

Crimes at sea: A review of crime onboard cruise ships

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Abstract

From the popular 1970s television show *The Love Boat*, the modern cruise industry was born. Today's mega-ships are the size of small cities and, as with any city, are faced with a multitude of problems and challenges. Crime onboard ship is one of these problems. Criminal activity onboard cruise ships runs the spectrum from minor issues such as petty theft to major Class 1 crimes such as sexual assault and murder. However, very little is really known about the criminal activity that takes place aboard ship. This paper reviews the four major types of crime about today's cruise ships.

CRIMES AT SEA:

A REVIEW OF CRIME ONBOARD CRUISE SHIPS

In novels, movies, television shows, and travel brochures, cruise vacations are portrayed as euphoric surreal escapes from the everyday tedium of the ‘real world.’ Cruising is an idyllic concept – forget your troubles and enjoy a carefree experience. Aside from the faint possibility of hitting an iceberg, going aground or being raided by pirates, cruise ships seem entirely safe.

Onboard crime, does it even occur? And if it does, where would someone run after having stolen a purse, shoplifted a bracelet in the gift shop, or committed a sexual assault? Given the uniqueness of the cruise ship environment, where could someone possibly go after having committed any type of crime? What would be the escape route? Given the ‘no way out’ probabilities, why would anyone ever bother attempting a crime?

Unfortunately, crime aboard cruise ships occurs more frequently than is typically believed. In 2017, a total of 106 crimes were reported aboard cruise ships embarking from ports in the U.S. (U.S. Department of Transportation, 2018). Crimes range along a continuum from relatively minor incidents such as petty theft to UCR Index crimes such as assault or murder.

This paper examines the phenomenon of crime aboard cruise ships. Specifically, four types of crime at sea are reviewed: sexual assault, drugs, theft, and pollution.

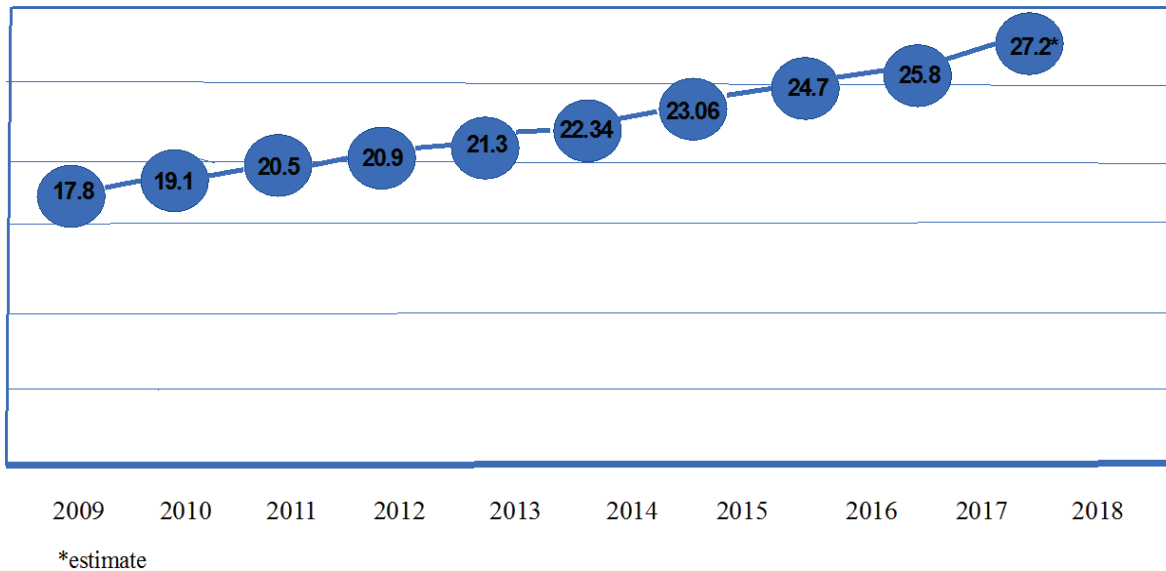
A HISTORICAL PERSPECTIVE

The modern cruise vacation, as currently known, got its start in 1977 with the debut of ABC’s “The Love Boat.” This popular television show was based on the best-selling 1975 novel “Love Boats” by Jeraldine Saunders and featured a likeable mix of passengers and crew who each week experienced an idealistic and lighthearted cruise experience. Festive images of the exotic tropical locals such as Acapulco, Mazatlan, and Puerto Vallarta fired the imagination of the American public. Those glamorous images, coupled with fun and untroubled storylines, quickly propelled the show to the top of the viewing charts and resulted in a financial success for both the network and the fledgling pleasure cruise industry. In the period of just two years – 1978-1980 – the number of passengers embarking from American ports increased from 825,000 to 1,500,000. Today, that number has grown in excess of

27 million passengers worldwide, with approximately 15 million of those coming through North American ports (Table 1). Since 2009, the cruise industry has almost doubled in size and earns annual revenues in the billions of dollars.

