



Exiger Trends Report

February 2023

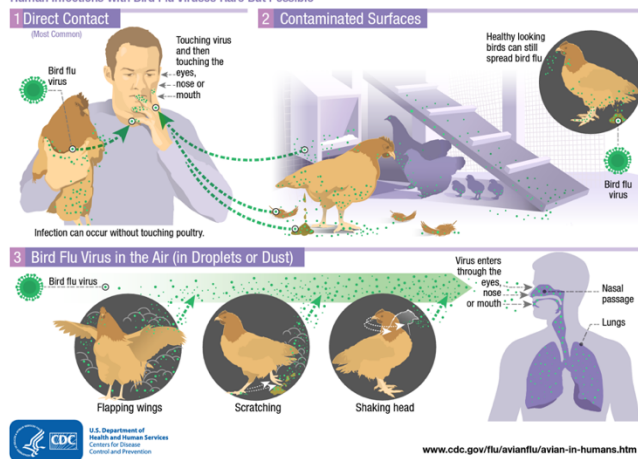
Climate, Disasters, & Disruption

■ Food Roundup:

- **Argentina's 60-year record drought impacting global food supplies.** Soy, corn, and wheat crops are all struggling to survive, with many Argentine farmers facing bankruptcy and harvests likely shrinking to levels not seen in 15 years ([Reuters](#)).

EXIGER INSIGHT: Argentina is the top global exporter of soybean oil and meal, the third largest corn exporter, and a major beef and wheat producer; continued drought will likely stoke food inflation. Compounding the issue: [grain exports from Ukraine have slowed markedly in recent weeks](#) ahead of the March 19 expiration of the U.N.-brokered deal to ensure safe passage of wheat, sunflower oil, and other agricultural products out of the war-stricken country.

How Infected Backyard Poultry Could Spread Bird Flu to People
Human Infections with Bird Flu Viruses Rare But Possible



- **Global bird flu outbreak worst since records began.** The avian flu has killed nearly 60 million birds in the U.S. alone and is squeezing the global egg supply, yielding price volatility for consumers, retailers, and packaged-food companies ([Bloomberg](#)).

EXIGER INSIGHT: While the steep cost of a dozen eggs is unfortunate, the new nightmare scenario is another animal-borne virus affecting humans. An [11-year-old](#) in Cambodia exposed to sick birds was confirmed as dying from avian influenza in late February, with some of her close contacts exhibiting signs of illness.

- **Brazil halts beef exports to China amid mad cow scare as Australia may benefit.** Brazil has stopped sending beef to China after a confirmed case of mad cow disease; Brazil is China's largest

beef supplier. A protracted ban would benefit Australia, motivating China to accelerate lifting import restrictions on Canberra as trade relations thaw between the countries. Beijing imposed trade sanctions in 2020 as reprisal for Australia calling for an international investigation into the pandemic's origin ([WSJ](#)). Ironically, a recent U.S. Energy Dept. analysis based on new intelligence concluded that COVID-19 most likely arose from a laboratory leak in Wuhan ([WSJ](#)).

EXIGER INSIGHT: In 2021, two cases of mad cow forced Brazil to halt beef shipments to China for three months. Such disruptions to the world's largest beef exporter are sure to result in global price hikes.

- **Survey of CEOs highlights dynamic between geopolitics and corporate strategy.** According to consultancy EY's latest quarterly survey, ~97 percent of surveyed CEOs have altered investment strategies due to geopolitical risks while nearly a third have already halted a project. It marks the first time in three years that another risk category has supplanted COVID-19-related disruptions as a top driver of certain corporate behavior ([Fortune](#)).

Labor & Industry

■ Energy:

- **Anticipated ramp up in U.S. LNG production as key idled facility restarts operations.** Freeport LNG—the second largest American liquid natural gas exporter whose Texas plant has been idle since a June 2022 fire—is set to restart two of three gas-liquefaction units ([Reuters](#)).

EXIGER INSIGHT: Prior to idling, Freeport LNG provided approximately 20 percent of U.S. LNG processing. Western demand for American LNG, particularly in Europe, has grown significantly as countries vie for alternatives to Russian energy.

