

A hand in a dark suit jacket is pointing towards the center of the frame. The background is a blurred image of a person in a suit. Overlaid on the image is a complex network of white lines connecting various circular nodes of different sizes. Some nodes are highlighted with a soft glow. The overall color palette is dark blue and grey.

Supply Chain Risk Insights 2020

bsi.

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FOREWORD

Jim Yarbrough

Director, BSI Global Intelligence Program

The job of supply chain practitioners is never easy. Predicting the future, assessing risks, determining evolving threats in an ever-changing landscape, and quantifying the potential impact of events are everyday concerns. These are the things that both keep us up at night and get us out of bed in the morning, eager to meet these challenges head on. These tasks also require a substantial level of insight into the state of the world as it is and as it likely will be in the future.

A resilient supply chain may be measured in loss ratios, compliance scores, on-time deliveries, and bottom-line cost savings. But for those of us who live and breathe this daily, we also know that a truly resilient supply chain means that medications arrive correctly and on time to the patients whose lives depend on them; that food is not contaminated or adulterated before it reaches consumers; that the people who make these products are safe, healthy, and treated fairly. It means that the massive global supply chain infrastructure and worldwide logistics operations are not used as a conduit for criminal and corrupt activity. It means that all this production and shipping is done in a responsible manner, minimizing adverse effects to the planet.

These issues, and so much more, are the challenges organizations must face in any typical year. 2020, as we all now know, will not be a typical year. The coronavirus disease 2019 (COVID-19) propelled supply chain resilience into the public eye in the first quarter of 2020 to an unprecedented degree. Supply chain disruptions, a term familiar daily to SCREEN subscribers, quickly became the chief concern for economists, the subject of frontpage headlines, and the topic of every hastily prepared webinar advertised on your social media feed. Supply chain shortages were felt across the globe, as a rush on demand for medical masks, hand sanitizer, and other essentials emptied store shelves around the world. Even in my neighborhood diner, I have overheard an impassioned conversation about the potential effects COVID-19 would have on the supply chain. That was a first.

The SCREEN intelligence team began noting cargo thefts of necessities in locations (e.g., Hong Kong) where these types of crimes are rare. Organizations moved swiftly, setting up task forces and war rooms to track the number of COVID-19 cases and flight cancellations. All of this before the end of January, and before COVID-19 caused direct disruption to daily life and business in areas outside of China.

Now that COVID-19 is recognized as a global pandemic and its impact is felt across the globe, the amount of tracking, data points, and overall information created around this issue can be simply overwhelming for any supply chain professional. The same can be said for many of the issues we discuss in typical years. Our intelligence team, for example, culls hundreds of thousands of significant data points from a pool of many more hundreds of thousands of incidents each year related to cargo crimes, workplace hazards, labor disruptions, and so forth. The ability to shut out the noise of this information overload and provide insight into the meaning behind all these data is the key to developing that truly resilient supply chain.

This report, Supply Chain Risk Insights 2020, is designed to do exactly that. In it, you will see a culmination of data collection, the trends our analysts identified by examining those data points and comparing them



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to previous years, and additional insights into how these trends impact supply chain operations. Further, you will notice this report is supplemented by key actions and processes suggested by our panel of expert contributors.

In many ways, the content you see in the following pages is also a direct reflection of the concerns, challenges, developments, and opportunities of our clients, partners, and SCREEN subscribers. These contributions offer a unique perspective, providing insight into how practitioners view and manage the challenges of global supply chains today. You will see results of our client engagement surveys, the global topics and trends most often viewed within our SCREEN community of supply chain professionals, as well as data analyzed from our worldwide collaboration of partners, trade associations, law enforcement, and government agencies.

I am personally very proud of the following report. Primarily, this report is a tremendous showcase of the hard work and dedication shown every day by the BSI Global Intelligence Program. I am honored to be associated with a group that puts everything they have into our core mission, which is to create knowledge and insight that assists organizations and makes our world a safer, more secure, and resilient place.

Further, this report is an indicator for where this program is headed in 2020 and beyond. In the coming months, the global intelligence program and the SCREEN platform will offer a more continuously connected and personal experience, allowing users more direct access to the insights they need. Data will become more accessible, immediate, and relevant to individual needs. The community of supply chain professionals will become a valuable resource and hub for active engagement of peers and professionals. Innovative technology will be leveraged to process and deliver intelligence in new, meaningful ways. Expertise and insight will be the foundation for these enhancements.

We hope that you use this report as a touchstone and starting point when considering the many challenges you may encounter in 2020. Certainly not every challenge facing global supply chains is listed here and single issues can mean many different things for your organization. Fortunately, the insights and recommendations found in this report can be applied to a multitude of issues your organization may cross throughout the year.

We know that 2020 will test international trade and global supply networks in both a scope and scale never seen before, and we at BSI will continue to equip you with the insights needed to successfully navigate these challenges and build a more resilient and sustainable supply chain.

Jim Yarbrough

Director, Global Intelligence Program

INTRODUCTION & RISK FORECASTS



INTRODUCTION

Throughout 2019, BSI monitored a wide range of threats and challenges spanning supply chain security, corporate social responsibility, food safety and fraud, and business continuity globally. Some threats of perennial concern, such as human trafficking, political protests, natural disasters, and terrorism, evolved in 2019 and have set the stage for new, deeper challenges for supply chains in 2020. These emerging challenges and variations of old threats will not only require tried-and-tested solutions but also new innovative thinking. As we conceptualize political protests through the lens of widespread indefinite instability, major weather events through the lens of climate change, and terrorism from highly-coordinated organized attacks to lone-wolf acts of destruction, businesses will need to prepare supply chains for these concerns to ensure a stable global business environment in the face of other forms of instability.

Specifically, in 2019, the ongoing trade dispute between the United States and China resulted in companies reassessing their presence in Asia, engaging with new regional partners, and re-examining current relationships with Chinese suppliers. Other regional countries such as India, Bangladesh, Cambodia, Vietnam, Thailand, and Myanmar moved toward more business-friendly environments to attract shifting foreign investment. Moving into 2020, companies restructuring supply chains in Asia will not only need to be aware of the ongoing supply chain risks in China, but also the myriad of security, business continuity, and corporate social responsibility risks still rife throughout the region.

Although the European migrant crisis of 2015 and 2016 seems to have abated over time, recent tragedies in 2019, such as the deaths of 39 Vietnamese nationals discovered in a trailer in Essex, have highlighted that supply chain challenges posed by human trafficking and the exploitation of migrants are still rampant. BSI continues to record incidents of migrants attempting to journey through Europe into the United Kingdom, many times facilitated by traffickers and often through supply chain modalities. As migrants seek a better life in Europe, the scourge of labor exploitation in the agriculture and manufacturing industries still remains and may grow in 2020 as agricultural products experience shortages resulting from climate change. Similarly, migrants continue to travel through South and Central America, seeking refuge in the United States. In 2019, Mexican authorities took a stronger stance in cracking down on migrant flows, but as cartel violence increases throughout the country, transporters can expect not only greater attempts to stowaway in perceived-safer supply chain modalities, but also continued security challenges and traffic disruptions along the U.S.-Mexico border as the two countries continue to debate the best solutions to the issue.

In *Supply Chain Risk Insights 2019*, BSI forecasted that major shifts in political ideology in large industrial nations would lead to new supply chain challenges. Throughout 2019, shifts in political ideology were indeed felt throughout the world, resulting in not only large protest movements touching nearly every continent and disrupting business continuity, but environmental and labor impacts stemming from privatization and deregulation. In 2020, the consequences of these political changes will continue to reverberate as companies reconsider once-stable locations from a business continuity perspective and become more mindful of corporate social responsibility vulnerabilities arising from deregulation.

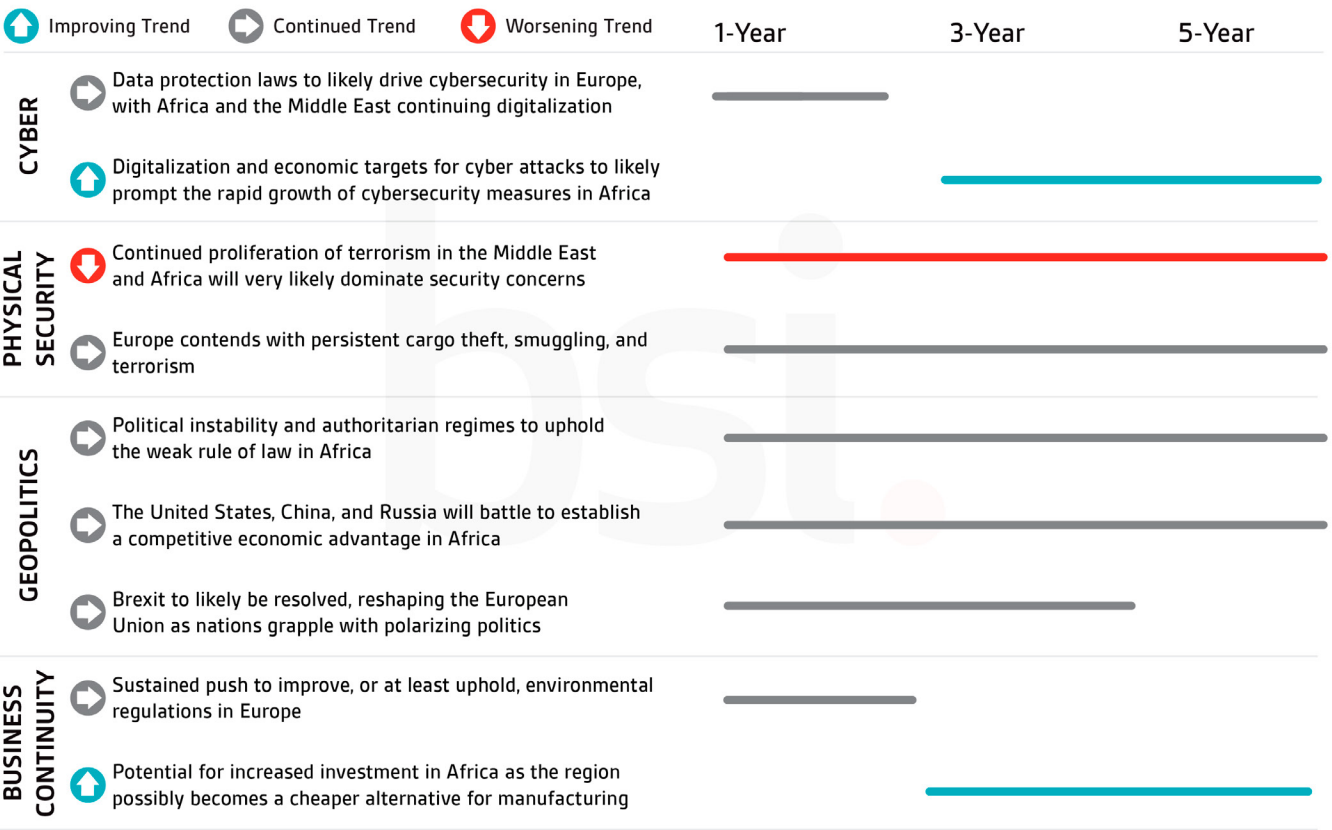
Several record-setting weather events wreaked havoc on supply chains in 2019. Experts expect climate change will continue to contribute to these severe weather events and, as a consequence, will likely produce other medium- and long-term consequences in the form of degrading infrastructure. Companies must form dynamic responses to minimize disruptions in business continuity but also properly secure supply chain facilities. In 2020, companies can further expect shortages of agricultural products, destruction, and impairment of infrastructure, notably in Southeast Asia, as we discuss later in this report, as well as vulnerabilities to thefts and looting in areas impacted by severe weather events. In 2020, natural disaster resiliency will be further taxed globally as these events continue and will result in medium- and long-term reassessments of the viability of some countries as supply chain partners.

Finally, while organized terrorism largely faded into the background of 2019, resurgent tensions in the Middle East between Iran and the United States, Turkey and Syria, and in Yemen, still cast a pallor of danger for any supply

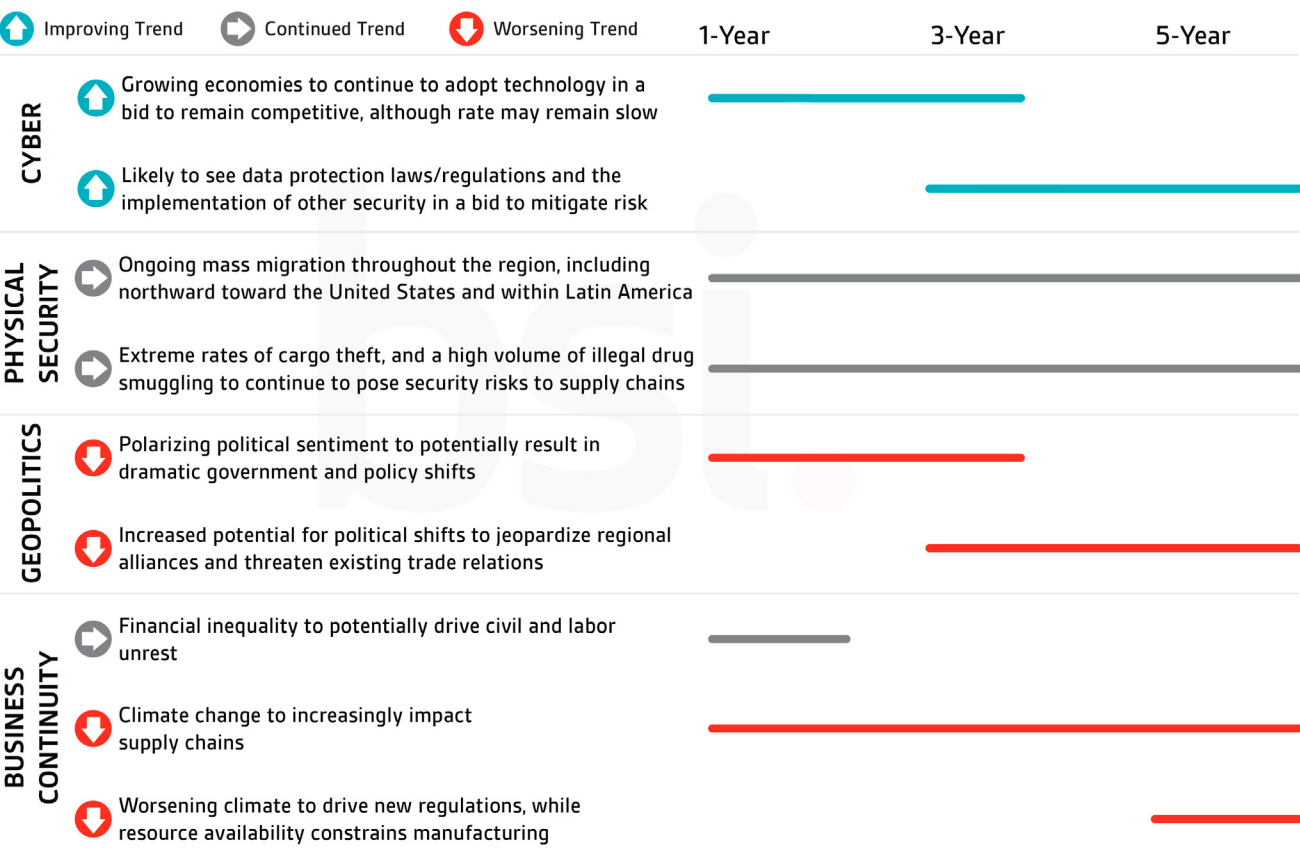
chains operating in the Middle East, notably logistics operating through the Gulf of Oman and the Strait of Hormuz. Despite a major act of organized terrorism impacting Sri Lanka in 2019, many instances of terrorism during the year consisted of lone-wolf or small militia attacks, which were sporadically organized and difficult-to-predict. As political protests continue to grow and intensify in 2020, incidents of terrorism are likely to occur as fringe political movements look for new methods to get their message across beyond vandalism and violent marches.

BSI forecasts that domestic unrest, climate change, and expansion into new markets will act as primary drivers of global supply chain security, business continuity, and corporate responsibility risks in 2020. The trends examined in the following report shed light on new threats and the progress made in addressing ongoing challenges. Based on these trends, BSI has outlined the best practices for countering and managing the risks of 2020.

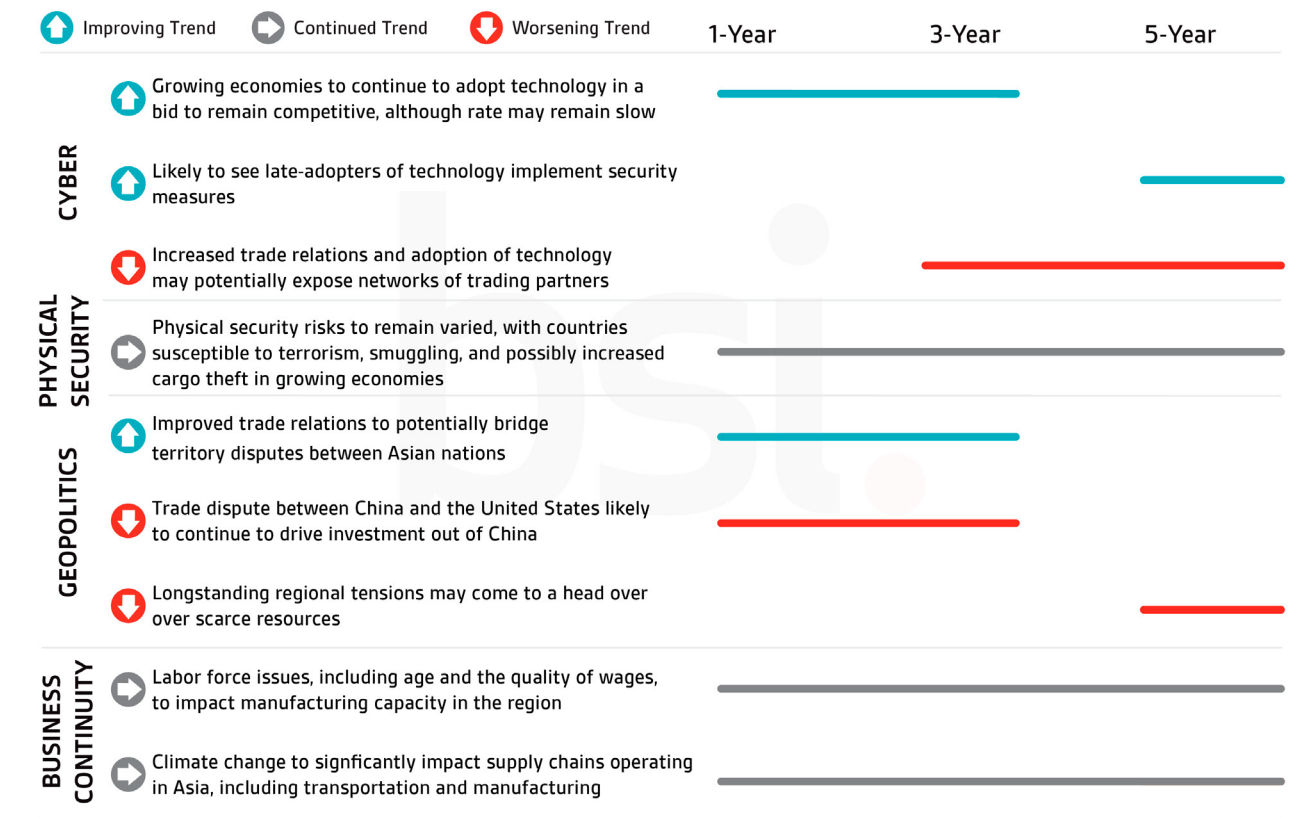
Supply Chain Risk Forecast - Europe, Middle East, Africa



Supply Chain Risk Forecast - Americas



Supply Chain Risk Forecast - Asia, Pacific, Japan



CLIENT INSIGHTS

In preparation for the release of this report, BSI Intelligence Team surveyed our SCREEN (Supply Chain Risk Exposure Evaluation Network) subscribers regarding their supply chain concerns and challenges in 2019 and what pressing concerns they have for 2020.

