

2017 Global Supply Chain Intelligence Review

Supply Chain Threats, Risks, and Trends



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Executive Summary

BSI recorded a diverse array of threats to supply chain security, corporate social responsibility, and business continuity worldwide in 2017, and similar risk factors proved to be the driving force behind these risks globally. For instance, inadequate resources and personnel for law enforcement agencies and government ministries undermined efforts worldwide to combat threats such as cargo theft and forced labor. Widely-reported political conflicts and terrorist attacks had pronounced impacts on supply chains. Both public corruption and criminal activity by supply chain employees also represented major threats to business operations around the world.

Inadequate resources, personnel, and planning undermined the efforts of countries to mitigate both corporate social responsibility and security threats in 2017. In both China and India, ineffective monitoring and regulation of large and fragmented pharmaceutical industries contributed to rising methamphetamine introductions into export shipments. In Brazil and India, insufficient government capacity undermined the ability of authorities to effectively combat child and forced labor. Diminished law enforcement and labor inspection capabilities in Turkey, due in part to ongoing purges following the failed July 2016 coup attempt, is one likely driver of heightened illegal drug smuggling and child labor risks in the country. Poor design of new environmental regulations in China limited the effectiveness of the country's efforts to address hazardous levels of air pollution. In Puerto Rico, the government's financial difficulties degraded the ability of authorities both to prepare for Hurricanes Irma and Maria and to rebuild in the storms' aftermath.

High-profile terrorist and cyberattacks, internal political instability, and major labor disputes also had significant impacts on supply chains in 2017. The ongoing migrant crisis continued to drive a high rate of stowaway introductions into cargo shipments across Western Europe. BSI noted several trends in migrant smuggling risk in freight across Europe over the last year, including a high frequency of introductions into cargo trucks at Belgian parking lots and the emergence of the Spanish port of Bilbao as an area of concern for stowaway introductions into shipments destined for the United Kingdom. Terrorists in Stockholm and Barcelona utilized commercial vehicles in ramming attacks, demonstrating the continued intent of terrorist organizations to target and exploit supply chains. A global cyberattack on a major port terminal operator also highlighted the scale of the threat posed to maritime shipping by malicious cyber actors. Internal political conflicts, including both the formal end of a violent insurgency in Colombia and a confrontation between the national government and pro-independence activists in Spain, also had pronounced ramifications for supply chains over the past year.

Corruption remains a principal driver of supply chain threats worldwide, with BSI identifying the impact corrupt government officials and supply chain employees had on security, corporate social responsibility, and business continuity trends in 2017. In India, cargo truck drivers and warehouse workers were responsible for a significant proportion of cargo thefts recorded by BSI in 2017, while a survey of Mexican law enforcement officials demonstrated the threat posed to supply chains in the country by endemic corruption in the country's security services. Corruption in the Chinese and Indian pharmaceutical sectors is one factor driving the heightened risk of illicit synthetic drug and precursor exportation from both countries, while corruption in several countries stretching from South Asia through the Middle East to the Balkans facilitates the smuggling of heroin and other illicit narcotics in cargo trucks bound for consumers in Europe.

BSI anticipates government capacity concerns, high-level political developments, and corruption to remain major drivers of global supply chain security, business continuity, and corporate social responsibility risks in 2018. The trends outlined in the following report reflect underlying risk factors that will continue to shape the threat environments faced by companies operating around the world. Based on these trends and risk factors, BSI has also outlined best practices and countermeasures companies can implement to better mitigate threats to their operations.

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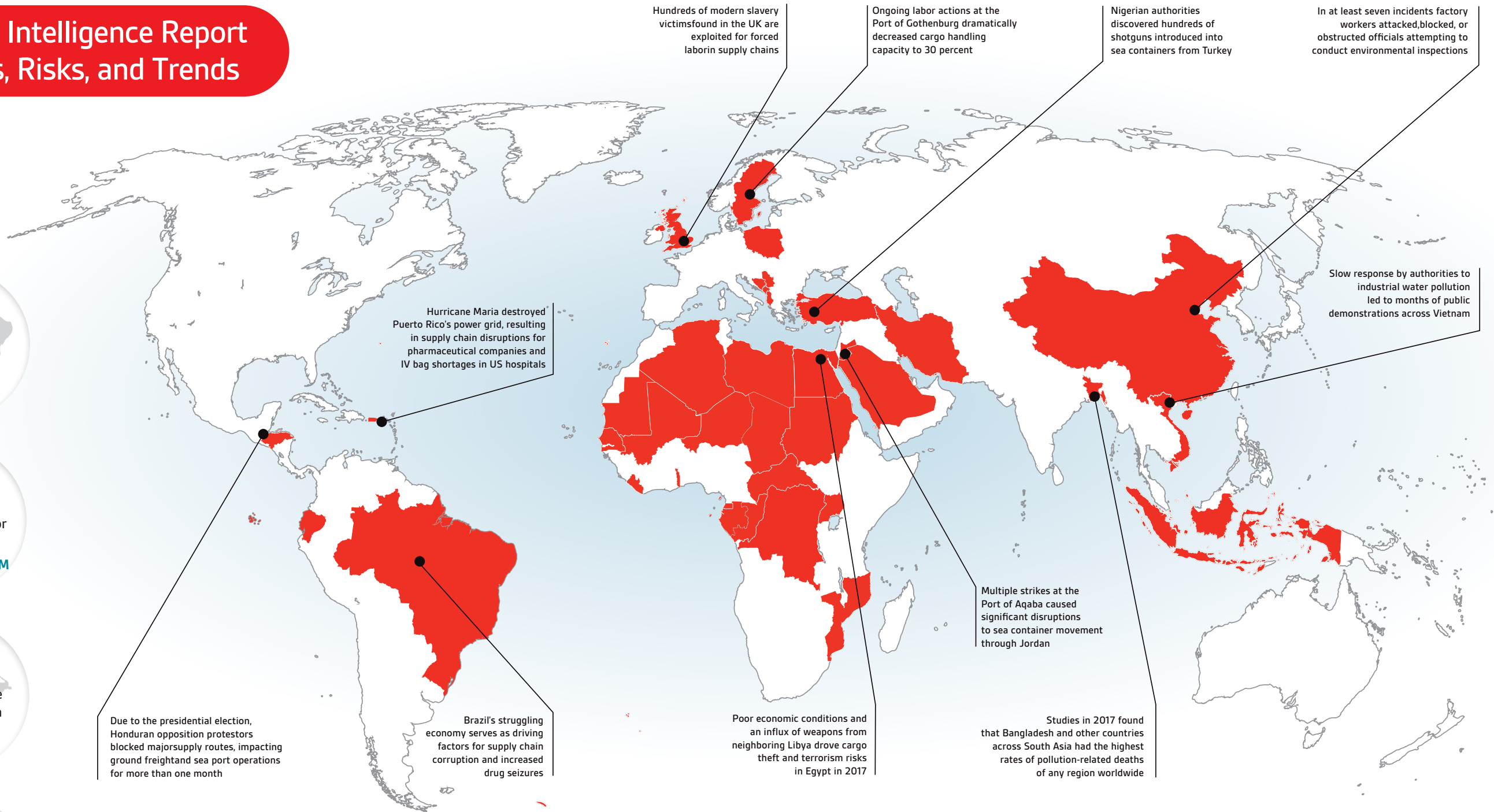
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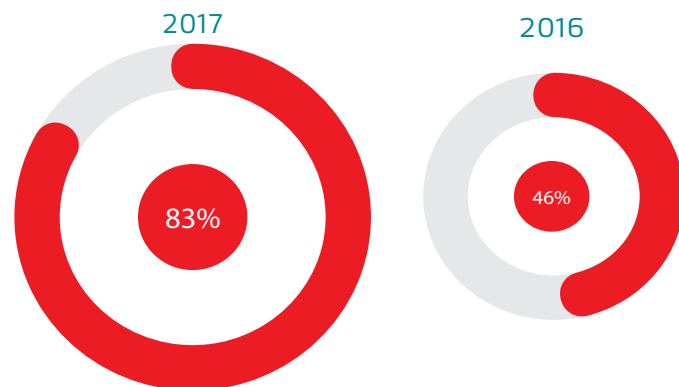
Supply Chain Threats, Risks, and Trends

Major 2017 BSI Threat Rating Trends

- ↑ Increased Severity
- ↓ Decreased Severity

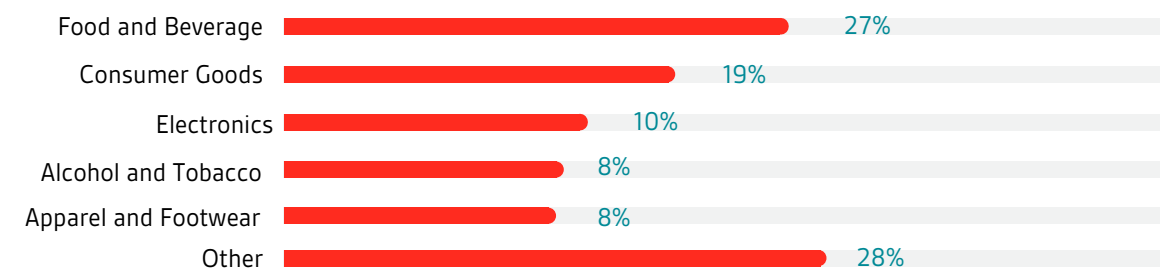


U.S. Share of Global Natural Disaster Recovery Costs



Top Commodities Stolen in 2017

Percent of Total Theft Incidents



Introduction

Governments in Asia continued to face capacity shortages and difficulties in enforcing industry regulations in 2017, exposing businesses to an array of security, business continuity, and corporate social responsibility risks. Poor monitoring of the sizable pharmaceutical industries in China and India contributed to an increasing flow of illicit synthetic drugs and chemical precursors in departing cargo shipments. Inadequate planning and enforcement of environmental regulations partially undermined the efforts of Chinese authorities to address hazardous levels of smog and air pollution. Insufficient personnel and resources continue to drive high rates of cargo theft in India, while the country's overburdened labor inspectorate contributes to the persistent presence of child labor in industries across the nation. Corruption also undermined efforts by governments worldwide to end the use of North Korean forced labor within their borders.

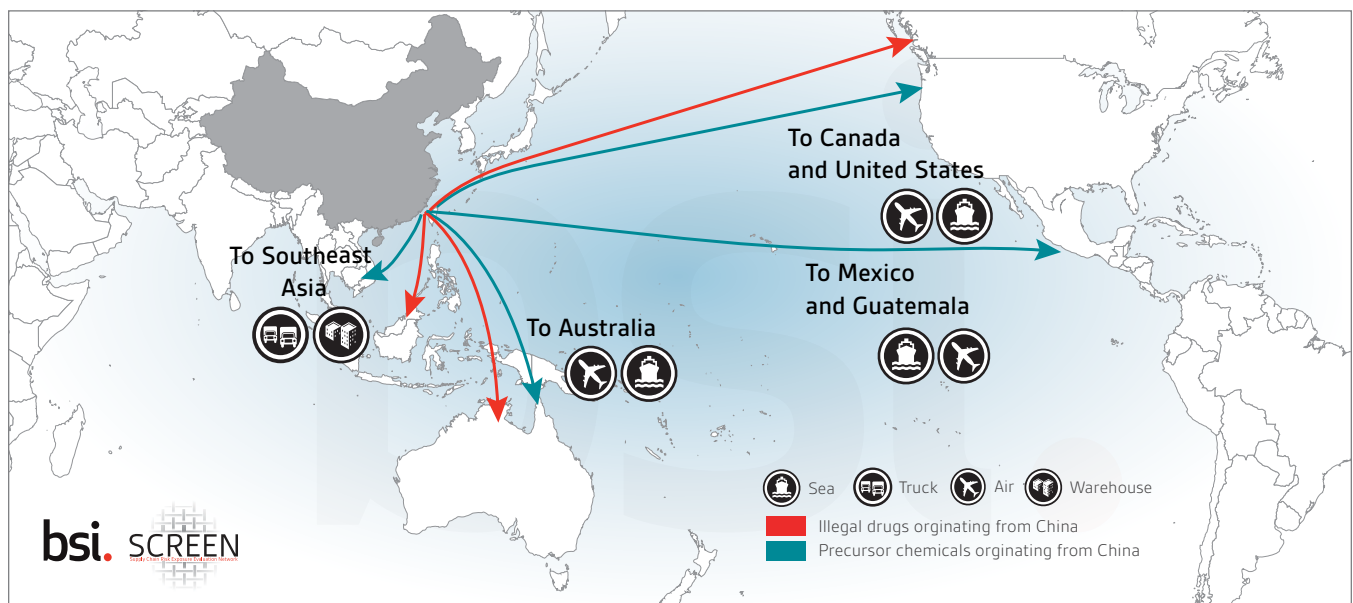
Rising Synthetic Drug Introduction Into Cargo in China

BSI observed an increase in illegal drug introduction into cargo shipments originating in China in 2017. Over the course of the year, BSI recorded at least seven notable seizures of crystal methamphetamine from Chinese sea container shipments destined for Australia and New Zealand, representing a significant increase relative to 2016.

