use Because of Privacy Concerns*, MIDWEST CENTER FOR INVESTIGATIVE REPORTING (Mar. 21, 2014), <http://investigatamidwest.org/2014/03/21/states-restrict-drone-use-because-of-privacy-concerns/>.

³ See Dan Loumena, *Drone crashes into stands during U.S. Open match; N.Y. teacher arrested*, LOS ANGELES TIMES (Sep. 4, 2014, 4:10 AM), <http://www.latimes.com/sports/la-sp-sn-us-open-drone-crash-20150903-story.html> (drone crashes into stands at sporting event); see also, Kevin Cokely, *FAA to Consider New Restrictions for Drones*, NBC DFW (Sep. 14, 2015, 11:33 PM), <http://www.nbcdfw.com/news/local/FAA-to-Consider-New-Restrictions-for-Drones-327616521.html> (describing a drone that nearly crashed into a private aircraft).

⁴ See i.e. Mehreen Zahra-Malik, *U.S. drone strike kills 15 Pakistani Taliban in Afghanistan*, REUTERS (Sep. 11, 2015, 10:54 AM), <http://www.reuters.com/article/2015/09/11/us-afghanistan-drones-idUSKCN0RB1OW20150911>.

⁵ Nick Valencia & Michael Martinez, *Drone carrying drugs crashes south of U.S. border*, CNN (Jan. 23, 2015, 3:00 PM), <http://www.cnn.com/2015/01/22/world/drug-drone-crashes-us-mexico-border/> (“U.S. authorities acknowledge a new smuggling strategy may be emerging on the border.”).

⁶ *Drug delivery drone crashes in Mexico*, BBC NEWS (Jan. 22, 2015), <http://www.bbc.com/news/technology-30932395> (“Other methods [of smuggling] included catapults, tunnels and ultra-light aircraft.”).

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has important implications for a number of reasons.⁷ Notably, drones are a rapidly growing industry with the potential to significantly impact the economy. Domestic use of drones in the United States is predicted to have an economic impact of over \$82 billion between 2015 and 2025.⁸ The demand for drones is consistently increasing among recreational users⁹ and businesses,¹⁰ causing a steady rise in their supply as well. While supply and demand continues to increase, the lack of drone regulations in the United States and Mexico is a cause for concern. Further, those regulations that currently exist do not account for the use of drones as trafficking tools at the border. It is thus unsurprising that cartels are beginning to utilize drones to traffic narcotics from Mexico into the United States.

Given the fact that the U.S.-Mexican border extends approximately 1,933 miles,¹¹ and that the cartels have used drones to

⁷ Such implications include a lack of drone regulations, anti-drone security measures, and extradition issues regarding those using drones for drug trafficking between nations.

⁸ Darryl Jenkins & Bijan Vasigh, *The Economic Impact of Unmanned Aircraft Systems Integration in the United States* at 2, ASSOCIATION FOR UNMANNED VEHICLE SYSTEMS INTERNATIONAL (2013).

⁹ See Mitch Joel, *The Booming Business of Drones*, HARV. BUS. REV. (Jan. 4, 2013), <https://hbr.org/2013/01/the-booming-business-of-drones> (Industry analysts predict the drone market to double in less than a decade).

¹⁰ A number of companies, including Amazon, Facebook, and Google, have invested in drone development for delivery of goods, sky-based computer networks, and even crop dusting in the agricultural community. See Jillian D'Onfro, *Why Amazon Needs Drones More Than People Realize*, BUSINESS INSIDER (July 30, 2014, 6:23 PM), <http://www.businessinsider.com/amazon-drones-2014-7>; John Naughton, *Why Facebook and Google are Buying Into Drones*, GUARDIAN (Apr. 19, 2014, 7:05 PM), <http://www.theguardian.com/world/2014/apr/20/facebook-google-buying-into-drones-profit-motive>; Mike Hanlon, *Yamaha's RMAX - The World's Most Advanced Non-Military UAV*, GIZMAG, <http://www.gizmag.com/go/2440/> (last updated Nov. 19, 2004) (discussing Yamaha's R-MAX drones which are used primarily used for crop-dusting in Japan.); Jeremy Bradley, *It's one delicious drone—the Burrito Bomber*, CNN, <http://www.cnn.com/2013/06/21/tech/innovation/drone-burrito-bomber/> (last updated Jun. 21, 2013, 8:35 AM) (Discussing drones to be used to deliver burritos to homes.).

¹¹ JANICE CHERYL BEAVER, CONG. RESEARCH SERV., RS21729, U.S. INTERNATIONAL BORDERS: BRIEF FACTS 2, (2006).

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traffic narcotics an estimated 150 times per year,¹² there is a dire need for a solution to this tactic before it becomes more prevalent. This comment will focus on the rising use of drones at the border to smuggle narcotics into the United States, and suggest possible solutions to curb this new tactic being utilized by the cartels. By taking steps to solve this problem before it becomes more recurrent, the United States can hinder the use of drones as an efficient method to smuggle narcotics across the border, and in doing so, decrease the influx of narcotics trafficked into the United States. This comment will also compare the current drone regulations of Mexico and the United States with those from various other countries, and discuss how such policies can be implemented at the United States-Mexico border.

Part I of this comment has served as an introduction to the issue. Part II will briefly discuss the current state of the war on drugs at the border and how the United States and Mexico are working together to prevent the trafficking of narcotics by Mexican cartels. Part III will examine the current state of drone regulations in the United States and Mexico. Together, Parts II and III provide a background that exposes the severity of the issue of drones as trafficking tools. Finally, Part IV proposes possible solutions to prevent Mexican cartels from using drones to traffic narcotics. This section will also discuss drone regulations in several other countries, and which policies, if any, should be adopted and implemented at the border.

II. DRUG TRAFFICKING AT THE UNITED STATES – MEXICO BORDER

According to a 2013 survey, approximately 24.6 million Americans aged twelve or older (9.4 percent of the population) had used an illicit drug in the past month - a number that has steadily increased from 8.3 percent in 2002.¹³ This increase in demand for

¹² See BBC NEWS, *supra* note 6.

¹³ NATIONAL INSTITUTE ON DRUG ABUSE, DRUG FACTS: NATIONWIDE TRENDS at 1 (2015).

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illicit drugs has been a catalyst for the trafficking of narcotics across the border, and has caused Mexico to become the number-one supplier of illicit drugs in the United States.¹⁴ The majority of methamphetamine available in the United States is produced in Mexico,¹⁵ and a 2010 report stated that ninety percent of the cocaine sold in the U.S. was transported across the border from Mexico.¹⁶ In fact, it has been speculated that more than eighty percent of all drugs that enter the United States are trafficked across the border by Mexican cartels.¹⁷

A. Mexican Cartels

The competing cartels at the United States-Mexico border include the Sinaloa Cartel, the Gulf Cartel, and the Tijuana Cartel.¹⁸ Additionally, Los Zetas provide a dominant presence in the drug violence and trafficking at the border.¹⁹ These drug cartels control the

¹⁴ S. Cody Barrus, *Interview with Mexico Drug War Expert Sylvia Longmire*, ALLTREATMENT.COM (Jan. 11, 2011), <http://www.alltreatment.com/blog/2011/interview-with-mexico-drug-war-expert-sylvia-longmire/>.