A majority of our surveyed supply chain professionals rated the two issues of evaluating new suppliers and locations and cargo theft as highly concerning in 2019. Furthermore, the majority of our surveyed professionals also rated terrorism, man-made disruptions, and natural disasters as high concerns in 2019.

Similarly, going into 2020, the majority of our supply chain professionals still rated evaluating new suppliers and locations and cargo theft as chief concerns; however, respondents also added the issue of trade compliance as a subject of high concern. A majority of our respondents also ranked human rights violations and environmental risks as concerning issues in 2020 alongside natural disasters, man-made disruptions, and terrorism.

SCREEN subscribers consistently highlighted the need to evaluate and select suppliers in new locations as a high concern in 2019 and 2020. Concerning China, the U.S.-China trade dispute and the coronavirus disease 2019 (COVID-19) outbreak are the latest in a series of events that have given companies reason to consider relocating some supply chain elements from China to other parts of Asia or abroad. As other regional countries such as Cambodia, Myanmar, India, Vietnam, and elsewhere attempt to create a more business-friendly environment, companies need to evaluate all the risk dimensions of setting up a supply chain in those countries.

The rise of human rights violations and environmental risks as concerns for SCREEN subscribers highlights the importance of corporate social responsibility and awareness of such risks, especially when evaluating new suppliers and new locations. Furthermore, the ranking of natural disasters as a concern to nearly 75 percent of our survey respondents demonstrates the importance of business continuity planning and the developing understanding of how climate change will impact supply chains in 2020 and beyond.

As COVID-19 continues to spread and impact supply chains globally, we predict that it will continue to become a top concern for SCREEN clients in 2020.

Most Watched Countries in SCREEN

Less than two years ago, the top ten most-watched countries in SCREEN among all subscribers were China, Mexico, Brazil, Hong Kong, Taiwan, India, the United States of America, Vietnam, Indonesia, and Japan.

Today, the top ten most-watched countries are largely similar; however, Vietnam has moved up the ranking from eighth to fourth and Indonesia is now ranked above the United States. The climb in the ranks of Vietnam and Indonesia likely underscores how supply chains have grown and are shifting in Asia. Both countries have made strides to create a more business-friendly environment and are considered solid options for supply chains developing in Asia or relocating from China. This report explores in-depth the reasons behind the growth and shifting of supply chains in Asia and forecasts the future for supply chain risks in the region as more and more companies enter Vietnam, Indonesia, and elsewhere in the region, including Cambodia, Myanmar, Thailand, and Bangladesh.

Due to their major industrial bases, key transit routes, and sheer geographic size, China, Mexico, and Brazil will most likely always be critical countries for SCREEN subscribers, and it is no coincidence that they make up the top three watched countries in SCREEN. Mexico and Brazil are both countries with ongoing severe issues of cargo theft and illegal drug introduction. In *Supply Chain Risk Insights 2020*, BSI not only highlights trends for cargo theft and illegal drug introduction but also examines how political shifts in Mexico and Brazil over the past year are impacting supply chains. This report will discuss the expanding violence and cartel influence within Mexico as well as the corporate social responsibility ramifications of budget cuts and new environmental policies in Brazil.

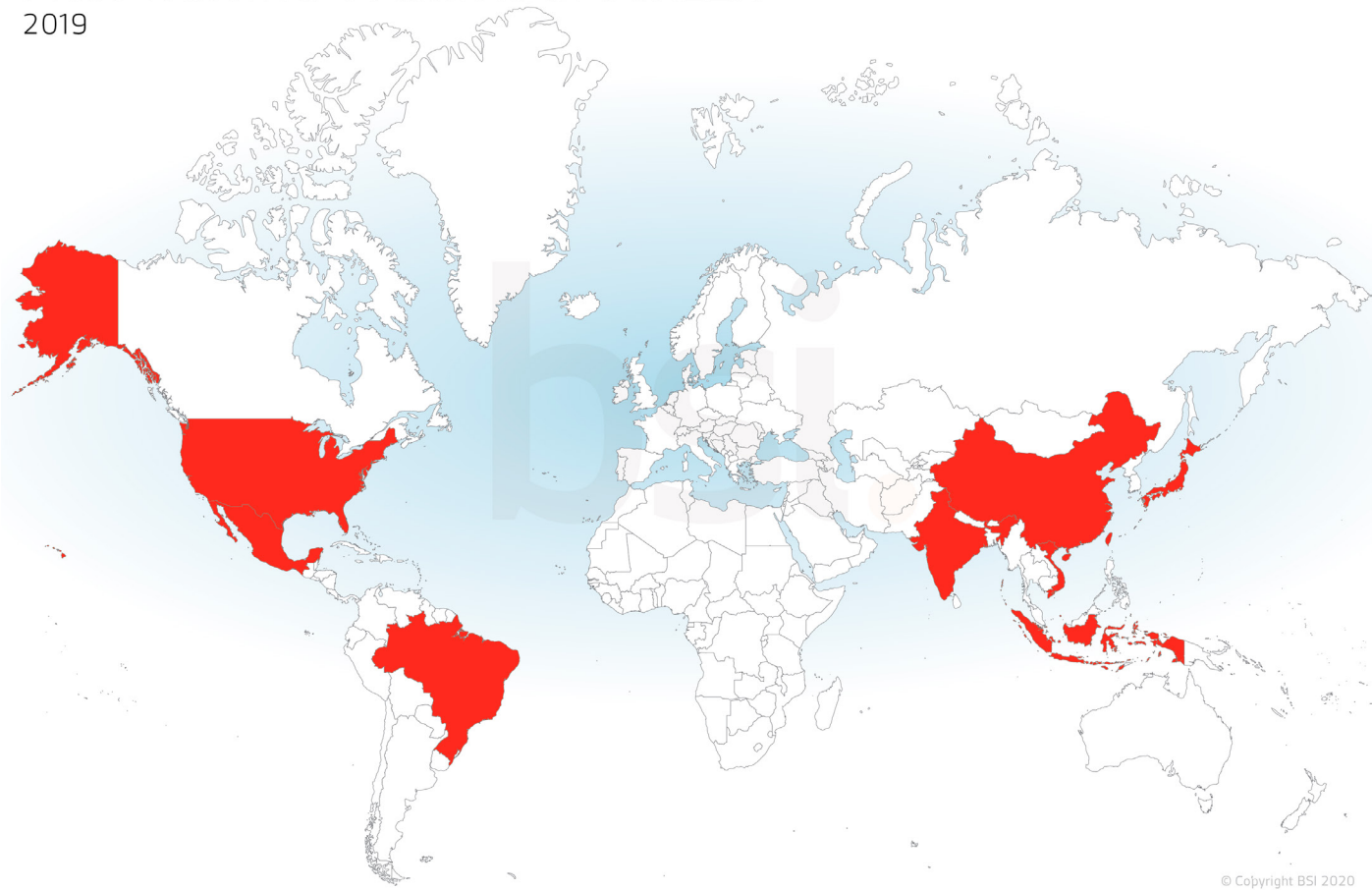
Hong Kong, Indonesia, and India, also on the top ten list, all experienced widespread political protest movements throughout 2019, movements that will likely continue in 2020 and result in further disruptions to supply chains.

Supply Chain Risk Insights 2020 discusses the root causes of these protests, how they are likely to evolve and continue throughout 2020, and how they have spread globally in 2019 and what that means for 2020.

Major natural disasters struck other members of our list last year, namely Japan, India, and Brazil. *Supply Chain Risk Insights 2020* highlights the impact of severe weather events on supply chains in 2019 and delves into how these weather events can degrade natural disaster resiliency and, linked with climate change, are leading to new sets of risks for companies active in the region to consider. This report highlights the need for companies to factor in the short-, medium-, and long-term repercussions of climate change in assessing supply chain risks by noting how agriculture, infrastructure, and trade routes were impacted by successive severe weather events in 2019 and may be impacted into 2020.

The following pages give an in-depth visual overview of the cargo theft trends we recorded and analyzed in 2019, as well as a comparison of 2019 and 2018 trends.

Most Watched Countries in SCREEN
2019



Most Watched Countries in SCREEN

2018

1. China
2. Mexico
3. Brazil
4. Hong Kong
5. Taiwan
6. India
7. United States of America
8. Vietnam
9. Indonesia
10. Japan

2019

1. China
2. Mexico
3. Indonesia
4. Brazil
5. Hong Kong
6. Taiwan
7. United States of America
8. Vietnam
9. India
10. Italy



THEFT IN THE AGE OF ECOMMERCE

With the growing presence of at-home delivery services, it is important for companies to implement innovative ways to protect goods as they travel not only to retail storefronts, but also to customer homes. Opportunistic thieves can steal unattended packages from consumers' doorsteps and supply chain security personnel may never know, as these thefts do not involve major losses of product, like with a traditional theft of a full load of cargo. Instead, these thefts usually involve smaller quantities and individual packages and may result in replacing stolen products and the possible loss of frustrated customers. David offers a few recommendations that companies can put in place:

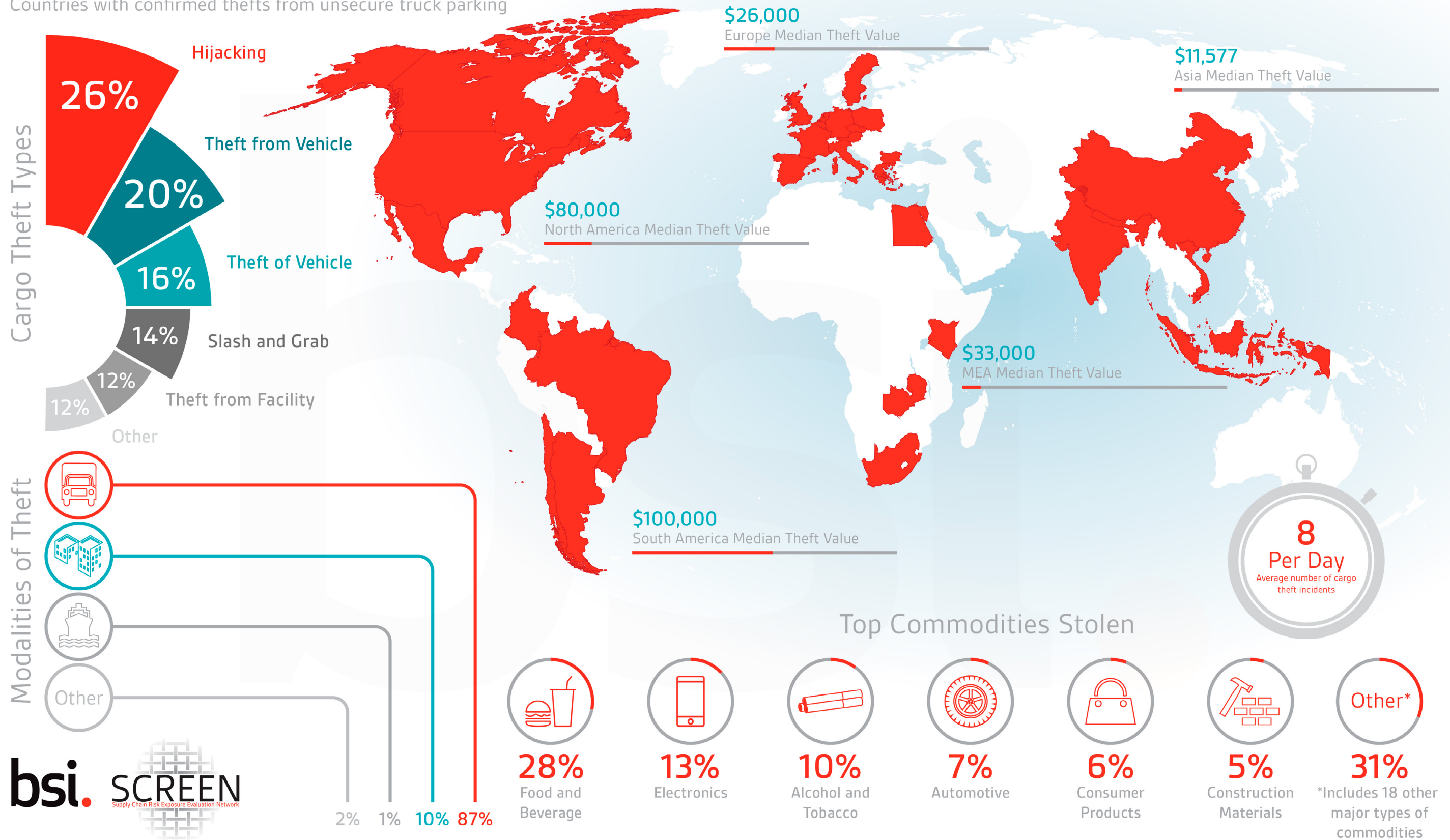
1. Require Delivery Verification
2. Map and Understand Your Delivery Services
3. Track and Collate Loss Reports to Identify At-Risk Areas



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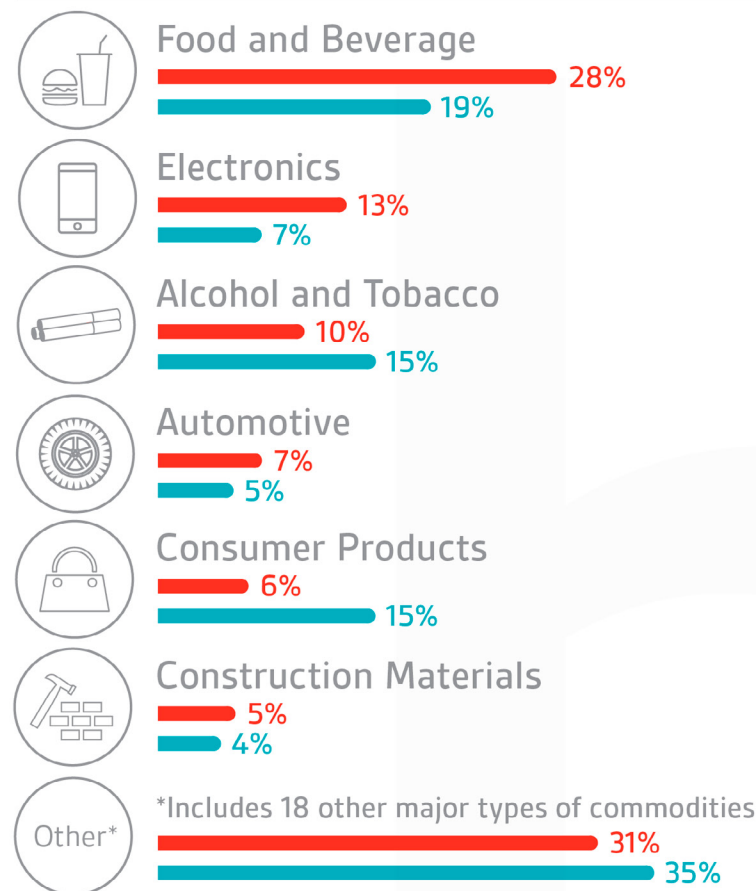
Global Cargo Theft Trends - 2019

Countries with confirmed thefts from unsecure truck parking

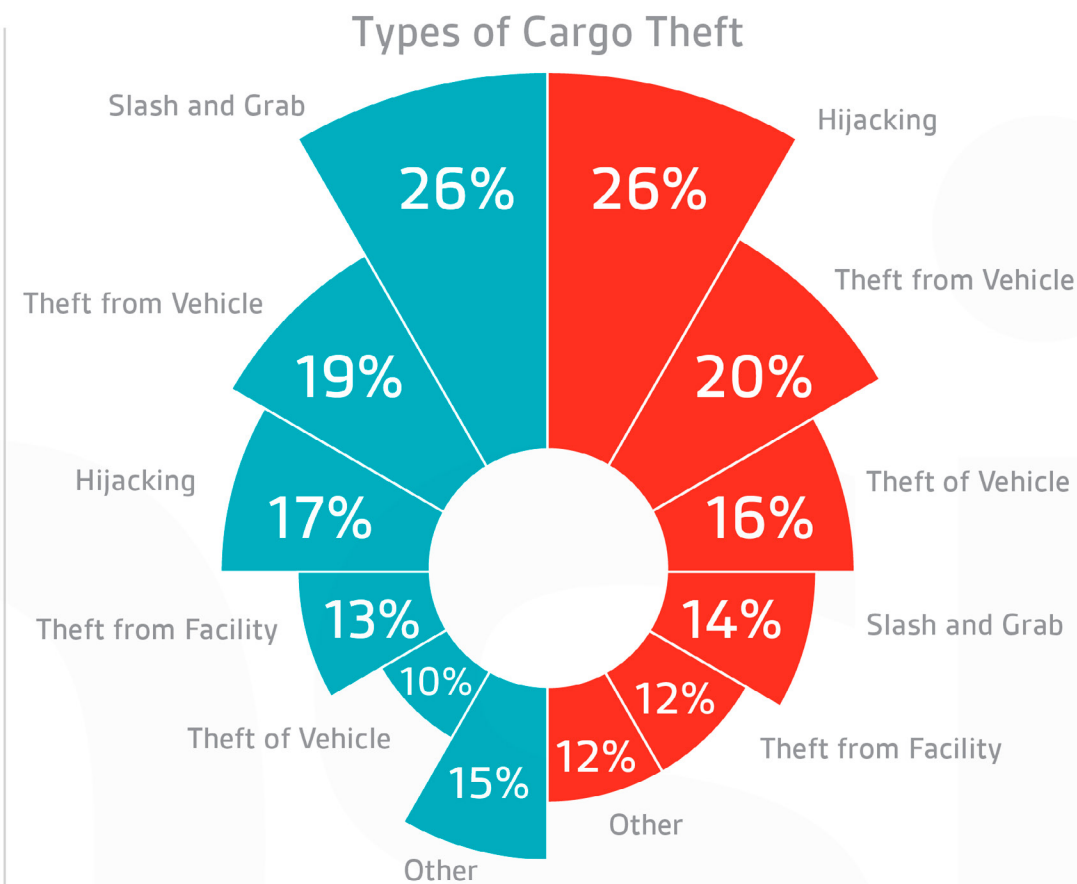
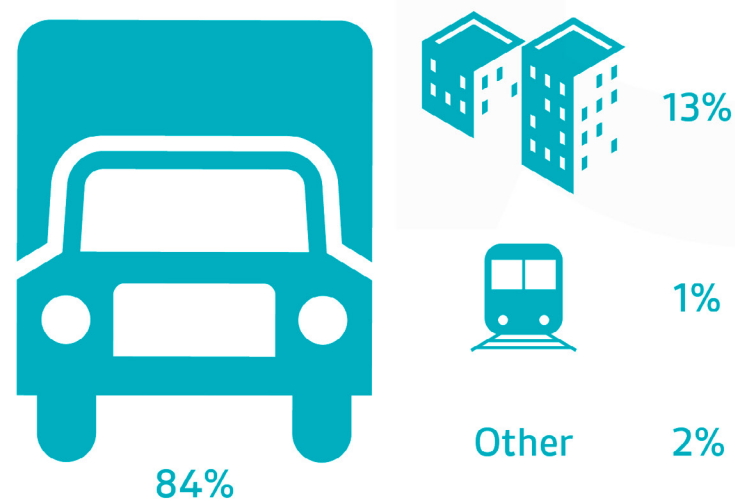