Criminals in China primarily produce methamphetamine in the country's southern provinces, particularly Guangdong. Cities in Guangdong, such as Boshe, are reportedly the source of 33 percent of China's total methamphetamine production, underscoring the substantial scale of drug manufacturing in this region.

Significant corruption in Guangdong also facilitates the introduction of these drugs into the supply chain. In one notable instance, officials sentenced a former senior government employee in the province to death for founding and organizing a major crystal methamphetamine production and distribution ring in Boshe, sourcing precursor chemicals and diverting cold medicine capsules in order to manufacture the drug. Local reports suggest that corrupt police officers and other officials likely turned a blind eye to this drug distribution ring.

Main Illegal Drug and Precursor Chemical Flows From China



Business partners in China, Cambodia, Indonesia, Thailand, and Vietnam struggled to keep CCTV recordings and provide backup systems for lost data. Corrective actions issued to business partners in these countries resulted in increased compliance.

Criminals also exploit gaps in the chain of custody for pharmaceuticals produced in southern China to procure drug precursor chemicals. Drug traffickers are able to divert many of these chemicals from their intended recipients and instead send them to illegal labs throughout the region for the production of methamphetamine or other synthetic drugs. The mobility of methamphetamine manufacturing operations makes these labs difficult to detect.

Organized criminal groups in China are increasingly participating in the export of methamphetamine and other illicit drugs, leading to a spike in the sophistication of smuggling operations. In one representative incident, authorities in New Zealand seized 160 liters of crystal methamphetamine that smugglers chemically disguised using a substance known as “t-boc,” which, when applied to methamphetamine, restructures the drug into an entirely different compound. The chemical alteration allowed the methamphetamine to pass through container scanners undetected. T-boc is extremely difficult to obtain, and the ability of organized criminal groups to access this substance highlights the exacerbating impact the groups have on the illegal drug trade in China.

China’s southern provinces will most likely continue to be a major area of concern for illegal drug introduction into cargo in 2018. Large-scale crystal methamphetamine production, as well as high levels of supply chain corruption, will almost certainly continue to exacerbate the risk of illegal drug introduction into cargo in China for at least the near term. In addition, rising demand for crystal methamphetamine in the East Asia-Pacific region and increasing legitimate trade of precursor chemicals between China, Australia, and New Zealand provide more opportunities and targets for drug trafficking organizations.

Business partners in China improved compliance after receiving corrective actions for the use of seven-point container inspections.

Synthetic Drugs and Precursors in India

BSI also recorded a significant increase in the export of methamphetamine and chemical precursors used in its manufacture from India to countries in Southeast Asia. Indian authorities made several seizures last year of methamphetamine precursors, most commonly ephedrine, from air freight shipments destined for Malaysia. These seizures occurred primarily at airports in southern India, especially Kempegowda International Airport in Bangalore and Cochin International Airport in Kochi. Drug traffickers in India also exported synthetic drugs and precursors to Southeast Asia in sea freight, with BSI recording multiple seizures of these products at the port of Chennai. BSI also recorded numerous seizures of Indian-origin tramadol, a synthetic opioid painkiller, from sea container shipments across the Middle East and North Africa. While tramadol is legal in India, it is strictly controlled in countries such as Egypt, Libya, and Nigeria, where it is used recreationally.

The large scale, fragmentation, and poor regulation of the pharmaceutical industries in both China and India contributes to the two countries’ status as sources of illicit synthetic drugs such as methamphetamine and fentanyl. Government authorities in both countries are unable to properly monitor pharmaceutical production, allowing traffickers to exploit these industries for criminal purposes. BSI has also noted cases in India and China of criminals manufacturing illicit drugs at legitimate pharmaceutical production facilities or stealing precursors from these locations. In some cases, these illicit activities involved the direct participation or cooperation of pharmaceutical company employees. Poor track and trace capabilities also facilitate illegal drug trafficking in these two countries; reports indicate that Chinese customs officials regularly disregard information on the recipients of exported fentanyl and fentanyl precursors, allowing Chinese drug smugglers to ship products to partner syndicates, including Mexican cartels, with a relatively low risk of detection.

Weak Compliance and Poor Implementation Undermining Environmental Policies in China

BSI observed increased instances of Chinese businesses failing to comply with environmental pollution regulations and local provincial governments unsuccessfully setting reasonable regulations to address hazardous pollution in 2017. China's Ministry of Environmental Protection (MEP) launched a nationwide environmental inspection program in late 2016 that continued throughout 2017. However, this campaign, the largest the MEP has undertaken, uncovered significant issues in provincial government enforcement of federal environmental regulations and generally poor compliance by businesses. For instance, the MEP found that 71 percent of inspected companies, including manufacturing production hubs, factories, and processing plants in Beijing, were not compliant with national environmental requirements. In another concerning trend, BSI recorded last year at least seven instances of factory workers in China attacking or deliberately obstructing officials attempting to conduct environmental inspections.

The Chinese government also struggled to set reasonable regulations for addressing pollution, in some cases enacting overly ambitious environmental policies without adequate preparation. In late 2017, China began implementing a series of strict restrictions on the commercial use of diesel fuel and coal in an attempt to reduce extreme levels of smog and air pollution across the country. However, when a cold snap and snowstorms impacted the country in the winter of 2017, high demand for heating energy and the ban on coal forced the government to ration fuel nationwide, reducing fuel allotted to industrial facilities in favor of heating hospitals and homes. The rationing had significant consequences for commercial operations and manufacturing in multiple provinces, particularly in the northern Tianjin-Beijing-Hebei region which reported as little as 20 percent left in natural fuel reserves, leading authorities to eventually reverse the new environmental restrictions.



Multiple factors continue to diminish the Chinese central government's capacity to address its pollution problems. China's governmental structure gives local administrations a significant amount of authority and autonomy, leading to inconsistent enforcement. National policies also reward provincial economic success, often incentivizing local governments to focus on economic performance over environmental concerns. Additionally, China's regulatory system does not provide an effective deterrent for persistent polluters, nor does it assist polluters in the costly process of upgrading their facilities and procedures to meet requirements. As a result, enterprises

find paying for upgrades to be significantly more expensive than paying fines for pollution violations. Although the increased push for improved environmental conditions and anti-pollution inspections in China is a positive development, the efficacy of this new campaign remains to be seen.

Developments in Cargo Theft in India

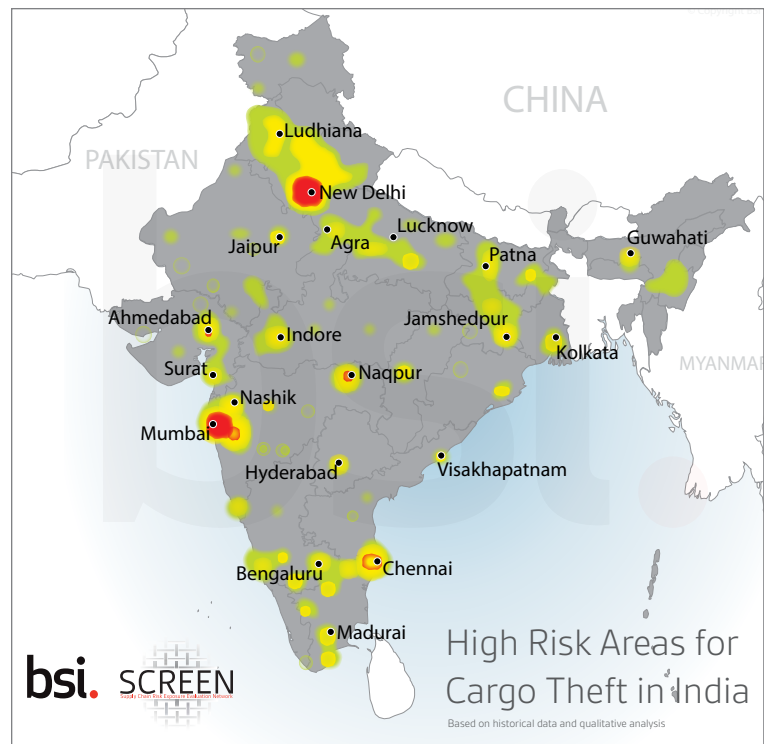
Incident data collected by BSI in 2017 revealed the emergence of new areas of concern for cargo theft across northern India. The state of Uttar Pradesh, India's most populous, was the site of the most cargo thefts in India recorded by BSI last year, accounting for nearly a quarter of all incidents. BSI also recorded frequent cargo thefts in the northern states of Punjab, Haryana, Bihar, and Jharkhand. Cargo thieves continued to regularly target shipments in previously-identified areas of concern across India as well, including the states of Maharashtra and Tamil Nadu.

While most incidents recorded in India in 2017 involved the theft of goods or shipments from warehouses, states in northern India, most notably Uttar Pradesh, saw a higher proportion of cargo truck hijackings. Several of these hijackings in northern India involved violence against truck drivers, with some incidents resulting in the deaths of drivers and their assistants. Relative to hijackings in other hotspot countries, such as South Africa, Brazil, and Egypt, fewer incidents in India involved the use of firearms; cargo thieves often instead utilized knives or clubs to intimidate drivers and steal trucks.

BSI data from the last year indicates that cargo thieves frequently exploited key vulnerabilities to carry out thefts across the country. Truck drivers in India regularly leave vehicles unattended at gas stations, roadside food stands,

or, in some cases, their personal residences in order to rest or refuel. Thieves in the country then capitalize on this security vulnerability, frequently exploiting these unsecure locations to steal trucks or goods from trailers. BSI also recorded multiple incidents last year of cargo thieves incapacitating truck drivers using sedatives, in some cases poisoning their meals at roadside food stands or posing as hitchhikers and offering drivers drinks laced with tranquilizing drugs. Cargo thieves also carried out moving truck thefts, in which thieves jump aboard in-transit cargo trucks and steal goods from their trailers. The use of this tactic, which BSI has recorded in several countries around the world, demonstrates the sophistication and experience of some cargo theft gangs operating in India.

Endemic supply chain corruption also continued to drive the threat of cargo theft in India in 2017. At least 17 percent of all cargo thefts recorded in India in 2017 involved the direct participation of cargo truck drivers or other supply chain employees. Truck drivers diverted shipments from their intended destinations and cut off contact with their managers or customers. In some cases, truck drivers falsely reported their vehicles as being hijacked to police. BSI also recorded multiple incidents last year of workers at distribution centers stealing electronics by placing false orders, shipping bricks or other non-electronic goods to false addresses, and then stealing the "ordered" electronic products themselves. Corrupt workers also contributed to thefts by supplying information on shipment



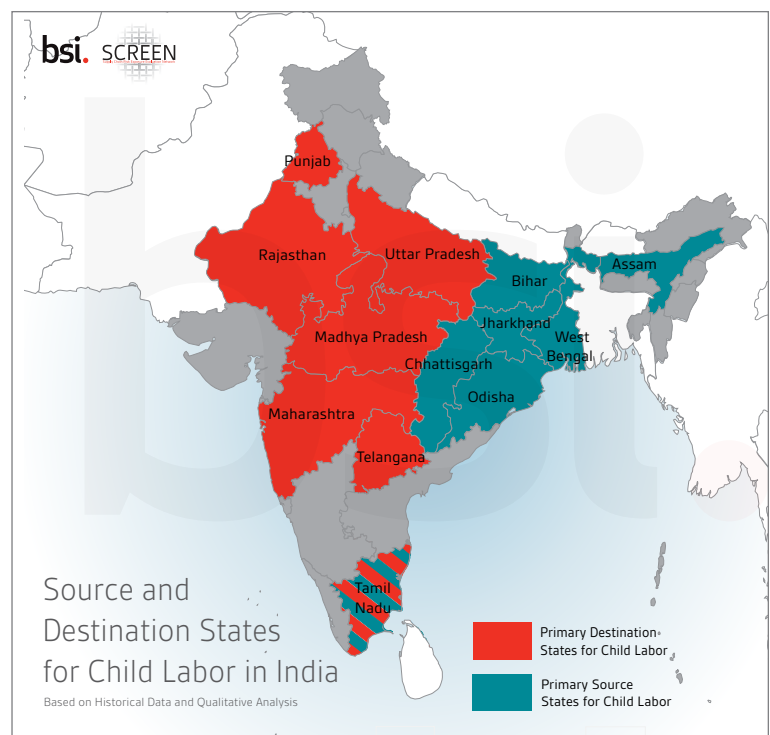
routes or cargo security measures to external gangs. The lack of personnel and resources for police agencies across the country also contributes to the endemic nature of cargo theft and other forms of crime targeting the supply chain in India.

