BEYOND HOT AIR

NICKEL MARKET FLUCTUATIONS AND LOCAL IMPACTS IN NEW CALEDONIA-KANAKY

By Jean-Louis Thydjepache, Head of Community Relations, Koniambo Nickel SAS (KNS); Matthias Kowasch, University College of Teacher Education Styria (AUT) (as of 1 October 2024: Professor of Human and Economic Geography, Sorbonne University, Paris, FR) & Inland Norway University of Applied Sciences (NOR); Simon P.J. Batterbury, Professor of Environmental Studies, Geography, Earth and Atmospheric Sciences, University of Melbourne (AUS)

The global nickel market in transformation

Nickel-bearing ores are currently mined in more than 25 countries around the world. The "first use" of nickel refers to its transformation into intermediate products (e.g. a concentrated form called nickel matte), which are then processed further in product manufacturing. According to the Nickel Institute (2024), 65% of processed nickel is used for stainless steel, 17% for batteries, 5% for nickel-based alloys, 5% for plating, 3% for steel alloys, 1% in stainless steel foundries, 1% going to alloy smelters, and 2% for other uses. But nickel is also "essential to a wide variety of clean energy technologies: geothermal, electrical vehicle batteries, hydrogen, hydro, wind, and solar power" (Black, 2024). The world is currently facing strong demand for nickel, due to these energy, digital and mobility transitions, particularly for increasing production of batteries and electric vehicles (EVs). Nickel is considered a strategic and critical raw material because it is also used in the aerospace and defence sectors.

Nickel is on the European Union's (EU) list of critical raw materials (CRMs), which in 2024 includes a total of 34 CRMs, from bauxite to vanadium (EC, 2023). In recent years, to meet the growing demand from European industries for CRMs, the European Commission has entered into strategic partnerships with a number of countries, including Argentina, Canada, Greenland and Zambia. The latest memorandums of understanding were signed in 2024 with Rwanda, Norway, Uzbekistan, Australia and Serbia (EC, 2024). New Caledonia, on the other hand, is not among these partnerships.

The massive concentration of nickel ore extraction to Indonesia in recent years (Fig. 1) has changed the market and regional development opportunities in other producer nations, including in New Caledonia-Kanaky (NC-K). In 2022, Indonesia accounted for 49% of the world's nickel production (WMD, 2024).

There are a number of reasons for the high concentration of mining in Indonesia today (Kyunghoon 2023; Pantz 2024): a) labour is cheap; b) there are measures to protect Indonesia's mining and metallurgy industry, for example the export of raw nickel ore was banned in 2020, in favour of developing the country's own processing capacities c) there are fewer safety measures and environmental regulations than in, for example, European countries; and d) energy costs are low, which is of major importance in the sector. Kyunghoon (2023) notes that "the Indonesian government is trying to build an electric vehicle production value chain throughout the country by leveraging its position as a major nickel ore miner and metal producer". In 2021, the country already had 25 nickel processing

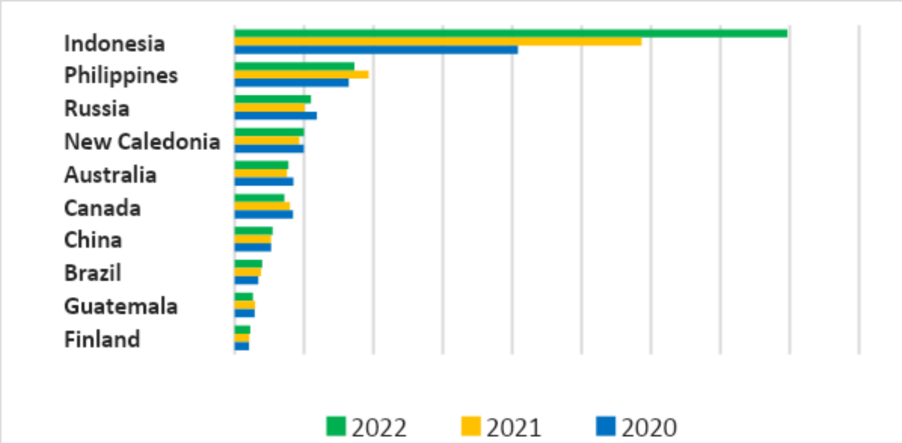

Figure 1: Nickel ore production between 2020 and 2022 – comparison by country. Source: WMD, 2024

plants, and this number was set to double (*ibid.*). The outcome has been strong economic pressure on the mining industry in other producer countries, as well as concerns about labour and environmental production methods in Indonesia itself.