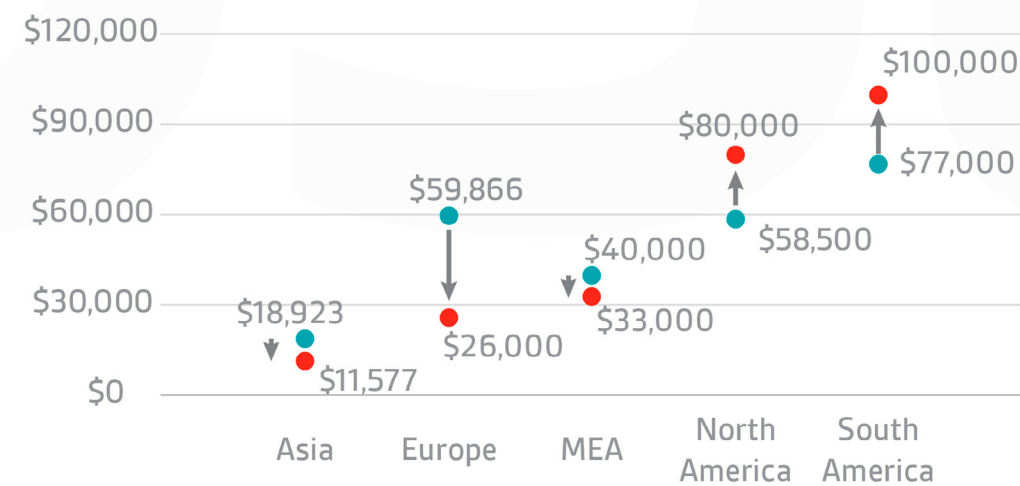
Comparing Cargo Theft Trends 2018 & 2019



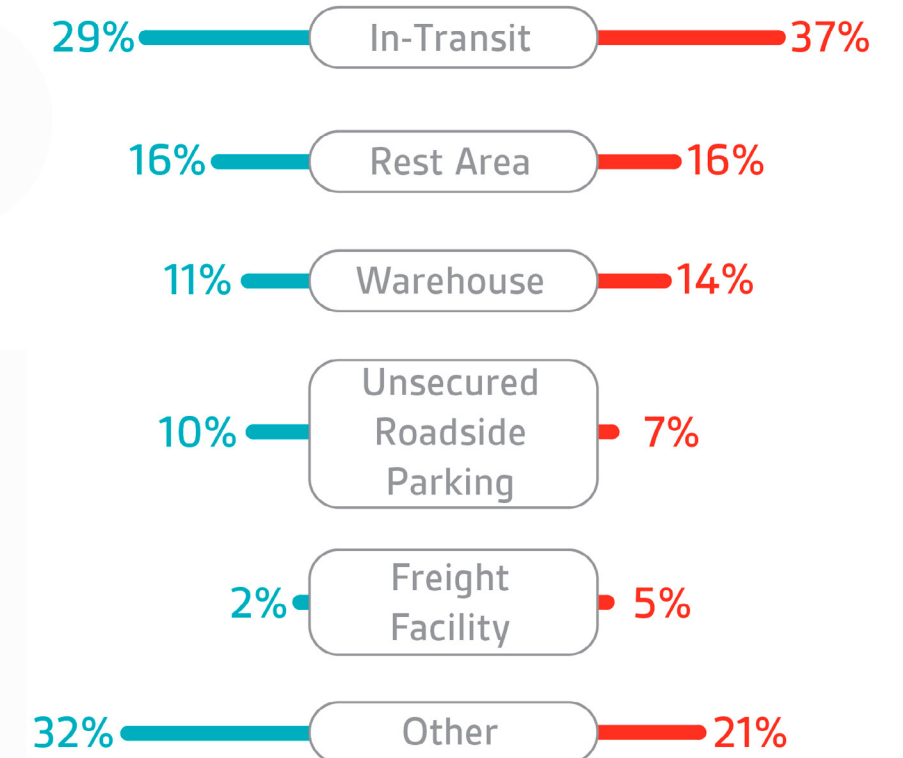
Modalities of Cargo Theft



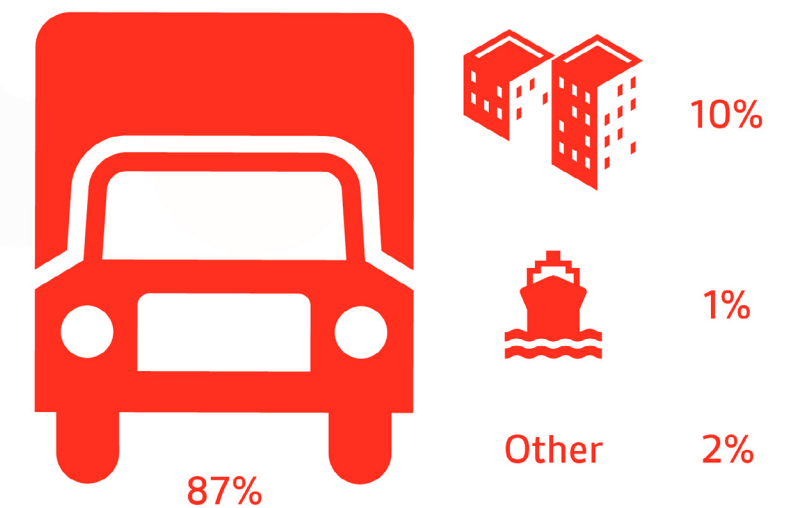
Median Theft Value



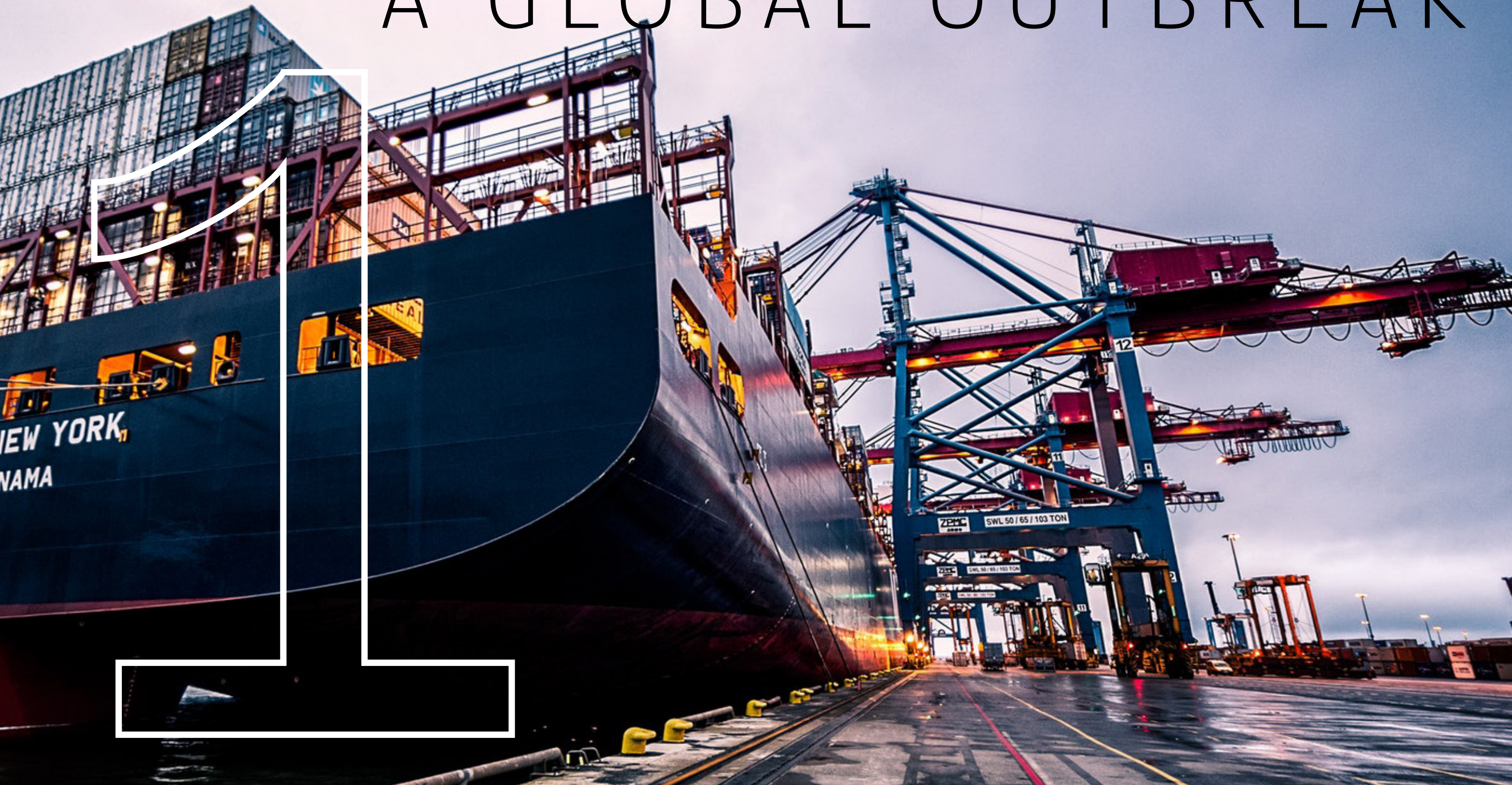
Locations of Cargo Theft



Modalities of Cargo Theft



SECTION ONE CORONAVIRUS - TACKLING A GLOBAL OUTBREAK



CORONAVIRUS - TACKLING A GLOBAL OUTBREAK

Introduction

The coronavirus disease 2019 (COVID-19) outbreak has highlighted the fragility of global supply chains, underscoring how the failure of one link in the chain has the potential to cause extensive disruptions throughout. At a minimum, the downtime and slowed restart of Chinese manufacturing will have lasting ripple effects for global industry and shipping throughout 2020. In addition, the spread of COVID-19 outside of China will likely lead to complex and varied responses by individual governments to contain the virus, further disrupting supply chains globally and requiring businesses to adopt adaptive business continuity measures.

Throughout the crisis, BSI has monitored the impacts of the outbreak and has surveyed our supply chain peers to determine not only how the outbreak is affecting companies, but what industry partners can do to mitigate the effects of COVID-19 and the impacts of future disease outbreaks. The COVID-19 crisis has underscored the necessity of comprehensive business continuity planning that considers all types of potential natural disasters, including disease outbreaks. As part of that planning, the COVID-19 outbreak has highlighted the importance of continual communication with suppliers abroad and knowing their vulnerabilities to disease outbreaks. The outbreak has already led to extensive delays in security, social compliance, environmental, and other forms of auditing, making it critical for companies to plan for how best to use the downtime to effectively improve their internal program. Lessons learned in 2020 from the COVID-19 outbreak on how to better mitigate disease spread and absorb delays to manufacturing and global shipping will likely shape how businesses are able to respond to other possible disease outbreaks in the future.

What is Coronavirus Disease?

COVID-19 is a new strain of virus that is easily spread from person to person, causing serious illness in many of the infected. Those infected with COVID-19 present with flu-like symptoms including a fever, a cough, or difficulty breathing. Currently, most cases of infection appear to be mild with fatalities mostly limited to those individuals who have pre-existing health conditions. The outbreak originated in the major City of Wuhan located in the Hubei Province of China and cases of COVID-19 infection began appearing in the end of 2019. In an initial effort to contain the spread of the virus, the Chinese government quarantined multiple cities, including Wuhan, by completely cutting off all incoming and outgoing public transportation into the cities, a measure that impacted millions of people. In what would foreshadow the disruption to business operations, the Chinese government took an additional precaution and, in an unprecedented move, extended the Lunar New Year holiday and delayed the population's return to work in a bid to limit travel and the spread of the virus. Yet despite these efforts, cases of the virus spread throughout China and to multiple countries around the world, creating a situation that represents arguably one of the most significant challenges for supply chains in recent years.

The spread of COVID-19 globally is a dynamic challenge for individuals, companies, and governments. When the outbreak was principally localized in China, several nations repatriated their citizens from Wuhan, or more broadly from mainland China. Governments worldwide also implemented extensive travel restrictions, first to Wuhan, and then more broadly to mainland China. As the disease spreads from China, governments and companies are preparing to deal with possible COVID-19 outbreaks at home, while considering questions of feasibility and effectiveness in implementing more extensive travel restrictions and protective measures to mitigate the spread of the virus. The COVID-19 outbreak is poised to have lasting impacts on not only supply chains, but how the globalized world handles epidemics in the years to come.

Supply Chain Impacts of COVID-19

The COVID-19 outbreak has inevitably led to a multitude of impacts on supply chains in China, with similar disruptions seen in other countries around the world as the outbreak continues to spread. Beginning with the quarantine of multiple cities and the extension of the Lunar New Year Holiday, transportation restrictions, factory closures, and limited resource availability have been the most immediate and significant impacts on supply chains in China. Wuhan alone, for example, is a significant center for pan-Asian supply chains pertaining to electronics, pharmaceuticals, and automobiles, and the quarantine of the city had all but halted these industries.

Productivity across the other quarantined areas dropped considerably as the movement of workers, raw materials, and finished goods were restricted. Cities and factories not under a total quarantine were not immune to disruption, as companies employ various types of checks and restrictions on employees, in some cases reportedly requiring temperature checks at the facility or the quarantine of workers arriving from out of town. These measures, although less extreme, have also had their own respective impact on supply chain operations.

The travel restrictions throughout China resulted in difficulties for migrant workers to return to the workplace after the Lunar New Year holiday, further exacerbating the slow restart of manufacturing centers. As factories struggled with a lack of an available workforce, transportation and logistics experienced two-fold challenges. Ports in China experienced a shortage of dockworkers, making it difficult to load and unload ships as well as complete any necessary repairs or maintenance to cargo vessels in Chinese shipyards. Besides dockworkers, a shortage of truck drivers made it difficult to move cargo to and from Chinese ports and facilities, causing a congestion of containers and a need to reroute cargo, particularly refrigerated shipments as shortages of connections for such containers developed throughout the region. The truck drivers that were available faced the challenge of navigating highly restricted travel routes throughout China, effectively paralyzing the movement of goods in the country. Amid the worker shortages and travel restrictions, exports from China were highly impacted, resulting in canceled sailings of cargo vessels and buildups of empty containers.

The slowed restart of manufacturing in China led to shortages of raw materials and component goods for production in other countries, resulting in temporary shuddering of factories in Vietnam, South Korea, Cambodia, and elsewhere, and all of the trickle-down impacts of those shutdowns, such as layoffs. As China and other nations struggle with the COVID-19 outbreak, we are likely to see those trickle-down impacts in other areas in 2020.

In addition to travel restrictions placed on internal movement in China, many countries have issued travel guidelines to nationals and recommend against traveling to or from locations with COVID-19 outbreaks. Countries bordering China closed their borders with China in a response to the outbreak while airports around the world instituted health checks on passengers arriving from afflicted regions and halted some flights. As the outbreak continues to spread, it is likely additional travel restrictions will come into effect, impacting a larger percentage of supply chains utilizing air transportation.

The COVID-19 outbreak contributed to a host of peripheral security challenges, particularly a spike in scams and suspicious products as BSI noted instances of smuggled and counterfeit medical masks in areas including Guangdong Province of China, Hong Kong, and Vietnam. Relatedly, BSI noted the hoarding of and the profiteering from mask sales. As demand increases globally for disinfectants and medical supplies, several shortages were reported. With such shortages comes an ongoing risk of counterfeiting, stockpiling, price gouging, and the targeting of such products by thieves that will only worsen in correlation to the spread of COVID-19.



Supply Chain Impacts Felt by You

BSI issued a benchmarking survey focused on gaining insights from supply chain experts and practitioners that subscribe to SCREEN. This survey revealed valuable insight into the scale and scope of the impact of COVID-19 and how businesses are responding to the challenge. In our February benchmarking survey, 23 percent of respondents noted that the COVID-19 outbreak had a significant outbreak on their supply chains while 69 percent of respondents noted a minimal impact. In conducting the survey, BSI noted significant gaps in communication with suppliers and developing business continuity planning that accounts for a disease outbreak.

Regarding communication with China-based suppliers, when our survey closed, many of our respondents were unsure as to the current status of their China-based suppliers. Over half of our survey participants said their suppliers in China were still closed, whereas 29 percent of respondents were unsure. Similarly, only half of our participants responded "Yes" to the question that asked if China-based suppliers were actively trying to protect personnel and curb the outbreak, whereas another 31 percent were unsure of their status. BSI also asked if their China-based suppliers had implemented any changes in EHS management systems to curb the outbreak and protect personnel. 31 percent of our respondents said yes, while half were unsure if those measures were being implemented. Close communication with suppliers in outbreak-impacted areas will be key to effectively mitigating the supply chain impacts of the COVID-19 crisis.