Persistent Child Labor Threats in India

India made progress at the national level in combating the risk of child labor in 2017, although investigations by newspapers and civil society organizations found that the practice remains widespread across the country, including in the manufacturing sector. The Indian government signed several major international conventions after passing several amendments to the country's child labor act. Statistics provided to the Indian parliament by the labor ministry in 2017 also showed improvement in government recordkeeping for the enforcement of anti-child labor legislation, with the labor minister reporting the prosecution of nearly 7,000 firms for utilizing child labor between 2014 and 2016, with 2,200 of those cases resulting in convictions

Despite government efforts to mitigate the threat of child labor, investigations in 2017 uncovered the continued use of children by employers across a range of industries. BSI reported on a 2017 study that found evidence of child labor, as well as serious environmental violations and hazardous working conditions, in the Indian leather industry. The investigation found children as young as eleven working at leather tanneries in Agra, Kolkata, and Tamil Nadu for low wages and in extremely poor conditions. A separate investigation into the footwear industry in Agra found that exporting factories often subcontracted with informal facilities and home-based workshops that regularly utilized child labor.

Researchers also found that some suppliers in Agra attempted to conceal their use of subcontracting from foreign brands, highlighting the necessity for companies to conduct on-site verification audits to ensure that business partners are in fact implementing the policies that they claim to have put in place. While surveyed factories generally attempted to verify the age of their workers, researchers also found that many were less diligent in such efforts at times of peak demand, with firms applying less scrutiny to the age and working hours of seasonal workers. Additional studies published in 2017 found ongoing use of child labor across a range of other sectors in India, including granite and mica mining, tea cultivation, embroidering, and food, with workers often exposed to abuse or dangerous working conditions.



Poor Enforcement of Labor Regulations Driving Human Rights Risk in South Asia

Workers across South Asia, including India, Bangladesh, and Pakistan, are vulnerable to poor working conditions and coercion by employers due to inadequate enforcement of labor legislation by national and regional governments. The generally understaffed labor inspectorates across the region do not receive sufficient resources to properly monitor workplaces for conformance to safety requirements or the presence of child or forced labor. For instance, BSI reported in 2017 that Bangladesh had only six inspectors responsible for ensuring the safe operation of over 5,000 registered and over 20,000 unregistered factory boilers in the country, despite multiple fatal boiler explosions last year that killed garment workers and employees in other sectors. Endemic corruption further undermines efforts by South Asian governments to mitigate the threat of labor violations. In July, a Pakistani lawmaker accused corrupt labor inspectors in Punjab province of accepting bribes from factory owners to ignore their regular use of child labor. While improved government efforts to expand labor inspectorates and combat corruption could contribute to decreasing threats to workers in South Asia in the long term, progress in improving worker protections in the region remains slow.



North Korean Forced Laborers in the International Supply Chain

Recent reports on the extent of North Korean forced labor in international supply chains underscore the necessity for businesses to closely monitor their supply chains for illegal labor practices. The North Korean regime profits directly from the wages of at least 50,000 North Korean workers who labor in conditions similar to slavery across dozens of countries. BSI identified notable countries and industries of concern, as well as the recruitment methodologies and working conditions characteristic of North Korean forced labor.

Laborers sent abroad are chosen from a list of citizens perceived to be both loyal to the regime and at low risk of defection. Workers with families are preferred candidates, as these individuals are easier for North Korean authorities to control due to the threat of reprisal to families should workers attempt to defect. All migrant laborers are subject to strict surveillance and are closely monitored for outside influence and behavior. North Korean workers abroad generally cannot leave housing or factory compounds without supervision, must give 50 to 70 percent of their wages to the North Korean government, and cannot take sick days or time off from work. Principal industries of concern for the use of North Korean migrant labor worldwide include the textile and garment, seafood, construction industry, and food service industries. Officials have also detected North Korean forced labor in other manufacturing industries around the world, including the electronics, agriculture, and logging sectors.

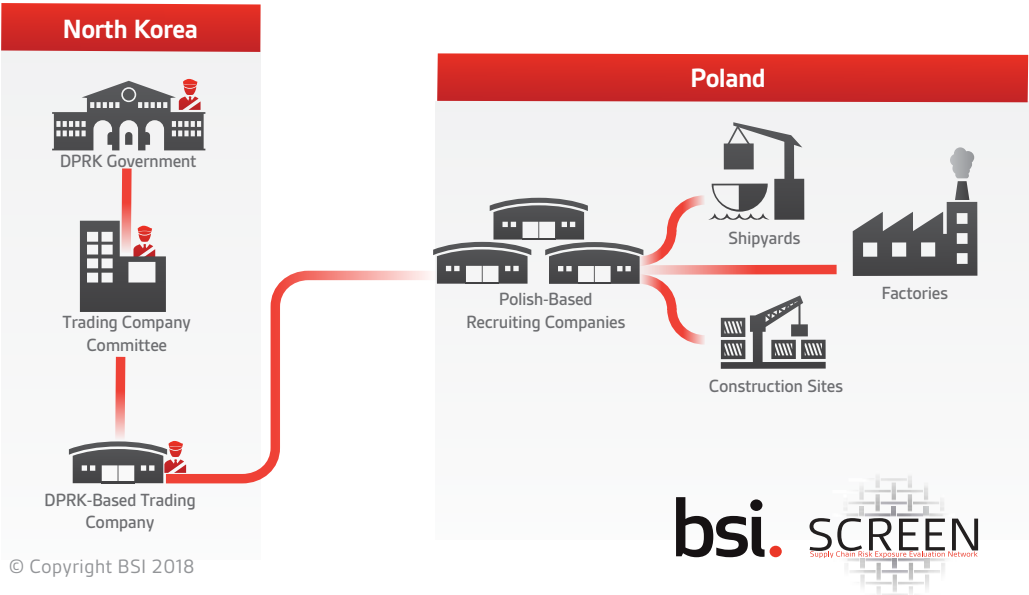
China is among the most prominent destinations for North Korean migrant laborers. An estimated 20,000 to 30,000 North Koreans currently work in China. These laborers work in a variety of Chinese industries, with most employed in the country's apparel and electronics manufacturing sectors. Officials in China have also detected North Korean laborers in pharmaceutical and seafood processing factories. In the third quarter of 2017, an investigative report revealed that a number of seafood processing factories in Hunchun, China utilized North Korean forced labor in their manufacturing and production lines, and that a number of companies in the U.S. and Europe utilized these manufacturers as business partners in their supply chains. Almost 3,000 North Korean workers were outsourced as contract laborers to factories in Hunchun. Companies in the U.S. and Canada imported at least 100 cargo containers of seafood processed in Hunchun last year, with some of that seafood suspected of being processed by North Korean forced labor.

North Korean Workers in Poland

Poland has historically provided the highest number of work permits to North Korean workers relative to any other country in the European Union. However, there are currently fewer than 500 North Korean laborers remaining in Poland, as these workers conclude their contractual obligations. North Korean laborers are primarily employed by a Polish recruiting company that leased workers to employers despite lacking valid permits. Polish intermediaries mostly operated in the shipbuilding and construction industries, though North Korean laborers have also been found in the country's agricultural sector. Poor training led to multiple fatal accidents involving North Korean workers, in some cases due to these workers being falsely certified for hazardous shipbuilding tasks.

North Korea's disregard for international sanctions and persistent efforts to infiltrate its workers into foreign economies in order to generate national income requires companies to remain vigilant and continue to closely monitor their supply chains for potential North Korean migrant labor. Companies must carefully audit and inspect contracted and subcontracted businesses within their supply chains for proper employment procedures, contract vetting, and workplace safety practices, and continue to be actively involved in enforcing appropriate corporate social responsibility practices to clear supply chains of illicit forced labor.

Methodology of North Korean Forced Labor in Poland



Inadequate Infrastructure in Bangladesh Exacerbating Business Continuity and Security Concerns

Outdated and low-quality infrastructure is a major risk factor driving threats to supply chain security and business continuity in Bangladesh. Insufficient capacity and maintenance of roadways, seaports, and air cargo facilities caused delays and increased the vulnerability of shipments to criminal exploitation. At the Port of Chittagong, BSI recorded a number of disruptive events in 2017 including severe weather, labor shortages, and industrial accidents, which exacerbated extant capacity issues to cause heavy congestion and long delays for shipments transiting the port.

Cyclone Mora and low productivity at ports during the Eid holiday contributed to an increase in dwell time for container vessels at the port from 62.7 hours in January 2017 to over 84 hours in June. A collision between a container ship and two gantry cranes at the port in June 2017 further disrupted sea shipments from Bangladesh, with the port already having an insufficient number of jetties and terminals to handle an increasing volume of shipments. These short-term disruptions highlight the potential for singular incidents to result in significant container buildups and eventual longer-term delays.

Poor infrastructure also impedes efficient movement of ground freight in Bangladesh. The lack of proper drainage systems heightens the vulnerability of Bangladesh's road network to waterlogging during the monsoon season. Road closures for repairs also slowed ground freight shipments, as did the suspension of repair efforts during the three-day Eid holiday. BSI has also noted instances in previous years of truck drivers in Bangladesh launching strikes and other labor actions to protest the poor state and insecurity of roads across the country.

Similar issues plague air freight consignments transiting Bangladesh as well. BSI has noted severe inadequacies in storage capacity and security measures for air cargo at Hazrat Shahjalal International Airport in Dhaka, Bangladesh's primary airport. Air freight consignments at the facility are also left unsecured in the open, including on the airport tarmac, due to a lack of space in the cargo complex. The number of cargo handling personnel at the Dhaka airport is also severely inadequate, with the airport hiring only 40 new handlers rather than the 300 new personnel that had been planned to meet the increased volume of shipments. The lack of explosive screening equipment at the airport led the United Kingdom and the European Union to enact bans on direct cargo flights from Bangladesh, highlighting the serious security consequences of the insufficient trade infrastructure in the country.

Introduction

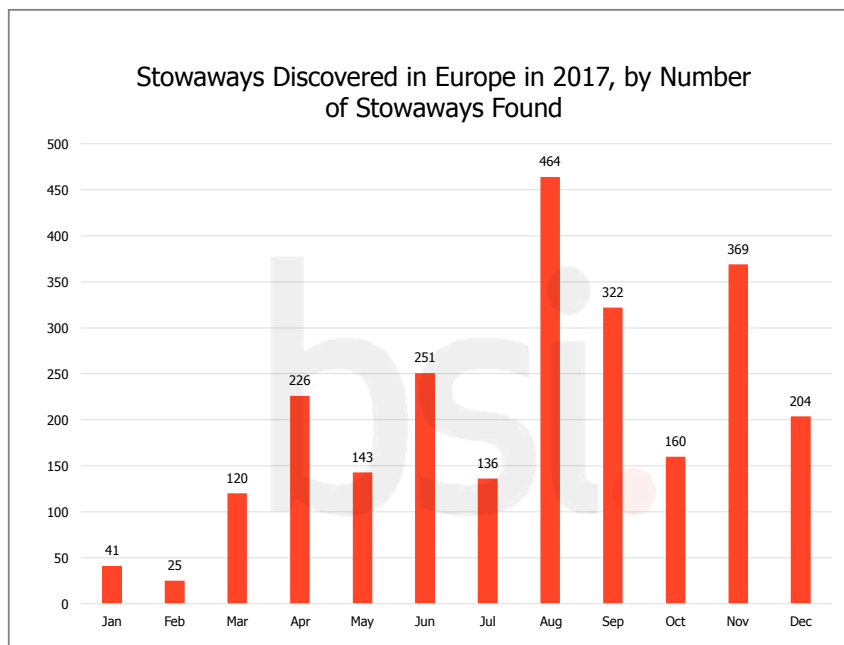
Noteworthy political developments had pronounced impacts on supply chains across Europe, the Middle East, and Africa in 2017. The ongoing influx of migrants from Africa and Asia to Europe continues to drive high levels of stowaway introduction risk across much of the continent, while high-profile incidents of terrorism in Sweden and Spain demonstrated the continued intention of militant groups to exploit supply chains to facilitate attacks. A major cyberattack on a port terminal operator caused prolonged delays to sea freight movement worldwide, including at multiple major ports in Europe. Ports on the continent also faced disruptions due to long-running conflicts between labor unions and port operators or national governments. The Turkish government's purges of law enforcement and labor ministries in 2017 was one driver of heightened illegal drug smuggling and child labor risks in the country. Conflict between pro-independence activists in Catalonia and the Spanish government also had significant effects on supply chains in the country in 2017.