Table 1

Global Cruise Passengers (Millions)



Source: (FCCA, 2018)

The cruise industry of today has changed dramatically from its humble beginnings four decades ago. In an effort to keep up with persistently surging customer demand, new ships have been added steadily to the worldwide cruise fleet. From a relatively modest new build of 40 ships in the 1980s, to 80 in the 1990s, and well over 100 ships since 2000, the industry momentum has been consistently upward. The trend is anticipated to continue into the near future as an estimated 50 additional ships are on line to be completed between 2018 and 2027 (Souza, 2018). Today, approximately 320 cruise ships ply the ocean’s waters worldwide.

As the number of in service ships has increased, so has their size (tonnage) and carrying capacity. The cruise ships of today are significantly larger than those of past years. “The Love Boat” featured the now-iconic Princess Cruise Line’s *Pacific Princess*. That ship, sleek, new, and cutting-edge of its time, weighed in at approximately 20,000 gross tons (GT), stretched 550 feet long, and carried a capacity load of 640 passengers. While large for its day, the *Pacific Princess* is dwarfed by today’s mega-ships. The newest ships composing the fleets of today’s cruise companies can weigh in excess of 225,000

GT, are nearly 1,200 feet in length (equivalent to about four US football fields), and have a carrying capacity in excess of 6,600 passengers and 2,200 crew. Today's ships are about ten times bigger and carry approximately ten times the number of guests and crew. In essence, today's mega-ships are the size of small cities.

Just as every city, large or small, will experience crime, it is unrealistic to assume all criminal activities end at the ship's gangplank and onboard life is crime free. And yet, the general perception of the cruise ship and cruising is one of security, fun-filled activities, exotic destinations, and romantic interludes. The cruise experience is a time when individuals forget their routine existence and become lost in the glitter and glamour the cruise environment offers (Panko, George, and Henthorne, 2009). In fact, that perception is underscored by a recent survey of cruisers indicates feelings of insecurity or danger do not even rise to the level of relevance (Baker, 2013).

Onboard crimes have been committed throughout the history of cruising. What has been lacking is complete transparency of the actual occurrences of onboard crimes. Historically, cruise lines featured autonomous policing. It was left to the individual lines to gather and report information of occurrences of crime onboard, as they deemed reasonable, prudent, and necessary. For example, Frantz, reporting on sexual assault in the 1970s and 1980s, found a pattern of cover ups that began as soon as the incident was reported. Industry lawyers were contacted and brought in immediately; victims were discredited by counterclaims of drinking and consensual sex and discouraged from filing reports. The lines aggressively pursued the settlement of claims in secrecy and out of court (Garin, 2006). The outcome was systemic underreporting and protected the brand.

Following a number of particularly high-profile onboard incidents that captured media attention, public awareness began a long slow awakening. In 1998, a steward raped a recently widowed woman in her room on the first night of her cruise. She notified ship security personnel. However, there was no rape kit onboard and she was only given a pelvic exam and sedatives. The ship's officers retained much important evidence of the assault. When she reached Miami, she reported the rape to the FBI; however, the case was subsequently dropped due to lack of crucial evidence, witnesses, and an overall poorly preserved chain of custody. Citing "medical reasons," the steward was flown back to his home country (Garin, 2006).

In another case involving only crewmembers, an engineer assaulted a ship's nurse. The victim reported the incident the following day. Cruise line attorneys stated they insisted she report what happened to

the FBI, but she declined. According to her statements, she was pressured to make an immediate decision. Upon arriving in Miami, she did report the assault to the FBI. Agents attempted to arrange a meeting between the victim and perpetrator; however, he had been dismissed immediately following the incident (for “being drunk on duty”) and flown back to his home country before agents could interview him (Orlando Sentinel, 1999).

In late 2015, a female employee was violently raped by a crewmember. She reported the incident to her supervisor, staff captain, and the ship’s security officer. Upon arriving to the Bahamas the next day, she and her supervisor went to the police; however, in later statements she indicated being so traumatized by the events that she acquiesced to her supervisor’s urging to not press charges. The cruise line never contacted any law enforcement agency including the FBI. Although the cruise line had employed her since 2003 (and was sexually assaulted the following year), she was discharged for unclear reasons (Lipscomb, 2018).