- **Threat of strike looming for UK and German offshore oil workforce in North Sea.** Various unions are balloting their members over labor concerns, including compensation, with workers citing record energy profits and inflation as factors for a potential strike ([Maritime Executive](#)).

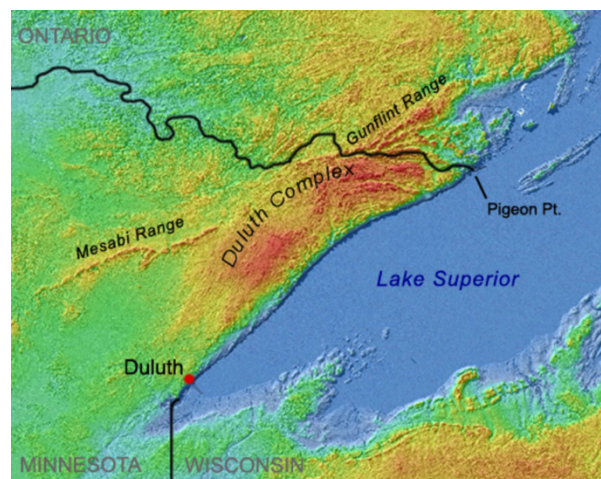
■ Mining & Minerals:

- **Sole American processor of rare earth elements inks agreement to supply Japanese trading giant.** As part of a larger effort by the U.S. and its allies to reduce China's position in the REE supply chain, **MP Materials**, owner of the Mountain Pass mine in California, will ship processed rare earths for distribution to **Sumitomo Corp.** in Japan. In 2022, the Biden administration approved \$35 million in funding to support MP Materials' expansion from REE mining into processing ([Bloomberg](#)).

EXIGER INSIGHT: America serving as an alternative source of supply to Japan is significant given Beijing and Tokyo's historically contentious relations surrounding rare earths. In 2010, China halted all REE shipments to Japan, effectively crippling Japanese manufacturing of electronics that require rare earth magnets.

- **Newly formed copper-nickel mine JV in Minnesota.** U.S. publicly held **PolyMet Mining** and Canadian publicly held **Teck Resources** finalized a joint venture to complete a copper-nickel mine in northeastern Minnesota. Known as **NewRange Copper Nickel**, the 50-50 JV now controls about half of the known copper, nickel, cobalt, and platinum-group metal reserves in the **Duluth Complex**, one of the world's largest untapped resources of critical minerals ([AP](#)).

EXIGER INSIGHT: From a foreign ownership, control, and influence (FOCI) perspective, it's notable that Teck's largest shareholder (10 percent) is **China Investment Corp.**, Beijing's sovereign wealth fund.



- **Operations halted at Chinese lithium mining production hub responsible for roughly ~10 percent of global supply amid government environmental probe, while Myanmar locals seek to expel Chinese rare earth processing operations on environmental grounds.** The Chinese government halted non-state-owned ore-processing operations in Yichun, Jiangxi province, as investigators probe alleged environmental violations at lithium mines. Among others, Chinese battery giant CATL has operations in Yichun ([Bloomberg](#)). Meanwhile, residents of Myanmar have petitioned for Chinese rare earth mining companies to leave the country, protesting, among other things, forest destruction, river pollution, and associated drinking water

problems. Chinese firms have mined rare earths in the area for three years ([BNI Online](#)).

EXIGER INSIGHT: As reported in last month's newsletter—in the context of Bolivia welcoming Chinese battery giant CATL to process its lithium reserves—Chinese foreign infrastructure projects have a poor environmental track record, as evidenced by a [2022 nonprofit report](#) focused on Latin America.

- **U.S. and EU move closer to cohesive strategy for countering China's hold on critical minerals.** U.S. and European officials are contemplating a strategic alliance for accelerating production of minerals used in clean-energy tech without Chinese inputs. Along with allies like Japan and the UK, trade deals would be negotiated around such minerals ([WSJ](#)).

EXIGER INSIGHT: As the *WSJ* observes, this strategizing comes amid America's rift with allies over Inflation Reduction Act subsidies for EVs, which include tax credits for EVs with battery minerals sourced from countries possessing U.S. free-trade agreements. A buyers' club for battery materials would allow allies without free-trade agreements (such as the EU, UK, and Japan) to take part in the EV tax credits.