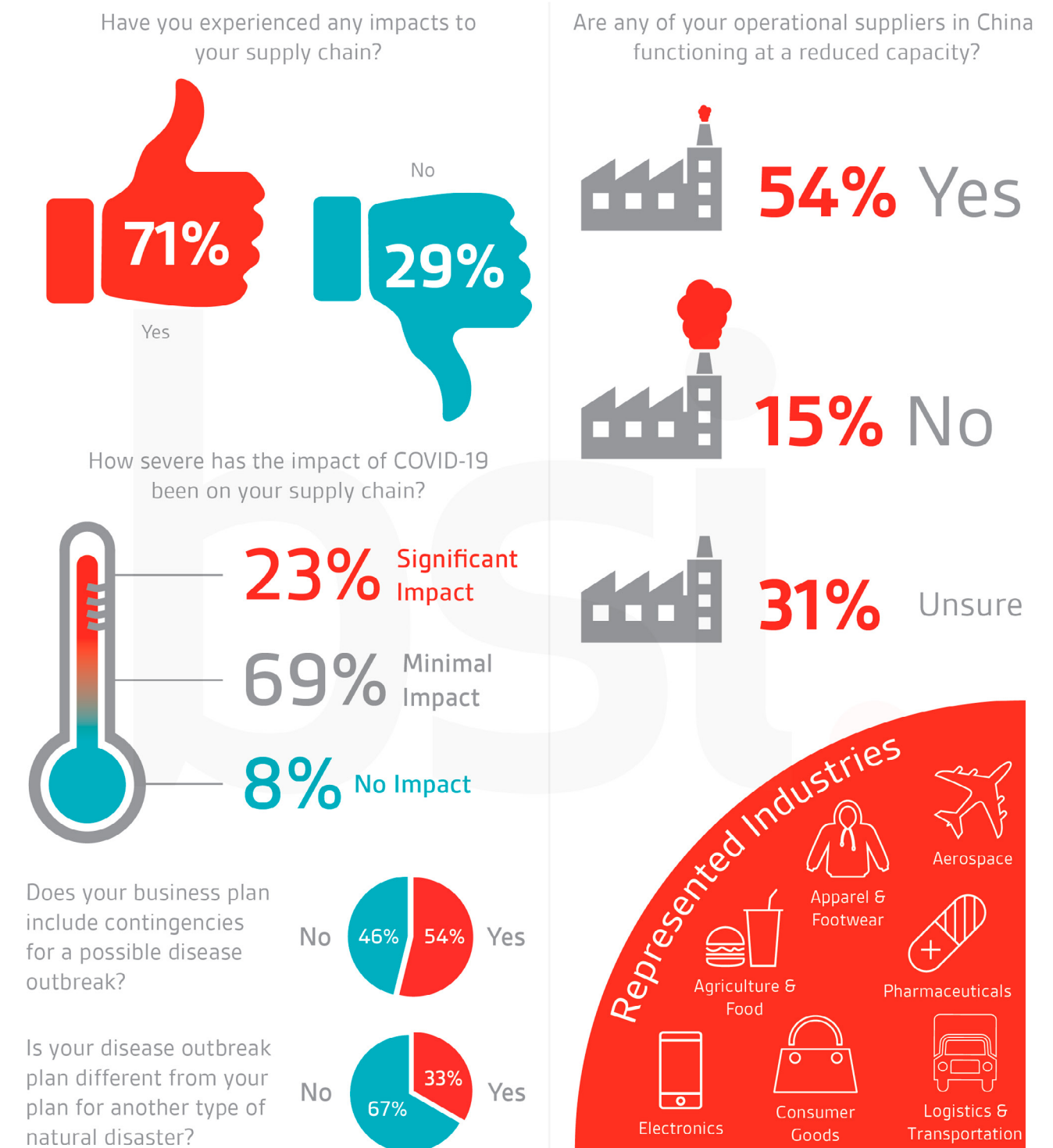
Similarly, in examining whether our survey participants had business continuity planning in place to help mitigate the impact of an outbreak, just over half of our respondents (54 percent) said they had a business continuity plan with contingencies in place for a disease outbreak. In addition, 67 percent of those responses noted that their disease outbreak plan was no different than another type of natural disaster business continuity planning, highlighting the potential issues with having a "one-size-fits-all" approach to planning for natural disasters. The dynamic and evolving nature of the coronavirus disease outbreak underscores the necessity of adaptive business continuity planning to handle the challenges posed by this outbreak in 2020 and other outbreaks in the future.

Planning and Improving Business Continuity During a Disease Outbreak

The COVID-19 outbreak will almost certainly remain a dynamic challenge for businesses throughout this year, both in terms of scale and severity. However, there are multiple measures that companies can take to mitigate the disruption to their supply chain. Cases of COVID-19 continue to spread on a global scale, and it is therefore important for companies to either develop or revise reactionary plans for critical components of their supply chain that may be affected by an outbreak. In order to protect personnel and business interests, BSI recommends the following initial steps that can be taken in an immediate response to a new outbreak:

1. Establish who you have in the area and who has recently traveled to the area.
2. Inform all staff of the immediate action plan should they experience symptoms, including what resources are available to them.
3. Review business impact analysis for interruptions to operations linked to the impacted areas.
4. Prepare your emergency communication team to make announcements throughout the crisis, to internal staff and external resources, as the situation develops.
5. Communicate to all your staff, clients, investors, and suppliers, informing them of potential impacts to your business and continuity action plans that are being implemented.
6. Communicate your business continuity plans to your suppliers and service providers, guiding them on how and when they should continue to operate alongside or within your organization.
7. Implement your work at home procedures of your business continuity plan, for staff who are identified as being at risk from exposure. Communicate the work at home policy for other staff who feel they are not able to report to their worksite.

Benchmarking the supply chain impacts of COVID-19



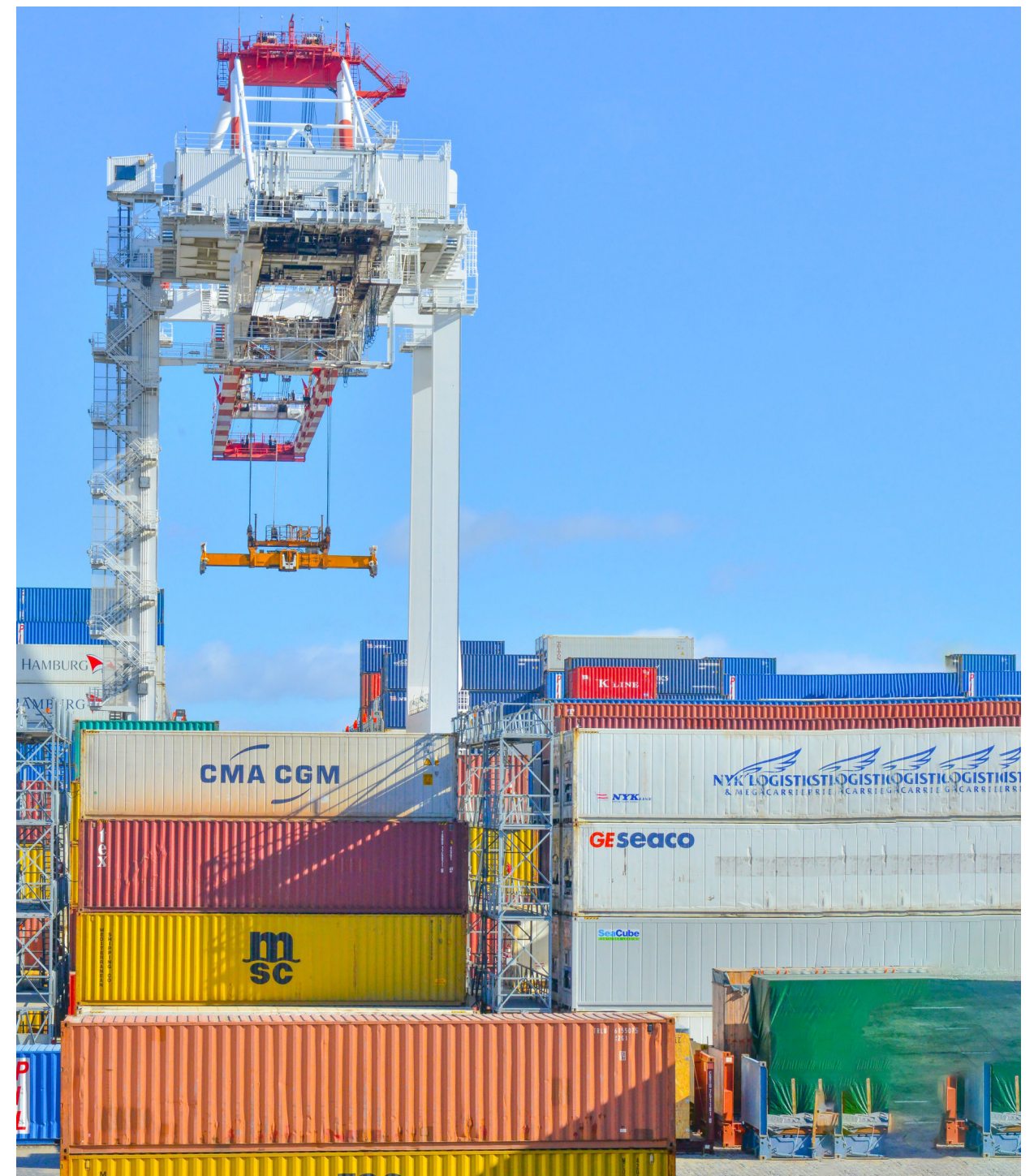


Insights on Remote Collaboration Auditing

Although primarily an issue in China, the continued spread of COVID-19 has the potential to severely impact the ability of companies to conduct social, environmental, and security audits. In China specifically, BSI noted that audit firms have canceled plans and prevented auditors from traveling in order to protect them from potential exposure to the virus. It is extremely possible that this situation could carry over to other countries with significant outbreaks. In order to mitigate the disruption to audit programs, companies should consider focusing on working with factories on open non-compliances during this time. Ideas for remote collaboration with supply chain partners in this respect are as follows:

- For non-compliances related to hardware, such as health and safety, and for permits, request photographic evidence from factories to show that these issues have been resolved. For health and safety, it may be difficult to evaluate if replacement signage is fixed or a different sign than the missing one - the point here is to ask for the factory to ensure that they have taken action on the findings, so this is a reminder that you are concerned about this, and less of a 100% verification that this issue has been fixed.
- For non-compliances that are complex and would require employee interviews, break down the issues and see what aspects of corrective action could be reviewed remotely:
 - For all issues, as part of the corrective action process, ask for root cause analysis. Use this analysis to ask the factory to identify the "root of the root" of what happened and address it appropriately.
 - For working hour issues, do not accept "we will reduce working hours" as a corrective action. Instead, ask for a plan on how this will happen. Will the factory increase productivity, and how? Will efficiency be increased? Who will support this? Will additional staff be hired? What is the plan for recruitment and onboarding? For new people that will be hired, what is their expected contribution to productivity? What are the targets for the department, and how will this contribution help to eliminate excessive overtime? With reduced working hours for the remaining staff, will there be concerns about decreases in wages? How will the factory deal with this?
 - For issues related to discipline, grievance, and other points in human resources management, request to review the changes in the policies that have been made in order to address the issues found during the audit. Ask about which sections of documents have been changed, and for the new language. Ask for proof that this has been communicated to the work force, such as pictures of bulletin boards, photos of training sessions, training records with dates, content, and signatures of attendees.

- Take the time to really explore non-compliances related to inconsistencies and audit fraud. If employees reported Sunday work or work in the evenings that did not appear on working hour records, do not accept explanations that "workers were confused." Take the time to explain to the factory that you are aware of how common audit fraud is, and you and your audit partners are aware of what these findings mean. Ask the factory to share with you the full picture related to lacking rest days and excessive working hours and reassure them that collaboration on these issues is preferred versus concealment of the findings each time an audit takes place. Solicit a commitment to transparency for future audits, and a real plan to resolve the issues found, even if the plan timeframes are much longer. Reiterate that continuous improvement is the goal.



SECTION TWO SHIFTING SUPPLY CHAINS IN ASIA



SHIFTING SUPPLY CHAINS IN ASIA

Introduction

The majority of our top ten most-watched countries in SCREEN are located in Asia and, given the criticality of the region for so many supply chains, it stands to reason that the continually shifting dynamics for business in Asia were a top concern in 2019 and will continue to be in 2020. In 2019, as the United States and China continued an ongoing trade dispute, setting tit-for-tat tariffs, implementing sanctions on certain goods and companies, and altogether generating uncertainty through on-again-off-again trade negotiations, other countries throughout the region worked to create a more attractive business environment. Global companies continue to reassess their supply chains within and through China, looking for other nearby regional opportunities, and countries such as India, Bangladesh, Cambodia, Vietnam, and Myanmar are making moves to attract competitive business. As companies restructure their supply chains in Asia and pursue these other opportunities, they must consider the corporate social responsibility risks still rife throughout the region, including the presence of child labor, forced labor, and poor working conditions. Furthermore, natural disasters, invasive species, and diseases ravaged the continent in 2019, causing widespread destruction of infrastructure and agriculture as heatwaves, floods, and torrential storms set records and impacted supply chains. Amid these challenges are accompanying vulnerabilities stemming from stretched security resources of which thieves and corrupt individuals can take advantage, underscoring the need for understanding the varying risks associated with entering a new country in Asia.

The U.S.–China Trade Dispute

The trade dispute between the United States and China was a major issue impacting supply chains in 2019. As businesses struggled to accommodate the tit-for-tat tariffs, sanctions, and other impacts of the trade conflict, companies continued to reassess the pros and cons of conducting business outside of China versus maintaining supply chains within the country. Despite the two countries entering 2020 with a signed trade deal, experts continue to evaluate the medium- and long-term consequences of the conflict as well as the possibilities of the dispute reigniting later in 2020. What is certain, however, is that the trade dispute has resulted in businesses reevaluating their Asia-centric supply chains and provided an opening for other countries to leverage opportunities away from China.

Corporate Social Responsibility Risks in the Region

Throughout the trade dispute between the United States and China, the global media highlighted several ongoing corporate social responsibility risks associated with doing business in China, the most visible being the issue of forced labor in the northwestern province of China, Xinjiang. Throughout 2019, media and NGO reports highlighted that many ethnic Uyghur minorities in Xinjiang, China, are part of a forced labor program taking place in "vocational training centers," with an estimated 1,000 such facilities throughout the region. The reports linked this use of forced labor in the Xinjiang region to textiles and apparel manufacturing and the production of cotton. Cotton from Xinjiang accounts for reportedly 85 percent of Chinese cotton, highlighting the scope to which supply chains are exposed to forced labor.

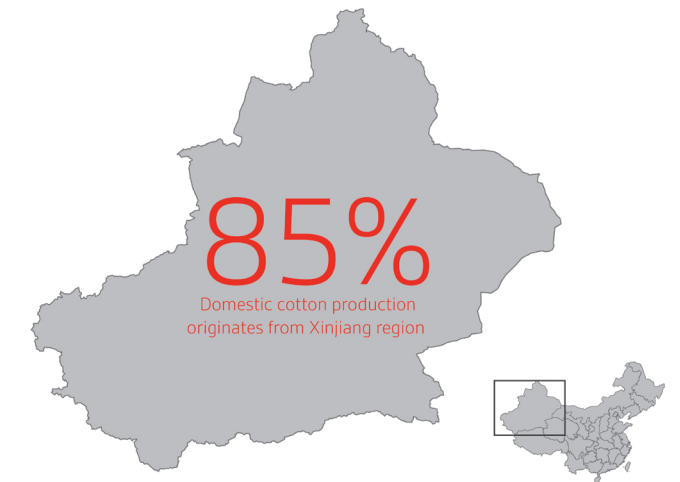
The severity of the issue resulted in U.S. Customs and Border Protection issuing a withhold release order targeting an individual supplier of garments made in Xinjiang, with non-governmental organization experts calling for further orders targeting cotton produced in the province. The United States government also sanctioned a number of Chinese entities, including eight technology companies, adding them to the U.S. Department of Commerce Entity List for alleged involvement in the facilitation of human rights abuses in Xinjiang. Compounding the issues posed

in Xinjiang, conducting audits in the region, and in greater China in general, continues to be challenging. As media reports continue to connect clothing brands, food companies, and retailers to forced-labor facilities in Xinjiang or possibly other labor abuses in China, companies will need to ensure that raw materials from China, such as cotton, are not tainted by such violations.

Labor issues are not exclusive to China, with other countries in Asia, namely Bangladesh, Cambodia, Malaysia, Thailand, and Myanmar also struggling to manage issues of forced labor, child labor, and poor working conditions last year. However, international pressure on these other regional countries is resulting in efforts to address some of these longstanding labor issues. In Cambodia, a European Parliament report in November of 2019 put the Cambodian government on notice to improve human rights or lose trade preferences. In December 2019, the Cambodian government made steps on labor rights, including announcing occupational safety legislation and entered into a cooperative effort with South Korea to generate comprehensive legislation by 2023. In February of 2020, the European Parliament followed up by announcing a partial withdrawal of tariff preferences to take effect in August of 2020. In Thailand, the United States suspended trade preferences reportedly due to a failure to improve worker rights. Shortly after the announcement, the Thailand government announced its first National Action Plan for Business and Human Rights, bringing together government agencies, industry groups, and civil society organizations to mitigate corporate social responsibility violations within the country. Aside from international pressure, corporate leadership also helped to root out labor violations in Southeast Asia in 2019. Multiple fashion brands negotiated to create a new body to monitor and ensure the improvement and continuation of sustainable workplace safety practices in Bangladesh. Similarly, in response to events in Xinjiang, multiple companies instituted internal bans on the use of Chinese cotton out of concern for possible forced labor adulteration.

Issues in China also drove governments in the region to create a more business-friendly environment to capitalize on the ongoing issues in China. Notably, in Vietnam, a country that has grown in importance to global supply chains in recent years, the government embarked on an unprecedented crackdown on counterfeit goods in the country. Throughout 2019, Vietnamese authorities extensively engaged in raids on known counterfeiters and the often Chinese-origin counterfeits entering the country. To underline the seriousness of the Vietnamese response to the counterfeiting, at least one Customs checkpoint experienced severe delays last year as enhanced security procedures were involved in the Customs clearance process. In Asia, as well as worldwide, labor stoppages began to blend with broader political protests that, aside from impacting business continuity, also forced governments to confront long-standing labor rights issues.