¹⁵ U.S. DEPARTMENT OF JUSTICE DRUG ENFORCEMENT ADMINISTRATION, DEA-DCT-DIR-002-15, NATIONAL DRUG THREAT ASSESSMENT SUMMARY 19 (2014), available at, <http://www.dea.gov/resource-center/dir-ndta-unclass.pdf>; see also COUNTERNARCOTICS ENFORCEMENT: COORDINATION AT THE FEDERAL, STATE, AND LOCAL LEVEL: HEARING BEFORE THE SUBCOMM. ON STATE, LOCAL, AND PRIVATE SECTOR PREPAREDNESS AND INTEGRATION OF THE S. HOMELAND SEC. AND GOVERNMENTAL AFFAIRS COMM., 111th Cong. 3 (2009) (statement of John Leech, Acting Director for the Office of Counternarcotics Enforcement, U.S. Dep't of Homeland Security) (“[Mexico] is the primary source of foreign marijuana and methamphetamine, and a major source of heroin to the United States.”).

¹⁶ See William Finnegan, *Letter from Mexico: Silver or Lead. The Drug Cartel La Familia Gives Local Officials a Choice: Take a Bribe or a Bullet*, THE NEW YORKER, May 31, 2010, available at, <http://www.newyorker.com/magazine/2010/05/31/silver-or-lead>.

¹⁷ Ginger Thompson, *U.S. Widens Its Role in Battle Against Mexico's Drug Cartels*, N.Y. TIMES, Aug. 7, 2011, available at http://www.nytimes.com/2011/08/07/world/07drugs.html?_r=0.

¹⁸ Callin Kerr, *COMMENT: Mexico's Drug War: Is It Really a War?*, 54 S. TEX. L. REV. 193 (2012).

¹⁹ *Id.*; See also, *Zetas*, INSIGHT CRIME, <http://www.insightcrime.org/mexico-organized-crime-news/zetas-profile> (last visited Oct. 10, 2015) (The Drug

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territory surrounding the border and various drug routes it consists of, including extensive underground tunnels, waterways, roads, and walking paths.²⁰ While the amount of narcotics trafficked into the United States annually is difficult to quantify, it is estimated that these cartels traffic between \$19 and \$29 billion in drugs each year.²¹ This has caused both the Mexican and United States governments to respond to the drug problem in a variety of ways.

B. Existing Statutes

1. *United States.*

A number of statutes have been enacted in both the United States and Mexico to combat the trafficking efforts of the cartels. In the United States, the Controlled Substances Act²² prohibits any person from distributing or possessing with intent to distribute a controlled substance.²³ Additionally, 21 USC § 952 prohibits the importation of controlled substances from outside of the United States.²⁴ In conjunction with this statute, the Drug Enforcement

Enforcement Administration has described Los Zetas as “the most technologically advanced, sophisticated and violent of these paramilitary enforcement groups.”)

²⁰ See Ken Stier, *Underground Threat: Tunnels Pose Trouble from Mexico to Middle East*, TIME (May 2, 2009), <http://www.time.com/time/nation/article/0,8599,1895430,00.html> (describing the discovery of a tunnel financed by the Tijuana Cartel that is “2,400 feet long and about nine stories deep”).

²¹ CNN Library, *Mexico Drug War Fast Facts*, CNN, <http://www.cnn.com/2013/09/02/world/americas/mexico-drug-war-fast-facts/> (last updated Sep. 23, 2015, 4:41 PM).

²² 21 USC § 841.

²³ Two men recently pled guilty under this statute for smuggling heroin across U.S.-Mexican border using a drone. See Kristina Davis, *Two plead guilty in border drug smuggling by drone*, Los Angeles TIMES (Aug. 12, 2015, 9:20 PM), <http://www.latimes.com/local/california/la-me-drone-drugs-20150813-story.html>.

²⁴ 21 USC § 952(a) (“It shall be unlawful to import into the customs territory of the United States from any place outside thereof (but within the United States), or to import into the United States from any place outside thereof, any controlled substance in schedule I or II of title II, or any narcotic drug in schedule III, IV, or V of title II, or ephedrine, pseudoephedrine, or phenylpropanolamine...”).

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Agency (“DEA”) has established Federal Tracking Penalties for numerous drugs based on their quantity and schedule.²⁵ To further increase security at the border and help prevent the trafficking of narcotics President George W. Bush signed the Secure Fence Act in 2006.²⁶ The purpose of this Act was to “establish operational control over the international land and maritime borders of the United States.”²⁷ With regard to trafficking, the Act sought to prevent the unlawful entry of narcotics and other contraband into the United States.²⁸ Under the Act, U.S. Border Patrol increased to approximately 20,000 agents throughout President Bush’s administration, essentially doubling the number of Border Patrol agents at the time.²⁹ Another important statute here is 21 U.S.C. § 881, which permits the seizure and civil forfeiture of a wide variety of property associated with narcotics trafficking.³⁰ Relevant for purposes of this comment, this statute permits any drone used to transport narcotics to be seized by the United States. Finally, on January 25, 2017, President Donald J. Trump signed Executive Order Number 13,767: Border Security and Immigration Enforcement Improvements.³¹ Under the Order, the Secretary of Homeland Security is instructed to “immediately plan, design, and construct a physical wall along the southern border”³² in addition to hiring “5,000 additional Border Patrol agents.”³³ While the main focus of the order is on immigration, it nonetheless recognizes the importance of preventing drug trafficking at the border. Given the recent nature of

²⁵ U.S. DEPARTMENT OF JUSTICE DRUG ENFORCEMENT ADMINISTRATION, FEDERAL TRACKING PENALTIES, <http://www.dea.gov/druginfo/ftp3.shtml>, (last visited Sep. 24, 2015).

²⁶ Secure Fence Act of 2006, Pub. L. No. 109-367, 120 Stat. 2638.

²⁷ *Id.*

²⁸ 120 Stat. 2638 §2(b).

²⁹ Bernd Debusmann, *The U.S. Border and Immigration Reform*, REUTERS (Oct. 21, 2011), <http://www.reuters.com/article/2011/10/21/idUS234388556220111021>.

³⁰ 21 U.S.C. § 881 (Property that may be seized under this statute includes the drugs themselves, materials and equipment used to make or deliver the drugs, vehicles used to transport narcotics, real property used to facilitate drug trafficking, and any firearms related to these same crimes.).

³¹ Exec. Order No. 13,767, 82 Fed. Reg. 8,793 (Jan. 25, 2017).

³² *Id.* at Sec. 4.

³³ *Id.* at Sec. 8.

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this order, it remains unclear what effect it will have on narcotics trafficking into the United States.

2. *Mexico.*

In Mexico, the predominant source of the Country's drug laws is the Federal Criminal Code.³⁴ Article 194 of the Code provides a twenty-five year prison sentence for the production, transportation, trafficking, sale, and supply of narcotics.³⁵ Additionally, the Federal Law Against Organized Crime, which was approved in 1996, increased sentences for any crime committed as part of a criminal conspiracy.³⁶ This law also established the concept of "preventative detention," which has since been incorporated into Mexico's constitution.³⁷ "Preventative detention" allows for the detention of individuals on the basis of having suspected links to organized crime.³⁸ Suspected individuals may be detained for up to 80 days without an arrest warrant or charge.³⁹ Despite these laws, various critics believe the Mexican judicial system has failed to adequately address the crime and violence the nation faces at the border.⁴⁰ In particular, Mexico's judicial system has been characterized as corrupt,⁴¹ and generally weaker than the other branches of the

³⁴ Código Penal Federal [CPF] [Federal Criminal Code], *as amended*, Diario Oficial de la Federación [DO], 14 de Agosto de 1931 (Mex.).

³⁵ *Id.* art. 194.

³⁶ Ley Federal Contra la Delincuencia Organizada [LFCDO] [Federal Law Against Organized Crime], *as amended*, Diario Oficial de la Federación [DO] 7 de Noviembre de 1996 (Mex.).