Numerous additional assaults, coupled with an increasing grass-roots activism, pushed the issue of passenger safety into the public forum. These efforts resulted in the passing of the Cruise Vessel Security and Safety Act (CVSSA) of 2010. This act mandated significant security changes, such as cabins equipped with security latches and time-sensitive key technology, the provision of a security guide to all passengers, limiting crew access to passenger cabins, and qualified medical staff to provide assistance in the event of sexual assault (U.S. Congress, 2010). However, subsequent changes in the language of the Act resulted in underreporting. The requirement that only crimes that had been reported to the FBI and officially closed be made known to the public created serious underreporting for two major reasons: not all cruise ship crimes are reported to the FBI and that agency keeps most files open (Ahlers, 2013).

Introduced to Congress in 2017, the Cruise Passenger Protection Act, if passed, would provide additional safeguards to passengers (U.S. Congress, 2017). To meaningfully discuss cruise ship crimes, some important questions must be posed. For example, what crime statistics are kept? Who keeps them? Whose definition of crime was used (important in determining whether to include/exclude incidences)? Are these statistics available to the public? Who has access to these statistics? If there are jurisdictional disputes, how are they resolved? The following four sections (sexual assault, drugs, theft, and pollution) provide a review of criminal activity aboard cruise ships.

SECTIONAL ANALYSIS

Sexual Assault at Sea

Cruising is perceived as safe and enjoyable travel, as affirmed by its popularity, customer satisfaction, repeat bookings and increased passenger volume. Yet, in the context of having a good time, it may present opportunities for sexual exploitation by crewmembers and other passengers (Klein and Poulston, 2011). Given the foregoing, one could assume that only passengers are victims of onboard sexual assault, but this is not the case. Both passengers and crewmembers commit sexual assaults; and, victims may be passengers or crew. The possible combinations are displayed in Figure 1.

		Perpetrator	
		Passenger	Crew
Victim	Passenger	P / P	C / P
	Crew	P / C	C / C

Figure 1
Assault at Sea: Possible Combinations

Most crewmembers meet or surpass their work standards and provide services and attention to passengers in a highly professional manner. However, it is not too surprising that the majority of crimes are perpetrated on passengers by members of the ship's crew, given the working conditions on a cruise ship: long hours, low wages, lengthy intervals without time off to see family or relax, and insufficient or lack of pre-employment screening through thorough background checks.

While sexual assault and rape are not highly reported crimes on land, they are reported in greater frequency than any other major offenses onboard ships (U.S. Department of Transportation, 2018). However, until recently, the cruising public had no reliable method of checking a cruise line's history of crime, since there was no centralized system for reporting or documenting crimes aboard ship. Cruise lines self-reported and were often lax or less than forthcoming about the incidence of onboard crimes.

According to the Rape, Abuse, & Incest National Network (RAINN), approximately one-third of sexual assaults are reported (RAINN, 2015). An even lower rate of 23% is reported in the National Crime Victimization Survey (NCVS) (Morgan and Kena, 2018). Victims do not come forth for a variety of reasons: may feel embarrassed and humiliated, express self-blame for the assault, knew the perpetrator, do not know to whom or where to report the incident, feel the authorities would not help, intimidated by the perceived/real difficulties in legally pursuing the case (especially if the incident occurred on the "open seas" and thus subject to international laws and enforcement strategies). Given these difficulties, a significant discrepancy exists between the actual occurrence of onboard assault and the public's perception.

This disconnect between perception and reality of onboard sexual assault substantively changed in 2016 when reporting of onboard crime came under the purview of the U.S. Department of Transportation (DOT). Throughout 2016 and into the first quarter of 2017, DOT reported the following crime statistics for cruise lines that embarked or disembarked in the U.S.: 4 suspicious deaths, 6 thefts of \$10,000 or more, 14 assaults with serious injury, and 62 sexual assaults (nearly 70% of total crimes) (Kozłowska, 2017). Given these numbers, it is safe to assume that the actual number of sexual assaults at sea has been historically understated.

The cruise ship environment may actually facilitate the prevalence of sexual assault for several reasons. As is true for just about any type of tourism venue, there is a prevailing tendency for individuals to let down their guard and be less aware of their surrounding and less vigilant when on

holiday (Mawby, Brunt, and Hambly, 1999)). With cameras mounted throughout the ship, passenger expectations are of safety, certainly more so than on land. Alcohol is abundantly available and, since driving a vehicle is not a concern, safe-drinking limits may be exceeded and judgment impaired.