Migrant Crisis Continues to Heighten Stowaway Introduction Risks in Europe

Cargo transiting Europe continues to face substantial risk of stowaway introduction due to the ongoing migrant crisis. In 2017, BSI reported on shifts in migrant communities at major port facilities, a growing use of rail freight by migrants traveling through the Brenner Pass, and the emergence of cargo truck parking lots in Belgium as areas of concern for both stowaway introductions and potential violence against cargo truck drivers. Migrants often stow away in freight shipments

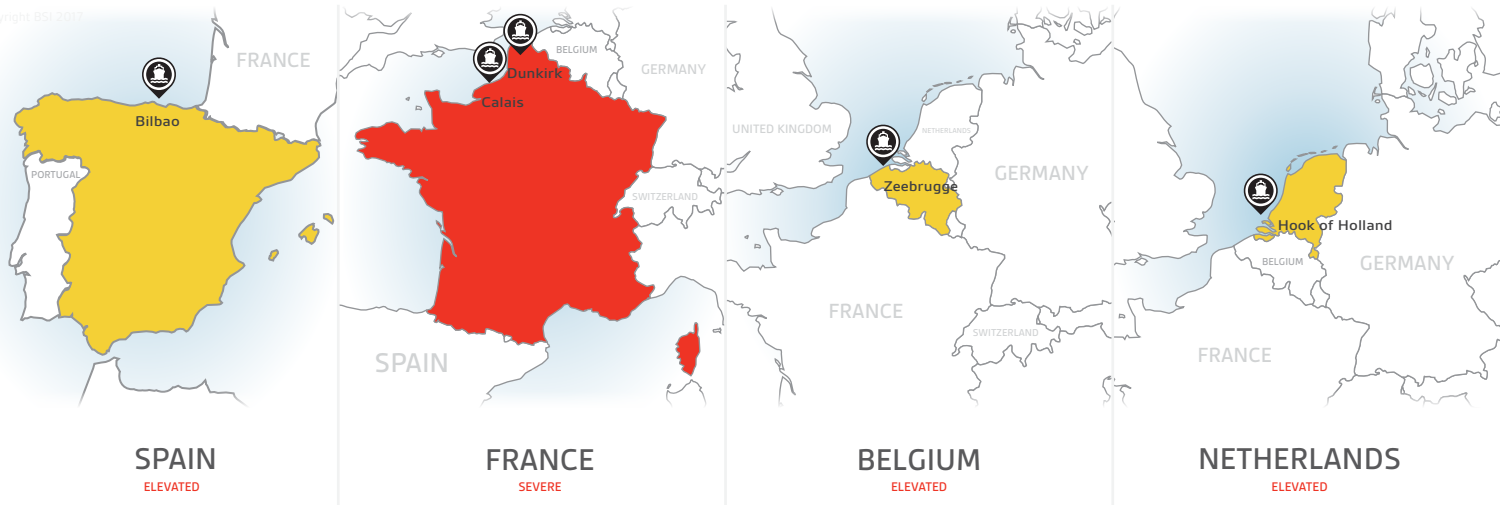
across a variety of modalities in an effort to reach destination countries, most commonly the United Kingdom, where they can apply for asylum. BSI routinely reported on migrants utilizing the "Balkan route" as a means to transit west from Southeastern Europe, stowing away aboard cargo trucks and rail vehicles travelling through Romania, Bulgaria, Serbia, and Greece in an effort to reach Western Europe. However, migrants still utilize various supply chain modalities in Western Europe to reach the countries they intend to apply for asylum, such as the United Kingdom.

Port facilities in Western Europe continue to face the highest risk of stowaway introductions into ground and sea freight shipments. Data collected by BSI in 2017 found multiple ports of concern for stowaway introductions across Europe, including the port of Zeebrugge in Belgium, the Hook of Holland in the Netherlands, the port of Bilbao in Spain, and the ports of Calais and Dunkirk in France.



Stowaway Introductions at Major European Ports

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In addition, migrant communities have shown resilience and flexibility in maintaining their presence near ports despite government efforts to remove them. For instance, authorities dismantled a migrant camp near the port of Calais and moved thousands of migrants to asylum centers across France in October 2016. Although the action reduced stowaway introductions at the port for several months, hundreds of migrants returned to the area by May 2017. The ensuing uptick in stowaway introductions caused several business continuity and security issues as migrants often utilized roadblocks and makeshift projectiles to slow down cargo trucks in the area so they could stow away aboard these vehicles. Additionally, BSI recorded several cases in which cargo truck drivers were injured during these incidents, or in which businesses had to pay fines for stowaways and suffered financial losses due to damaged or adulterated products.

Beyond port facilities, BSI also found that cargo trucks transporting goods in Belgium faced the persistent risk of stowaway introductions at parking lots throughout the country. Cargo transporters faced violent attacks by migrants, thefts, and stowaway attempts at these facilities. In an attempt to combat these risks, officials implemented overnight parking bans for cargo trucks at some of these facilities; however, BSI continued to record incidents at these facilities since the bans failed to protect transporters from daytime risks. BSI analysis indicates that Belgium may lack the capacity to implement additional security measures to mitigate stowaway introduction risks, as the government's prioritization of other security threats, such as terrorism, limits law enforcement resources.

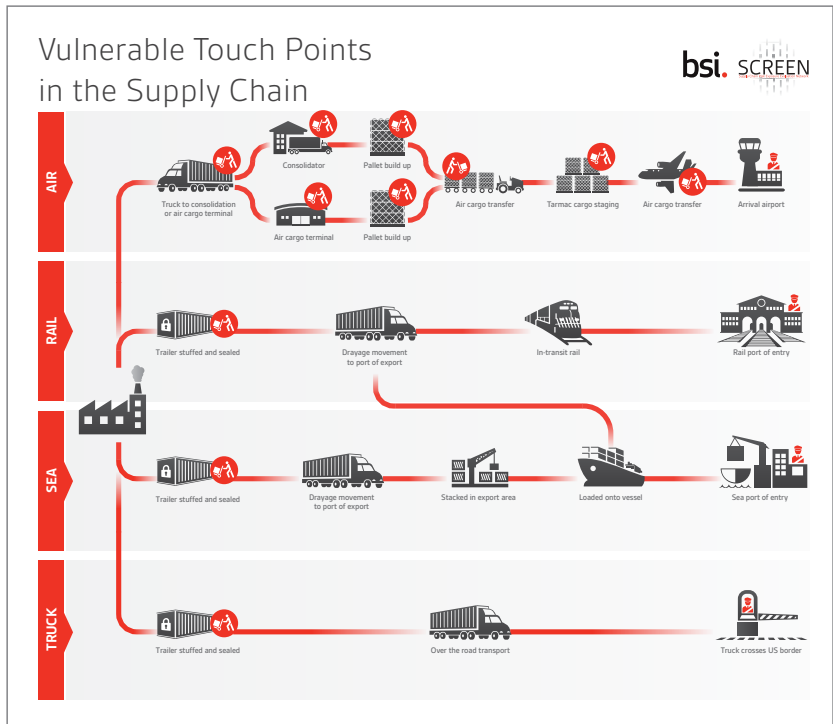
BSI identified freight trains transiting the Brenner Pass, a mountainous route that passes through northern Italy, Austria, and southern Germany, as an additional concern after several groups of migrants were found on numerous trains along this route. Austrian and German rail authorities discovered a significant number of stowaways on freight trains coming from Italy during the summer of 2017. Authorities most frequently discovered migrants at Raubling train station in Germany on trains destined to Munich. Although migrants have stowed away on rail freight along this route in the past, authorities indicated heightened concern in 2017 due to a higher-than-usual frequency of discoveries. Officials subjected freight trains transiting this route to increased inspections and occasional stoppages due to migrant discoveries, leading to shipping delays. Although the frequency of stowaway introductions on freight trains traveling through the Brenner Pass has declined since the summer of 2017, BSI continues to record stowaway discoveries along this route.

Stockholm and Barcelona Attacks Highlight Terrorist Targeting of Supply Chains

BSI continues to recommend the implementation of best-practice security countermeasures to diminish the risk of terrorism involving supply chains in Europe. Terrorist propaganda and attacks in 2017 demonstrated the capacity and motivation of militant groups to exploit various supply chain vulnerabilities to conduct attacks. In May, the Islamic State of Iraq and Syria (ISIS) published an informational graphic outlining various methods and tactics for assailants to successfully conduct a vehicle ramming attack using a cargo truck. Although the organization has released similar information in the past, the group's persistent focus on trucks underscores the significant risk of attacks involving cargo vehicles and the need for stringent supply chain security measures.

In March 2017, an assailant stole a cargo truck in Stockholm, Sweden during a cargo delivery and used the vehicle as a weapon, ramming the truck into civilians at a popular shopping location. BSI assesses that delivery vehicles and unsecure cargo trucks are among the primary targets for terrorists seeking to mount similar ramming attacks.

BSI has also identified rental cargo vehicles as another supply chain modality that assailants attempt to exploit, and several countries experienced attacks using this method during the course of the year. One of the most notable attacks in 2017 occurred in Spain, when an assailant used a rented cargo van to ram pedestrians on a busy tourist street, killing 13 and injuring 130. In a similar incident, several perpetrators used a rental cargo van for a rent vehicle ramming attack on London Bridge. The group initially attempted to rent a cargo truck online, but were denied access after their payment attempt failed. BSI assesses that terrorist groups may utilize various methods to obtain cargo vehicles including hijacking, theft, purchasing, renting, or through employment with freight handling businesses.

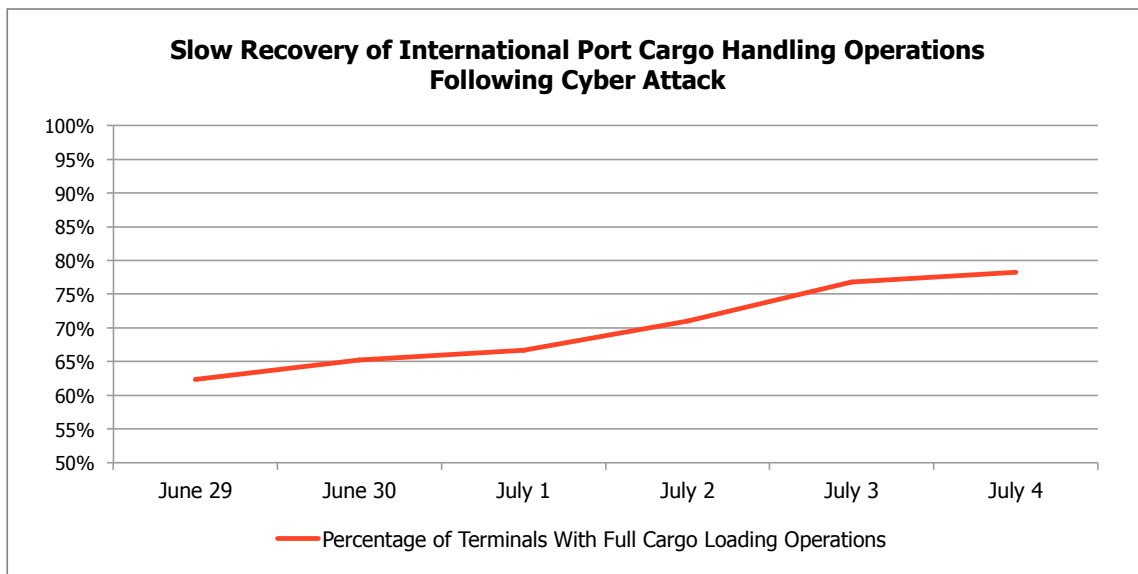


Best Practice Security Countermeasures

- Do not leave vehicles unlocked, unattended or idle
- Park vehicle in secure parking lots and rest stops
- Increase awareness about high-risk target areas and facilities: government buildings, popular tourist spots, shopping centers, religious sites
- Implement security technology: panic buttons, GPS trackers, silent alarms
- Train personnel about cargo security best practices

Major Cyberattack Disrupts Maritime Trade Worldwide

A global cyberattack in late June and early July of 2017 had significant impacts on business operations worldwide, highlighting major business continuity risks and shipping vulnerabilities. While the cyberattack affected nearly 7,000 companies and government agencies globally, the incident had an especially large impact on global port operations, sea container shipments, and oil and gas production, as one of the world's largest port terminal operators experienced technical problems at 17 different container terminals for nearly two weeks following the incident. The port terminal operator handles an estimated 25 percent of all containers shipped between Asia and Europe, demonstrating the large scale affect the cyber-incident had on international shipping operations.