While Indonesia produces 49% of the world's nickel ores, China contributes only 3% to world supply but consumes 60%. In this global nickel game, Beijing is trying to secure its supply and therefore its consumption of ores. To this end, Beijing is investing in ore processing capacity at home and in Indonesia. Indeed, Indonesia is setting up new processing facilities, focusing mainly on low-grade lateritic nickel, using Chinese technologies. Chinese co-funding is assisting hydrometallurgical processing. Negative environmental impacts are substantial. New Caledonia-Kanaky has already experienced this problem at its Goro Nickel processing plant in the south of Grande Terre, the main island.

Some mines in Indonesia are directly owned by Chinese mining companies. Other owners exist, however. For example, the French company Eramet also owns a mine at Weda Bay on the island of Halmahera. With financial backing from Paris, this company, 27% of which is owned by the French state, is developing a project to build a processing plant next to the mine with its German partner BASF, despite concerns about the respect given to Indigenous communities and environmental damage (Mouterde, 2024).

Increased demand from China and the extraction of nickel ores and their processing in Indonesia and, to a lesser extent, the Philippines, have certainly influenced mining in New Caledonia-Kanaky. In 2023, 53% of New Caledonia's crude ore (in wet tonnes) was exported to China (ISEE, 2024a). We explore whether the development of the nickel sector in Indonesia is responsible for the recent withdrawal of the two Swiss giants, Glencore and Trafigura, from their respective operations in New Caledonia-Kanaky.

Local impacts on the nickel sector in New Caledonia

Nickel was discovered in NC-K in 1853 by the French engineer Jules Garnier. Ore extraction began a few years later, while the first processing plant was inaugurated in 1910. This plant, called "Doniambo", is still operated by Société Le Nickel (SLN), a subsidiary of the French Eramet group. It is in the capital Nouméa in the south of the territory. Since the early 2000s, two other processing plants have been built, trading on high global demand for nickel: Goro Nickel in the south (operated by the Caledonian-Swiss consortium Prony Resources and Trafigura) and Koniambo in the north (operated until recently by the Caledonian-Swiss consortium SMSP and Glencore) (Kowasch and Merlin, 2024). The two Swiss groups, Trafigua and Glencore, have recently withdrawn from New Caledonia-Kanaky, citing poor profits and escalating costs of energy, and wish to sell their shares in the two mining operations. SLN, for its part, is also in serious financial difficulties.

Is the withdrawal of two Swiss companies the result of an economic war waged by Beijing, or other factors? In an article in the *Tribune de Genève* (TdG), Sallier (2024) suggests another: that the withdrawal of these companies is also linked to their inability to master efficient metallurgical processes at their complex plants. Indeed, neither of these companies specialize in the transformation of metal ores. Trafigura is primarily a commodities trader, while Glencore is a trading, brokerage and mining company.

When the Koniambo plant was under the management of Xstrata (a mining company bought by Glencore in 2012), operating costs were expected to break even at $8,000 per tonne, with the condition of running at full capacity. However, despite the fall in nickel prices, nickel is still selling for $18,000 per tonne on the markets today (INSEE, 2024), which should leave a margin for profit. The Koniambo plant has real potential, and should therefore find a buyer. On the other hand, Koniambo Nickel SAS (KNS), the joint venture between SMSP (*Société Minière du Pacifique Sud*) and Glencore, that runs the whole operation, has experienced a number of technical problems in recent years, including furnace repairs in the smelting plant. Despite these issues, in 2023 production increased. While Glencore's departure from this Koniambo plant appears to be for technical and financial reasons, the reasons for Trafigura's departure from Goro (despite the owners signing a deal to supply nickel to Tesla, but refusing to inject new finance in January 2024), are less clear.