Cruisers may be especially vulnerable due to the many decks on a cruise ship and its maze of passageways, familiar to crew but bewildering to them. Although assaults may occur anywhere onboard ship, it is in the passenger cabin that the majority of sexual assaults have historically occurred. Alarming, minors are often victimized, perhaps accounting for as much as one-third of sexual assaults (including molestation). Supervised or unsupervised, crewmember or passenger, a predator may lead an unquestioning (“obey your elders”) child to an unfamiliar area of the ship. The same is true for teenagers and young adults as greater numbers opt for cruises for high school senior trips. In instances such as these, excessive alcohol consumption, inadequate adult supervision, and the carefree environment may be significant contributing factors.

As with land-based assaults, physical force is often involved in sexual assaults at sea. A woman was savagely attacked and sexually assaulted on a cruise ship on Valentine’s Day 2014 in international waters off the coast of Honduras. A service attendant claimed the victim swore at him and made disparaging remarks about his family. So while off duty, he used an all-access key to enter the cabin and hide on a balcony outside the victim’s cabin. When she returned for the evening, he violently attacked, choking her and sexually assaulting her as she was unconscious. Facial bones and back bones were broken and she bled profusely. The attacker attempted to hurl her off the balcony to conceal his crime but nearby passengers heard her screams and he fled the cabin. Passengers’ 911 calls were assigned a low priority (an overflowing toilet rated a higher response) and precious time that could have prevented some of the injuries was lost. The passenger filed suit against the cruise line for having insufficient security protocols and failing to have a real 911 emergency response team in place. The cruise line tried to have the suit dismissed; the offender pled guilty to attempted murder and aggravated assault and was sentenced to thirty years in prison (Pulkkinen, 2015).

Drugs are frequently a facilitating factor in sex crimes. For example, scopolamine can be sprinkled onto food, blown in a person’s face, or put on clothes. Afterwards, the only sign a person has been drugged is a severe headache that may last days. Rohypnol (“ruffies”) is a fast-acting tranquilizer that takes effect within 20 to 30 minutes but lasts for hours. Its ingestion may result in an amnesic

“zombie-like” state with little or no memory of what occurred. This greatly complicates and compromises the reporting of the assault.

Certainly, cruise ships have security personnel to deal with crime and emergency situations. However, security is a twenty-four hour a day concern and to provide sufficient personnel for three shifts to handle thousands of passengers can be taxing (as it would be on land). Crews overwhelmingly come from international backgrounds. Hence, language skills, lack of law enforcement training, knowledge and skills in the preservation of the evidentiary “chain of custody,” the interpretation of crimes and how they are to be handled may be complicating factors to a victim. This situation is exacerbated when negligence (deliberate or unintended) occurs in following through with reporting an alleged sexual assault to the appropriate authorities.

There are vast differences from country to country with respect to social norms and the enforcement of sexual crimes. In some countries, women may face strong personal or institutional sanctions when reporting sexual assault or rape. For example, in Mauritania and India (among other countries) women may find themselves jailed for reporting sexual assault (Human Rights Watch, 2018 Thomson Reuters Foundation, 2018). Since most crimes are handled under the jurisdiction of the vessel’s flag (F.O.C. or “flag of convenience”), international laws may present a chaotic and labyrinthine dilemma for victims (Langewiesche, 2004).

Drugs at Sea

Given the carefree, “good times” atmosphere onboard cruise ships, the presence of recreational drugs is to be expected. A variety of factors contribute to their onboard presence, most importantly is the phenomenal increase in the number of cruise passengers in the past twenty-five years. Some cruise lines have decided that “bigger is better,” with regard to ship size. With the increase in the size of the ship and passenger carrying capacity comes a corresponding increase in the amount of recreational drugs onboard. Marijuana, the most popular drug of choice, is now legal in several U.S. states and that number is increasing. Puerto Rico and the U.S. Virgin Islands are common ports-of-call for many cruise ships. Many passengers, possibly not realizing U.S. laws govern these islands, find themselves in trouble by openly smoking a joint. Finally, some passengers naively believe they will not get into

trouble for drugs while at sea nor realize the severity of sanctions associated with cruise lines' "zero tolerance" policies found in the passenger's contract.