Overall, operations in Europe and North America experienced some of the most significant disruptions due to the slow recovery capacity for terminals in these regions. Some cargo terminals closed for days, and more were forced to operate at a limited capacity. The cyberattack led to import and export delays, cargo diversion to other terminals, freight shipment buildups, and long truck queues. The cyberattack primarily disrupted cargo handling and document processing, forcing workers to perform these tasks manually.

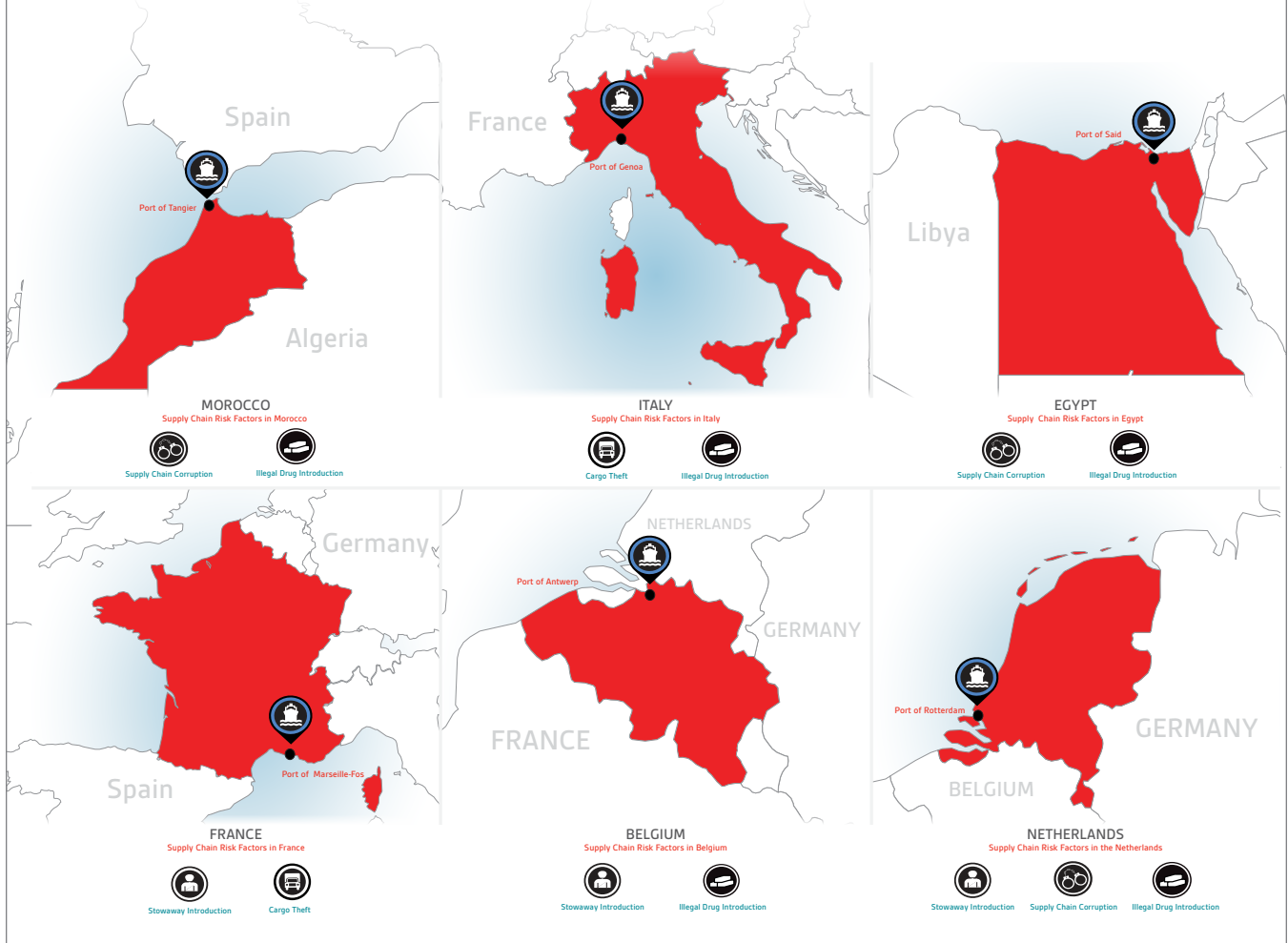
The slow recovery of international ports after the cyberattack and its pronounced impact on freight shipments demonstrate significant gaps in port cybersecurity practices and highlights a major business continuity risk. BSI recommends that companies ensure that they implement rigorous cybersecurity practices, conduct cybersecurity risk assessments, invest in information security, and promote similar practices for their business partners. Furthermore, companies should establish reliable contingency plans to offset potential impacts and improve business resilience, and remain aware of potential shipping vulnerabilities.

Port Labor Disputes Drive Business Continuity and Security Risks in Europe

Throughout 2017, BSI monitored several notable port strikes across Europe that resulted in both short and long-term business continuity disruptions. While the primary impacts to shipping companies were delays and substantial additional financial costs, BSI analysis found other ongoing business continuity risks and heightened security vulnerabilities for affected cargo.

One of the most impactful and highly-disruptive port strikes during the year was a nationwide dockworker strike in Spain, which was particularly impactful to country as ports handle about 80 percent of Spain's imports and 60 percent of exports. BSI reported in 2017 on another highly disruptive port labor conflict occurring at the port

Supply chain risks in diverted cargo recipient countries



of Gothenburg, which experienced an ongoing labor dispute over collective bargaining agreements since April 2016. Frequent delays and persistent uncertainties at these ports generated longer term effects for businesses and shippers. Besides direct impacts to business growth and other short-term issues, companies were subject to reputational damage due to cargo delays. Ongoing labor disputes and instability from port conflicts impacted the perception of overall port reliability, leading some businesses to permanently move shipping operations or change shipping routes to avoid potential future disruptions.

Port labor conflicts in Europe during 2017 also demonstrated the varying, often increased security and supply chain corruption risks that cargo shipments faced after being diverted to other ports in the region. Additionally, these diversions forced unprepared companies to either completely rely on or incorporate other freight modalities, such as ground transportation, to successfully ship goods. This often resulted in additional costs, increased risk of other supply chain threats such as stowaway introductions, and cargo delays.

Companies should evaluate their shipping operations to assess whether they are too heavily dependent upon a single business partner for crucial services, such as transportation. Companies should also have a strong understanding of how their operations could be affected by major business continuity risks, including strikes at port facilities, and establish contingency plans to mitigate potential impacts. Alternatively, companies could consider relying on other suppliers or transporters to spread out risks.

Supply Chain Impacts of Brexit

The United Kingdom voted in a referendum to leave the European Union, and the country is scheduled to depart on March 29, 2019. High-level negotiations between the United Kingdom and European Union took place throughout 2017, and the two entities reached a political agreement, or “sufficient progress,” on the three key “divorce” issues. These issues include determining how much the United Kingdom owes the European Union, what happens to the Northern Ireland border, and what happens to UK citizens living elsewhere in the European Union and EU citizens living in the United Kingdom.

In 2018, the United Kingdom and European Union will move on to negotiating a two year transition period aimed at smoothing the way to post-Brexit relations. The transition period - also referred to as an implementation period - is seen as a way to minimize disruption when the United Kingdom leaves the European Union for things like trade, business, travel, and security.

Businesses with complex supply chains are becoming increasingly concerned with the practical issues of a potentially new trading model between the United Kingdom and the European Union. The European Union and United Kingdom continue to negotiate a high level political transition plan that looks to define a future trading relationship, including whether the United Kingdom will trade inside or outside the single market and customs union. The European Union recently published clarification on the effects of Brexit for economic operators that states post Brexit, goods imported from the United Kingdom to the European Union and vice versa will be subject to customs supervisions and controls. Certain goods may be subject to restrictions on the grounds of public policy, security, and protection of life.

Authorizations granting the status of Authorised Economic Operators (AEO) issued by the United Kingdom will also no longer be valid in the customs territory of the European Union. The United Kingdom is currently part of the EU's AEO program, which has its basis in the Union Customs Code. After Brexit, the United Kingdom would need to either adopt the provisions of the EU AEO program, or develop its own AEO program. It is unclear whether recognition of the United Kingdom's AEO scheme by other countries after Brexit would be automatically mutually agreed or require prior agreement or negotiations.

Public and political debate in the United Kingdom is currently focused on whether to remain in the EU customs union and single market and what tariffs costs may be applied to United Kingdom imports and exports post-Brexit, regardless of whichever trading model is agreed. Many companies, however, are less concerned with the cost of crossing borders than the practical difficulties of doing so. Modern supply chains are extremely complex, with products made up of thousands of components that travel across multiple borders before completion. With the potential implementation of “new” borders adding considerably increased customs declaration requirements, businesses are concerned that their “just-in-time” manufacturing supply chain process could be hugely impacted.

Pending the outcomes of the 2018 transition negotiations, no one can be sure what the post-Brexit trade and customs regime will look like - the greatest risk for supply chains is the potential for delays and queues at EU/ UK borders for customs checks and declarations.

Supply Chain Impacts of the Catalonia Crisis

Efforts to gain independence by activists in Catalonia, a Spanish region with a long history of separatist sentiment, had significant impacts on political stability in Spain, generating both supply chain and national financial security risks.

Protestors, angry over the Spanish government's efforts to prevent Catalonia's independence referendum, blocked major highways while port workers in the region also participated in demonstrations, affecting sea freight shipments at the port of Barcelona. More than 2,700 business firms located in the region moved their headquarters to other locations in Spain in an effort to avoid potential political instability and mitigate economic and regulatory uncertainties.

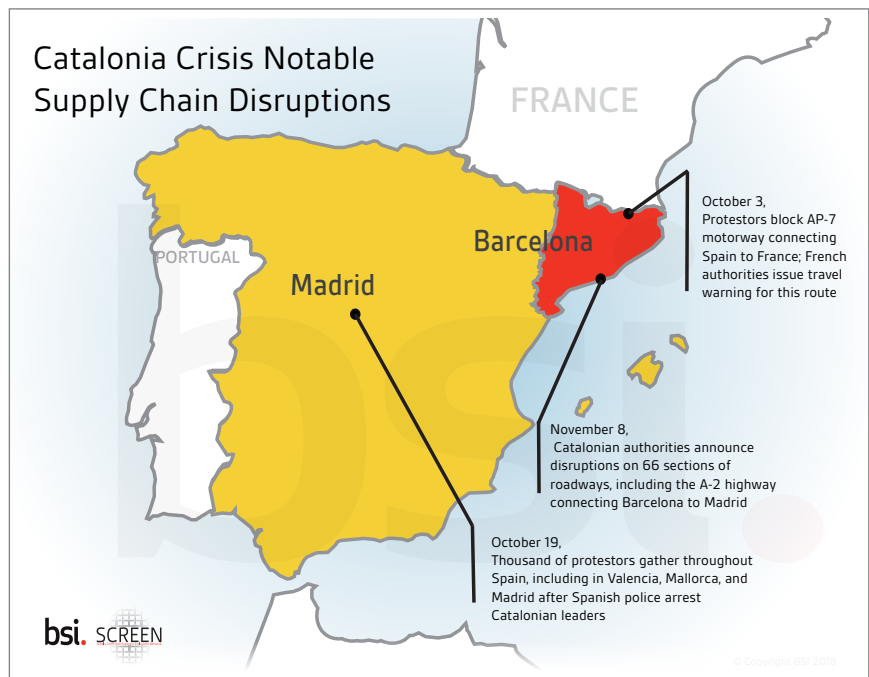
The severity of the situation increased as Catalonia formally declared independence from Spain. The Spanish federal government responded by imposing direct rule over Catalonia and stripped the region of its semi-autonomous status. This action allowed the federal government to seize control of Catalonia's regional law enforcement, dissolve the parliament, and confiscate the Catalan government's financial assets. While these measures temporarily diminished protests and impacts to supply chain operations, they did not resolve the crisis.