In India, nationwide manufacturing and transportation strikes in early 2019 gave way to more widespread political protests



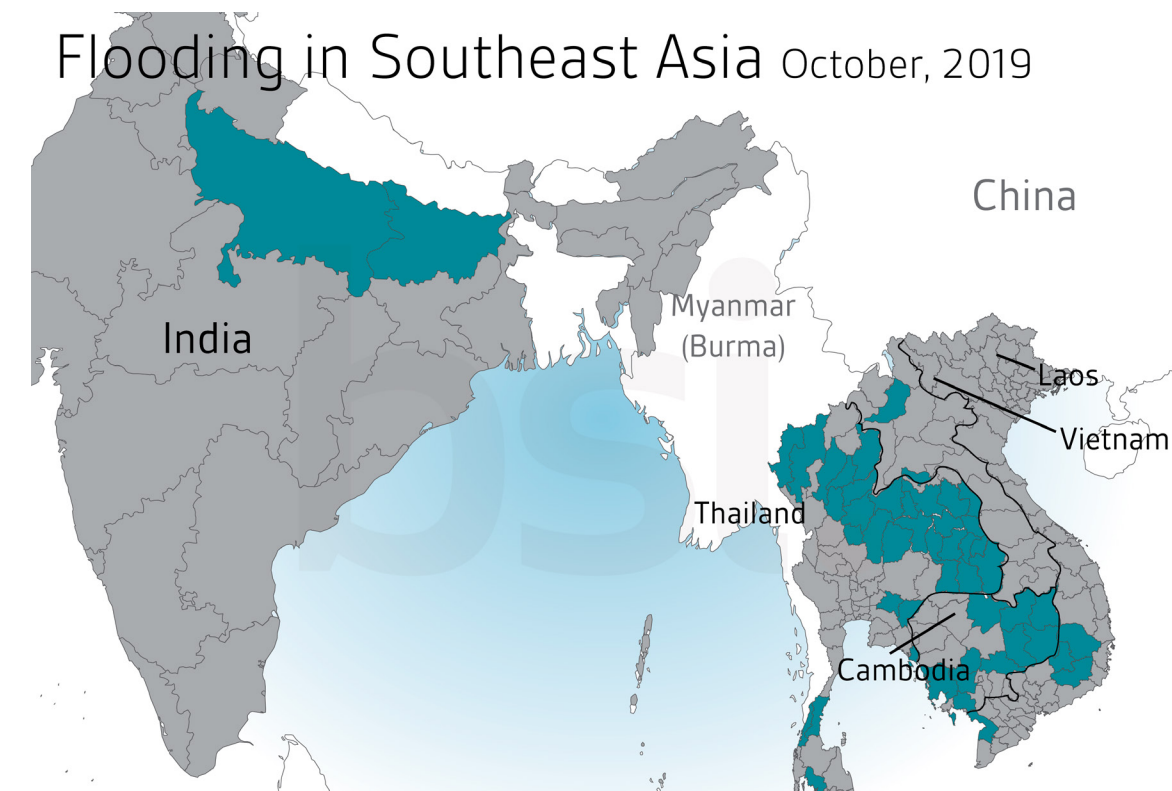
later in the year. In Indonesia, protests over moral-governance legislation gave way to nationwide protests over perceived discriminatory wage practices, labor practices, and even health regulations. A core observation for 2020 is the expectation of these protests continuing to grow, evolve, and take on other long-standing issues in Asia and elsewhere, not only disrupting business continuity but also driving corporate social responsibility change.

Impacts of Natural Disasters on Business Continuity

South and Southeast Asia are some of the most vulnerable regions in the world to natural disasters, with global climate change exacerbating severe weather events in the region through the increasing of average global temperatures. Numerous record-setting weather events impacted the region in 2019, and some experts believe that climate change will likely result in a higher frequency and continued growing severity of such events. Throughout the previous year, storms, floods, unprecedented heatwaves, bushfires, and disease outbreaks all impacted Asia.

As companies evaluate supply chains in Asia, companies must include an understanding of not only the frequency and type of natural disasters themselves but also the resiliency of the country to recover from such incidents. Evaluating a nation's natural disaster resiliency, the capacity of that nation to recover from the shocks and hazards caused by a disaster as well as the preventative measures taken to mitigate such shocks and hazards will grow in importance when assessing supply chain partnerships. In Asia, storms, floods, and heatwaves have always been relatively commonplace, and many countries have developed resiliency plans to cope with such events. In 2020, successive intense weather events due to climate change will likely begin to erode the resiliency against natural disasters and degrade the ability for governments in the region to respond and rebuild after a severe storm. Natural disasters alone are highly disruptive to business continuity, and the additional issue of poor resiliency can extend the recovery time from such a disaster from days to weeks and months, resulting in a need for companies to develop comprehensive response plans.

Throughout central Asia, flooding and landslides destroyed agriculture and washed away major roadways in key countries such as Thailand, Vietnam, Cambodia, Pakistan, and China last year. But no country was arguably as impacted by severe weather events in 2019 than India. By July of 2019, BSI recorded a 28 percent increase in



SUSTAINABILITY IN ASIA: SPOTLIGHT ON VIETNAM

Vietnam stands near the top of the list of possibilities as a nation increasingly making moves to attract international business. Many brands and retailers are considering, beginning, or increasing sourcing for a variety of products from Vietnam as the country's manufacturing center evolves and diversifies to cover a broader list of goods beyond traditional soft goods, footwear, and apparel products. Many corporations have previously remarked that audit reports from the field provide an impression that laws in Vietnam are complex and challenging to understand. The difficulty curve for Vietnam is much steeper than understanding the legal complexities for China. After spending three months auditing China, the laws related to sustainability, which document support compliance with which requirements, and the general basics of field auditing are clear. In Vietnam, however, even traveling on-site every week, with intensive training and a solid set of legal documentation for reference, it can take months to fully understand what is necessary to conduct a complete audit. Specifically, payroll and the laws that govern payroll are extraordinarily challenging to navigate. Additionally, Vietnam does not have one single set of labor laws. Labor laws in the country are overseen by an assortment of Ministries and regulations are promulgated through a gazette system. Updates to regulations are released ad hoc, whenever an individual ministry decides to release them, and the content of those updated regulations may touch on an assortment of issues instead of a single issue. Navigating the labor laws in Vietnam requires an in-depth knowledge of multiple legal frameworks and understanding of which laws take precedence in the event of conflicts.



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the number of natural disaster incidents in India from the year prior. The summer in India began with two severe cyclones, a record-setting heatwave and accompanying drought, followed by a delayed and extraordinarily severe monsoon season. Government officials in India expressed concerns over damage to roadways and railways as a result of the heatwave and lost agricultural production due to the delayed monsoon season. Shortages of certain agricultural products, such as onions, were a direct result of these weather events in 2019, leading to restrictions on exports and increased targeting by cargo thieves looking to capitalize on the higher-value of the goods. Once the monsoon season began, railways in the Mumbai Metropolitan Region experienced significant delays due to flooded tracks while overflowing Brahmaputra tributaries caused significant damage to infrastructure at local farms. In addition to the disruptions to business continuity, the disasters had a number of fatalities and the prevalence of the standing water led to increased fears of malaria and dengue fever outbreaks.

The warmer temperatures brought about from global climate change will also likely impact the prevalence of biological natural disasters. Studies indicate that warmer global temperatures will likely create more hospitable ecosystems for diseases, especially vector-borne illnesses. Aside from the risks of dengue fever and malaria common to the region, the prevalence of African Swine Fever was especially impactful to food supply chains in 2019. African Swine Fever Virus (ASFV) is a highly transmissible swine-killing virus with origins in Africa and Europe but has been especially virulent throughout Southeast Asia. ASFV heavily impacted domestic pork supplies for many of the countries in the region, especially in China and Vietnam. China's Ministry of Agriculture and Rural Affairs reported that some 32 provinces and municipalities have been affected by ASFV since the first breakout was reported in early April of 2018. Since then, officials have culled approximately 2.1 million pigs in an attempt to contain the virus. In Vietnam, virtually every province has experienced the ASFV outbreak, leading to the killing of almost six million pigs since February of 2019. The 2019 expansion of ASFV has led nations throughout the region to take additional security measures in vetting pork products originating in China and has led to outright bans on pork products from China in some nations. Concerns of ASFV and invasive species were prevalent in food supply chains in 2019 and those challenges will likely remain, if not grow, in 2020. One of the new categories in the revised **Minimum Security Criteria of CTPAT, the U.S. Customs and Trade Partnership Against Terrorism**, is geared toward agriculture and ensuring shipments are devoid of pests and diseases, underscoring the ongoing concern and necessity of agricultural security.

Throughout the start of 2020, China has also struggled with another disease outbreak with significant implications for supply chains: COVID-19. The COVID-19 outbreak in China, which began in Wuhan but spread to other areas throughout the country, resulted in numerous travel restrictions and quarantines during the Lunar New Year

celebration. In many impacted areas, officials extended the Lunar New Year holiday in an attempt to curtail the spread of the virus. Due to the outbreak and the ensuing travel restrictions, many factories were reportedly unable to restart operations after the holiday, resulting in numerous supply chain disruptions. The full extent of the supply chain disruptions caused by the COVID-19 outbreak remains fluid as it is an ongoing situation as of this report; however, the effects are likely to be felt throughout 2020. The COVID-19 outbreak, reminiscent of the 2003 SARS outbreak, and its aftermath will likely add another layer of concern for companies with supply chains highly focused within China.

As Asia continues to develop its infrastructure to accommodate international business, such disasters will challenge supply chains operating in the region and will force countries to expend more resources in developing comprehensive natural disaster resiliency plans. Therefore, it is imperative for companies that are expanding or planning supply chains in the region to consider the risk of natural disasters exposure against the development of the infrastructure in the region, as well as the countries and their capacities to mitigate the risk to said infrastructure.

Push of Business to Africa

In our previous annual report, BSI highlighted a possible opportunity for Africa to attract business in the wake of uncertainty in Asia. As that uncertainty continues, Africa is still poised to take advantage of such opportunities and it is no coincidence that the Chinese government continues to invest in infrastructure throughout Africa. One of several long-standing challenges for Africa in attracting supply chains is a lack of substantial infrastructure. In developing such infrastructure, governments and companies should be mindful of possible climate-change related risks throughout the continent to ensure such infrastructure can withstand severe weather events.

"It is important for companies to understand who their suppliers are in China, engage with the suppliers they are continuing to do business with, and understand the pressures that Chinese suppliers are undergoing and the impact of those pressures. Companies should be asking suppliers about plans to develop capacity and how current capacity impacts quality, excessive overtime hours, and acquiring skilled labor. Ask whether suppliers are starting with a blank slate in developing as a business and what risks that may present in regions that have less mature management systems, industrial relation systems, or labor inspectorates."



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SECTION THREE HUMAN TRAFFICKING & MIGRANTS

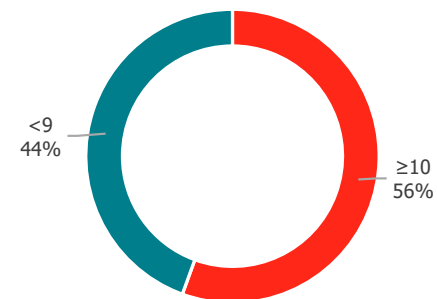


HUMAN TRAFFICKING AND MIGRANTS

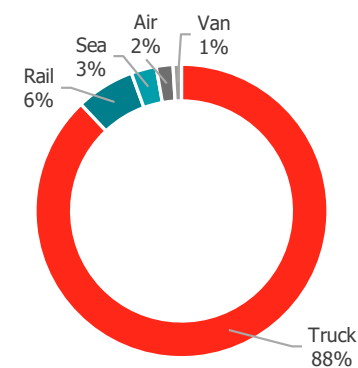
Introduction

In last year's annual report, BSI noted how it was very likely that conflict and both political and economic conditions would continue to drive mass migration in a way that would significantly impact supply chains, and this trend largely remained true in 2019. Over the past year, BSI continued to note security risks, in the form of stowaways contaminating shipments, as well as corporate social responsibility issues, particularly the abuse of migrant labor, in several key locations around the world. BSI also recorded instances in which the business continuity of supply chains suffered as a result of migration in 2019, underscoring how migration can directly or indirectly threaten business operations. Although BSI noted active measures by countries attempting to stem mass migration combined with other geopolitical developments that have in some regions similarly impacted the flow of migration over the past year, it is again very likely that many of these issues will continue to shape supply chain policies in 2020.

Number of Migrants Found in European Stowaway Incidents



Modality of Stowaway Incidents in Europe



Security Risks

Security risks were arguably the most pronounced of the three types of threats that mass migration posed to supply chains in 2019. One of the most publicized incidents to occur last year involved the discovery of 39 dead Vietnamese migrants in a refrigerated cargo truck trailer in Essex, United Kingdom. Although a relatively more common occurrence in the Americas where high temperatures can often lead to the deaths of migrants traveling in cargo shipments, the incident in the United Kingdom made global headlines due to the infrequency in which migrants are found dead in mass in cargo trucks in this area. This incident in the United Kingdom embodied the risk that stowaways continue to pose to supply chains globally. Migration hotspots in both Europe and the Americas experienced a persistently high risk of stowaway introduction into cargo, and the regions accounted for the bulk of this incident type that BSI collected last year. Although migration flows have slowed to some degree in Europe, particularly in comparison to 2016 when the number of migrants attempting to reach European countries peaked, the risk of stowaways remains an extant challenge for companies operating in Europe. Adhering to the global trend, approximately 88 percent of all stowaway incidents that BSI recorded in 2019 in Europe involved the trucking modality. A historical lack of secure parking locations, a risk that also influences cargo theft trends, combined with high numbers of migrants already in European countries, partially explains this statistic.

Corruption continued to play a role last year in stowaway incidents in Europe, with a significant number of incidents involving the discovery of large numbers of migrants in cargo shipments. This contrasts slightly with the year prior, in which BSI more commonly recorded instances of stowaways involving ten or less migrants, a figure likely more indicative of poor trailer security rather than the presence of corruption. In the past, migrants frequently targeted vulnerable cargo trucks in an attempt to make it to the United Kingdom, the preferred destination for most. However,

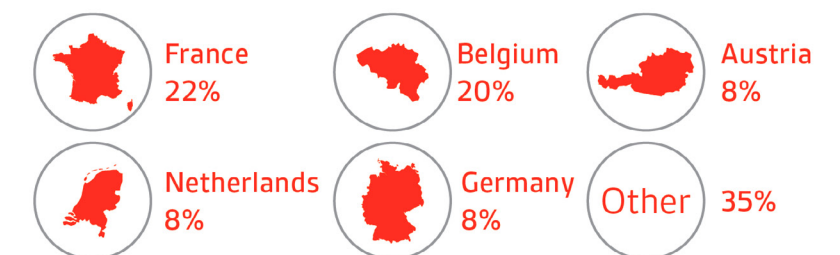
Stowaway Risks in Europe

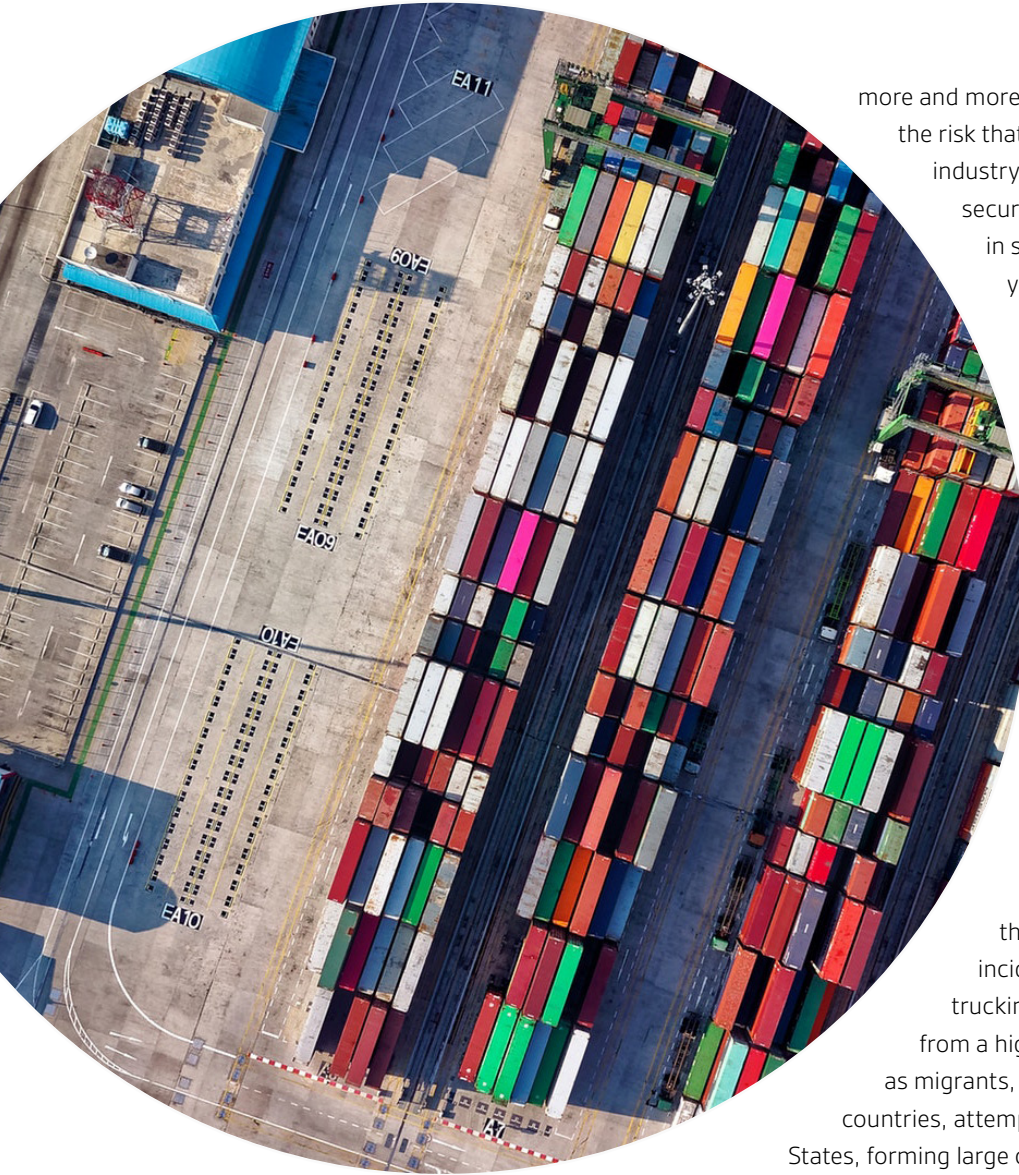


Modalities of Recorded Stowaway Incidents



Countries of Detection in Recorded Stowaway Incidents





more and more attention has been focused on the risk that migrants pose to the trucking industry in Europe as well as to the lack of secure parking in the region, resulting in some efforts over the past several years to mitigate the risk, such as a heightened awareness of drivers to the risk of stowaway. It is possible that these efforts were enough to have forced migrants into seeking out corrupt cargo truck drivers due to a reduced ability to board vulnerable vehicles. This proved to be true in the United Kingdom incident described above, with authorities arresting multiple individuals, including the truck driver, for their role in the trafficking attempt.