³⁷ *Mexico*, DRUG LAW REFORM IN LATIN AMERICA - TNI, <http://www.druglawreform.info/country-information/mexico/item/205-mexico#2> (last visited Oct. 10, 2015).

³⁸ *Id.*

³⁹ *Id.*

⁴⁰ Deborah M. Weissman, *The Political Economy of Violence: Toward an Understanding of the Gender-Based Murders of Ciudad Juárez*, 30 N.C. J. INT'L L. & COM. REG. 795, 808 (2005) (discussing the failure of the Mexican legal system to respond to the murders of women in Ciudad Juárez).

⁴¹ Human Rights Watch, *Mexico*, in WORLD REPORT 380 (2015), available at http://www.hrw.org/sites/default/files/reports/wr2015_web.pdf. ("The criminal justice system routinely fails to provide justice to victims of violent crimes and

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Mexican government.⁴² The threat posed by narcotics trafficking at the border, in addition to the weak response by the Mexican government, has caused the United States and Mexico to begin working in a cooperative manner to address drug-related crime at the border.

C. Cooperation Between United States and Mexico

The United States and Mexico signed an extradition treaty that went into effect in 1980.⁴³ The objective of this treaty is “to cooperate more closely in the fight against crime and, to this end, to mutually render better assistance in matters of extradition.”⁴⁴ While this treaty provides a general means for the nations to cooperate in matters of extradition, the principal policy between the United States and Mexico with respect to cartel drug trafficking and violence is the Merida Initiative.⁴⁵ This initiative is described as a “partnership between the United States and Mexico to fight organized crime and associated violence while furthering respect for human rights and the rule of law.”⁴⁶ The Merida Initiative contains four pillars: (1) Disrupt Organized Criminal Groups; (2) Strengthen Institutions (e.g., the judicial sector); (3) Build a 21st Century Border; and (4) Build Strong and Resilient Communities.⁴⁷ Under the Merida Initiative, the United States has provided over \$2.3 billion in aid to Mexico, and \$1.4 billion in equipment and training.⁴⁸ Such equipment includes

human rights violations. Causes of this failure include corruption, inadequate training and resources, and the complicity of prosecutors and public defenders.”

⁴² See Matthew C. Ingram et al., *Assessing Mexico's Judicial Reform*, TRANS-BORDER INSTITUTE 4 (2012), available at <http://justiceinmexico.files.wordpress.com/2010/07/tbi-assessing-judicial-reform1.pdf>.

⁴³ Extradition Treaty Between the United States and Mexico, U.S.-Mex., May 4, 1978, T.I.A.S. No. 9656: 31 UST 5059.

⁴⁴ *Id.*

⁴⁵ U.S. Dep't of State, Bureau of Int'l Narcotics and Law Enforcement Affairs, Merida Initiative (2012), available at <https://www.state.gov/j/inl/merida/>.

⁴⁶ *Id.*

⁴⁷ *Id.*

⁴⁸ U.S. Embassy & Consulates in Mexico, *The Merida Initiative - Overview*, <https://mx.usembassy.gov/our-relationship/policy-history/the-merida-initiative/> (last visited Feb. 3, 2017).

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helicopters, surveillance equipment and military gear.⁴⁹ The funds appropriated to strengthen institutions under the second pillar focus primarily on strengthening Mexico's justice system and the aforementioned problems that plague it.⁵⁰ This is accomplished through the training of prosecutors, defenders, investigators, and forensic experts, and through judicial exchanges and partnerships between Mexican and U.S. law schools.⁵¹ The U.S. State Department has claimed that the initiative is responsible for the removal of key drug trafficking organization leaders, the seizure of tens of thousands of tons of illicit drugs, millions in currency, and tens of thousands of weapons.⁵²

D. Drone Use at Border

Though the use of drones to traffic narcotics across the border is a relatively new tactic, the United States government has been utilizing drones at the border for nearly a decade.⁵³ In particular, the United States Customs and Border Protection ("CBP") operates ten unmanned aircrafts ("UAs") for border surveillance and law enforcement purposes.⁵⁴ The unmanned aircrafts conduct reconnaissance missions to gather data and intelligence on drug trafficking and specific individuals either crossing the border illegally,

⁴⁹ See William A. Fix, Kendra J. Harris & Aida A. Montanaro, *Offense, Defense, or Just a Big Fence? Why Border Security is a Valid National Security Issue: St. Mary's University School of Law Center for Terrorism Law*, 14 SCHOLAR 741, 756 (2012).

⁵⁰ The Merida Initiative, *supra* note 45; see also Eric Olson, *Six Key Issues in U.S.-Mexico Security Cooperation*, WILSON CTR. (2008), available at http://www.wilsoncenter.org/sites/default/files/six_issues_usmex_security_coop.pdf.

⁵¹ *Id.*

⁵² See Press Release, U.S. Dep't of State, United States-Mexico Security Partnership: Progress and Impact (Mar. 23, 2010) (on file with Office of the Spokesman).

⁵³ Arthur Holland Michel, *Customs and Border Protection Drones*, CENTER FOR THE STUDY OF THE DRONE (Jan. 7, 2015), <http://dronecenter.bard.edu/customs-and-border-protection-drones/>.

⁵⁴ U.S. DEPARTMENT OF HOMELAND SECURITY, DHS/CBP/PIA-018, PRIVACY IMPACT ASSESSMENT FOR THE AIRCRAFT SYSTEMS 2 (2013), available at <http://www.dhs.gov/sites/default/files/publications/privacy-pia-cbp-aircraft-systems-20130926.pdf>.

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or seeking to smuggle narcotics and other contraband into the United States.⁵⁵ These efforts have been met by mild success, with unmanned aircrafts helping to seize 7,600 pounds of marijuana worth \$19.3 million in 2012.⁵⁶ While the CBP originally intended to expand their number of drones to twenty-four at an additional \$443 million,⁵⁷ the Department of Homeland Security has recently published a report stating that the CBP drone program has not performed to expectations and is not worth the cost to maintain.⁵⁸ In light of this report, it is unlikely that the CBP drone program will realize its projected expansion.⁵⁹ Given the fact that the United States has been implementing the use of drones in its efforts to detect drug trafficking at the border, it is unsurprising that the cartels are attempting to level the playing field by utilizing drones in their drug trafficking efforts. With this brief background on the status of drug trafficking at the border, we turn now to the current state of drone regulations in Mexico and the United States.

III. DRONE REGULATIONS IN THE UNITED STATES AND MEXICO

A. Drone Regulations in the United States

Though public drone use is a relatively new phenomenon, the foundation for drone regulations in the United States was set in 1958

⁵⁵ *Id.*

⁵⁶ Brian Bennett, *Predator Drones Have Yet to Prove Their Worth on Border*, LOS ANGELES TIMES (Apr. 28, 2012), <http://articles.latimes.com/2012/apr/28/nation/la-na-drone-bust-20120429>.

⁵⁷ Andrew Becker, *Border agency looks to expand drone fleet*, CALIFORNIA WATCH (Nov. 19, 2012), <http://californiawatch.org/dailyreport/border-agency-looks-expand-drone-fleet-18678>.

⁵⁸ U.S. DEPARTMENT OF HOMELAND SECURITY, OIG-15-17, U.S. CUSTOMS AND BORDER PROTECTION'S UNMANNED AIRCRAFT SYSTEM PROGRAM DOES NOT ACHIEVE INTENDED RESULTS OR RECOGNIZE ALL COSTS OF OPERATIONS (2014), available at, https://www.oig.dhs.gov/assets/Mgmt/2015/OIG_15-17_Dec14.pdf.