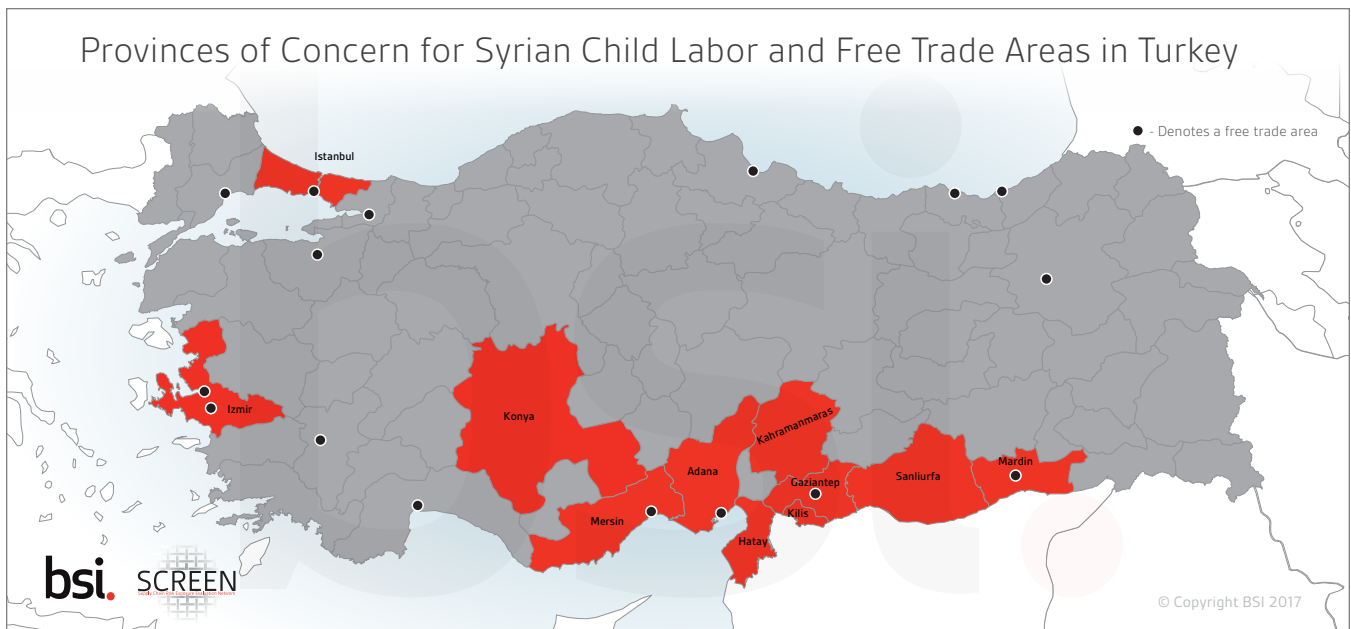
BSI assesses that conflict over Catalan independence will continue to be an area of contention in 2018, representing a risk to political stability in Spain and a potential threat to supply chain operations in the region. Additionally, the conflict may impact Spain's financial stability, as the economic fallout from the dispute could hamper the country's recovery from the 2007-2008 financial crisis. The Catalan independence issue is projected to have cost Spain \$1.4 billion to date, and caused the country's projected GDP growth to fall from 2.8 percent to 2.3 percent.

Influx of Migrants Contributing to Heightened Child Labor Risk in Turkey

BSI continued to record concerning levels of labor violations in Turkey in 2017, including poor or hazardous working conditions and the utilization of child and forced labor. An investigation in early 2017 found significant use of undocumented Syrians as laborers in the Turkish apparel and garment industry, including in facilities supplying major Western brands. Most Syrian refugee workers in Turkey earn wages below the national minimum and are denied access to protective security and welfare programs. The report also found that Syrian workers in the garment industry worked longer hours and were provided less protective equipment than Turkish workers at the same factories. Many undocumented Syrians work in the informal sector, with unregistered and smaller-scale facilities often subcontracting with larger exporting factories.

A separate investigation found that numerous apparel factories in the Istanbul metropolitan area employed child labor, including refugee and migrant children. The report, which examined apparel production facilities in Kukuckpazar in Fatih district on the European side of Istanbul, found children as young as ten working in apparel





sweatshops producing goods with the trademarks of major Western brands. Children working in the surveyed facilities also faced extremely poor working conditions, working up to twelve hours a day in cramped condition without air conditioning or proper ventilation.

Annual government statistics released in 2017 also underscore the hazards faced by both adult and child laborers in Turkey. A Turkish labor safety organization found at least 2,006 workplace fatalities in 2017, a two percent increase from the number of recorded deaths in 2016. The number of children killed in workplace accidents also increased from 56 in 2016 to 60 in 2017. However, these statistics likely understate the true number of workplace deaths in Turkey, and poor monitoring of Turkish industry contributes both to the extent and persistent nature of labor violations in the country. While most fatal workplace accidents in Turkey occur in the construction and agriculture industries, factories producing metals and textiles also saw significant numbers of worker deaths, including deaths of child laborers.

Several factors contributed to the risks faced by workers in Turkey in 2017. The ongoing migrant crisis provided a significant pool of cheap labor for factories in Turkey seeking to exploit refugees, with one 2017 survey finding that seven percent of migrants residing in four Balkan countries had been trafficked into forced labor in Turkey en route to Europe. The study found that Syrian, Iraq, and Afghan migrants are most vulnerable to forced labor in Turkey, with most exploited by factories and businesses in Izmir, Istanbul, and Ayvalik. Surveyed workers reported being illegally detained, forced to work without pay, and being coerced into marriages. Migrant women faced higher forced labor risks than men, with many also reporting sexual exploitation as they transited through Turkey. Turkish labor traffickers also exploit the presence of an estimated 1.3 million Syrian refugee children in the country, with over 400,000 of those children employed at Turkish businesses. The continuing influx of vulnerable migrant children into Turkey, coupled with the Turkish government's inadequate efforts to monitor businesses and industries for labor violations, led BSI to increase the threat rating for child labor in Turkey to High in 2017.

BSI has also reported on the labor risks posed by the government's purges of civil servants suspected of abetting the failed July 2016 coup attempt. Officials have arrested or dismissed labor inspectors during these purges, further diminishing the government's ability to effectively police industry for hazardous working conditions or illegal labor exploitation. While the purges have decreased in intensity in recent months, they remain ongoing, and potential further attrition of the Turkish labor inspectorate could exacerbate labor threats in the country.

Increased Trafficking of Heroin in Cargo Transiting Balkan Smuggling Route

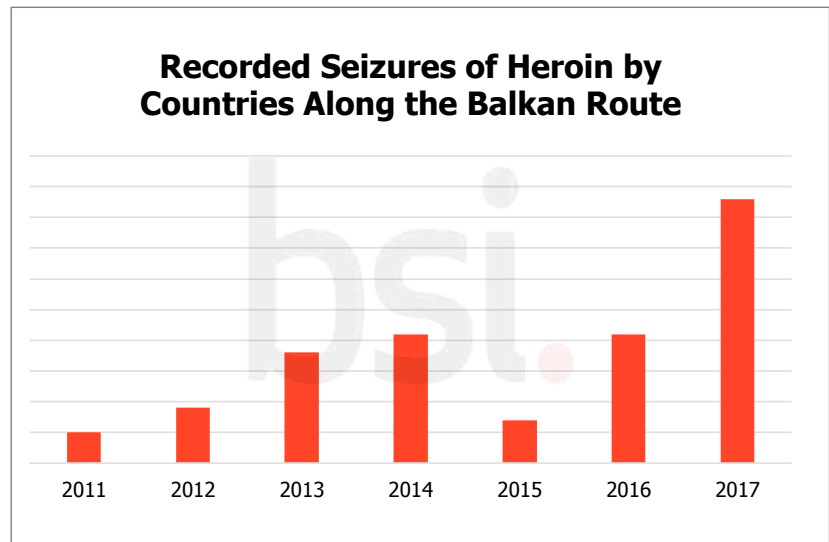
Both BSI data and statements from multiple national governments across southeastern Europe and the Middle East in 2017 indicated an increase in drug trafficking along the Balkan route. This route stretches from drug production and processing facilities in South Asia through Iran, Turkey, and the Balkans to consumer markets in Western and Northern Europe. BSI recorded a sharp uptick in seizures of heroin in Iran, with the Iranian government also reporting a ten percent increase in seizures in 2017 relative to the previous year. Incident data collected by BSI also showed a significant increase in heroin seizures in Turkey in 2017, with both Turkish and Bulgarian authorities making their largest-ever seizures of heroin last year.

Most introductions of heroin and heroin precursor chemicals traveling along the Balkan route involve ground freight shipments, with BSI noting frequent seizures of narcotics from cargo trucks passing through the Gurbulak checkpoint along the Turkish-Iranian border and the

Kapikule or Kapitan Andreevo checkpoint along the Turkish-Bulgarian border. BSI also recorded introductions of heroin into sea container shipments traveling along a similar route, including a June seizure by Turkish authorities of over one tonne of heroin valued at approximately \$57 million from a sea container shipment, the largest seizure of heroin in Turkey in recent years. The heroin seized in that incident originated in Afghanistan and was intended to be transported to Greece.

Traffickers also introduce precursor chemicals used in the manufacture of heroin into cargo shipments transiting the Balkan route, with these illicit consignments generally traveling in the opposite direction from heroin destined for users in Europe. BSI recorded several seizures in 2017 of acetic anhydride, a heroin precursor, from cargo truck shipments traveling along the Balkan route. Many of these illicit acetic anhydride shipments originated in the Netherlands; the presence of sophisticated chemical and pharmaceutical industries in the Netherlands and other countries in Western and Northern Europe provides criminal syndicates with greater opportunity to divert chemicals intended for legitimate industrial purposes for narcotics production. BSI has also previously recorded the introduction of acetic anhydride into sea container shipments in East Asia. These precursor consignments are primarily destined for drug production facilities in Pakistan and Afghanistan.

The recent increase in heroin seizures along the Balkan route is likely due in part to sharply rising cultivation of opium in Afghanistan. Despite U.S. counterdrug efforts in Afghanistan, production reached a record high in 2017, with Afghan farmers cultivating 46 percent more opium last year than in 2015. The Taliban's strengthened position in recent years and continued use of opium trafficking to finance its operations are likely factors in this increased production; as the group's influence continues to expand across Afghanistan, the amount of land available for opium cultivation will increase accordingly. Endemic corruption and poor economic conditions also contribute to rising levels of opium production, as both corrupt officials and farmers without access to the formal, licit Afghan economy participate in the drug trade. Another factor in the rise in heroin seizures along the Balkan route is likely significant supply chain corruption in countries along the path.



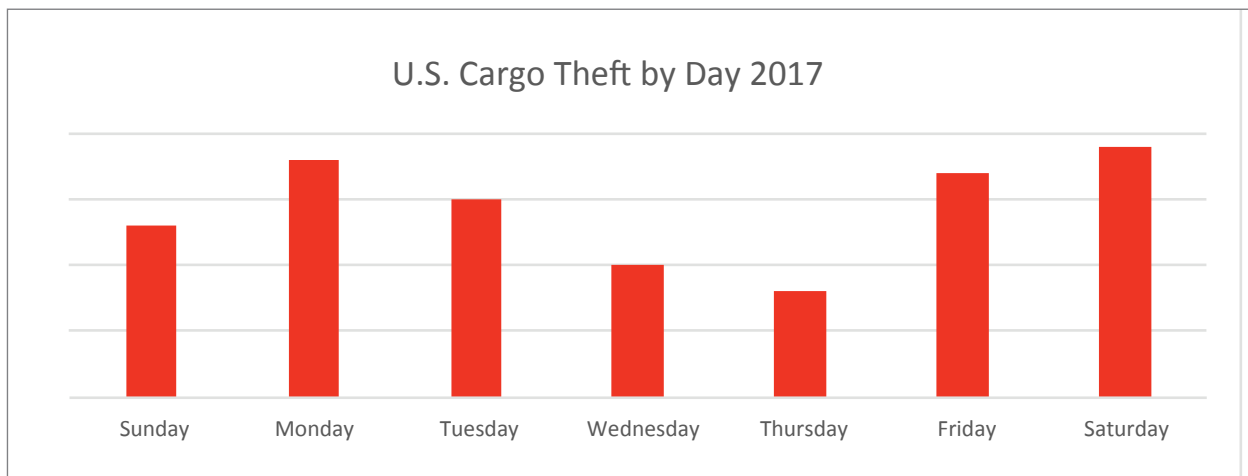
Introduction

Robust and specialized law enforcement operations in both the United States and Canada contributed to lower rates of cargo theft in both countries in 2017. Contrastingly, insecurity and violence perpetrated by criminal organized groups, including drug cartels, led to a rise in cargo theft risk in Mexico. The continued expansion and diversification of organized criminal groups in Brazil poses significant risks to both international and domestic supply chains, while drug trafficking remains a major concern in Colombia despite a ceasefire with the FARC guerrilla group. Supply chain disruptions in Puerto Rico following Hurricane Maria created both security and business continuity risks, while government efforts to alter labor regulations in Brazil threatened corporate social responsibility in the country.

