

DEVELOPMENTS IN THE FIELD

Automotive Supply Chain Links to the Uyghur Genocide: Reversing a Growing Crisis

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Abstract

Since 2017, the government of the People's Republic of China has heightened repression of Uyghur and other minorities in the Xinjiang Uyghur Autonomous Region (XUAR). Repressive tactics involve family separations, mass incarceration, forced labour and cultural indoctrination. This has been accompanied, in recent years, by an aggressive industrialization of the area which relies heavily on the forced labour of Uyghur and other minorities. The automotive industry, in particular, has expanded into the region. This piece describes China's push of heavy industry into XUAR and recent findings by Sheffield Hallam University and NomoGaia of abuses against Uyghurs and their links to the global automotive sector. It then explains the methodology employed by NomoGaia in its co-authored report with scholars from Sheffield Hallam University for linking abuses in the XUAR to global brands, and proposes a way forward for the industry.

Keywords: Automotive; electric vehicles; just transition; supply chain due diligence; Uyghur; Xinjiang Uyghur Autonomous Region (XUAR)

I. The Rise of Heavy Industry and Abuses Against Uyghur People in the XUAR

The automotive sector is massive in the global economy, with 22 car companies on the Fortune 500 list.¹ The main materials comprising cars include steel, aluminium, glass and plastics. China is the world's largest producer and exporter of all of these, as well as the world's largest producer of synthetic rubber, used for car tyres.² Electric vehicles (EV) are also heavily reliant on copper, nickel, cobalt and lithium which, although not largely mined in China, are shipped to China for processing and EV battery parts manufacturing. As of 2020, China hosts 76 per cent of the world's EV battery cell manufacturing, and Chinese companies own and operate many of the manufacturing facilities outside its borders.³ In short, China currently dominates every aspect of car parts production,

¹ Pan Eu Jin, 'BYD Makes Fortune 500 List for the First Time – Among Seven Chinese Car Companies to Make the 2022 List', *Paul Tan Automotive News* (10 August 2022), <https://archive.ph/wip/aMu9U> (accessed 16 March 2023).

² Research and Markets, 'Global and China Synthetic Rubber Industry Report 2022 Featuring 19 Key Synthetic Rubber Companies', *Business Wire*, Dublin (30 March 2022), <https://archive.ph/YgF1K> (accessed 16 March 2023).

³ The White House, 'Building Resilient Supply Chains, Revitalizing American Manufacturing, and Fostering Broad-Based Growth', 100-Day Reviews Under Executive Order 14017 (June 2021), 117.

including in the EV sector, and exports 10 per cent of the world's car parts to global markets.⁴

In recent years, China has pushed heavy industry westward, into the Xinjiang Uyghur Autonomous Region (XUAR), where culturally distinct peoples are under existential threat. 'Xinjiang', which simply means 'the new territory' in Mandarin, is a 643,000 square mile (1.66-million square kilometre) region claimed by China under post-World War II settlements. While China has been colonizing the region for decades, it began a more vicious social crackdown in 2017, which has been characterized by the mass incarceration of Uyghurs and other ethnic Turkic peoples, as well as mass sterilizations, family separations, ubiquitous surveillance, and cultural indoctrination.⁵ The United Nations (UN) has identified these conditions as potentially rising to the level of 'crimes against humanity'.⁶

The industrial shift serves to consolidate the colonization of the XUAR, relying on conscription of working-age Uyghurs into forced labour in conditions of surveillance and social isolation. Uyghurs and other Turkic peoples who resist job placements or indoctrination are subjected to incarceration in a vast network of prisons and re-education camps spread across the region, where an estimated one million ethnic Uyghurs and other native inhabitants are being detained.⁷ Often, 'satellite factories' are built adjacent to these camps, with detainees forced to work for industry as a form of social rehabilitation. The industrial expansion and large-scale abuse and exploitation occurring in the XUAR aim at the eradication of cultures that do not resemble the majority, Han, culture in China. This threat is globally important because China's decision to shift global industry into the region links global companies and consumers to the abuses.

II. Abuses to Uyghurs Embedded in the Global Automotive Sector

Because of the place the XUAR now occupies in the global automotive supply chain, human rights abuses against Uyghur people are now embedded and pervasive in the automotive sector. Every major car maker is linked to abuses in the XUAR today, through parts or materials sourcing (or both). Recent research undertaken by scholars at Sheffield Hallam University and NomoGaia has confirmed many of the atrocities committed against Uyghurs described above, and has linked them to the automotive supply chains of global brands.⁸ This section gives examples of some of these findings.