⁵⁹ *Id.* at 1 (“The \$443 million CBP plans to spend on program expansion could be put to better use by investing in alternatives, such as manned aircraft and ground surveillance assets.”).

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with the passage of the Federal Aviation Act.⁶⁰ This act established the Federal Aviation Administration (“FAA”), which oversees all aspects of American civil aviation and is responsible for “the safe and efficient use” of the National Airspace System.⁶¹ Consequently, the FAA is the regulatory agency responsible for administering drone regulations in the United States.⁶²

The principal piece of drone legislation applicable in the United States is the Federal Aviation Administration Modernization and Reform Act of 2012 (“FAA Modernization and Reform Act”).⁶³ This Act directed the FAA “to safely accelerate the integration of civil unmanned aircraft systems into the national airspace system” by September 30, 2015.⁶⁴ In other words, the FAA has been tasked with providing comprehensive drone regulations for various classes of drone users. The FAA missed this September deadline, however, and the deadline was extended into 2016.⁶⁵ The extension of the FAA Modernization and Reform Act will be of paramount importance in combatting cartel drone use, as will be discussed in Part IV.

“The United States Government has exclusive sovereignty of airspace of the United States.”⁶⁶ The FAA Modernization and Reform Act directs the FAA to implement three classifications of

⁶⁰ Federal Aviation Act, Pub. L. 85-726, 72 Stat. 731.

⁶¹ *Id.*

⁶² A federal statute specifies the general policy of the Department of Transportation. See 49 U.S.C. § 40101. The primary purpose of the FAA (today a part of the Department of Transportation) is to maintain safety “as the highest priority in air commerce.”

⁶³ FAA Modernization and Reform Act of 2012, Pub. L. 112-95, 126 Stat. 11 [*hereinafter* “FAA Modernization and Reform Act”].

⁶⁴ FAA Modernization and Reform Act of 2012, Pub. L. 112-95, § 332, 126 Stat. 11, 73.

⁶⁵ See Aviation Pros, *ARSA on FAA Extension: Time is Not on Our Side*, AVIATION PROS (Sep. 29, 2015), http://www.aviationpros.com/press_release/12120302/arsa-on-faa-extension-time-is-not-on-our-side; see also Mark Rockwel, *FAA looks to 2016 for drone rules*, 1105 MEDIA, INC. (Sep. 30, 2015), <https://fcw.com/articles/2015/09/30/faa-drones.aspx> (“A June 2014 Department of Transportation Inspector General report stated the agency would miss the 2015 mark because of ‘significant technological barriers,’ including detection and standardized air traffic procedures and other issues.”).

⁶⁶ 49 U.S.C. § 40103(a).

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drones into this airspace: public, civil, and model/recreational.⁶⁷ Public drones are those owned and used by the United States government or the government of a state.⁶⁸ Civil drones are all other drones not used by the government, but are not recreational.⁶⁹ Model or recreational drones are those that are flown by the general public strictly for hobby or recreational use.⁷⁰ Of these three categories, only public drones currently require certification from the FAA. It is important to note that while the FAA Modernization and Reform Act establishes the aforementioned categories of drones, as of August 29, 2016, the FAA has implemented regulations that simply govern the use of “small” drones – those weighing less than 55 pounds.⁷¹ As a result, civil drones and model/recreational drones are currently treated in a similar manner (with minor exceptions for pilots), and can be flown without FAA certification, as long as the drone is registered and as long as those piloting them abide by the flight regulations expressed by the Small Unmanned Aircraft Rules.⁷²

1. *Public (Governmental) Drones.*

A number of qualifications must be met before a drone or aircraft can qualify for public status.⁷³ “Whether an operation qualifies as a public aircraft operation is determined on a flight-by-flight basis, under the terms of the statute.”⁷⁴ Factors taken into consideration when determining public status include ownership, the

⁶⁷ FAA Modernization and Reform Act, *supra* note 63.

⁶⁸ 49 U.S.C. § 40102(a)(41) (Operators of public aircrafts include DOD, DOJ, DHS, NASA, NOAA, state/local agencies and qualifying universities.).

⁶⁹ 49 U.S.C. § 40102(a)(16).

⁷⁰ FAA Modernization and Reform Act of 2012, Pub. L. 112-95, §336(c), 126 Stat. 11, 77-78.

⁷¹ U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION, SUMMARY OF SMALL UNMANNED AIRCRAFT RULE (PART 107), available at https://www.faa.gov/uas/media/Part_107_Summary.pdf (last visited Feb. 9, 2017).

⁷² 14 CFR 107.

⁷³ 49 U.S.C. § 40125.

⁷⁴ U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION, UNMANNED AIRCRAFT SYSTEMS: PUBLIC OPERATIONS (GOVERNMENTAL), available at http://www.faa.gov/uas/public_operations/ (last visited Nov. 14, 2015).

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operator, the purpose of the flight, and the persons on board the aircraft.⁷⁵ A drone that qualifies as public must apply for a Certificate of Waiver or Authorization (“COA”) from the FAA.⁷⁶ If the COA is issued, public agencies and organizations are then permitted to operate a particular aircraft or drone, for a particular purpose, in a particular area.⁷⁷ It should be noted that a public drone operator using the drone in an active, restricted, prohibited or warning area airspace needs permission from the entity controlling that airspace to operate the drone in the secured area.⁷⁸ Alternatively, if the governmental drone chooses to fly under the small UAS rules, it need not obtain a COA so long as it follows all rules established under 14 CFR part 107.⁷⁹

2. *Civil Drones.*

Perhaps the most important category for purposes of this comment, civil drones are all drones that are not public or recreational. This includes drones used by businesses for commercial purposes. Currently, there are three methods of gaining FAA authorization to fly civil drones. First, a civil drone that weighs less than 55 pounds must be registered with the FAA, and the pilot of such a drone must meet certain requirements.⁸⁰ Specifically, the pilot of a civil drone must be at least 16 years old, pass an initial aeronautical knowledge test, and be vetted by the Transportation

⁷⁵ 49 U.S.C. § 40125, *supra*.

⁷⁶ U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION, CERTIFICATES OF WAIVER OR AUTHORIZATION (COA), available at https://www.faa.gov/about/office_org/headquarters_offices/ato/service_units/systemops/aaim/organizations/uas/coa/ (last visited Feb. 3, 2017).

⁷⁷ *Id.*

⁷⁸ FAA, Interim Operational Approval Guidance 08-01: Unmanned Aircraft Systems Operations in the U.S. National Airspace System 5 (2008).

⁷⁹ U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION, UNMANNED AIRCRAFT SYSTEMS: BEYOND THE BASICS, available at https://www.faa.gov/uas/beyond_the_basics/#55 (last visited Feb. 9, 2017).

⁸⁰ U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION, UNMANNED AIRCRAFT SYSTEMS: FLY FOR WORK/BUSINESS, available at https://www.faa.gov/uas/getting_started/fly_for_work_business/ (last visited Feb. 9, 2017).