- **Semiconductor industry decentralizes Chinese operations, opting for APAC alternatives.**

Global chip firms are shifting operations and long-term strategy in Asia to comply with recent U.S. trade restrictions targeting China's semiconductor industry. Three of the largest chip manufacturing equipment providers—**Applied Materials, Lam Research, and KLA**—have been expanding production in Southeast Asia or moving non-Chinese employees from China to hubs like Singapore and Malaysia. Applied Materials also unveiled a “Singapore 2030” plan to improve its production and R&D capacities there ([Nikkei Asia](#)).

EXIGER INSIGHT: As anticipated, stringent American export controls introduced in Oct. 2022 are pushing the center of gravity for chip sector investments away from China. The Japanese market—host to some of the world's most advanced chip tool manufacturers—has long been the most prominent foreign supplier to Chinese chipmakers, but is increasingly [investing](#) in operations closer to non-Chinese customers. Although not taking effect for five years, Section 5949 of the FY 2023 National Defense Authorization Act will only amplify this trend. [Section 5949](#) prohibits the U.S. Government from entering into or extending contracts with companies to procure electronic parts, products, or services, including semiconductors, from three giant Chinese chip firms—including **SMIC**, China's largest chipmaker.

TRADE WAR

NIKKEI Asia

U.S. chip tool makers eye Southeast Asia as China business shrinks

Export controls drive shift as semiconductor industry suffers demand slump



Threats & Regulatory Compliance

- **Uyghur Forced Labor Prevention Act:**

- **UFLPA may impact U.S. imports of Vietnamese solar panels.** Vietnam-based exporters of solar panels to the U.S. are reportedly concerned some industries in Vietnam may be importing, sometimes unwittingly, raw material from Xinjiang, or might find it hard to prove they were not doing so. Global production of polysilicon, a key material in solar cells, is primarily concentrated in Xinjiang ([Reuters](#)).

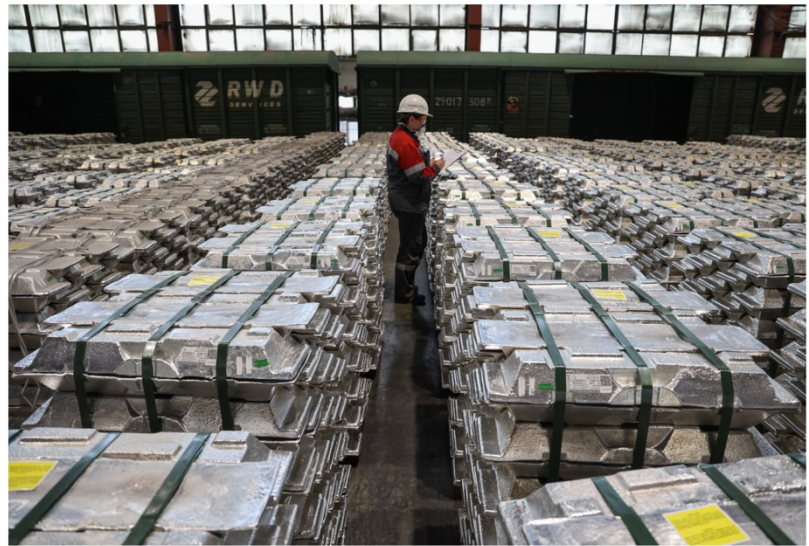
EXIGER INSIGHT: As Reuters notes, Xinjiang-origin polysilicon in Vietnam-sourced solar panels could significantly affect the U.S. market for solar panels, which imports an estimated 80 percent of its total panel supplies from Vietnam and other Southeast Asian countries.

U.S. Customs and Border Control expands UFLPA enforcement to include polyvinyl chloride products. CBP is reportedly detaining PVC products (e.g., vinyl flooring) and asking importers to trace these items back to their originating chemicals such as chlorine, carbon, and ethylene ([ST&R](#)).

EXIGER INSIGHT: This new focus comes after last month's newsletter noted expansion of UFLPA scrutiny to aluminum imports (for more on aluminum trade policy, see immediately below). The scope and complexity of the UFLPA—and its implications for U.S.-China trade—only continue to grow. Exiger uses [AI/ML-driven analysis of big data](#) to help affected organizations illuminate their upstream supply chains and identify linkages to forced labor.