In addition to marijuana, other drugs including cocaine, heroin, ecstasy, amphetamines and barbiturates are brought onboard at initial embarkation as well as when re-boarding following a shore excursion at a port-of-call. Drugs are smuggled in a variety of ways: in suitcases, attached to the body, in undergarments, zip-top bags, and dab pens. Drug sniffing dogs, x-rays machines, sophisticated proprietary techniques of the cruise lines, and increased security personnel are all used to detect the presence of illicit drugs. Some of the increased efficiency in detection is due to technological advances, some to mandatory training for crew members at all levels and the requirement to report the suspected presence/use of drugs per the Cruise Vessel Security and Safety Act (CVSSA). The key is screening without disrupting passengers (Peters, 2016),

Honduras, Mexico, Bermuda, Bahamas, Dominican Republic, and Jamaica have popular ports where passengers often re-board with onshore drug purchases. Drug laws vary considerably from country to country as do sanctions. For example, strict drug policies are in effect In Bermuda and the Bahamas. In these locales, it is common practice for law enforcement to bring "sniffer dogs" onboard to inspect for drugs. Doing so does not require a warrant and, if a dog alerts to the presence of drugs, it constitutes probable cause. Additionally, the search can be conducted in the passenger's cabin without the occupant's presence due to the fact that the cruise line, not the individual, owns the cabin. If a small quantity of drugs is discovered, the criminal justice process is speedy. The accused offender may be arraigned, plead guilty, and simply be required to pay a fine the same day before the ship sails. When an international arrest and conviction occurs, the U.S. Consulate is notified and U.S. Customs and Border Patrol will detain and interview the passenger upon arrival in the U.S. In all instances, it is illegal to have recreational drugs onboard. However, when a large quantity of drugs is brought onboard, it may be considered trafficking under U.S. law.

Violators may be crewmembers as well as passengers. For example, three crewmembers were arrested in Baltimore for possession of \$65,000 of cocaine. When federal agents followed up with an onboard inspection, sniffer dogs detected an additional \$94,000 of heroin and cocaine hidden in an employee's locker. These drugs were obtained during a port-of-call in the Dominican Republic with a plan to distribute them in Baltimore. In another incident, a ship's waiter was found guilty of conspiring to

import nearly \$500,000 of cocaine to Bermuda. The plan involved using other crewmembers and passengers to serve as “mules” to take the drugs off the ship (Golden, 2011).

In yet another example, three Canadian cruisers attempted to smuggle 100 kilograms (over 200 pounds) of cocaine hidden in four suitcases with a street value of approximately \$30 million, into Sydney, Australia (a record for drugs brought into that country by cruise vessel). Sniffer dogs found 35 kilograms in the cabin of two women and another 60 kilograms in the cabin of their male associate. The trio was charged with importing a commercial quantity of cocaine. A life sentence is the maximum penalty for this federal Class A drug offense (Bever, 2018).

Finally, in the late 1980s, an ingenious method was employed to bring marijuana onboard cruise ships docked in Ocho Rios, Jamaica. In the flurry of activity with the arrival and departure of cruise ships, it was quite easy to overlook the actions of small tugboats. These boats were responsible for receiving and securing anchor lines to the pier. During this process, cruise ship crewmembers securely fastened money to the anchor rope and lowered it to be collected by crewmembers on the tugs. As departure time neared, members of the tug crew fastened the purchased quantities of ganja to the anchor lines which were then pulled back into the cruise ship for distribution.

What happens when someone is caught with illicit drugs onboard? Typically, they are interviewed by cruise staff captain and security officers who then notify law enforcement to pick them up at the next port-of-call. Or, the offender may be placed into the ship’s brig until they reach the next port.

Is the use of illicit drugs onboard cruise ships on the rise? It is difficult to say with certainty. Indications suggest this may well be the case given factors enumerated at the outset: more passengers, more ships, increasing legalization of certain drugs, and increasing numbers of younger passengers.

In 2010, out of more than one million passengers, only 127 were found with illegal drugs onboard. There were also 36 instances of passengers attempting to re-board with newly purchased drugs (mainly marijuana) (Golden, 2011). Cruise lines are increasing their drug enforcement efforts and passengers would be well advised to consider the consequences of being caught.

Theft at Sea

Larceny-theft is a Part I Index crime reported in the Uniform Crime Reports published annually by the FBI. Essentially, larceny-theft refers to the unlawful taking of property belonging to others; no use of

force or violence is involved. Approximately 5 million incidents of larceny-theft are reported each year in the U.S., with a clearance rate of 19% (FBI, 2017). However, when it comes to cruise ship theft, there are peculiarities that affect its reporting and clearance rate.

Much of the ambiguity associated with onboard theft is attributable to its definition and official reporting requirements. Unless incidents of theft are in excess of \$10,000, cruise lines are not obligated to formally report the incident. Obviously, unless theft meets this monetary criterion, it understates its incidence and its clearance rate.