Decline in Cargo Thefts in United States and Canada in 2017

BSI data indicated a decrease in the number of cargo theft incidents in the United States and Canada in 2017, likely due to increased law enforcement efforts to combat theft in both countries. In an effort to counter theft, some U.S. states established specialized cargo theft police units to better investigate thefts of cargo trucks and trailers. While BSI records a higher frequency of cargo theft incidents in the Americas relative to other regions, 2017 data reflected a decline in cargo thefts from 2016 across previously noted states of concern in the United States, including California, Texas, Florida, Illinois, New Jersey, and Georgia. In Southern California, while thieves continued to target containerized cargo en route to and from the ports of Long Beach and Los Angeles, overall thefts of cargo fell in this state in 2017, as well as in Texas and Florida where BSI recorded a much lower number of cargo theft incidents compared to 2016.

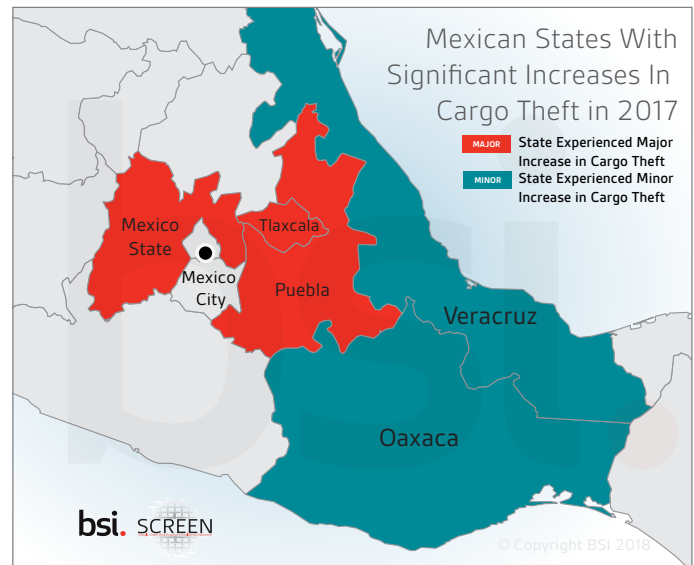
The majority of cargo thefts in the United States recorded by BSI in 2017 involved shipments of food and beverage products, construction materials, appliances and electronics, apparel, and consumer goods. In most of these incidents, thieves targeted parked trucks at carrier yards and gas stations, among other locations. BSI recommends the installation of electronic tracking or surveillance devices in cargo trucks in order to facilitate the recovery of stolen vehicles. BSI also noted thefts most commonly occurring on or close to the weekend, with 19 percent of incidents occurring on Saturdays, 18 percent on Mondays, and twelve percent on Fridays.



Sharp Increase in Cargo Thefts Recorded in Mexico

BSI continued to record a high rate of cargo thefts in Mexico in 2017, with the frequency of these incidents driven upward by the presence of powerful and sophisticated organized criminal groups and cargo theft gangs, corrupt security forces, and industry employees facilitating thefts. Official statistics indicate that the total number of thefts involving cargo trucks in 2017 surpassed both the number of thefts in 2016 and industry estimates for thefts in 2017. BSI recorded significant increases in cargo theft most notably in the states of Mexico, Puebla, and Tlaxcala. Thieves likely targeted these areas most frequently due to their proximity to Mexico City, a known hotspot for cargo thieves intercepting goods en route to and from central parts of the country to ports in Veracruz.

Organized criminal groups, including well-equipped drug cartels, continue to primarily target in-transit goods and typically use violent tactics, including armed hijackings of cargo trucks, when carrying out thefts. The presence of these organized groups exacerbates security risks for shipments traveling along highways and roadways across Mexico's 32 states, with the State of Mexico, Guanajuato, Nuevo Leon, Puebla, Colima, Baja California, Michoacán, and Jalisco representing particular areas of concern. For instance, some larger drug cartels are known to disrupt ground freight by cordoning off sections of highways with stolen tractor-trailers or vehicles from earlier thefts and forcing truck drivers to pull over, allowing cartel members to pilfer goods from trailers.



Numerous business partners in Mexico failed to use alarms and keep CCTV recordings for longer than 60 days in their facilities, but many of these entities became compliant after receiving corrective actions.

Endemic supply chain corruption in the country's police forces also contributes to high rates of cargo theft in addition to overall poor enforcement and reliability. A survey published by a civil society organization highlighted this issue, finding that nearly 32,000 government security personnel in Mexico, representing ten percent of all Mexican law enforcement officers, failed to pass integrity exams. In Michoacán and Veracruz, two states where BSI has noted particularly high rates of cargo theft, between one-fifth and one-quarter of officers did not pass integrity exams. Due to the threat posed by corrupt security officials in Mexico, BSI urges companies with supply chain operations in the country to continue to review and augment security countermeasures and ensure they are aligned with best practice recommendations.

Although trucking remains the most vulnerable modality for cargo theft in Mexico, government statistics indicate that thefts from freight trains also increased sharply in parts of the country. Mexico's rail agency reported an increase of 766 percent in rail thefts in the state of Puebla in the first and second quarters of 2017, which BSI had previously identified as a hotspot for thefts from both freight trains and cargo trucks. Authorities further noted that trains traveling through a specific section of Puebla known as Esperanza-Canada Morelos had seen an especially high incidence of thefts by organized criminal gangs targeting rail freight. BSI analysis indicates that one potential factor behind the increase in rail freight thefts in Mexico is increased government efforts to combat thefts from fuel trucks and pipelines. Gangs that formerly engaged in these activities may be shifting to target trains in response to this law enforcement trend.

How to Address Increasing Risk in Brazil and Mexico

Cargo theft in Brazil and Mexico often resembles a never-ending arms race, with cargo thieves developing increasingly sophisticated or violent techniques in response to each new security countermeasure. Both countries are extremely challenging environments for any company seeking to do business there, but there are certain measures that companies can take to reduce risk to their shipments. Here more than in most other countries, it's important to sort out the web of contracting and subcontracting that often takes place in trucking and transportation. Use of a reliable partner for cargo tracking and recovery can aid greatly, providing your company with a valuable link to local law enforcement during a crisis.

Understanding which countermeasures are most often defeated by thieves can help determine which physical security technologies are likely to be most effective and provide a positive cost-benefit. However, even the best technology can ultimately be defeated and it is certainly possible to over-spend on security in Brazil and Mexico. Gaining a better understanding of the specific region or cities where your company is operating, the risks your specific product types will face, and understanding the cost of your security measures in comparison to these threats is invaluable. Mapping out routes and risks ahead of time is an important part of a proactive approach to security. Cargo theft patterns are often based on broader socio-economic trends that influence organized criminal behavior. Budget constraints for the regional government of Rio de Janeiro, for example, has led to decreased public security funding and a corresponding surge in cargo thefts. With a combination of good partners and a sophisticated understanding of risk and which measures do and don't work, companies can mitigate risk in even the most dangerous environments for cargo theft.

Brazilian Organized Crime Groups Expanding and Diversifying Operations

BSI noted the continued expansion and diversification of Brazilian organized crime groups in 2017, with these organizations carrying out more international operations paralleling the activities of drug cartels in Mexico. This trend poses a significant risk to both domestic and international supply chains in Brazil. Similar to Mexico, Brazilian organized criminal groups also utilize "narcobloqueos," a tactic that typically involves setting fire to cars and cargo trucks to block roadways and deter police or military from entering particular areas where gangs are engaged in criminal activity. Organized groups in Brazil also shared similar operational techniques with Mexican cartels with respect to drug trafficking and cargo theft. The strengthening and expansion of Brazilian organized criminal groups will likely continue in 2018, with the Brazilian government's efforts to combat this trend ineffective to date.

Corruption Fueling Contraband Introduction into Cargo in Brazil

Throughout 2017, much of the mainstream international news on Brazil focused on the widespread frustration with the political classes and business elites surrounding the relentless corruption cases linked to the Car Wash scandal. The sluggish economy and lack of faith in the political classes has also had an effect on growing levels of supply chain corruption at a localized level for domestic and international businesses. Numerous factors fuel this corruption, including the worrying rise of major organized crime groups in the country, corrupt local officials, and numerous workers in supply chains suffering from poor wages and that are susceptible to coercion.

In particular, ports in Brazil have seen a rise in illegal contraband introduction into containers with legal goods bound for countries throughout Latin America and Europe. While organized crime rings coordinating

shipments of illegal goods are often highly sophisticated, they continue to use the well-known method of “blind-hook,” or rip-on, rip-off, to place illegal goods in containers. Smugglers often target cold cargo containers (reefers) because of the less rigorous inspection process due to temperature requirements.

To accomplish the illegal introduction of goods at ports effectively, there needs to be a solid network of employees, including customs officials, transport providers, freight carriers, on a local crime payroll. During times of economic downturn, there are always opportunities to coerce workers to “turn a blind eye,” or not carry out a full inspection in exchange for monetary compensation. Ports have historically been more vulnerable to contraband introduction than their land counterparts, and bribery and co-option of customs officials and security authorities in ports across Brazil is a key concern to those moving their goods into and out of the country.

Changing Trends in Stowaway Introduction Risks in Mexico

BSI sources indicate that migrant smugglers in Mexico are increasingly utilizing cargo trucks to transport migrants to the United States, rather than freight trains as traditionally seen in years past. Trucks transiting less-traveled routes in Mexico are particularly vulnerable to stowaway introduction. One factor driving this shift is the perception by migrants that cargo trucks are a faster, safer, and more comfortable mode of transport than freight trains. A recent survey of migrants who had traveled from Mexico and Central American countries to the United States found that 74 percent had preferred to stow away in tractor-trailers and cargo trucks, relative to an average of just ten to twenty percent of migrants who had utilized rail freight to migrate to the United States. Approximately eleven percent of surveyed migrants revealed that they concealed themselves in cargo trucks by hiding underneath the truck’s consignment or under false truck floors.

The primary routes for cargo trucks carrying migrants include highways beginning in southern and eastern Mexico and continuing toward central Mexico, particularly toward Mexico City. BSI noted in 2017 that Highways 145 and 200, which pass through Chiapas near the Guatemalan border are two such roadways. Another major highway of concern for the threat of stowaway introduction into cargo trucks is Highway 150D, which runs from the state of Veracruz in southern Mexico to the country’s most centralized states of Mexico City and Puebla.



Corrupt Supply Chain Employees Facilitating Drug Smuggling in Mexico

BSI recorded a series of marijuana introductions into cargo exported from a factory in Hermosillo, in the Mexican state of Sonora, in 2017. At least four such incidents occurred in the first two months of the year, with similarities in the drug shipments suggesting that an organized criminal group was behind the incidents. In one incident, a load of marijuana was introduced into a shipment of newly manufactured goods from Mexico and seized in the Midwest region of the United States. Subsequent incidents in which these marijuana shipments were discovered in the United States after successfully crossing the border in cargo exported from the Hermosillo factory also suggests the involvement of corrupt supply chain workers in this drug trafficking flow. These incidents highlight the importance of implementing high levels of business partner vetting and security countermeasures for imports from Mexico.

Persistent Security Threats in Colombia Despite FARC Peace Agreement

The official disbanding of the FARC may lead to a longer-term decrease in cocaine trafficking from Colombia, but the presence of dissident FARC groups and other guerilla groups such as the National Liberation Army (ELN) and Los Urabenos will likely continue to drive high rates of cocaine production and exportation from the country. The Revolutionary Armed Forces of Colombia (FARC), a left-wing guerrilla group which carried out an anti-government insurgency for over 50 years, officially disbanded in August 2017 after successful peace negotiations with the Colombian government. However, many FARC members remained skeptical of the government's promise to reintegrate former guerrillas into

Colombian society. As many as 700 to 1,300 former FARC members have left the group; while some returned to their families, others have formed their own drug trafficking gangs, operating in the same territory previously held by FARC.