To save the ailing nickel industry, in particular the three metallurgical plants, the French government proposed a 'Nickel Pact', based on a report on the future of the nickel industry, published in July 2023 by the General Inspectorate of Finance and the General Economic Council (Requin et al., 2023; NC 1ère, 2024a). It was rejected by the New Caledonian Congress. The Pact stipulated that the three metallurgical operators would undertake to:

- reach their nominal production levels by 2027 (60,000 tonnes per year for SLN, 50,000 tonnes per year for Prony Resources, 45,000 tonnes per year for KNS),
- contain costs and work on their competitiveness,
- not share dividends as long as public support is in place,
- turn to the production of nickel mattes,
- give priority to supplying the European market for electric batteries (NC 1ère, 2024a).

The Pact specifies that, given that Koniambo and Prony Resources would eventually see the arrival of new operators, these commitments 'may be reviewed by the next shareholders, if necessary' (*ibid.*). For its part, the French government should:

- carry out an investment programme to provide metallurgical producers with stable, low-carbon energy at a competitive price without subsidies over a 10-year period,
- set up an energy subsidy mechanism for these companies. But: this subsidy, determined on a plant-by-plant basis, should be 50% co-financed by the New Caledonian government (*ibid.*).

Consequently, the New Caledonian government was expected to contribute to this subsidy, estimated at a whopping 8 billion CFP (€67 million) a year for all three plants, from the second half of 2024. In addition, the New Caledonian government undertakes to:

- draft a law to reform the country's Mining Code to allow 'any exporter of raw ore' to sell to 'any customer' (*ibid.*),
- suspends the legally agreed ability of local authorities to extract rents from mining licences they have issued
- refrain from supporting or initiating legislation that would make mining or metallurgy more onerous.

The Caledonian provinces, for their part, must facilitate company access to mineral deposits. (*ibid*.).

New Caledonia-Kanaky has been convulsed by rioting and protests since May 13, 2024, set off by French electoral reforms, receding chances of full decolonization, and growing dissatisfaction by Kanak youth. The economy is now in a dire state, with many businesses and organisations burned to the ground, compensation payments started for some workers and owners, and massive rebuilding costs, particularly in and around the capital, Nouméa. It therefore seems increasingly unlikely that the New Caledonian government could support energy subsidies for the nickel plants.

Moreover, the Pact is sometimes seen as a new form of colonial control, under which the French State regains control of raw materials and aims to manufacture more electric cars in Europe (Guitton-Boussion, 2024). By contrast, "Kanak people have long claimed authority over the resources extracted from New Caledonia's 33 mines, as part of a broader call for independence from France" (Black, 2024).

The independentists of the FLNKS (*Front de Libération National Kanak et Socialiste)* favour a previously presented 'nickel doctrine' over the 'nickel pact' (Fig. 2). Unlike the 'nickel pact', the doctrine envisages a halt to raw ore exports (except for offshore Caledonian companies) and that New Caledonia (via STCPI, the *Société Territoriale Calédonienne de Participation Industrielle*) should become the majority shareholder in SLN.

In any case, the financial problems of mining operators in New Caledonia-Kanaky and the departure of Glencore and Trafigura are having a serious and direct impact on the New Caledonian economy. The nickel sector is the main engine of economic activity. Although it only contributed 4.1% to New Caledonian GDP in 2017 (it has fluctuated between 3% and 9% over the last ten years), the sector accounted for 91.4% of export values, rising to 93.9% in 2019 (ISEE, 2020; Kowasch & Merlin, 2024). An ISEE study (2020) estimates that the sector accounted for a quarter of all private-sector employees in New Caledonia, including indirect and induced jobs. In the current crisis, the New Caledonian government and the North and South provinces are providing

Figure 2: Banner in the community of Baco in the North Province. Source: Kowasch, 2024

financial assistance to local mining employees (provision for training and reorientation, assistance for social security, bank loans, etc.).

Impacts on Koniambo

The Koniambo project, also known as the “Northern plant” (Fig. 3), has symbolic value to Kanak people. Koniambo was 51% owned by the SMSP (a local mining company owned by the pro-independence North Province) and 49% by Glencore, which officially withdrew from the project in February 2024 (Kowasch and Merlin, 2024). Glencore no longer wished to co-finance a project in which it had invested around US$9 billion, but was losing its money (Turton, 2024), and therefore put its shares up for sale.