Brand image and the line's financial bottom line may be impacted when negative news, such as onboard crime statistics are released to the public. In 2013, the cruise lines reported a total of only 78 crimes onboard their ships. However, a Freedom of Information (FOI) request for statistical data revealed that over three hundred crimes were committed onboard cruise ships leaving Florida ports. Associatively, the cruise lines disclosed only 14 thefts in that same year. Given the threshold that must be met, it is plausible to assume that only a fraction of thefts were reported and recorded. In 2016, the reporting source was transferred to the U.S. Department of Transportation. According to DOT's Cruise Line Incident Report, only six incidents of theft occurred through June 30, 2017; six in 2016; and seven in 2015 (Renee, 2018).

Onboard theft may be the result of crimes committed by passengers or crewmembers; likewise, victims may be passengers or crewmembers. Cruise lines recommend passengers secure their valuables in the provided in-cabin safes. However, many do not heed this advice and, as a result, are the victims of onboard theft. Passengers steal from other passengers. The most frequently occurring thefts include jewelry, purses, wallets, credit cards, computers, cell phones, backpacks and suitcases. Theft also occurs when crewmembers use master keys to access cabins and take valuables while the occupants are elsewhere onboard or on shore.

Sometimes theft involves members of the crew as perpetrators and victims. A crewmember used his electronic access card to enter the cabin he shared with two other crewmembers. Then, using a key he found, he opened the cabin's safe and stole nearly eight thousand dollars from his mates. Surveillance camera caught him on the scene and he was arrested when the ship docked in the next port of call (Roustan, 2013).

Jurisdiction regarding onboard crimes can be complex. When a theft occurs onboard a U.S. owned vessel while in a U.S. port, local, state, and federal laws apply and the FBI usually leads the investigative efforts. That agency also handles any crime that occurs within twelve miles of the U.S. coast. The FBI will also head the investigation if a U.S. national involved in a crime is entering or departing a U.S. port. In instances when the origin of the perpetrator is unknown, the trial might take place in the country to which the cruise ship traveled. If a perpetrator brings stolen property into another country, that country's jurisdiction may prevail.

Crimes occurring on the "high seas" – in international waters (over 24 miles from shore) – usually are subject to the laws of the country whose flag is flown by the ship, the so-called Flag of Convenience (F.O.C.) The language of those laws may be lax and imprecise; enforcement may be problematic (Langewiesche, 2004).

Pollution at Sea

Simply put, pollution involves the introduction of harmful substances or products into the environment. Pollution may take many forms from discharges of contaminants into the sea and air to landfill depositories. Since the 1990s, the cruise ship industry has promoted its "environmentally friendly" operations. The image projected clashes with reality, as cruise ships generate an astonishing amount of pollution daily. While all cruise ships produce pollutants, due to the levels of toxicity associated with certain forms of pollutants, not all can be legally discharged at sea or dockside. When illegally discharged, cruise lines potentially face significant penalties (Cruise Junkie dot Com, 2018).

As the cruise ships become larger, so does the potential pollution generated. In an effort to reduce pollution to legally acceptable levels, cruise lines have installed costly abatement technologies on newly constructed ships and re-fitted older ships with upgraded equipment. However, such technologies are expensive to install and maintain and, as a result, air and water pollution in excess of acceptable standards still occurs. The disposal of waste and hazardous substances is subject to a variety of laws including the Clean Water Act (CWA) of 1972, the Marine Protection, Research and Sanctuaries Act (MPRSA) of 1972, and the 1988 Ocean Dumping Ban Act (ODBA). Circumventing the legal and appropriate method of disposal of materials is done principally to save time and money.

Water Pollution

Pollution of the water occurs while ships are at sea as well as dockside. Such pollution includes substantial discharges of chemicals, garbage, plastics, solid waste, grey water (waste water generated by laundries, kitchens, sinks, showers), and bilge water (a mixture of fresh water, sea water, oil, sludge, chemicals, and various other fluids) (Oceana, 2004). It is estimated that over one billion gallons of sewage are generated on the sixteen major cruise lines annually (Guilford, 2014). During a one week voyage, a large cruise ship will typically generate the following: 200,000 gallons of raw sewage, one million gallons of grey water, 110 gallons of hazardous waste, eight tons of solid waste, 25,000 gallons of oil bilge water, and approximately 210,000 gallons of black water (primarily from ship toilets) (Copeland, 2008). If these materials are not properly disposed, they pose a risk to health and the environment (EPA, 2018).