Mined Ore

Copper, zinc, polysilicon and other mined materials are critical alloying materials and inputs for passenger cars. Two of the largest mine operators in the XUAR are Xinjiang Nonferrous Metals Company (XNMC) and Zijin Mining, which mine and refine these metals.

⁴ Daniel Workman, 'Automotive Parts Exports by Country', *World's Top Exports* (2022), <https://www.worldstopexports.com/automotive-parts-exports-country/> (accessed 16 March 2023).

⁵ Adrian Zenz, 'Sterilizations, UDs and Mandatory Birth Control: The CCP's Campaign to Suppress Uyghur Birthrates in Xinjiang' (Washington, DC: The Jamestown Foundation, June 2020); 'The Nightmare of Uyghur Families Separate by Repression' Index Number: ASA 17/3798/2021 (Washington, DC: Amnesty International, March 2021).

⁶ Michelle Bachelet, 'OHCHR Assessment of Human Rights Concerns in the Xinjiang Uyghur Autonomous Region, People's Republic of China,' Geneva: OHCHR (31 August 2022).

⁷ Adrian Zenz, "'Thoroughly Reforming Them Towards a Healthy Heart Attitude' – China's Political Re-Education Campaign in Xinjiang' (2018) 38 *Central Asian Survey* 102, 128.

⁸ Laura T Murphy, Kendyl Salcito, Yalkun Uyulol, Mia Rabkin, Anonymous, *Driving Force: Automotive Supply Chains and Forced Labor in the Uyghur Region* (Sheffield, Sheffield Hallam University and NomoGaia, 2022), <https://www.shuforcedlabour.org/drivingforce> (accessed 15 March 2023).

XNMC is deeply entrenched in Uyghur abuses. Supporting government ‘poverty alleviation’ programs, its XUAR subsidiary has transferred the lands of local households to other firms, marking the newly landless farmers as ‘surplus labour’. It has also forced Uyghurs to share their homes with Han officials who surveil and indoctrinate them from within their own homes.⁹ XNMC has also moved Uyghurs into involuntary work at satellite factories and remote mine sites for anti-extremism ‘training’.¹⁰ XNMC’s clients include global shipping giant Trafigura, as well as an array of car parts manufacturers, motor manufacturers, automotive electronic components manufacturers, and cable and wiring makers.¹¹ In a direct link to the western automotive industry, XNMC sells metal to Xinjiang Zhonghe (‘Joinworld’), which supplies aluminium alloys to Minth group, the manufacturer of car decals and decorative pieces for every major car maker in the world.¹²

Zijin, a global mining company with operations across several continents, holds 75 per cent of China’s domestic copper reserves and operates, among other assets, the Ashele Copper Mine in Altay, northern XUAR. Ashele has ‘absorbed’ over 800 Uyghurs into forced labour to ‘effectively change the traditional ideology of farmers and herdsmen’.¹³ Zijin sells its copper to global traders including Transamine Trading, Trafigura, Gerald Metals and IXM, who sell it forward to electronics makers (and automotive electronics makers) worldwide.¹⁴

Processed Material

The world’s largest steel producer, Baowu Steel, operates in XUAR through its subsidiary Xinjiang Bayi Iron and Steel Co. Ltd (Bayi). Bayi is deeply entrenched in forced labour in XUAR, both in its smelters and in satellite factories it has erected in rural villages. In 2022, Bayi claimed to have ‘paired’ 4,581 Uyghurs with Han employees to ‘Hanify’ the homes of local people.¹⁵ Bayi directly ‘absorbs’ forced labourers into its workforce across its XUAR operations through an array of government programs. During the COVID-19 lockdowns, it housed thousands of Uyghur workers in tents to maintain production in its Ürümqi factory, in the capital of the XUAR. In 2021, Bayi announced that 57 southern Uyghurs were ‘transferred’ to steel working jobs in Ürümqi, hundreds of miles from their homes.¹⁶ One of Bayi’s prominent products is ‘ultra low-carbon steel’, produced in its Ürümqi facility and marketed to carmakers worldwide. Baowu Steel, on its part, exports steel to Toyota, GM, Mitsubishi supplier Metal One, and an array of US and Canadian coil manufacturers.¹⁷

⁹ Cheng Hui, ‘脱贫路上新疆有色哈图金矿携手相扶、倾囊相助’ [On the road to poverty alleviation, Xinjiang Nonferrous Hatu Gold Mine joins hands and helps], *China Nonferrous Metals News* (19 October 2020), <https://archive.ph/NAMwG> (accessed 17 April 2023). In Murphy et al, note 8.