Koniambo is not just a processing plant and mine. It anchors the ‘rebalancing policy’ of recent decades, designed to reduce the socio-economic disparities between the north and south of the main island, Grande Terre, whose economy is dominated by the capital Nouméa and its conurbation (‘Greater Nouméa’, which includes the municipalities of Nouméa, Dumbéa, Mont-Dore and Païta). Nouméa is home to around three out of four jobs, a large majority of businesses and 67% of the territory’s total population (ISEE, 2024b). Rebalancing was agreed in the Matignon Accords, signed between the Kanak independence movement, the Loyalist parties and the French state in 1988, and renewed by the Nouméa Accord in 1998 (Batterbury et al., 2020). The Koniambo smelter, a key instrument in this policy, was inaugurated on the Vavouto peninsula in the municipality of Voh in the North Province in 2013, and nickel smelting commenced from ores extracted at the Koniambo massif in the vicinity of the processing plant.

Since the announcement of Glencore’s withdrawal in February, the mine and plant have been under a “hot shutdown”, i.e. the furnaces (and some local jobs) are being maintained so that the plant can resume operations when an investor has been found. Local employees (around 1,200) were still paid, in addition to community subcontractors. From August 31, 2024, the smelter entered ‘cold shutdown’ (NC 1ère, 2024b). The number of employees was firstly reduced to around 200, and will progressively be reduced to 50

Figure 3: The Koniambo plant on the Vavouto peninsula. Source: KNS, 2024

by February 2025. It's the end of an era. If no buyer is found, Glencore will finance complete closure.

While waiting for a buyer for Koniambo, community subcontractors have only had small short-term contracts since February (e.g. SAS Vook, Taa Poa, Vavouto-Koniambo or Sowemar). But from September 1, most of them lost their work. SAS Vook, for example, which is responsible for transport and earthworks, had seven contracts before KNS's operations has been suspended: operating trucks transporting spare parts from Nouméa to Koniambo, construction of platforms at the mine, management of dust, watering and refueling trucks at the smelter, management of the KNS shop on the Vavouto peninsula, and managing coal supplies for the power plant. Since February 2024, a few contracts of limited duration (often 3-4 weeks) have helped to generate some income for 'survival'. Since August 31, SAS Vook started work on the construction of a Shell filling station opposite the Vavouto industrial site (which will replace an existing one in the village of Voh), showing that subcontractors are seeking to diversify their activities and take on contracts outside Koniambo and the mining sector.

STMK (Fig. 4), a customary enterprise that works on water management at the mine, has no plans to take on any other contracts outside Koniambo, nor has it ever had any. It's 'impossible', said its manager in an interview on August 13, 2024. Since February, it has had odd jobs to help pay its employees, but the demobilisation and redundancies began in August. The other subcontracting company managed by the head of STMK, Syorena (Figs. 4 and 5), may be luckier, as it is possible that transportation will still be needed after the Koniambo plant is shut down. The same applies to the company 'Golden', a subcontractor of SAS Taa Poa created in 2019 by the GDPL Taa Ma Pwanefuk in the community of Oundjo, located a few kilometres from the smelter. In charge of safety, Golden, which employs around 20 people at the Vavouto site, will most likely remain after the smelter's cold shutdown. The two other activities that SAS Taa Poa manages itself, namely office cleaning, light industry and managing green spaces, will be scaled back.

Generally speaking, subcontracting is expensive in New Caledonia, which is a handicap compared with competitor countries in the nickel sector. On the other hand, the establishment of a large number of local subcontracting companies, particularly in Kanak communities, could be an asset for the revival of other economic activities outside of mining, since training and knowledge have been acquired.

As of August 2024, three mining companies had expressed an interest in taking over the 49% stake in Koniambo: a European group, and two non-European companies. Discussions are currently underway.