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Safety Administration (TSA).⁸¹ Further, civil drones under 55 pounds are subject to various operating rules, however all are subject to waiver.⁸² Second, if the civil drone exceeds 55 pounds, the drone operator must petition for an exemption under section 333 of the Modernization and Reform Act.⁸³ According to the FAA, a section 333 exemption “provides operators who wish to pursue safe and legal entry into the NAS a competitive advantage in the UAS marketplace, thus discouraging illegal operations and improving safety.”⁸⁴ Third, civil drone operators can obtain a Special Airworthiness Certificate (“SAC”).⁸⁵ To obtain such a certificate, the drone must conform to the same airworthiness standards as that of any other type of aircraft.⁸⁶ Additionally, applicants must be able to describe a number of details regarding the drone and the anticipated flight pattern.⁸⁷ It

⁸¹ *Id.*

⁸² *Id.* Operating rules include flying in a Class G airspace, under 400 feet, during the day, at or below 100 mph, and not over people or from a moving car.

⁸³ U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION, UNMANNED AIRCRAFT SYSTEMS: BEYOND THE BASICS, available at https://www.faa.gov/uas/beyond_the_basics/#55 (last visited Feb. 9, 2017).

⁸⁴ U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION, UNMANNED AIRCRAFT SYSTEMS: SECTION 333, available at https://www.faa.gov/uas/beyond_the_basics/section_333/ (last visited Feb. 9, 2017).

⁸⁵ U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION, SPECIAL AIRWORTHINESS CERTIFICATION: CERTIFICATION FOR CIVIL OPERATED UNMANNED AIRCRAFT SYSTEMS (UAS) AND OPTIONALLY PILOTED AIRCRAFT (OPA), available at https://www.faa.gov/aircraft/air_cert/airworthiness_certification/sp_awcert/experiment/sac/ (last visited Feb. 9, 2017).

⁸⁶ Brandon Bellow, COMMENT: *FLOATING TOWARD A SKY NEAR YOU: UNMANNED AIRCRAFT SYSTEMS AND THE IMPLICATIONS OF THE FAA MODERNIZATION AND REFORM ACT OF 2012*, 78 J. Air L. & Com. 585, 601 (2013).

⁸⁷ U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION, UNMANNED AIRCRAFT SYSTEMS: CIVIL OPERATIONS (NON-GOVERNMENTAL), available at http://www.faa.gov/uas/civil_operations/ (last visited Nov. 14, 2015) (“must be able to describe how their system is designed, constructed, and manufactured, including engineering processes, software development and control, configuration management, and quality assurance procedures used, along with how and where they intend to fly.”); see also *Civil Flight Operations (Non-Governmental)*, B4UDRONE, available at <http://b4udrone.us/civil-operations/> (last visited Feb. 9, 2017).

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should be noted that civil drones may also receive a SAC in the experimental category to perform research and development, crew training, and market surveys.⁸⁸ However, unlike other civil drones, carrying persons or property for compensation with an experimental SAC is strictly prohibited.⁸⁹

3. *Model or Recreational Drones.*

The FAA has enacted regulations requiring the registration of all drones between 0.55 and 55 pounds, even if used for recreational purposes.⁹⁰ Those registering small recreational drones must be a U.S. citizen or legal permanent resident at least 13 years old.⁹¹ The failure to register such a drone may result in civil and criminal penalties.⁹² In addition to the federal registration process, operators of these drones must comply with a number of additional “small unmanned aircraft rules.”⁹³ Specifically, all flights must occur during daylight, at or below 400 feet, may not exceed 100 mph, and the drone must be kept within sight of the pilot at all times.⁹⁴ Further, drones are prohibited from carrying hazardous materials or being operated in a reckless manner.⁹⁵ If a drone operator abides by these regulations, the pilot does not need FAA authorization to operate their drone. It should be noted however, that similar to civil drones, to fly a drone that weighs 55 pounds or more, operators must file for a Section 333

⁸⁸ 14 CFR §21.191.

⁸⁹ 14 CFR § 91.319(a)(2).

⁹⁰ U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION, UNMANNED AIRCRAFT SYSTEMS: REGISTRATION, available at <https://www.faa.gov/uas/registration/> (last visited Feb. 3, 2017).

⁹¹ U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION, UNMANNED AIRCRAFT SYSTEMS: FLY FOR FUN, available at https://www.faa.gov/uas/getting_started/fly_for_fun/ (last visited Feb. 9, 2017).

⁹² U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION, SMALL UNMANNED AIRCRAFT SYSTEM (sUAS) REGISTRATION SERVICE, available at <https://registermyuas.faa.gov> (last visited Feb. 9, 2017).

⁹³ 14 CFR 107.

⁹⁴ U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION, SUMMARY OF SMALL UNMANNED AIRCRAFT RULE (PART 107), available at https://www.faa.gov/uas/media/Part_107_Summary.pdf (last visited Feb. 9, 2017).

⁹⁵ *Id.*

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exemption.⁹⁶ Despite these limited provisions, “[n]othing in this section shall be construed to limit the authority of the Administrator to pursue enforcement action against persons operating model aircraft who endanger the safety of the national airspace system.”⁹⁷

4. *Additional Regulations.*

In addition to the above regulations, the government may classify airspace as prohibited, meaning “[n]o person may operate an aircraft within [the] area unless authorization has been granted by the using agency.”⁹⁸ Additionally, foreign aircrafts, not part of the armed forces of a foreign country, may not navigate in the United States absent, among other factors, authorization from the Secretary of Transportation.⁹⁹ Finally, various criminal penalties have been put in place for violations of registration requirements in connection with transporting a controlled substance by aircraft.¹⁰⁰

B. Drone Regulations in Mexico

Mexico’s drone regulations are provided in the Dirección General de Aeronáutica Civil (General Direction Manual of Civil Aeronautics). The Dirección General de Aeronáutica Civil is a part of the Secretariat of Communications and Transportation of Mexico (“Secretariat”), which in essence is Mexico’s Transportation Department.¹⁰¹ The Secretariat is responsible for enacting drone regulations in Mexico, which has been accomplished principally

⁹⁶ U.S. DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION, UNMANNED AIRCRAFT SYSTEMS: BEYOND THE BASICS, available at https://www.faa.gov/uas/beyond_the_basics/#55 (last visited Feb. 9, 2017).

⁹⁷ FAA Modernization and Reform Act of 2012, Pub. L. 112-95, §336(b), 126 Stat. 11, 77.

⁹⁸ 14 CFR § 73.83.

⁹⁹ 49 USCS § 41703.

¹⁰⁰ 49 USCS § 46306.

¹⁰¹ *See generally*, Secretaría de Comunicaciones y Transportes, <http://www.sct.gob.mx> (last visited Feb. 3, 2017).

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through revisions to Mexico's Aviation Law, COAV23-10R2, in May 2015.¹⁰²

COAV23-10R2 defines a drone as any vehicle capable of "transiting through air space."¹⁰³ The most important provisions within this regulation regarding drones are the drone classifications and the no permit requirement for the operation of small drones in daylight.¹⁰⁴ Specifically, the regulation divides drones into three categories based on size: small-sized drones weighing 2 kilograms (4.4 pounds) or less; medium-sized drones weighing between 2 kilograms and 25 kilograms (55 pounds); and large-sized drones weighing over 25 kilograms.¹⁰⁵ Small-sized drones are typically those used by hobbyists, and, as stated above, do not require any permit to fly, so long as they abide by the general flight laws.¹⁰⁶ Medium-sized drones require a permit to operate, unless operated on the grounds of a flight club.¹⁰⁷ Finally, large-sized drones require an operating permit, and the operator must also be a licensed pilot.¹⁰⁸

Notwithstanding the above categorizations of drones, small recreational drones must abide by a number of additional regulations. For example, all drone flights must be operated during daylight hours only.¹⁰⁹ Additionally, all drones must stay 9.2 kilometers (5.72 miles) away from airports and 900 meters (0.56 miles) from helicopter pads. Further, small-sized drones are prohibited from flying above 122 meters (400 feet).¹¹⁰ Throughout the duration of the flight, the

¹⁰² CO AV-23/10 R2, available at <http://www.sct.gob.mx/fileadmin/DireccionesGrales/DGAC/00-aeronautica/co-av-23-10-r2.pdf>.