A record fine of \$40 million was levied on a major cruise line for the illegal discharge of bilge water into the ocean, rather than the more costly and time consuming process of onboard incineration or being stored for later disposal on land. Instead, ship's officers and crew colluded to install a "magic pipe" designed to bypass onboard sensors that would otherwise detect dumping of contaminated bilge water (Anderson, 2016).

Vanuatu, a group of islands off the northeast coast of Australia, was the site of one attempt to circumvent environmental laws. In an effort to conceal over 130,000 gallons of oil and raw sewage, a major cruise line dug deep holes, fitted those holes with plastic liners, and dumped in oil and raw sewage. This effort cost less than \$200; to dispose of the materials at an approved regional facility would have cost approximately \$30,000. When later found guilty of this environmental violation, the line faced fines in excess of \$30,000,000 (Klein, 2009).

Another example of deliberate water pollution was documented via videos taken by a passenger and a former crewmember that showed garbage bags containing plastic, oily discharge, and other materials being disposed of out portholes at night. The discharges occurred in Brazilian waters and lent credibility to bathers at a public beach who complained of irritated eyes, difficulty in breathing, and gastrointestinal problems. The Brazilian Institute of Environment and Renewable Natural Resources (IBAMA) ordered the cruise line to pay a \$635,545 fine (Friendemann, 2016).

In 1999, a major cruise line was fined \$27,000,000 and placed on five years' probation. Three years later, another major cruise line was fined \$18,000,000 and placed on probation. Both had been found guilty of repeated acts of dumping pollutants into the sea and falsifying oil record books to conceal their illegal practices. These fines prompted a third major cruise line to plead guilty to felony charges of regularly dumping oil bilge water into the ocean and falsifying its records. Because the cruise line had come forward voluntarily and admitted it had deceived the U.S. Coast Guard for years, it was assessed a much smaller fine than the other two lines (Adams, 2002).

In 1999, a major cruise line was fined \$27 million and placed on five years probation. In 2002, another major cruise line was fined \$18 million and placed on probation. Why? Because both had been found guilty of repeated acts of dumping pollutants into the sea and falsifying oil record books to conceal the illegal practices. Shortly thereafter, a third major line pled guilty to the felony charge of regularly dumping oily bilge water into the ocean and falsifying its records (Wald, 1999; McDowell, 2002; Anderson 2016).

Air Pollution

Most cruise ships burn bunker fuel, the heavy residual that remains after more valuable fuels have been extracted in the refining process. Bunker fuel is an inherently dirty fuel. It is also the preferred fuel because it is cheap and fuel costs are a substantial component in a vessel's operating costs. However, the byproduct of bunker fuel is exhaust composed of high amounts of toxic sulfur and other potentially lethal chemical contaminants. Unfiltered, these substances have been linked to a variety of health problems including lung cancer and cardiovascular disease (Gallucci, 2017). Marine pollution experts in Germany and Belgium assert that the daily sulfur emissions of mega-cruise ships is greater than several million cars as well as more particulate emissions than thousands of London buses (Vidal, 2016). Air pollution is further exacerbated at popular cruise destinations when multiple cruise ships are dockside and simultaneously discharging tremendous amounts of particulate matter into the air and surrounding environs. In spring 2018, a ship's captain admitted to using fuel in excess of established standards while in the port of Marseille, France. This was the first prosecuted case of a violation of European air pollution standards. The captain faced a fine of nearly \$250,000 and a year in jail (Jozo's Blog, 2018).

With some of the most stringent air quality standards in the U.S., Alaskan air quality standards are defined by opacity or how "see through" is a cruise ship's plume. Alaskan officials meted out \$75,000

in fines to two ships for violations of the state's air quality standards in 2017. Nine violation notices have been issued in the first nine months of 2018. Although many cruise lines have installed "scrubbers" in engine rooms to reduce sulfur oxide and particulate matter to be in compliance with state laws, the number and size of these vessels has created air quality challenges. The situation is expected to magnify as a third consecutive yearly increase in total cruise ship passengers to Alaska is predicted (Resneck, 2018).

While NABU (Nature and Biodiversity Conservation Union), Germany's oldest and largest environmental organization, states that 1,000 particles per cubic centimeter (1,000 pt/cm³) of sulfur oxide and particulate material are harmless, a recording of 84,000 ultra-fine particles per cubic centimeter (similar to readings found in Delhi and Shanghai, two of the world's most polluted cities) was found on the deck of a cruise ship where passengers frequently sunbathe. Emissions at such high levels are deleterious from health and environmental standpoints (Millar, 2017).