¹⁰ Detailed references in Murphy et al, note 8.

¹¹ Xinjiang Nonferrous Group, ‘新疆有色金属工业(集团)有限责任公司2021年度第一期中期票据募集说明书’ [Xinjiang Nonferrous Metals Industry (Group) Co., Ltd. Prospectus for the 2021 first phase medium-term notes], *Shanghai Clearing House* (8 August 2021), <https://archive.md/9ekNy> (accessed 17 April 2023).

¹² ‘Global Customers’, Minth website, http://www.minthgroup.com/?page_id=2119&lang=en (accessed 6 December 2022).

¹³ ‘农民转身变工人 哈巴河县农民就业进入新时代’ [Farmers turned into workers, farmers in Habahe County have entered a new era of employment], *Tianshan News* (15 March 2012), <https://archive.ph/ugJSH> (accessed 17 April 2023).

¹⁴ Murphy et al, note 8.

¹⁵ ‘预告】八一钢铁2021年度业绩说明会将于5月9日在全景网举办’ [Bayi Steel’s 2021 annual performance briefing will be held on May 9], *Panorama Network* (8 May 2022), <https://archive.ph/bfdaA> (accessed 17 April 2023).

¹⁶ Xinxing Casting Pipe Co., ‘新兴铸管股份有限公司2021年度社会责任报告’ [2021 social responsibility report of Xinxing Casting Pipe Co.] (April 2022), <https://archive.ph/Cffun> (accessed 17 April 2023). In Murphy et al, note 8.

¹⁷ Shipping information from Panjiva, ‘Toyota sources crucial steel product from China’s Baowu’, *Nikkei Asian Review* (13 July 2020), <https://archive.ph/3cwHw> (accessed 17 April 2023). In Murphy et al, note 8.

The largest aluminium smelters in the XUAR are co-owned by the Xinjiang Production and Construction Corps (XPCC), an entity sanctioned by the US government for its involvement in Uyghur abuses. One of these smelters, Xinfu Group Xinjiang Branch,¹⁸ produces everything from sheet and foil to finished car parts and has vast reach into global supply chains. A Xinfu Group subsidiary is partnered with Nanjing Yunhai Special Metals Co., whose products are exported to automotive manufacturers worldwide, including Tesla.¹⁹

Abuses are not limited to metals producers. PetroChina's XUAR subsidiary Dushanzi Petrochemical established a satellite factory in southern XUAR and coerced villagers into industrial work.²⁰ Dushanzi rubber is used in Bridgestone, Michelin and Pirelli tyres.²¹

Manufacturing

Guanghui Group, one of XUAR's largest companies, produces cars' interior floor mats and seat covers. In 2017, Guanghui Group 'received' and 'resettled' 100 'surplus rural laborers' from Hotan and Kashgar, during one of the early government initiatives to transfer 100,000 minoritized citizens out of the southern XUAR and into work and receive 'discipline-related' training.²² In 2020, Guanghui announced that it had 'driven 386 rural women in the village to find employment' in the company's poverty alleviation industrial park.²³ The Guanghui operations in southern XUAR include at least one facility that has been documented to be directly engaging with forced, detained workers.²⁴ Guanghui is one of China's largest BMW dealers.²⁵

Lead-acid battery manufacturing has also shifted into the XUAR, carrying environmental and health risks alongside forced labour concerns. Lead emissions affect air, soil and water, and carry serious risks to health when breathed, ingested or consumed, for example, through affected crops. The World Health Organization holds the position that there is 'no safe threshold of lead exposure'.²⁶ Camel Group, the first car battery manufacturer to set up operations in the XUAR,²⁷ has faced sanctions for 'frequent blood lead incidents' at its

¹⁸ 'Base Problem: Forced Labor Risks in China's Aluminum Sector', *Horizon Advisory* (April 2022), <https://www.horizonadvisory.org/backtobasics> (accessed 17 April 2023).

¹⁹ 'Sea of Clouds: Supply of Magnesium Alloys to Tesla's First-Tier Suppliers', *SMM News* (6 January 2022), <https://news.metal.com/newscontent/101014033/sea-of-clouds:-supply-of-magnesium-alloys-to-teslas-first-tier-suppliers/>. In Murphy et al, note 8.

²⁰ '独山子石化：驻村帮扶用真情精准扶贫见成效' [Dushanzi Petrochemical: Village-based assistance and targeted poverty alleviation achieves results], *NetEase Home* (14 October 2020), <https://archive.ph/0XUi7>. In Murphy et al, note 8.