¹⁰³ *Id.*

¹⁰⁴ See Nancy Palencia, *Mexico drones get green light*, CAPITALMEDIA, available at <http://thenews.mx/2015/04/mexico-drones-get-green-light> (last visited Nov. 12, 2015).

¹⁰⁵ CO AV-23/10 R2, art. 7, p. 4, available at <http://www.sct.gob.mx/fileadmin/DireccionesGrales/DGAC/00-aeronautica/co-av-23-10-r2.pdf>.

¹⁰⁶ *Id.* at art. 8, p. 5.

¹⁰⁷ *Id.* at art. 9, p. 6.

¹⁰⁸ *Id.* at art. 10, p. 6.

¹⁰⁹ *Id.* at art. 7.2(k); see also *Mexico Drone Laws*, UAV SYSTEMS INTERNATIONAL INC. (Nov. 1, 2015), <https://uavsystemsinternational.com/drone-laws-by-country/mexico-drone-laws/>.

¹¹⁰ *Mexican Drone Regulations*, THE DRONE INFO (June 24, 2015), <http://www.thedroneinfo.com/mexican-drone-regulations/>.

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operator or pilot must always keep the drone within his visual line of sight.¹¹¹ Finally, the regulations provide that all drones may not carry any dangerous merchandise or prohibited substances,¹¹² and pilots are responsible for any damage caused by an accident.¹¹³

As the foregoing discussion illustrates, Mexico's drone laws are not only new, but are not completely developed. That being said, commentators have stated that Mexico's drone laws are a step in the right direction, in part because they have closely modeled their regulations off of those currently in existence in the United States. However, both the drone regulations of Mexico and the United States are not fully comprehensive, leaving gaps for drones to be utilized in criminal activity, as displayed by the narcotics trafficking seen at the border.

IV. POSSIBLE SOLUTIONS TO PREVENT DRONES FROM BEING USED AS TOOLS FOR DRUG TRAFFICKING BY MEXICAN CARTELS

The previous sections have established the importance and impact of the use of drones to traffic narcotics into the United States. Factors contributing to the severity of this issue include the expanding drone industry, lack of drone regulations, and significant quantity of narcotics smuggled into the United States from Mexico. Based on the foregoing discussion, it is evident that the trafficking of narcotics from Mexico into the United States is nothing short of an epidemic. While certain drone regulations have been established by both Mexico and the United States, these regulations were not enacted to control the use of drones as tools for transporting narcotics. Since evidence suggests that Mexican cartels have begun to utilize drones as a trafficking technique, the need for a

¹¹¹ CO AV-23/10 R2, art. 8, p. 5, available at <http://www.sct.gob.mx/fileadmin/DireccionesGrales/DGAC/00-aeronautica/co-av-23-10-r2.pdf>.

¹¹² *Id.* at art. 7.2(e); see also *SCT announces new drone regulations*, MEXICO NEWS DAILY (Apr. 30, 2015), <http://mexiconewsdaily.com/news/sct-announces-new-drone-regulations> (“[drones] must not carry anything dangerous or illegal.”).

¹¹³ CO AV-23/10 R2, art. 7.2(g), p. 4, available at <http://www.sct.gob.mx/fileadmin/DireccionesGrales/DGAC/00-aeronautica/co-av-23-10-r2.pdf>.

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comprehensive solution is imminent. This section proposes possible solutions to prevent drones from being used as tools by Mexican cartels for drug trafficking. This section will also discuss the regulation of drones in several other countries, and which policies, if any, should be adopted at the border.

It should be noted that while there exist several different theories to reduce the incidences of drug trafficking into the United States,¹¹⁴ this comment focuses on methods that can be used to specifically prevent cartels from using drones to traffic narcotics. While alternative theories could undoubtedly decrease the overall incidences of narcotics trafficking into the United States, they will not be the focus of the discussion.

A. Overview of Proposal

The most important aspects of solving the drone crisis at the border are the FAA Modernization and Reform Act of 2012, the Merida Initiative, and the extradition treaty between the United States and Mexico. As discussed above, the FAA has been granted an extension to finalize their implementation of drones into the United States airspace.¹¹⁵ The FAA should utilize the extension granted in the FAA Modernization and Reform Act to implement regulations for drone use at the border, and fill in any gaps not covered by the current regulations. The specifics of possible regulations will be discussed in subpart 1, below. These refined regulations within the FAA Modernization and Reform Act should then be implemented into collaborative drone regulations with the Mexican government at the border. This can be accomplished through the Merida Initiative, and specifically, through the first three pillars, which focus on disrupting organized criminal groups, strengthening institutions, and building a twenty-first century border. Such collaborative drone regulations would be consistent with the goals of the Merida

¹¹⁴ See *inter alia* Mark Osler, SYMPOSIUM: DRUG POLICY REALITY AND REFORM: ASSET FORFEITURE IN A NEW MARKET-REALITY NARCOTICS POLICY, 52 Harv. J. on Legis. 221 (2015). (proposing that attacking the “cash flow” of the cartels would disrupt their narcotics operations).

¹¹⁵ Aviation Pros, *supra* note 65.

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Initiative. As part of the Initiative, the Mexican government must work to honor any new regulations implemented in the United States through the FAA Modernization and Reform Act. Finally, any criminal violations of the collaborative regulations would permit the United States to prosecute any offenders located in Mexico, due to the extradition treaty between the United States and Mexico. In order for this proposal to be effective, both countries must work to honor the treaty while respecting the other nation's sovereignty. With the basic framework of the proposal established, potential new drone regulations will be discussed below.¹¹⁶

1. *New Drone Regulations to be enacted through the FAA Modernization and Reform Act.*

To begin, both the United States and Mexico must enact regulations that explicitly ban the use of drones as drug trafficking tools at the border. No such regulation currently exists in either country, so this proposal is intuitively the first step in solving this problem. It is significant that a number of states have already enacted legislation prohibiting the weaponization of drones.¹¹⁷ For this reason, a prohibition on the transportation of drugs would be feasible and consistent with existing drone regulations.

Next, the United States and Mexico should create harsher penalties for offenders who use drones to transport narcotics across the border. While trafficking narcotics across the border is already illegal,¹¹⁸ a sentence enhancer for the use of drones would help deter future incidences of drone transportation, since the relatively small benefits of a single drone trafficking flight would not outweigh the potential enhanced sentence attached to such conduct. Such a sentence enhancer would also apply to those receiving the drone shipment within the United States. This proposal is closely related to

¹¹⁶ While it is not anticipated that the cartels will follow every regulation this comment proposes, such regulations may nonetheless help deter cartels from using drones as trafficking tools by making the penalties for such conduct outweigh its potential benefits.

¹¹⁷ See *inter alia* N.C. Gen. Stat. § 14-401.24 (2014).

¹¹⁸ 21 USC § 841.

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the first, however with slight differences. Whereas the previous proposal was an explicit ban on trafficking narcotics with drones, this proposal ensures a harsher penalty for those caught trafficking narcotics in this fashion. While the former is its own offense, the latter would attach to legislation already in existence.