Besides Europe, the Americas were the other region where BSI recorded the highest number of stowaway incidents in 2019. Similar to Europe, the trucking industry in the Americas suffered from a higher number of stowaway incidents as migrants, primarily from Central American countries, attempted to travel north to the United States, forming large caravans and passing through Mexico in the process. BSI noted in these incidents that food and

beverage shipments suffered from a higher number of stowaways over

other types of industries, which may be explained by the typically lower level of security afforded to these shipments in comparison to high-value goods such as electronics or pharmaceuticals. Also of note, BSI frequently recorded stowaway incidents in this region that clearly involved, at a minimum, corruption and, at most, the involvement of organized crime, evidenced by both the large number of migrants often found in vehicle trailers or the use of other tactics, such as false walls. In a region in which the opportunity for crime is controlled, and often contested, by major cartels, it makes sense too that migrant trafficking would be similarly criminalized as another means of income for organized criminal groups and therefore result in more sophisticated stowaway attempts.

Corporate Social Responsibility Risks

Along with the above security risks, mass migration also poses several key corporate social responsibility risks for supply chains, specifically the potential for labor rights violations. BSI noted this issue globally last year, and it is almost certain that businesses will have to grapple with this threat going forward in 2020. The abuse of migrants for labor is not a phenomenon exclusive to one region and BSI recorded incidents in nearly every region last year.

The presence of unauthorized migrants in large quantities across Europe presents a significant risk to supply chains and is often discounted as a concern in favor of the traditionally more visible hotspots in regions such as Asia. However, migrants in Europe, like their counterparts in Asia, generally lack any means of supporting themselves or their families and as a result, seek out jobs in their country of residence. Due to this lack of support, migrants

often find themselves employed in informal industries such as agriculture or textiles, which tend to be subject to health and safety violations and low wages. The often-informal nature of these industries increases the difficulty of enforcing labor laws as inspectorates frequently lack any visibility, and the legal status of many migrants prevents workers from lodging official complaints. In addition, the seasonal, and therefore temporary, nature of agricultural work often hampers investigative endeavors, as workers arrive at the fields for the harvest and leave after the season finishes. Thus, the presence of exploited labor exists only within a limited period of time, allowing for better concealment by employers.

BSI noted evidence last year of the relatively wide-scale exploitation of migrants for labor in several regions across the European Union. El Ejido, for example, a region in Southern Spain that has dozens of square miles of warehouses, has faced allegations for years of labor exploitation. This past September, a French-led police operation in collaboration with seven EU member nations, identified several criminal operations exploiting migrant labor throughout the agricultural sector. In France, police targeted operations in vineyards, where migrants trafficked from Morocco and several Eastern European states worked for slave wages, often extorted by criminal bosses. In Italy, police identified a major labor-exploitation operation taking place at farms in the Basilicata region of Southern Italy. In their investigation, police identified hundreds of exploited migrants forced to work for slave wages in the fields for excessive hours. Tomatoes and other European products, including the olive oil industry in Spain, Italy, and Greece, also often rely on cheaper migrant workers for the labor-intensive harvesting process. Although there are certainly ethical businesses utilizing migrant labor correctly, the above risk factors and evidence indicate that the abuse of migrants is a distinct possibility.

Business Continuity Risks

Besides the obvious impact that the discovery of a stowaway-contaminated shipment can have on delaying shipments, mass migration resulted in disruptions to supply chains that are likely to see at least some form of continuation in 2020.

Although initially imposed during the peak of the migration crisis, six countries in Europe continued to impose border checks last year that have also been extended into 2020. Austria, France, Germany, Denmark, Norway, and Sweden currently have restrictions in place to mitigate both migration and terrorism issues, and while the need to pass through these border checks has likely been incorporated into many supply chains' transportation plans, the presence of border restriction within the supposed restriction-free Schengen Zone, the collective shared jurisdiction by European Union countries, only highlights the potential impact that mass migration can have on supply chain transportation.

In April of last year, BSI also noted extreme delays to cargo traffic along the U.S.-Mexico border following the reported redeployment of border officials to other functions as a result of the arrival of massive groups of migrants. As a result of this personnel shift, cargo trucks attempting to cross the southern U.S. border using standard commercial lanes faced delays of up to 270 minutes. These delays lasted for at least a month and again serve as a reminder of the indirect effects that mass migration can have on supply chains.

SECTION FOUR
POLITICAL PROTESTS
DISRUPTING
BUSINESS



POLITICAL PROTESTS DISRUPTING BUSINESS

Introduction

In **Supply Chain Risk Insights 2019**, BSI forecasted the impact of newly-elected governments and their associated shifts in political ideology on supply chain challenges. The previous annual report covered how changes in governance in Brazil, India, Mexico, and elsewhere could lead to new corporate social responsibility, business continuity, and security challenges in those countries. Throughout 2019, not only did many of those challenges come to fruition, but the ideological shifts gave rise to widespread political protests that dominated the headlines worldwide and will very likely have ripple effects into 2020. The most notable instance of this trend arguably occurred in Hong Kong last year. Largely viewed as a stable focal point in the world for business, Hong Kong citizens engaged in the longest, most violent, protest movement to date, spanning from April 2019 into 2020. Like many protest movements globally, the Hong Kong protests began as a grievance over a specific law and evolved into a larger, more disruptive and destabilizing force.

Major Protest Movements in 2019



Throughout 2019, a number of other countries experienced a similar phenomenon in which a minor grievance against the government became a catalyst for broader, often violent, protest movements. While not an exhaustive list, political protest movements similar to Hong Kong occurred in Puerto Rico, Indonesia, Haiti, Chile, Bolivia, Ecuador, Iran, Iraq, Lebanon, and Colombia throughout 2019. In many cases, the spark was a minor policy change that revealed some deep-seated unrest over inequalities. Entering 2020, many of these protest movements are still ongoing and governments, such as in Guatemala, Costa Rica, Uruguay, and Chile, have begun to pass legislation limiting the activities of protesters to ostensibly prevent such movements from spreading. Throughout Central and South America and the Middle East, such demonstrations raise the fear that the rest of 2020 will possibly see even more countries undergo protests, revealing political instability in places previously thought to be calm and stable.

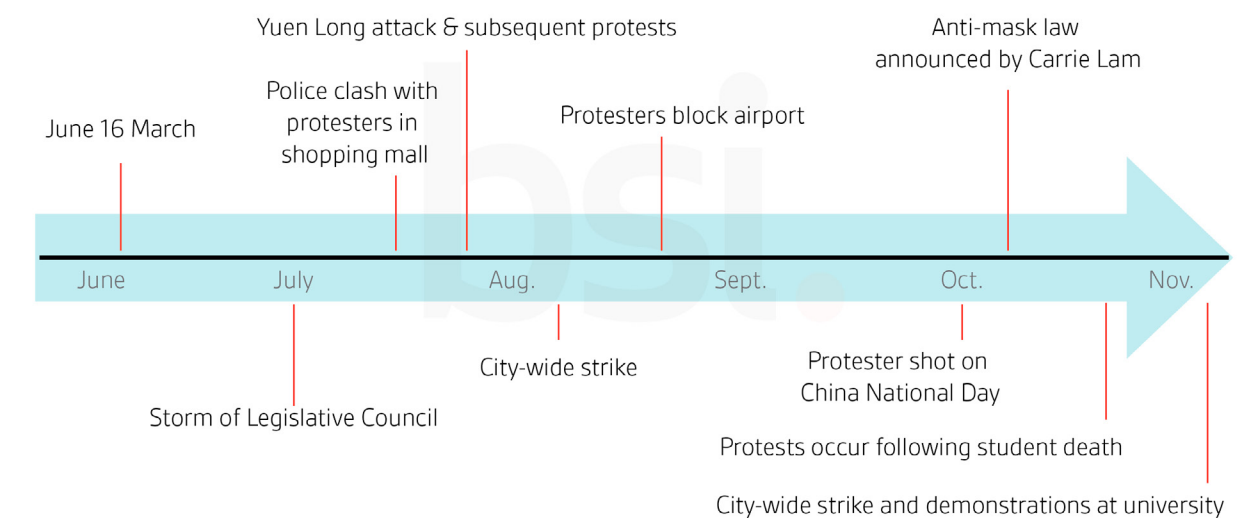
The Hong Kong Protests

Hong Kong has historically been known as a stable focal point for business. A major transit and transshipment hub from East to West, Hong Kong holds a special status for global trade. Protests in Hong Kong began in April, with the flashpoint being an extradition bill allowing the transfer of prisoners in Hong Kong to mainland China. In June, the protests began to escalate with estimates of millions of people marching in the streets, blockading roadways, and taking to government buildings. Over the course of the summer, the extradition bill issue, the ensuing protests, and conflicts with Hong Kong police revealed long-standing resentment toward the current governance of Hong Kong and the movement evolved into a larger pro-democracy demonstration that continued throughout 2019 and into 2020. Each week in Hong Kong, protests varied from extraordinarily violent with vandalism and petrol bombs targeting Chinese businesses to peaceful marches through major shopping districts.

With some exceptions, the major demonstrations in which there are riots and clashes with Hong Kong police have remained limited to weekends. Protesters have been highly reliant on social media to organize sporadic demonstrations and have employed the use of such applications to stage smaller peaceful protests on short notice. The Chinese government continues to view the Hong Kong situation as an internal matter, despite pleading by protesters for assistance from the United States and the United Kingdom.

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Critical Events in the Months of the 2019 Hong Kong Protests



From a supply chain perspective, there have been few major disruptions to cargo freight as a result of the Hong Kong protests; however, protesters frequently targeted airport operations. Over the course of the movement, protesters successfully staged a sit-in at the airport terminal, resulting in widespread flight cancellations and disrupting cargo carried aboard passenger jets. In a second incident, protesters effectively cut off ground transportation routes to the airport, which did have an impact on cargo traveling to and from the international airport. Since that incident, law enforcement has put checkpoints and surveillance measures in place, which has effectively mitigated any further disruptions to airport operations.

Concerns remain over possible direct intervention of the Chinese government and the possible "locking down" of the territory. As the protests ebb and wane, particularly in the advent of the COVID-19 outbreak, the longevity and uncertainty surrounding the movement has done consequential damage to the reputation of Hong Kong and the economic impacts of shuttered businesses and uncertainty as to Hong Kong's stability are likely to be felt in 2020.

Latin America

In the latter half of 2019, Latin America underwent a wellspring of successive protest movements, notably in Ecuador, Chile, Bolivia, and Colombia. Although protests are not uncommon in Latin America, extensive nationwide movements are typically not the norm. In several instances, a small policy change triggered the protests, with high levels of inequality exacerbated by government intervention being an overarching theme of the demonstrations. In Chile, it was a metro fare increase. In Ecuador, it was the removal of a fuel subsidy. Such fiscal policy changes predominantly harm the poor and minority groups, many of which already feel oppressed by the government or the ruling class.

In Chile, a proposed increase in metro fares sparked protests. Historically heralded as a stable Latin American country, the protests over the metro fare increase revealed many middle-class communities struggling with low wages, high prices, and a developing mistrust of the Chilean government. The President repealed the increase in an attempt to quell the protests, but the institution of curfews and military deployments still severely disrupted business in major Chilean cities like Santiago and Valparaíso. The protests began to subside after the President agreed to overhaul government policies to address the expressed inequalities, but calls for strikes, demonstrations, and protests are ongoing in 2020, including by organized labor groups. Until such inequalities are adequately addressed, the instability and possibility for further disruptions remain. Although the single-issue acts as a spark, the protests expand to multi-issue platforms, inciting national instability. As the protest movements expand, it is more challenging for the government to adequately address the varied demands of the protesters, thus encouraging further protests.

In Colombia and Chile, the protest movement evolved from its initial dispute into a broad anti-government or anti-establishment movement subsequently resulting in its continuation for more than several weeks. In contrast, Ecuador's protest movement remained concentrated on one issue concerning fuel subsidies and lasted ten days. This can be attributed to Ecuador's expeditious government response in the early stages of the mobilization. A responsive government can stifle the time permitted for a protest movement to gain traction and prohibit the movement to tack on additional grievances. The longer the movement, the more opportunities for other unions to join, for the issue platform to expand, and for deaths or injuries to occur, all of which contribute to the prolongation of the protest movement.

Countries with a history of protesting will also be more readily willing to protest. Nicaragua, Argentina, Colombia, Chile, Venezuela, and Brazil are all countries where man-made disruptions are commonplace, particularly in recent years. Not only do these man-made disruptions foster instability for the host country, but they also can impact the stability of neighboring countries. Within two months in 2019, four South American countries erupted with anti-government protests. The proximity of these protests exhibits the chain reaction effect where awareness of another's social unrest provides kindle for dissatisfaction with one's government, thereby amassing to a continental movement. Since national protests frequently occur in clusters, failure to address these underlying issues will likely result in waves of unrest engulfing Latin America throughout 2020.

Middle East & North Africa

Throughout 2019, several countries in the Middle East and North Africa (MENA) region also experienced a resurgence of anti-government, pro-democracy protests. Spanning from Sudan to Lebanon, predominantly young activists took to the streets to call for reducing corruption, greater political freedoms, and regime change. Movements emerged and continued in countries that had previously experienced uprisings amidst the 2011 Arab Spring protests: Lebanon, Iraq, Iran, Algeria, and Sudan. Like in Latin America, most of these movements emerged from narrow policy concerns – for example, planned taxes, including one on a popular social media application in Lebanon and rising fuel prices in Iran – before each movement evolved into mass demonstrations of political dissatisfaction.

Also like in Latin America, once these protests evolved into multi-issue platforms, it became increasingly difficult for governments to meet the demands of protesters, subsequently encouraging further anti-government action. This was the case in Lebanon, where the government quickly abandoned the initial tax on a popular social media

application that sparked demonstrations and subsequently facilitated the resignation of the country's Prime Minister and cabinet. Similar concessions occurred in Iraq and Sudan, where demonstrations ousted prominent political figures from office. These concessions, initially called for by anti-government movements, were now insufficient to abate rising national anger, resulting in the lengthy continuation of the movement. As these movements continue into 2020, more intense demands for democratization and economic equality measures will be leveraged by protesters, demands that are substantially difficult for current Arab governments to satisfy.

Like most protests, the social unrest in these countries led to significant supply chain disruptions. One notable instance in Iraq featured protesters blocking the entrance to Umm Qasr port, Iraq's only deep-water port. Anti-government activists in Lebanon, Iran, and Algeria all established roadblocks along major roads and public spaces to disrupt business and movement throughout major cities.

As youth populations in the MENA region continue to surge, economic unrest and democratic fervor are expected to continue well into 2020. Governments, particularly in Iraq and Sudan, have cracked down on protests with increasing violence, which has only resulted in increased anti-government fervor. As countries begin to make concessions and remove individuals from power, such as in Algeria and Lebanon, protests will likely continue into 2020, emboldening activists to continue making demands for government reform. While these movements have forced significant and symbolic concessions, they are largely leaderless and decentralized, and thus, unlikely to result in significant electoral gains for pro-democracy movements. These movements are still likely to continue into 2020, but their longevity will be dependent upon the emergence of clear leaders and demands.

Political Change in Brazil, India, and Mexico

In **Supply Chain Risk Insights 2019**, BSI highlighted the impact of political shifts on supply chains in Brazil, India, and Mexico. Throughout 2019, BSI forecasts largely came to fruition as changes in government policies resulted in new or heightened corporate social responsibility risks, security vulnerabilities, and disruptions to business continuity.

In 2019, the Bolsonaro government in Brazil enacted several deregulatory policies that made impacts that will linger into 2020. To start, the initial budget introduced by the new government cut labor inspection funding by 63 percent compared to the previous budget. Cutting the funding, which supports investigations of slave labor, child labor, and unsafe working conditions, will likely result in a direct reduction in the ability of the Brazilian government to thwart labor violations. Furthermore, with fewer inspections and pressure to maintain safe working conditions, labor violations may begin to trend upward in Brazil in 2020.

Another major development that will likely impact civil unrest and security issues in Brazil in 2020 is the move to privatize 17 state-owned companies in the energy and transportation sectors, high-traffic ports such as the Port of Santos, and even the state oil company. In 2019, there has been a generally negative public response to this transition due to fears over possible layoffs. On the anniversary of the creation of the state-owned oil company in October, around 20,000 people gathered in Rio de Janeiro to protest the decision to privatize state-owned companies. As the Bolsonaro government accelerates the shift towards privatization and dismantling bureaucracy in Brazil, it is possible more protests and unrest could affect the flow of goods in 2020.

The privatization of Brazilian ports may also impact the movement of drugs through Brazil. Brazilian officials recorded all-time highs in cocaine seizures in 2019 at Brazilian ports, as South American producers such as Columbia, Peru, and Bolivia continued to traffic drugs through Brazilian ports to European points of entry. Criminal organizations often sneak contraband into shipments by corrupting dock workers and dock officials. While inspections of shipments will still be completed by the Brazilian internal revenue service, a federal body for the inspection of imports and exports, new dockhands will be hired to fill what were once public positions, creating the potential for criminal organizations to place corrupt employees in these positions to facilitate the movement of contraband.

Other countries similarly experienced unrest due to implemented policies. In India, two major policy changes by the Modi administration in 2019, the repeal of the special status afforded to Jammu and Kashmir by the Indian Constitution and the passage of a citizenship bill that reportedly fast-tracks citizenship for religious minorities from

neighboring countries, but excludes Muslims in its language, generated widespread protests and labor strikes. Demonstrations surrounding the citizenship bill are ongoing, resulting in violent clashes with authorities, the torching of vehicles, and ground transportation disruptions in major cities such as Delhi, Chennai, Hyderabad, Kolkata, and Mumbai. Nearby Bangladesh reacted to the security concerns over the laws' passage by disabling telecommunications along the border. After the Jammu-Kashmir decision, there were not only localized protests and strikes in the area but also several reported attacks by militants on transporters, impacting the regional stability and possibly relations between Pakistan and India.

In Mexico, the difficulties of the administration in curbing cartel violence has resulted in an increasingly dangerous security situation for companies operating there. President Andres Manuel Lopez Obrador promised to counter increasing violence in Mexico during his campaign by changing the approach to a less militarized one, characterized by a slogan "Abrazos No Balazos" or "Hugs not Bullets." His approach, however, has not been effective in curbing violence.

According to several reports, 2019 was the most violent year in Mexican history, with an estimated 36,000 homicides tallied by the end of the year. December 3 marked the deadliest peacetime day in Mexico with 127 murders occurring in a single day. Citizen groups, angry with the security situation in the country, took to blocking major roadways using hijacked buses and burning debris to attract government attention to the issue. Cartels have also hijacked buses and trucks and lit them on fire across major roadways in the state of Michoacán to block access by military and police.

The Mexican security situation became of increasing interest to the United States when a suspected cartel group killed an American family traveling in Sonora. Three adults and six children were murdered as their vehicles came under heavy fire, prompting the U.S. administration to threaten Mexico with direct intervention against the cartels.

Insofar as the drug trade, legalization and domestic manufacturing of cannabis products in the United States may cut into cartel revenue. However, cartels have shown resiliency and an ability to make up shortfalls in income through other avenues such as human trafficking and investing in legitimate business, such as the avocado industry. Throughout 2019, BSI noted continued instances of cartels extorting farmers and controlling areas with avocado farms. Given the nature of the current Mexican government's policies, there are no indications that 2020 will see any marked improvements in the Mexican security situation.