²¹ '独山子石化：遥远的地方不遥远 冲出一隅影响益大' [Dushanzi Petrochemical: Far away, not far away – Emerging from out of sight to make a positive impact], *China News Service Xinjiang* (6 August 2021), <https://archive.ph/q5lSH>. In Murphy et al, note 8.

²² '第十三届人民企业社会责任奖 候选企业：新疆广汇集团' [The 13th People's corporate social responsibility award candidate company: Xinjiang Guanghui Group], *People's Daily Online* (12 November 2018), <https://archive.ph/2WAoR>. In Murphy et al, note 8.

²³ '北京援疆扶贫车间托起群众致富梦' [The Beijing Aid Xinjiang Poverty Alleviation Workshop supports the people's dream of becoming rich], *People's Daily Online – Xinjiang Channel* (3 November 2020), <https://archive.ph/1RGhj>. In Murphy et al, note 8.

²⁴ '和田西宝汽车用品有限公司' [Hetian Xibao Auto Products Co., Ltd.], *Aiqicha*; '工厂建在贫困村 就近就业助脱贫' [The factory is built in a poor village to help people get rid of poverty], *Xinjiang Daily* (19 March 2019), <https://archive.ph/4QgTk> (accessed 17 April 2023).

²⁵ '广汇汽车—新疆天汇' [CGA – Xinjiang Tianhui], *Dajie Workplace Information Network*, <https://archive.ph/oGV11>; 'Contact Us', Guanghui Group website, <https://archive.ph/HENyA> (accessed 17 April 2023).

²⁶ World Health Organization (WHO), 'Lead Poisoning,' Fact Sheet (11 October 2021).

²⁷ '新疆最大废旧铅酸蓄电池加工项目开建' [Construction starts on Xinjiang's largest lead-acid battery waste processing project], *China Nonferrous Metals Industry Network* (14 September 2016).

facilities.²⁸ These put both Uyghur workers handed over by the Government and the nearby Uyghur communities at risk. Although Camel has acknowledged that no residential areas should be within a 1 km radius of its facility, Camel has worker dormitories directly on the smelter property.²⁹ Camel's XUAR operation has never produced credible health monitoring data, so the risks to workers and local communities are not known. Camel Group lists Volkswagen, Ford, Audi, General Motors, Honda, Nissan, Jeep, Hyundai, Kia, Peugeot, Citroen and Volvo among its clients.³⁰

III. Methodologies for Linking Global Supply Chains to Uyghur Human Rights Abuses

Because car companies do not make their supply chains public, researchers began their investigation of supply chain risks from the geographies of risk, tracing the links from suppliers to brands, rather than from brands to successive tiers of suppliers.

The process began with commodity selection. As cars are 60 per cent steel and 10 per cent aluminium by weight, these were natural commodities for focus. To narrow the scope, researchers examined only the largest companies producing these commodities worldwide and in the XUAR. Researching the companies required translation of company names into Mandarin. Google Translate can often identify or approximate the Mandarin version of Chinese companies' English names, and Chinese financial reporting websites Sina Finance (finance.sina.com.cn) and SSE (sse.info) provide heightened clarity on company names, subsidiaries, and, often, corporate websites.

Next, the company and subsidiary names can be word-searched in Mandarin alongside the characters for XUAR (新疆). This extremely basic search continues to be effective for many companies with links to the region. Additional useful search terms include 'surplus labour' (剩余劳动力), 'labour transfer' (劳动力转移), and 'poverty alleviation' (扶贫).

These word searches typed into Google can also be run on corporate websites, market reporting websites where corporate financial documents are posted (e.g., Sina Finance), state media sites and environmental agency websites where environmental monitoring reports are listed. State media and corporate reports are the dominant sources linking companies to harms committed against Uyghurs, because for years government authorities and companies proudly touted their roles in 'poverty alleviation' and 'deradicalization' of Muslims in the XUAR. They often show images, videos and other depictions that, with interpretive support from ethnic minorities who have fled China, can reveal many human rights violations.³¹ Satellite imagery can confirm proximity of satellite factories to prison and detention facilities, indicating a likelihood of forced labour usage.

Verifying linkages to western brands may involve additional steps. First, cross-checking shipping records for suppliers and buyers, accessible through Panjiva Market Intelligence or other shipping log subscription services, can reveal links. Often suppliers will give specific descriptions of their products that directly match the descriptions on purchasing companies' procurement logs. Additionally, suppliers frequently name their largest

²⁸ Lei Chuang, '血铅事件频繁爆发 骆驼集团因污染被责令整改' [Frequent blood lead incidents break out, Camel Group ordered to rectify due to environmental pollution], *Yangtze River Commercial Daily* (23 June 2011).