- **U.S. mulls 200 percent tariff on Russian aluminum.** Such a policy would effectively end American aluminum imports from Russia, the world's largest aluminum producer after China. Although Russia has historically been a notable source of aluminum for the U.S. market (10% share), imports have dropped to roughly three percent amid uncertainty over possible Ukraine-related sanctions ([Bloomberg](#)).

EXIGER INSIGHT: While metal tariffs of this magnitude are typically linked to anti-dumping measures, this is plainly intended as another blow to the Russian economy—punishment for Moscow's 2022 escalation of its conflict with Ukraine. It's also an opportunity to bolster the diminished American aluminum industry that is operating at only [55 percent](#) of its rated production capacity, significantly below the global average of 88 percent.



A worker inspects bound stacks of aluminum ingots ready for shipping in the foundry at the Sayanogorsk Aluminium Smelter, operated by United Co. Rusal, in Sayanogorsk, Russia, on May 26, 2021. Source: Bloomberg

Cybersecurity

- **U.S. DoD Microsoft Azure cloud-based server revealed terabytes of sensitive information for two weeks.** None of the compromised information was classified, although a [security researcher](#) confirmed the server contained a completed SF-86 security clearance questionnaire and messages between military personnel. The server was vulnerable because a misconfiguration left it with no password ([TechCrunch](#)).

EXIGER INSIGHT: Attacks against government servers containing background information are not new and Azure attacks are getting [more advanced by the day](#). Using search engines for internet-connected devices, such as [Shodan](#), makes it easier for threat actors to discover and exploit poorly secured servers.

- **S4 conference highlights new vulnerabilities affecting critical infrastructure.** During the annual industrial control system (ICS) security conference in Miami, organizations shared recently discovered vulnerabilities and research on how nation-states can compromise operational technology networks ([CyberScoop](#)).

EXIGER INSIGHT: Attacks on industrial control systems (ICS), which underpin critical infrastructure, pose a high potential for destructive consequences. But how should enterprises and the government decide what to prioritize? If everything is critical, nothing is critical. At the S4x23 conference, Exiger's [Munish Walther-Puri](#), a cyber risk expert, presented a framework for thinking about critical services, different from the conventional sector approach. Speaking from his experience working for the City of New York, he instead [urged](#) attendees to focus on services, impact, and scale to gauge levels of importance for a society.

Rethinking what's "critical"

Another change advocated by Munish Walther-Puri, senior director of critical infrastructure at Exiger and former director of cyber risk for New York City's Cyber Command, is to reduce reliance on the term critical infrastructure.

"The word 'critical' is both clear and confusing," he told S4 attendees. "It is clear because we know it means 'the most important.' It is confusing because it gives us no help whatsoever to figure out what's most important."

- **Hackers shut down North American Dole production plants.** Grocery shoppers noticed the effects of the ransomware attack—in the form of unstocked Dole products—only two weeks after an unidentified threat actor slowed production at Dole's four domestic processing plants. The company is working with law enforcement and third-party cybersecurity experts to contain the threat and identify the attack's source ([CNN](#)).

EXIGER INSIGHT: Ransomware has been leveraged against the food and agriculture sector in [other headline-grabbing attacks](#) over the past few years. Governments have taken notice and are increasingly treating the sector as a key part of critical infrastructure.

- **UK coordinates with U.S. to sanction seven Russian ransomware actors.** The Russian nationals, attributed to ransomware strains such as Conti, Ryuk, and Diavol, have had their assets frozen in response to attacks on universities, hospitals, and government agencies ([UK Government](#)).

EXIGER INSIGHT: This coordinated campaign between the U.S. and UK presents a new tool to police ransomware actors, who can obfuscate their association with attacks and switch between jurisdictions when authorities are closing in.

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ABOUT EXIGER

Exiger is revolutionizing the way banks, corporations, and governments manage risk through its combination of practical expertise, award-winning technology, and process excellence. In recognition of the growing volume and complexity of data and regulation, Exiger is committed to creating a more sustainable compliance environment through its holistic and innovative approach to problem solving. Powered by DDIQ and Insight 3PM, Exiger takes an analytics-led, technology-enabled approach to everything we do.

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