SUPPLY CHAIN RISK ASSESSMENT

Companies should ask themselves the following questions when thinking about supply chain security risk:

- Does the company market a good with a high theft potential or a high likelihood of being counterfeited?
- Does the company market products that are easy to move on the black market so even if the item is inexpensive, it still has value to thieves?
- How exposed is the company to supply chain interruptions?
- Does the company need to transport goods somewhere within a short period of time or lose the ability to sell to consumers, such as perishable products?
- Is the pace and speed of the operation slower and less important, but cost is a greater factor for the organization and so the supply chain is oriented to minimize costs?

All these factors will influence the types of activities a company will engage in to mitigate or minimize risks. In starting to engage in a risk assessment, it is critical to think first about what the organization looks like and what its priorities are before thinking about the more common conceptions of risk like "Are hurricanes or other weather-related disruptions commonplace in this area?" or "Is there a high rate of theft in this particular area?" Risks often increase when goods are in transit; the greater the visibility and control an organization has over a product and where it is traveling, the lower the risk.

Part of conducting a risk assessment could be isolating the need for deeper or more frequent risk assessments, audits, or self-assessments at a facility. If a supply chain's security system has access to tools that scale well, such as BSI's SCM and SCREEN tools, a risk assessment of every supplier becomes a possible option. Supply chain security management personnel should take advantage of software tools that allow achieving that scale, with the understanding that a true in-depth risk assessment or expensive mitigation technologies may not be possible for every supplier or site.

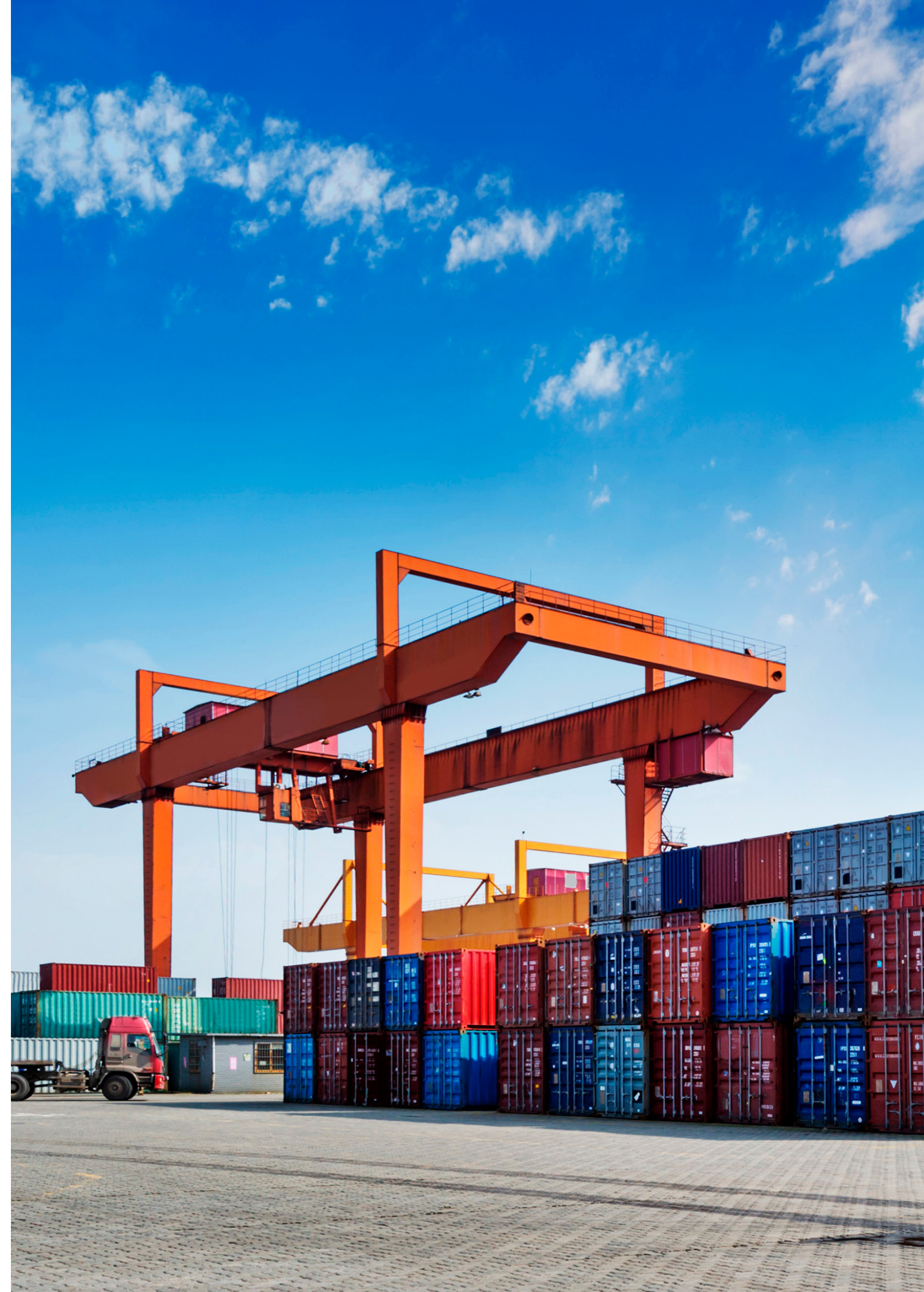


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SECTION FIVE CLIMATE CHANGE & NATURAL DISASTER RISK



CLIMATE CHANGE AND NATURAL DISASTER RISK

Introduction

Multiple record-setting natural disasters and severe weather events occurred in 2019, setting the stage for greater concern about what is to come in 2020. Many countries prepare for and build resiliency to common natural disasters such as floods, severe storms, heavy rainfalls, droughts, heatwaves, and earthquakes. However, throughout 2019, successive natural disasters taxed many countries' resources by causing lasting damage to infrastructure. Not only have severe weather events wracked business continuity worldwide, but invasive species and diseases such as African swine fever and the fall armyworm also contributed to agricultural shortages, leading to some nationwide bans on certain imports and exports and increased security measures for agricultural products moving through borders.

Such shortages of commodities have also led to an uptick in thefts of such goods in certain countries. In one notable example, altered rainfalls in India severely impacted onion production, leading to a ban on onion exports. BSI recorded several incidents of thieves targeting onions within the country, likely for resale on the secondary market. Disasters may also result in security concerns for facilities and transportation modalities in the path of these storms, as the inclement weather reduces response times by law enforcement and creates greater security vulnerabilities in rural areas. These severe weather events have led to experts considering the medium- and long- term impacts of climate change on regional infrastructure, generating a need to re-examine supply chains for medium- and long-term vulnerabilities as climate change degrades existing infrastructure and necessitates new infrastructure.

Impactful Weather Events Degrading Infrastructure

The United States is accustomed to severe weather disrupting business continuity and such disruptions are largely predictable for supply chain planning purposes. Each year, a series of hurricanes of varying intensity typically impact the eastern coast of the United States, while the Midwest experiences tornadoes and high wind events. Snowstorms roll throughout the northern part of the country, although sometimes span as far south as Texas and Georgia. Finally, California experiences seasonal wildfires that can disrupt traffic in places and cause evacuations of localized areas. But in 2019, dry conditions and high temperatures resulted in a much worse wildfire season and a much more disruptive response to mitigate the fires.

California recorded over 7,500 fires last year, which burned over a quarter of a million acres of territory. Ahead of the fire season, experts warned that heavy rains in the earlier part of the year would give way to an increased amount of foliage primed to burn. Heavy winds coming in from the Pacific whipped embers from the tall indigenous pine trees hundreds of meters. In the case of the fire that impacted San Bernardino national forest, strong winds were able to spread the flames ten miles in two days. Throughout the summer and fall of 2019, officials had to shut down interstates and freeways in California, including some near Los Angeles International Airport (LAX). In a largely unprecedented move, utility providers in California organized pre-emptive blackouts, shutting down power to over 700,000 customers to reduce the risk of fires sparking from high-voltage above-ground power lines during times of high winds. Experts estimated the economic impacts of the blackouts ranging from tens of millions to billions of dollars and meteorologists warn that such conditions may be the new normal, requiring such actions during fire seasons in California and elsewhere in an attempt to respond or prevent severe natural disasters.

Severe fires were not unique to California in 2019. In Brazil, the Bolsonaro administration made good on its campaign promise to open the Amazon rainforest to development and scaled back existing environmental protections.

Significant California Fires in 2019



Within 2019, reports suggest that deforestation of the Amazon increased 30 percent, leading to as much as 4,800 square miles of forest being razed for development. The issue gained headlines in August as the deforestation resulted in extensive burning as smaller controlled fires spread and generated larger fires. In the first eight months of 2019, officials recorded 87,000 fires in Brazil. Eventually, the fires slowed toward the end of 2019 due to a two-month ban on burning and the end of the dry season; however, experts expect climate change will likely intensify such fires in 2020 as conditions become drier and hotter.

The rainforest land is commonly deforested for a multitude of commercial reasons, including cattle grazing, soybean production, and

mining. However, reports indicate that the scaled-back environmental protections led to increases in those activities. Media outlets linked major corporations with sourcing in the Amazon rainforest connected to the deforestation. As a result, BSI noted several instances of companies withdrawing business from Brazil as a result of the fires, which served as a prime example for the importance of ensuring that suppliers, including those in the second tier and below, are audited for environmental compliance. As climate change may increase the magnitude of the fires in 2020, companies should remain aware of possible connections of business operations to the deforestation as well as operations in the area.

Record-breaking temperatures and dry conditions contributed to a dramatic intensification in bushfires in Australia in 2019. Sydney experienced average temperatures as high as 120 degrees Fahrenheit at the closing of 2019. Canberra, the country's capital city, saw record-highs of 110 degrees Fahrenheit. Toward the end of 2019, Australia declared multiple states of emergency as New South Wales and Victoria became ravaged by unprecedented fires. Evacuation orders throughout the southern coastal regions resulted in delays for transporters and the severe haze and smoke impaired areas across Sydney, Melbourne, and the surrounding suburbs for days and weeks. Although bushfires are a regular occurrence in Australia, much like wildfires in California, the intensity appears to have worsened in line with conditions resulting from climate change.

Natural disasters also hit Japan, a more disaster-prone but also a highly resilient nation in the region, especially hard in 2019. Several typhoons struck Japan, including Typhoon Hagibis, one of the largest and most destructive storms to hit the island nation in decades, with some estimates suggesting Hagibis caused over \$350 million USD in damages to Japan's agricultural sector alone.

Successive Disasters Impairing Resiliency

2020 will likely bring concerns about severe weather damaging critical infrastructure and the reduction in the ability of governments to effectively respond. In India, the summer heatwaves damaged railways and roadways while the intense rainstorms flooded bridges, highways, and caused landslides. Similarly, throughout the rest of Asia, in countries such as Thailand, Cambodia, Myanmar, and Vietnam, landslides and rainstorms wiped out roadways and caused landslides along major transportation routes. In the Caribbean, island nations are accustomed to major

hurricanes and storms, and depending on the severity of the storm, generally have adequate recovery plans. Yet, multiple hurricanes followed by the intensity of hurricane Dorian stalling over Grand Bahama severely impacted the ability of the island nation to respond to another storm. As these smaller and developing nations expend resources to recover from severe weather events, the pool of resources available to withstand successive storms decreases, a phenomenon already seen in Puerto Rico which is still recovering from 2017's Hurricane Maria. Other concerns include long-standing damage to agriculture, reduced capacity to produce critical commodities, and the closures of ports and airports, creating delays and queues for supply chains operating through countries impacted by these weather events.

Security Threats Stemming from Climate Change

Severe weather events have the potential to create secondary security threats. Reduced infrastructure may restrict trade routes and increase wait times at border crossings, resulting in more idling and vulnerabilities for transporters. Warehouses and other supply chain facilities in disaster-prone areas may become more susceptible to looting as law enforcement and security response forces struggle to reach impacted areas. As climate change impacts global weather patterns in 2020, corporations should be mindful of risks resulting from altered transportation routes and reduced responses from law enforcement, especially in developing areas.



SECTION SIX GLOBAL RISK OF TERRORISM



GLOBAL RISK OF TERRORISM

Introduction

Underscoring security concerns globally, tensions in the Middle East continued to bubble and impact supply chains in 2019. BSI noted a spike in the targeting of oil facilities and related trade last year, with notable concern over the vulnerability of tanker vessels traveling through the Strait of Hormuz. The Strait of Hormuz and the broader Gulf of Oman was a hotbed for tension in the Middle East throughout 2019 as Iranian forces frequently detained oil tankers, claiming suspicions of fuel smuggling.

BSI also noted terrorist attacks occurring across a wider range of countries over the year prior, which saw the bulk of attacks take place in several hotspot countries. The global risk of terrorism still looms throughout the Middle East despite the rollback of ISIS that culminated in the death of its declared leader. While global terrorist networks such as ISIS, Al Qaeda, and Boko Haram still impact supply chains in the Middle East and parts of Africa, BSI also recorded more instances of lone-wolf terrorism in 2019, with the isolated, unpredictable episodes of violence likely to be more common in 2020.

Lone-Wolf Terrorism

2019 saw a substantial number of lone-wolf attacks executed across the globe. These attacks were typically enacted by individuals claiming no affiliation with established groups (apart from a few claiming linkages to the Islamic State) and by using relatively unsophisticated weapons and vehicles to inflict violence. While many recorded instances of lone wolf terrorism did not target supply chains directly, attacks on citizens, property, and businesses impacted broader supply chain security through road closures, changing security measures, and business disruptions in a manner likely to continue into 2020.

A notable instance of lone-wolf terrorism that did directly impact supply chains was the October attack in Limburg-an-der-Lahn in Germany, wherein a man hijacked a commercial truck and used the vehicle to ram into a line of cars in an attack that left eight injured. The attack resembled the 2016 terror attack on Berlin's Christmas Market and the 2016 Nice Bastille Day truck attack, emphasizing the continued effectiveness and ease

THE STANDING OF ISIS

ISIS had maintained a pervasive international presence ever since its offensive campaigns in Western Iraq in 2014. The death of its proclaimed leader, Abu Bakr al-Baghdadi, last year capped the coordinated efforts by coalition forces that successfully rolled back ISIS, which diminished its ability to impact supply chains, which in the past included disruptions from the control of key regional border crossings as well as supply chain terrorist attacks. In recent years, ISIS has ranked highest for its perpetration of supply chain terrorist attacks and largely drove countries like Iraq and Syria to the top of the list for countries with the most incidents recorded by BSI. With the rollback of the organization, it is likely that we will begin to see a fluctuation in the ranking as countries like India, Pakistan, and Colombia continue to suffer from supply chain terrorist attacks in the absence of similar, coordinated coalition efforts. The Islamic State is likely to continue to attack from its decentralized network, relying more on guerrilla tactics and smuggling efforts in North Africa and Syria. The organization currently lacks the resources to scale up to any significant degree but will likely aim to obtain more territory in conflict-ridden states like Libya and northern parts of Sudan, posing a risk to supply chains in these areas going forward.

Although the core ISIS group in Iraq and Syria lost much of its power, other smaller affiliated groups around the world continue to operate and pose much of the same threats to supply chains. BSI has recorded several instances, particularly in North Africa, of Islamic State affiliates exploiting weak security procedures to carry out attacks on supply chains or conduct smuggling operations. Additionally, the terrorist organization continues to be heavily engaged in drug smuggling efforts, particularly those involving fenethylline, an amphetamine-type stimulant used by militant ISIS fighters in Iraq and Syria. These narcotics have been smuggled in cargo shipments throughout the Middle East, predominantly through the United Arab Emirates and Qatar, for the past half-decade.

for terrorists to engage in hijacking attacks. While several European cities have enhanced security at popular events and attractions, many localities suffer from continued vulnerability to the theft and diversion of heavy commercial vehicles. Going into 2020, companies should continue to enhance security measures for their commercial vehicles, as hijacking attacks are expected to continue throughout the next year given their low barrier to entry and relative success.

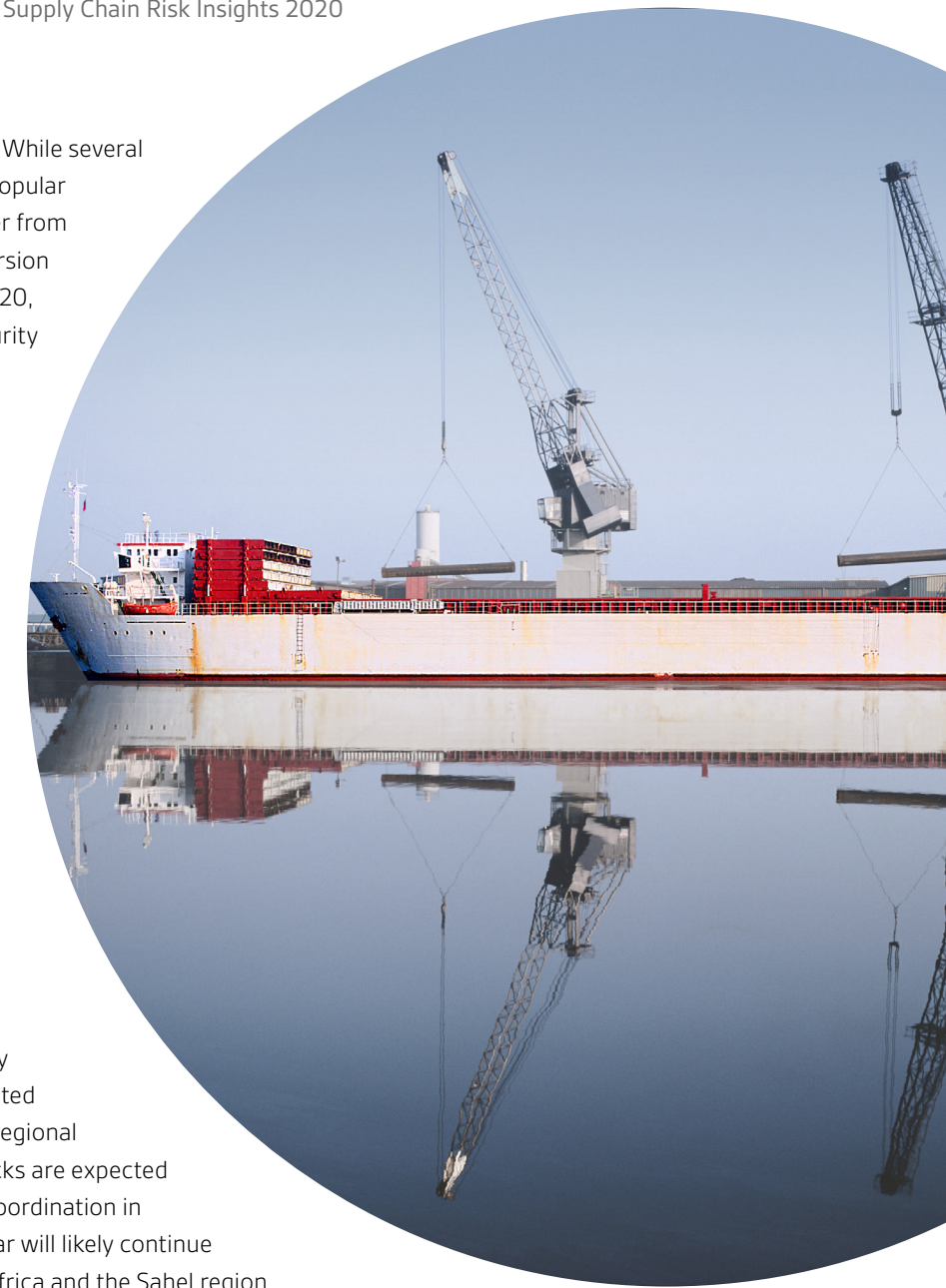
Organized Terrorism in Africa

While lone-wolf terror attacks have become more commonplace, the risk for organized terrorism will continue to be a threat in 2020 despite the rollback of ISIS, one of the most frequent perpetrators of attacks in recent years. Boko Haram, the Islamic State, and its regional chapters, and various separatist units all carried out deadly attacks in 2019, with the majority concentrated in sub-Saharan Africa. Despite coordinated regional efforts to combat organized terrorism, attacks are expected to continue due to ineffective funding and coordination in several regions. Attacks in the upcoming year will likely continue and increase in magnitude in sub-Saharan Africa and the Sahel region, while violence on the Arabian Peninsula may potentially stall as Saudi Arabia, the United Arab Emirates, and Yemen negotiate peace agreements.