²⁹ '蓄电 池项目环境影响报告书' ('Camel Group Xinjiang Storage Battery Co. Ltd. Annual Production of 4 million kWh Battery Project Environmental Impact Report') (2017), section 3.17.

³⁰ Camel Group, 'About – Cooperative Partners,' Camelbatt.com, <https://archive.ph/zmLb2>; Camel Energy US, 'Home', Camelenergyus.com (accessed 17 April 2023).

³¹ For example, Ansteel, the world's second largest steelmaker, does not operate in XUAR but it funds a boarding school for small children in XUAR. See Gao Han and Shang Sheng, 'The 500-Mile Journey to the Spring Together – The Change of Education in the Pamirs', *Xinhua News Agency* (19 March 2022), <https://archive.ph/2yyBb> (accessed 5 April 2023). Uyghur colleagues are resolute that there is no cultural history of sending children away for early education, and multi-generational households remain preferred by many Uyghurs. In Murphy et al, note 8.

buyers in financial filings for publicly traded companies on US, Chinese (including Hong Kong) and other stock exchanges. Supplier and buyer marketing materials can also often confirm the links. Joinworld, for example, names Minth (mentioned above) as a direct buyer in its online advertising.³² Minth, on its website,³³ confirms Joinworld is one of its largest suppliers.³⁴

IV. What Needs to Change

Current approaches to supply chain due diligence in the automotive sector are deficient. Companies currently use software to track supplier questionnaires across their Tier 1 suppliers. They sometimes supplement this with desk-based screening processes, focusing again on direct purchases without generally capturing the full supply chains. The effort is predominantly undertaken in the language of the parent company or English. The business community has often expressed scepticism that more serious supply chain due diligence is possible or desirable.³⁵

For car companies (and companies in general) to meet their human rights responsibilities in supply chain due diligence, new approaches are needed.³⁶ Procurement departments that source from China need Mandarin language support in their supply chain due diligence efforts; they need resources to visit high-risk suppliers and validate the claims in supplier questionnaires. Supply chain due diligence needs to cover the full production chain of inputs, including processing and mining. When those chains have links to XUAR, the links need to be eliminated. There is no ability to undertake adequate supply chain due diligence in XUAR, and the risks are too great to rely on the promises and attestations made to procurement officers. This level of seriousness necessitates mandates from the C-Suite to prioritize human rights risks in selecting trusted suppliers. Procurement has historically been a department focused on efficiency and cost-cutting; the Uyghur genocide mandates that this corporate function (as all other corporate functions) become embedded in the business and human rights agenda.

Competing interest. The author declares none.

³² Xinjiang Zhonghe Alloy Material Company, 'About Zhonghe,' marketing material, <http://www.joinworld.com/images/shouce-hejin.pdf> (accessed 17 April 2023).

³³ 'Global Customers,' Minth website, http://www.minthgroup.com/?page_id=2119&lang=en (accessed 17 April 2023).

³⁴ '新疆众和2021年度暨2022年第一季度业绩说明会' [Xinjiang Joinworld 2021 annual and 2022 first quarter results briefing], *SSE Info* (25 April 2022), <https://archive.md/mn4Xh> (accessed 23 April 2023).

³⁵ Penelope Simons and Audrey Macklin, *The Governance Gap: Extractive Industries, Human Rights, and the Home State Advantage* (London: Routledge, 2014); David Monciardini, Nadia Bernaz and Alexandra Andhov, 'The Organizational Dynamics of Compliance with the UK Modern Slavery Act in the Food and Tobacco Sector' (2021) 60:2 *Business & Society* 181, 191. Stefan Schaper and Irene Pollach 'Modern Slavery Statements: From Regulation to Substantive Supply Chain Reporting' (2021) 313 *Journal of Cleaner Production*, 127872, 127884; Galit Sarfaty, 'Global Supply Chain Auditing', in Daniel Sokol and Benjamin van Rooij (eds.), *Cambridge Handbook of Compliance* (Cambridge: Cambridge University Press, 2021) 977–988.

³⁶ This is now critical for companies importing into the US if they are to meet the US Government's 'rebuttable presumption' that goods made in whole or part in Xinjiang are inherently subject to import bans under the Uyghur Forced Labor Prevention Act.