Drug smuggling in Colombia will likely continue despite the FARC peace negotiation, as FARC dissidents, the ELN, Los Urabenos, and smaller armed groups frequently clash in turf wars over previously FARC-controlled territory. In January 2018, the Colombian military deployed 2,000 troops to the coastal town of Tumaco, where 16 percent of the country's coca is produced, to quell increasing violence between multiple major guerrilla groups fighting over control of major drug trafficking routes in the area.

After the FARC agreed to peace terms, Los Urabenos and the ELN also participated in ceasefires in an attempt to initiate peace negotiations with the



Colombian government. Los Urabenos announced a ceasefire in December 2017, two months after the gang's leader announced that he would be willing to turn himself in once the government made arrangements for a proper surrender for gang members. The ELN held a 101-day ceasefire with the government from September 2017 to early January 2018, during which time the government and ELN leaders accused each other of violating the truce. Despite the violations, leaders from both parties initially expressed a desire to continue peace negotiations. However, the ELN launched three bombings on an oil pipeline and military base just hours after the ceasefire expired in early January 2018. Colombian President Juan Manuel Santos subsequently withdrew the government's chief negotiator from the location in Ecuador where both parties had previously intended to negotiate a ceasefire extension. In the weeks after the attack, the ELN claimed another bombing of a police station near Barranquilla.

The ELN's return to violence after the ceasefire was likely influenced by the government's perceived lack of commitment to the promises outlined in its agreement with the FARC. According to the leader of the new FARC political party, the Colombian government has failed to uphold parts of the peace agreement. As Colombian President Santos is ineligible to run for reelection, he has the political freedom to push for accelerated integration of former FARC guerrillas until the end of his term in 2018, despite the policy's controversial nature across much of Colombian society. The ultimate success of the peace agreement will likely depend on the approach of the new Colombian government to the accord following the 2018 elections.

Major Impacts on Business Continuity in Puerto Rico Following Hurricane Maria

The destruction in Puerto Rico caused by Hurricane Maria revealed vulnerabilities in the territory's natural disaster resilience and caused long-lasting impacts on business continuity. The hurricane made landfall in Puerto Rico in late September 2017, just two weeks after Hurricane Irma struck the island, and caused significant damage to the island's infrastructure, completely destroying its power grid. The power grid was likely ill-prepared for the back to back hurricanes due to a lack of government funds, which forced a halt to most routine maintenance for Puerto Rico's state-operated electrical grid in the months before Hurricanes Maria and Irma. Subsequent power outages continue to cause significant delays to supply chain operations. Consistent delays to power grid repairs meant that only 55 percent of the Puerto Rican population had power four months after the hurricane made landfall.

Factories on the island, specifically those in the pharmaceutical industry, continue to experience supply chain disruptions, depending on generators in order maintain production. Puerto Rico supplies approximately \$40 billion of pharmaceuticals to the United States, more than any other state or territory. Following Hurricane Maria, medical supplies manufacturers located in remote regions in Puerto Rico are having difficulty transporting shipments from their factories, resulting in shortages of supplies, especially IV bags, at U.S. hospitals.

BSI has also noted heightened supply chain security concerns in the aftermath of natural disasters. Following Hurricanes Irma and Maria, U.S. authorities have been closely monitoring port activity from the Caribbean, particularly Puerto Rico, due to concerns that drug trafficking organizations will exploit the aftermaths of these disasters to smuggle drugs into the United States. Authorities voiced these concerns after U.S. customs officials at the Port of Philadelphia seized 321 kilograms of cocaine hidden in a shipment of furniture from Puerto Rico in early January 2018.

Both organized syndicates and opportunistic criminals are able to exploit a number of factors that decrease the security of cargo shipments following natural disasters. Disasters generally necessitate the diversion of law enforcement resources to relief efforts, diminishing the ability of authorities to combat drug trafficking, cargo theft, and other forms of crime targeting the supply chain. Decreased awareness for companies regarding shipping schedules and the location of consignments also provides increased opportunity for criminals to steal or introduce

drugs into shipments. The buildup of containers at ports and other logistics facilities after severe weather events, potentially compounded by damage to security systems at these locations, also heightens the vulnerability of shipments to criminal exploitation. Companies forced to utilize the services of alternate logistics providers following natural disasters may face the threat of supply chain corruption. Businesses must properly vet new providers to mitigate the risk of employees stealing or tampering with shipments.

Labor, Regulatory, and Capacity Concerns Drive Human Rights Risk in Brazil

Despite government efforts to eliminate slave labor in Brazil, labor strikes and political disputes in 2017 made it difficult for the country to implement a consistent strategy to mitigate the threat of forced labor. In 2017, labor officials rescued victims from these forms of slave labor in multiple states, including Mato Grosso do Sul, Para, Tocantins, Sao Paulo, and Minas Gerais, which was the state with the highest number of rescued laborers. Belo Horizonte, in Minas Gerais, was the city with the highest number of recued slave laborers. These victims often worked on farms or in the factories of suppliers to the poultry, cattle, confectionery, and apparel industries.



The Brazilian Ministry of Labor pledged to strengthen inspection efforts aimed at eradicating slave and child labor in 2017 after government statistics showed a significant decrease in the number of workers rescued from slave labor in the previous year. Despite the Ministry of Labor's pledge to increase inspections, many labor unions remained unhappy with the government's approach to modern slavery after Brazilian President Michel Temer attempted to pass a decree altering the country's legal definition of modern slavery in October 2017. Brazilian law defines slavery as labor involving poor working conditions, excessive working hours including commuting time, forced labor, or debt bondage. The new definition simplified the categorization of "degrading working conditions" to only cases involving restrictions on workers' rights to come and go from the workplace. The controversial decree drew criticism from domestic and international labor groups, who saw the changes as an effort to garner support among rural businesses that would undermine anti-forced labor measures in Brazil. The new rules also limited the government's publication of the "dirty list," a record of companies found to have utilized forced labor in Brazil, to only twice a year, and transferred authority over public disclosure of the list from a special office responsible for forced labor to the discretion of labor minister.

Due to strong and widespread opposition to the government's redefinition of modern slavery, the Brazilian Supreme Court reviewed and suspended the controversial decree. The court announced that the decree was a violation of the Brazilian constitution, and also threatened Brazilian trade relations, as other countries could consider slave labor to be unfair competition. Brazilian labor unions remain distrustful of the government and efforts to eliminate modern slavery remain vulnerable to political disputes and strikes, a theme likely to continue in 2018.

Successful Corporate Social Responsibility Programs Incorporate Risk Intelligence

In the case of Latin America, increasing unemployment in already fragile economies puts additional strain on the tax base and enforcement of law, which further enables employers to exploit workers with impunity. This is in the context of an already insecure environment in countries like Brazil and Peru (which are both High to Severe Risk related to Cargo Theft, Cargo Disruption, Illegal Drug Introduction, Corruption and Hijacking Exposure), where criminal organizations sometimes administer services provided by state entities, which further damages government credibility and provides criminal organizations unofficial license to operate. The combination creates an environment where workers have few credible means of redress when faced with workplace abuse. Incorporating this type of risk intelligence and understanding of the local context in a systematic way into supply chain due diligence programs is crucial in order to allocate program resources in an efficient and effective manner.

Supply Chain Country Risk Reports

A Holistic View of Country-Level Supply Chain Threats and Trends

These reports provide increased visibility into country-level supply chain threats and trends to help organizations take a proactive, risk-based approach to sourcing new suppliers, evaluating new markets, and analyzing potential exposures. BSI's reports provide proprietary data and analysis pulled straight from our Supply Chain Risk Exposure Evaluation Network (SCREEN) solution to help organizations make informed and strategic decisions. The reports provide an overview of the current risk landscape within the country concerning supply chain security, corporate social responsibility, and business continuity threats.

These reports are available for individual purchase and do not require a subscription. BSI provides access to 70 different country reports and allows you to purchase multiple reports at a time.

Price: \$350 per country report

How do these reports benefit you?

These reports help organizations better understand where the threats are and how they could impact their supply chain. These reports contain the intelligence you need to understand the risk landscape of a specific country and make informed decisions to protect your supply chain, brand, and reputation.

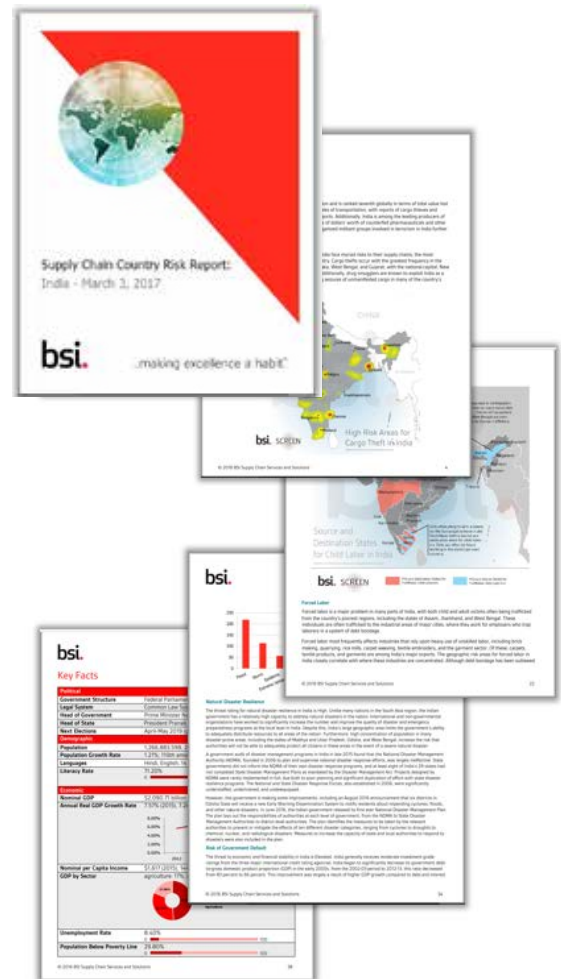
All you need to do is visit the website, input your contact information, select your country or countries, and submit payment. Once the order has been submitted, you will receive the purchased reports within one business day via email.

Visit the website to learn more and order your first report: www.bsi-intelligencecenter.com

Powered by:



SCREEN
Supply Chain Risk Exposure Evaluation Network



BSI Supply Chain Services and Solutions

BSI Supply Chain Services and Solutions is the leading global provider of supply chain intelligence, auditing services, audit compliance and risk management software solutions, and advisory services. Our mission is to help corporations, governments and associations identify, manage and mitigate global supply chain risks and maintain world class governance risk and compliance programs. Our holistic supply chain risk management suite is designed to predict and visualize risk, and develop robust risk mitigation and compliance management programs to protect your supply chain, brand and reputation. Our intelligence-infused supply chain solutions and global network empower our clients to understand global supply chain risk with unequaled precision.



Supply Chain Risk Exposure Evaluation Network (SCREEN), allows organizations to actively identify and monitor supply chain security, social responsibility, and business continuity threats and trends at a country level. SCREEN's robust modules provide insight into geographic risk for over 20 proprietary risk indicators in more than 200 countries.



Supplier Compliance Manager (SCM), is an automated self-assessment and audit analysis solution that quantifies and tracks supplier risk and compliance through various assessment methods to ensure your supply chain, brand and reputation are protected. SCM provides corporations with complete insight into their global operations, and streamlines their risk and compliance management efforts by utilizing a single, comprehensive solution.



BSI Supply Chain Verification Auditing Services, VerifEye, enables organizations to gain complete visibility into their suppliers' practices and procedures worldwide. Our audits are customizable, allowing each client to structure the audit and audit report as they like. Our audits provide your organization cost-effective assurance that your suppliers are not exposing your brand to potential security, social responsibility or business continuity risks.

Advisory Services

BSI's Advisory Services are driven by experienced supply chain professionals that leverage proven risk-based methods to provide timely insights into potential problems within a supply chain to ensure an organization can effectively identify, manage and mitigate risk. BSI's advisors will assist you in developing or enhancing a risk management program, preparing and applying for a government program certification and analyzing your supply chain on a country or lane-to-lane basis to gain a better understanding of potential global risks.

Training

BSI's Training Programs help build awareness and develop a deeper understanding of supply chain security, corporate social responsibility and business continuity risks and how to manage them. Our customizable training programs will provide your operations with the information they need to proactively identify, and mitigate global threats. Training can be provided through an e-learning course or presented on-site by one of BSI's experts.



For more information, please contact us at supplychain@bsigroup.com or visit us at bsigroup.com/supplychain

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