Additionally, the United States and Mexico should categorize the region extending the length of the border as a “no fly zone” for drones, thus prohibiting unauthorized drone flights within 5 miles of the border.¹¹⁹ This is accomplished by categorizing this region as “prohibited airspace,” in which no drone operations may take place in a designated region of the border without the express permission of the United States or Mexican governments.¹²⁰ Any drone flights within this region, with the exception of drones currently controlled by the CBP,¹²¹ would be strictly prohibited, and those participating in unauthorized flights would be subject to severe penalties as well as confiscation of any drone and narcotics being transferred across the border.¹²² While such regions already exist, the border of the United States and Mexico is not included among these “no-fly zones.”¹²³ As will be described below, several countries have adopted similar “no-fly zones” to help regulate drone flights.¹²⁴

In conjunction with the prohibited airspace, all drone flights that fall outside of this region but nevertheless remain within 10 miles of the border must be operated within the line of sight of the operator – GPS and camera controlled flights should be strictly prohibited within this region. Adopting such a regulation would make it much more difficult for those attempting to traffic narcotics via

¹¹⁹ Bobby Sudekum, *Don't fly drones here*, MAPBOX (July 22, 2014), <https://www.mapbox.com/blog/dont-fly-here/> (Map of current no-fly zones for drones).

¹²⁰ 14 C.F.R. §§73.81-73.83 (2011).

¹²¹ See U.S. DEPARTMENT OF HOMELAND SECURITY, *supra* note 54.

¹²² 21 U.S.C. § 881.

¹²³ FAA Modernization and Reform Act of 2012, Pub. L. 112-95, §334, 126 Stat. 11, 76-77.

¹²⁴ Canada prohibits flights within restricted airspace, including near or over military bases, prisons, and forest fires. See Canadian Aviation Regulations, SOR/96-433 (Can.) available at <http://laws-lois.justice.gc.ca/PDF/SOR-96-433.pdf>.

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drones to remain hidden from authorities, and should make the risk of such a flight outweigh the potential benefits. This would also make drone trafficking flights less convenient, since they cannot be controlled through an automatic flight pattern with GPS coordinates or from a remote location via camera. To be effective, this regulation would also require the communities neighboring the border to be well informed of the regulation's requirements.

Finally, recall that the current United States and Mexican regulations categorize drones based on weight.¹²⁵ However with reports that the cartels are engineering their own drones with larger engines to make transporting narcotics more efficient,¹²⁶ regulations should be implemented prohibiting certain engine sizes for civilian drones. By limiting the engine size of drones that can be used for narcotics trafficking, such drones will be unable to carry greater weight, and thus will be unable to transport larger quantities of narcotics. Any drones seized that contain engine sizes exceeding the statutory limit will be subject to additional penalties. This regulation will help deter cartels from constructing their own drones with increased engine sizes, thus making drones an inefficient method for trafficking narcotics.

2. *Additional Methods.*

In addition to the above regulations, the United States and Mexico should employ the use of geo-fencing technology. Put simply, geo-fencing is a virtual barrier that surrounds a geographical boundary through the use of a GPS.¹²⁷ Geo-fencing technology could automatically prevent drones from entering a designated prohibited area. By designating the region extending the length of the border as

¹²⁵ FAA Modernization and Reform Act of 2012, Pub. L. 112-95, §336, 126 Stat. 11, 77-78; CO AV-23/10 R2, art. 7, p. 4, available at <http://www.sct.gob.mx/fileadmin/DireccionesGrales/DGAC/00-aeronautica/co-av-23-10-r2.pdf>.

¹²⁶ *Drug delivery drone crashes in Mexico*, BBC NEWS (Jan. 22, 2015), <http://www.bbc.com/news/technology-30932395> (Stating that cartels hired engineers to manufacture drones to carry more weight than those that were commercially available.).

¹²⁷ *DEFINITION: geo-fencing (geofencing)*, TECHTARGET (Sep. 2015), <http://whatis.techtargt.com/definition/geofencing>.

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prohibited airspace, as described above, the use of geo-fencing technology would ensure that GPS controlled drones do not fly within 10 miles of the border. This proposal is feasible, as U.S. lawmakers have recently suggested similar regulations.¹²⁸

The United States must also continue utilizing their own surveillance drones at the border to help identify any unauthorized drones in the border airspace.¹²⁹ Since the drones utilized by the CBP already monitor the border for drug trafficking,¹³⁰ extending their operation to monitor the skies is the next logical and necessary step in preventing narcotics trafficking. In fact, China is currently utilizing drones in their own efforts to prevent drug trafficking on the Indian border in Tibet and in Xinjiang and Yunnan regions.¹³¹ The use of such technology comes with its own weaknesses however, as drones utilized by the CBP may be susceptible to attacks.¹³² Increased drone

¹²⁸ See Kim Kirschenbaum, *Recreational Drones Present Enforcement Issues for FAA*, UNIVERSITY OF PENNSYLVANIA LAW SCHOOL (Sept. 23, 2015), http://www.regblog.org/2015/09/23/kirschenbaum_recreational_drones/ (New York Senator Chuck Schumer recently announced his intentions to introduce an amendment mandating the use of geo-fencing technology on drones to restrict their flying capabilities.); see also Kaveh Waddell, *Chuck Schumer Wants to Set Up No-Drone Zones Around Airports*, NATIONAL JOURNAL (Aug. 19, 2015), <http://www.nationaljournal.com/tech/2015/08/19/chuck-schumer-wants-set-up-no-drone-zones-around-airports> (Geo-fencing technology proposals would create no-fly zones for “sensitive areas.”).

¹²⁹ See U.S. DEPARTMENT OF HOMELAND SECURITY, *supra* Note 54.

¹³⁰ See Thompson, *supra* note 17.

¹³¹ *China deploys radars, drones on borders to curb infiltration*, THE ECONOMIC TIMES (Nov. 6, 2015), <http://economictimes.indiatimes.com/news/defence/china-deploys-radars-drones-on-borders-to-curb-infiltration/articleshow/49688679.cms>.

¹³² See Scott Peterson & Payam Faramarzi, *Iran Hijacked US Drone, Says Iranian Engineer*, CHRISTIAN SCI. MONITOR (Dec. 15, 2011), <http://www.csmonitor.com/World/Middle-East/2011/1215/Exclusive-Iran-hijacked-US-drone-says-Iranian-engineer-Video> (Commentators have noted that the GPS guidance system that allows a UAS to fly free is highly susceptible to attack); see also Lorenzo Franceschi-Bicchierai, *Drone Hijacking? That's Just the Start of GPS Troubles*, WIRED (July 6, 2012), <http://www.wired.com/dangerroom/2012/07/drone-hijacking/all/> (“There are already drones in use in the country that are plausible targets for jamming – think of the drones being used to monitor the border between the U.S. and Mexico for drug smuggling and border jumping.”).

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security could protect CBP drones from being hijacked,¹³³ and such techniques could then be used to ground unauthorized drones trafficking narcotics.¹³⁴

B. Drone Regulations of Other Nations

Numerous countries around the world have enacted their own unique drone regulations, the adoption of which may be useful to the United States and Mexico in their efforts to combat narcotics trafficking. The following discussion explores a number of drone regulations from several countries. While some of the outlined regulations may prove to be useful in the future of drone regulation at the border, others are included to provide a simple comparison. This discussion is intended to highlight how the regulations of Mexico and the United States compare to those of other nations, and discuss which regulations may be useful to help curb the incidences of drones being used to traffic narcotics across the border. The countries described below were selected based on a unique feature about their drone regulations, and provided a distinct basis of comparison to the drone regulations of Mexico and the United States.