Sub-Saharan Africa has become a hub for organized extremist violence. Casualties have centered in conflict-ridden Burkina Faso, Mali, and Niger, though attacks have gradually spread westward towards the Horn of Africa. Many attacks have been attributed to groups affiliated with Al-Qaeda and Boko Haram, with a smaller percentage claiming linkage to the Islamic State. Attacks have shifted from primarily impacting religious and political figures to supply chain-relevant targets, including bridges, roads, and mining facilities. The destruction and bombing of bridges are common tactics used by militant groups in the region to isolate military positions and impede security reinforcement, in addition to disrupting general transit. As the military conflict in the region continues to swell, attacks are expected to increase and continue to disrupt economic operations.

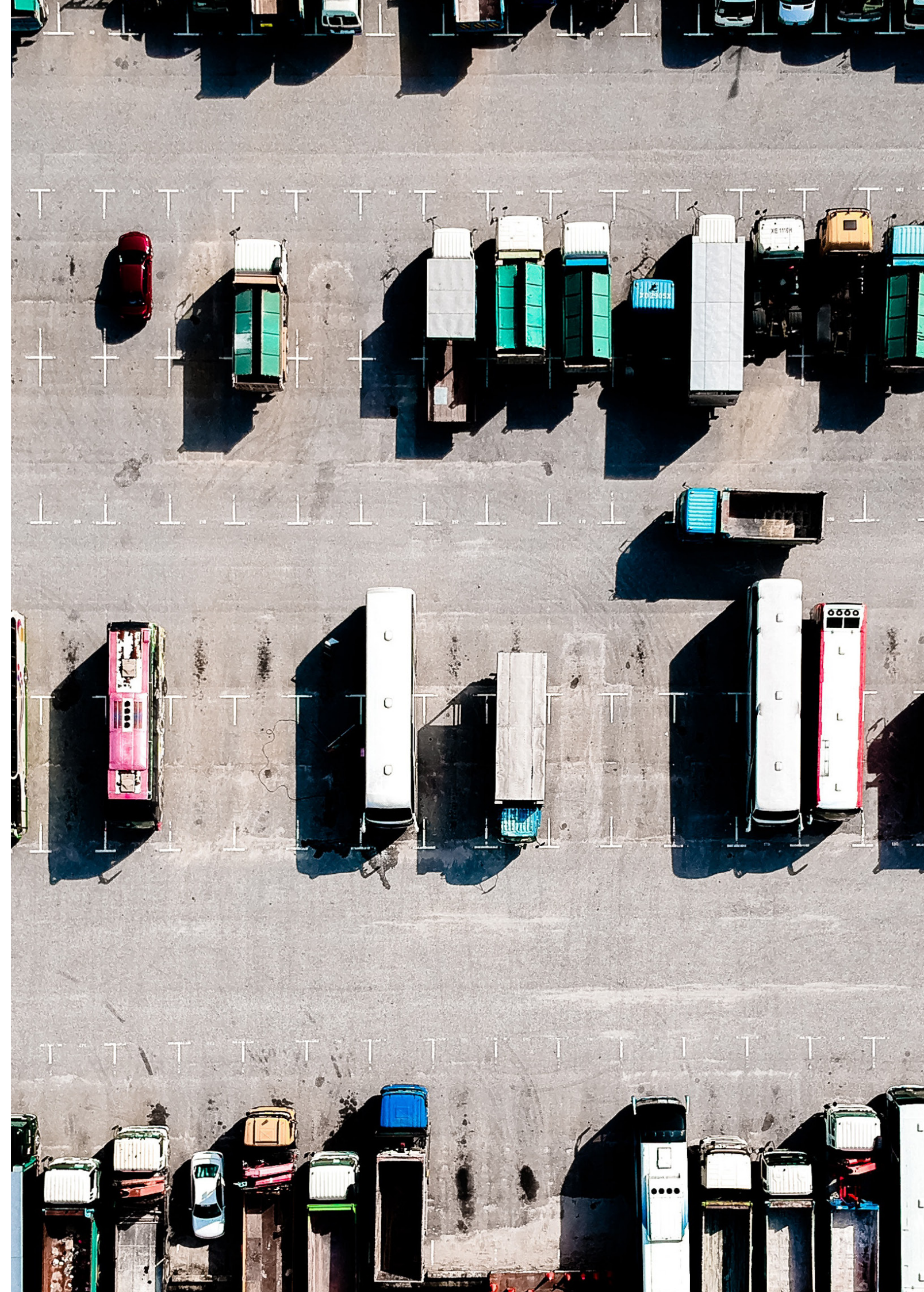
Burkina Faso, in particular, has become a hub for increasing terrorist violence as the central location for an ongoing jihadist insurgency in the Sahel region. The West African country shares a border with conflict-ridden Mali and Niger, facilitating the easy spread of militant extremists in the region. The Mali-Burkina Faso border region experiences an especially high risk of attacks, due to its porosity and lack of adequate security forces, underscoring the potential for future acts of terrorism at or along border checkpoints.

Yemen's Houthi rebels claimed responsibility for the largest act of organized supply chain terrorism in September of 2019 when drones struck Saudi Arabian oil facilities. Despite the attack's magnitude, the conflict did not escalate, indicating a possible slowing down of the ongoing war in Yemen. In November, Saudi Arabia sponsored an agreement



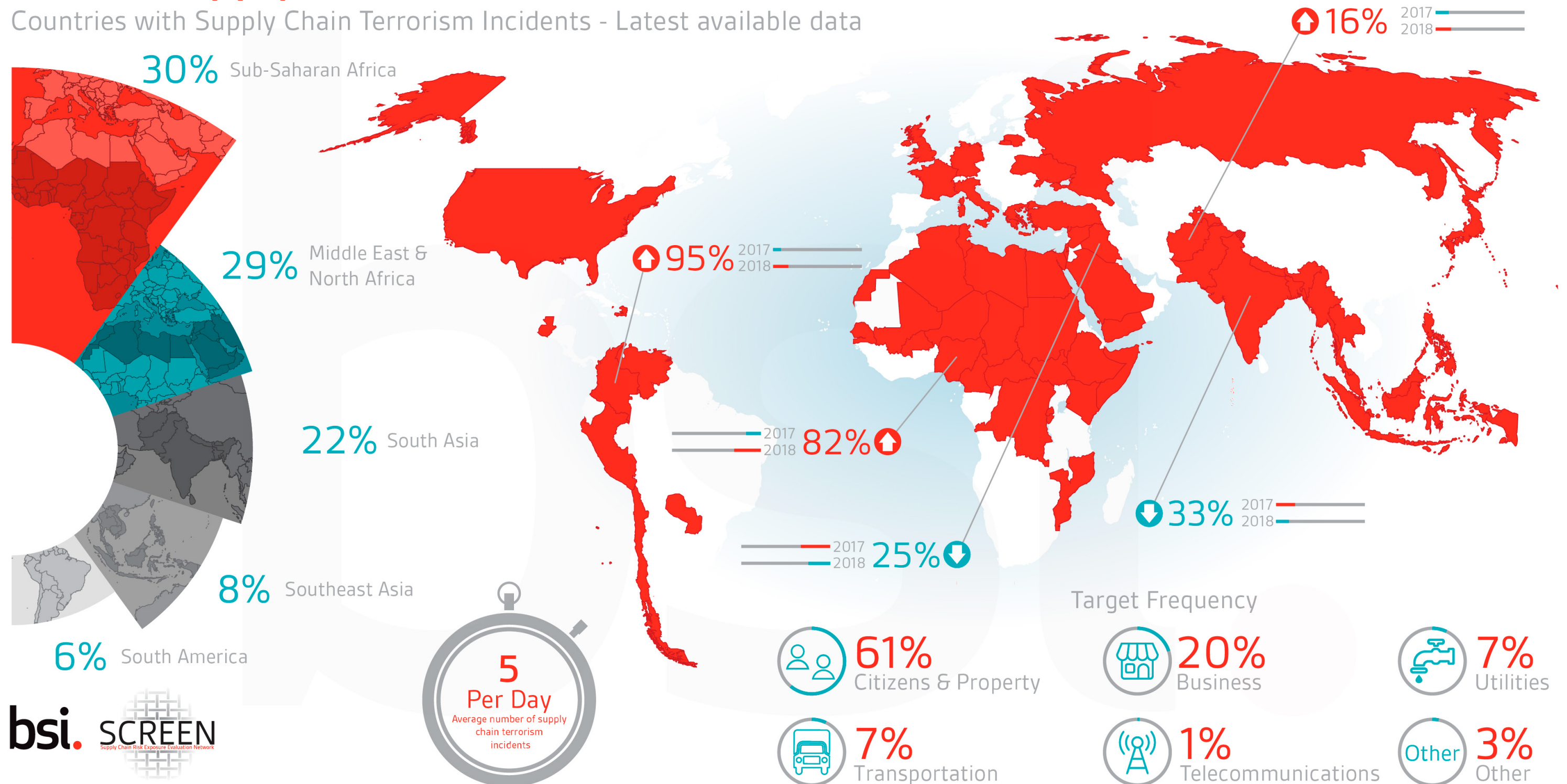
allowing the government of Yemen and southern separatists to share power and halt fighting in southern Yemen. As United Nations aid efforts have continued in the region, a mild quelling of conflict between Saudi Arabia and Yemen is expected, with fewer attacks carried out by the Houthis.

While conflict between Saudi Arabia and Yemen may decrease, the Strait of Hormuz is expected to remain a security risk well into 2020. 2019 saw a slate of attacks on oil and cargo tankers along the waterway as political tensions skyrocketed between the United States and Iran. Several nations have deployed naval fleets to the waterway to protect their cargo transits through one of the world's most trafficked sea passages. Tensions will likely remain high in the region, heightening maritime security risks and demonstrating the fragility of the security situation in the region going into 2020.



Global Supply Chain Terrorism Risk

Countries with Supply Chain Terrorism Incidents - Latest available data



Major Shipping Facilities in Countries with Terrorism Concerns

- MAJOR AIR CARGO AIRPORT
- SUPPLY CHAIN TERRORISM
- MAJOR CONTAINER SEAPORT
- CSI PORT

SEVERE

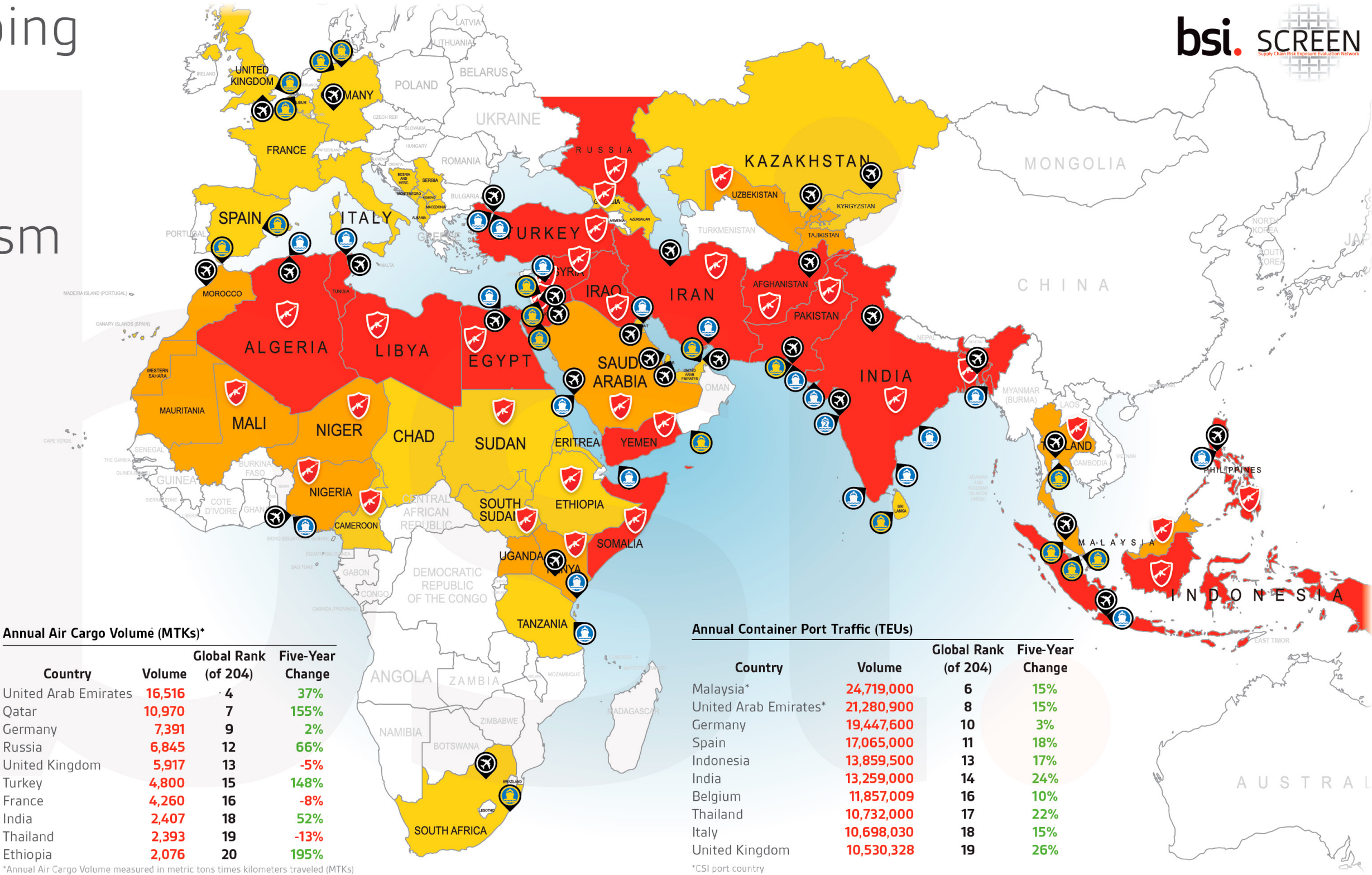
HIGH

ELEVATED

GUARDED

LOW

TERRORISM
The unlawful use of force against persons or property with the intent to intimidate or coerce a government or civilian population in furtherance of a political goal



OUR SERVICES: BSI SCREEN INTELLIGENCE

Supply Chain Risk Exposure Evaluation Network (SCREEN), is BSI's web-based, comprehensive global supply chain intelligence system. SCREEN is the most complete, publicly available Supply Chain Security, Corporate Social Responsibility, Food Safety/Fraud, and Business Continuity intelligence and analysis resource used to measure country level risk factors through BSI's 25 proprietary country-level supply chain risk ratings. SCREEN's unique, proprietary global supply chain risk data and analysis helps organizations identify and understand where their supply chain risks exist. SCREEN generates trade interruption updates, BSI-authored special reports on major disruption incidents and trends as well as insights and analyses on supply chain topics, countermeasure programs, and risk mitigation best practices to help protect supply chains worldwide. SCREEN's intelligence provides organizations with full transparency of country risks and helps them to make intelligent risk-based decisions that drive resilience.

Custom Intelligence Services

BSI's Intelligence Team offers custom intelligence services specific to your organization's supply chain. This innovative feature allows our team to dive deep into geographies, commodities, and subject areas that are of the most importance to your organization. Our team can then work with you to address your supply chain concerns and needs by creating custom reports, developing specific threat ratings, and providing analyses. For more information on having our team craft custom intelligence solutions for your organization, please reach out to one of our supply chain analysts at supplychain@bsigroup.com.

Daily Updates & Notifications

SCREEN provides users the ability to stay current and up to date with breaking news and changing conditions around the world that impact the integrity of their supply chain. Users are able to look on SCREEN's homepage for a compilation of daily analysis, insights, and incidents. Additionally, users can subscribe to the notifications for specific locations and subject areas that concern them the most. SCREEN's daily updates provide data and analysis on the most pressing global incidents and crucial topics in supply chain.

Country-Level Threat Ratings

Each proprietary risk indicator is conveniently displayed for over 200 countries through SCREEN's global risk mapping views. For every indicator, a country is assigned a rating of Low, Guarded, Elevated, High, or Severe. This rating system allows users to quickly identify and categorize the threats to their supply chain and address them quickly.

Custom Report Builder

SCREEN's custom country report builder provides users with more control over the areas that are represented in the report. Users can easily pull and compare reports for multiple countries, threat assessments, and commodities tagged throughout the SCREEN system instantly. Our intelligence team reviews each country on a consistent basis and updates them based on threat rating changes, new discoveries, and other pertinent factors.

Additional Supply Chain Services & Solutions

Supplier Compliance Manager (SCM): BSI's 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.

Advisory Services: BSI's experienced risk management professionals leverage their knowledge and SCREEN intelligence to help organizations effectively identify, manage, and mitigate risk and develop robust management programs.

Training Services: Our customizable training services help develop a deeper understanding of supply chain security, corporate social responsibility, and business continuity risks and how to quickly respond and proactively manage them.

Auditing Services: Our services provide organizations with complete visibility into their suppliers' practices and procedures worldwide. Our audits provide your organization cost-effective assurance that your suppliers are not exposing your brand.

Our supply chain professionals are at your disposal to answer questions, listen to feedback, and chat about the different services and solutions we do and can provide for your organization. Please contact us via the contact information below.



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