Friends of the Earth (FOE), an organization advocating the protection and preservation of the planet's environment, rated the environmental footprint of 17 major cruise lines and 171 individual ships. Ratings were based on performance on major variables including sewage treatment, air pollution reduction, water quality compliance, transparency, and changes since 2014. Only one cruise line received an "A" as a final grade (and the only "A" rating on transparency...all other lines received "F" ratings) (Klein, 2009).

Cruise lines must dedicate greater efforts to reducing their pollution of air and marine environments. Significant fines, probation, community service, and other sanctions have been levied on cruise ships for water pollution, air pollution, incomplete/falsified or non-reporting. In short, cruise lines have engaged in crimes of commission and crimes of omission.

Cruise lines are striving to be in compliance with the lower global cap on sulfur emissions set by the International Maritime Organization (IMO). Currently, sulfur limits are 3.5% m/m, but those permissible levels will decrease substantially to 0.50% m/m by 2020. Three major approaches to facilitate the reduction of pollution have been advanced, each with advantages and disadvantages. Low-sulfur fuel oils (LSFO) can be used to fuel conventional diesel engines. This fuel source requires no investment in time or money in technological conversion or in the installation of "scrubbers." In short, LSFO is a 'clean' fuel. However, the increased demand for LSFO will inevitably increase the cost of fuel. Liquefied natural gas (LNG) is significantly better than other marine fuels based on crude

oil, since it could reduce the carbon footprint and sulfur emissions by 99% through the removal of various harmful components. As a result, there would be no dirt, soot, or particles expelled into the atmosphere. The conversion from natural gas to the more compact liquefied gas significantly reduces fuel storage space. Conversely, infrastructure problems associated with this conversion exist; specifically, a substantial shortage of storage and refueling facilities.

A final alternative approach involves exhaust gas cleaning systems (EGCS) or “scrubbers.” Scrubbers allow the continued use of heavy fuel oil, but with reduced sulfur oxide and particulate matter emissions. Unfortunately, the technology is expensive and not exceedingly environmentally friendly. EGCS shifts the problem from the air to the water since sulfur will go into the sea with washing water. In addition, scrubbers are not allowed in many territorial waters (Millar, 2017).

SUMMARY

Onboard crime information was transferred from the individual cruise lines to the Department of Transportation in 2016. This move was long overdue. Statistics now available provide greater accuracy of the occurrence of onboard crime and provide a means for the cruiser to assess safety issues on cruise ships. The reporting of sexual assault, generally the most underreported crime but ironically the most reported onboard crime, may be affected by the #MeToo movement. More reliable reporting standards, enhanced security measures, better sexual assault training procedures, increased emphasis on chain of custody protocol are among the areas of suggested improvement on cruise ships. Cooperative efforts between cruise lines, victims’ assistance organizations, and security personnel can do much to address sex crime issues at sea.

Drugs onboard pose problems, as they do on land. While they have been undeniably used for recreation, they have also been used in sexual assault incidences. Forum selection clauses contained in the passenger’s ticket contract specify that any litigation against the cruise line must be filed in a certain jurisdiction to the exclusion of all others (for example: the case must be brought in Seattle even if the incident in question took place off the coast of Southern California). This requirement poses significant financial and time burdens for a passenger.

In addition, the daunting requirement of reporting theft only if it involves a minimum of \$10,000 should be addressed. This monetary amount considerably veils the amount of theft occurring on cruise ships. Theft is a crime of opportunity. Passengers often fail to heed cruise line advice to utilize cabin safes and crewmembers take advantage of access to cabins when passengers are elsewhere onboard.

Finally, the prospects of the total elimination of pollution beyond legal standards are being addressed. Lower sulfur limits will be in effect by 2020. This will end the use of heavy fuel in favor of cleaner diesel fuel. Expanded use of scrubbers and other strategies can reduce ultra-fine particulate emissions to acceptable levels. Given the tremendous amounts of toxic materials spewed into the air by cruise ships, air and water standards must be increased. Some of this needed change was enacted recently, but more must be considered. The future outlook is optimistic. The cruise industry is investing significantly in new technologies and cleaner fuels that will be less impactful on the environment and the bottom financial line.

Strengthening the laws with respect to sexual assault, drugs, theft and pollution serve to increase the cruising experience. Traditionally, the cruise industry resisted greater oversight, but credit is due for changing attitudes and practices. Cruising is the number one touristic venture in terms of satisfaction and repeat bookings. There are problems in the industry, there are solutions.

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