1. *United Kingdom.*

To begin, drone regulations in the United Kingdom are very similar to those of the United States. One notable difference is that the United Kingdom requires direct visual contact to be maintained at all times, and the operator may not use a monitor to conduct the

¹³³ Bellow, *supra* note 86 at 615 (“The FAA should also require that all UASs come equipped with some sort of anti-drone-jacking technology.”).

¹³⁴ Josh Solomon, *Uncertainties Remain as FAA Integrates Drones Into American Skies*, MCCLATCHY DC (April 29, 2013), <http://www.mcclatchydc.com/2013/04/29/189894/uncertainties-remain-as-faa-integrates.html> (“Drones also are susceptible to communications jamming, leaving the operator unable to control the aircraft.”).

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flight.¹³⁵ A similar regulation should be enforced at the designated 10-mile zone at the border, discussed above. This would prohibit GPS or camera operated flights, thus forcing pilots to keep the drone in their line of sight. In turn, this UK regulation would increase the risk that a potential trafficker will be identified.

2. *Canada.*

As previously noted, Canada prohibits flights within restricted airspace, including near or over military bases, prisons, and forest fires.¹³⁶ A similar regulation could create a “no-fly zone” within five miles of the border, and impose severe fines or penalties for any violators caught operating an unauthorized drone in this region. Additionally, Canada prohibits operating a drone in a region that would interfere with first responders.¹³⁷ A similar regulation could be implemented at the border, prohibiting drone flights that could interfere with drones currently being utilized by the CBP.

3. *Bangladesh.*

Contrary to the United States and Mexico, the Government of Bangladesh has banned all drones that did not have flight permission prior to December 2014.¹³⁸ While an interesting approach to drone regulation, a similar approach would likely be far too drastic in the United States and Mexico, where demand for drones are skyrocketing, and would not directly solve the issue of drones used as trafficking tools. Nevertheless, the approach to drone regulations in Bangladesh is an interesting contrast to the regulations discussed in the United States and Mexico.

¹³⁵ *Above the Law: How Drone Laws Around the World Are Affecting Production*, LITTLE BLACK BOOK LTD. (Sept. 2014), <http://www.lbbonline.com/news/above-the-law-how-drone-laws-around-the-world-are-affecting-production/>.

¹³⁶ See Canadian Aviation Regulations, *supra* note 124.

¹³⁷ *Id.*

¹³⁸ *No drone allowed in country's airspace*, THE DAILY STAR (Dec. 31, 2014), <http://www.thedailystar.net/no-drone-allowed-in-countrys-airspace-57769>; see also CIVIL AVIATION AUTHORITY, BANGLADESH, <http://www.caab.gov.bd> (last visited Jan. 7, 2016).

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4. *Brazil.*

On the opposite end of the spectrum, Brazil does not have any restrictions on drone usage within their country.¹³⁹ The country intended to implement new drone legislation before the 2016 Olympics,¹⁴⁰ however such measures were largely unsuccessful.¹⁴¹ While not a practical solution by any means, this *laissez faire* approach to drone regulation is interesting in the context of the rising drone market across the globe.

5. *Austria.*

Austria requires that potential drone users either have a pilot license or pass an exam about Austrian air law.¹⁴² While such a regulation may seem harsh, it undoubtedly would increase the security of the border, permitting only trained pilots or those with requisite knowledge to pilot drones. While such a regulation may not directly have any deterring effects on the trafficking of narcotics into the United States via drones, this regulation would increase the safety of the communities at the border by enhancing notice of the no-fly zones and applicable drone laws prohibiting trafficking.

6. *The Netherlands.*

The final, and most outlandish, method of drone regulation in a foreign country is found in the Netherlands. While not exactly a regulation, it is worth mentioning that the Dutch National Police

¹³⁹ *Above the Law: How Drone Laws Around the World Are Affecting Production*, LITTLE BLACK BOOK LTD. (Sept. 2014), <http://www.lbbonline.com/news/above-the-law-how-drone-laws-around-the-world-are-affecting-production/>.

¹⁴⁰ *Brazil to Unveil New Drone Legislation ahead of 2016 Olympics*, PANAM POST (Apr. 17, 2015), <https://panampost.com/panam-staff/2015/04/17/brazil-to-unveil-new-drone-legislation-ahead-of-2016-olympics/>.

¹⁴¹ Russell Brandom, *How Brazil is trying (and failing) to keep drones away from the Olympics*, THE VERGE (Aug. 8, 2016), <http://www.theverge.com/2016/8/8/12402972/olympics-rio-2016-anti-drone-jamming-public-safety>.

¹⁴² BUNDES-VERFASSUNGSGESETZ [B-VG] [CONSTITUTION] BGBl No. 253/1957, as amended by Bundesgesetz [BGBI] No. 96/2013, art. 4, § 24 (Austria).

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Corps has begun a new initiative using eagles to capture unauthorized drones from the sky.¹⁴³ The eagle responds to the drone as it would its normal prey, snatching the drone mid-flight and carrying it to the ground. It has been explained that “these birds’ animal instincts . . . offer an effective solution to a new threat.”¹⁴⁴ While this technique may seem impractical, one cannot deny the poetic justice of seeing a bald eagle protect the American border by snatching a shipment of illicit narcotics from the sky.

V. CONCLUSION

The use of drones to traffic narcotics into the United States from Mexico is an increasing phenomenon that is contributing to the United States’ drug epidemic. Drones are becoming more widely available, and the current regulations cannot keep up with this expansion. The need for a solution is imminent as we move into 2017. The current drone regulations of Mexico and the United States are insufficient to solve this crisis, however the pieces of a solution have been put into place. The United States needs to utilize the recent extension of the FAA Modernization and Reform Act to ensure that new regulations are enacted to help prevent future incidences of drug trafficking into the United States. Potential regulations include explicit bans on using drones as trafficking tools as well as sentence enhancers for such uses, categorizing the border as prohibited airspace or a “no-fly zone,” and limitations on drone engine sizes. These regulations could be promulgated through the FAA Modernization and Reform Act, and implemented into Mexico’s own drone legislation through the Merida Initiative. Once these two nations have collaborative drone regulations at the border, they should continue to honor the extradition treaty they signed in 1978. In addition to the above framework, both countries should utilize geo-fencing technology, thus creating virtual barriers for any GPS piloted flights. The United States CBP should continue using

¹⁴³ Mindy Weisberger, *Drone-hunting eagles can snatch devices out of the sky*, CBS NEWS (Feb. 8, 2016), <http://www.cbsnews.com/news/drone-hunting-eagles-can-snatch-the-devices-out-of-the-sky/>.

¹⁴⁴ *Id.*

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their own drones at the border to not only identify potential traffickers on foot, but to monitor the skies for any unauthorized drones. It is important that the CBP ensure these drones are equipped with anti-drone-jacking technology, and should not hesitate to use such technology to ground unauthorized drones. Finally, various regulations (or lack thereof) from the United Kingdom, Canada, Bangladesh, Brazil, Austria, and the Netherlands provide a unique dialogue on regulations that the United States and Mexico could potentially implement at the border.

While drones may not currently be the primary method for Mexican cartels to traffic narcotics into the United States, this reality could change if the United States and Mexico do not take steps to prevent its continued use in the future. The use of drones at the border has implications beyond drug trafficking,¹⁴⁵ however their use as trafficking tools can no longer be ignored. With an extension granted to the FAA for the promulgation of new regulations, only time will tell if this new drug trafficking method can be grounded before it finally takes off.

¹⁴⁵ See Bellow, *supra* note 86, at 609 (“[T]hose with nefarious purposes could turn large-scale UASs into projectile weapons against the American people or attempt to weaponize UASs and open fire on the public.”).