Figures 4 and 5: Subcontractors: STMK and Syorena offices; Syorena coach. Source: Kowasch, 2024

Insurrection in New Caledonia-Kanaky

As we have noted, the background to problems in the nickel sector is an insurrection that has shaken New Caledonia-Kanaky since May 13, 2024, almost certainly diminishing the prospect of finding a buyer for the Northern smelter. The spark was the French government's bill to free up the electorate so that more French citizens could vote in provincial elections. It was passed by the Senate and then the National Assembly in Paris. But the reasons for the unrest, which mainly involved young Kanak from the northern neighbourhoods of Nouméa, run much deeper: the high level of socio-economic inequalities that characterise the country, persistent ethnic inequalities, and a large proportion of Kanak youth who are failing at school and have no job prospects (Ris and Gorohouna, 2017; Perraud, 2024). The French government's failure to listen to the demands of the Kanak pro-independence movement is also an aggravating factor. And some loyalist politicians inflamed the situation by racialising the protests and accentuating the differences between Kanak and Western worlds. The President of the South Province, for example, now advocates splitting up the territory, with larger autonomy for the different provinces (Le Nouvel Obs, 2024).

In addition, there are deep fissures within the pro-independence UC (*Union Calédonienne*) party, whose elected representatives and leaders are being challenged by certain members of a UC cell, the CCAT (*Cellule de Coordination des Actions de Terrain*), who are taking a more radical stance. The latter demanded full sovereignty immediately, rejecting any new agreement with France or any further referendum (Interview in Dumbéa, August 2024). Unlike the previous period of violence, the 'events' of the 1980s, younger people are taking the lead and are resorting to violence because they feel they have no other choice to be heard and to achieve recognition. Since CCAT leaders were sent into detention in France, adding fuel to the fire, there has been less, if any, coordination of actions on the ground including road blockades and setting fire to houses, schools, churches and medical services (George, 2024; Interviews in the North Province, August 2024). According to government information, destruction, looting and fires have cost at least €2.2 billion, with 740 businesses destroyed or damaged (Government of NC, 2024). Given this major economic, social and political crisis, we think there is little chance that the territorial government will also support the nickel sector.

Conclusion

The current uprisings, the considerable increase in nickel production in Indonesia and the Philippines, and soaring energy prices have all had an impact on the situation of the nickel sector in NC-K. The last two reasons have certainly influenced the decision of the Swiss mining groups to close down their operations. While the French President Emmanuel Macron has developed an Indo-Pacific strategy for France in which New Caledonia is central, locally such a strategy is often seen as recolonization (Merle, 2024), especially since the French government perceive the referendum process on the question of political independence as concluded. In this context, the whole nickel sector is in crisis, but in particular, we suggest that the Koniambo project, which has been playing a role in job creation and economic activity well away from the capital and with its "solidarity-based" subcontracting (Kowasch, 2018), should be supported given its geopolitical importance. But solutions for saving the nickel sector without new investors or public subsidy are in very short supply in late 2024.

References

Batterbury, S.P.J., Kowasch, M. and Bouard, S. (2020). 'Bordering' New Caledonia: The ironies of territorial re-ordering and Indigenous economic development. Journal of Political Ecology, Vol. 27, 594– 611. http://doi.org/10.2458/v27i1.23812

Black, S. (2024). Nickel and Dimed: The green metal gamble in New Caledonia. Harvard International Review. May 22, 2024. Online: https://hir.harvard.edu/nickel-and-dimed-the-green-metal-gamble-in-new-caledonia/

EC (European Commission) (2023). Critical Raw Materials. https://single-market-economy.ec.europa.eu/sectors/raw-materials/areas-specific-interest/critical-raw-materials_en

EC (European Commission) (2024). EU and Serbia sign strategic partnership on sustainable raw materials, battery value chains and electric vehicles. July 19, 2024. Press release. Online: https://ec.europa.eu/commission/presscorner/detail/en/ip_24_3922

George, N. (2024). Why is New Caledonia on fire? According to local women, the deadly riots are about more than voting rights. The Conversation, May 16, 2024. Online: https://theconversation.com/why-is-new-caledonia-on-fire-according-to-local-women-the-deadly-riots-are-about-more-than-voting-rights-230199

INSEE (2024). Nickel - pureté de 99,80 % - LME (London Metal Exchange) - Au comptant - Prix en dollars par tonne. Online: https://www.insee.fr/fr/statistiques/serie/010002060

ISEE (2020). L'économie calédonienne forte des retombées du nickel. Online: https://www.isee.nc/economie-entreprises/entreprises-secteurs-d-activites/secteur-du-nickel

ISEE (2024a). Les exportations de nickel et produits métallurgiques. Online: https://www.isee.nc/economie-entreprises/entreprises-secteurs-d-activites/secteur-du-nickel

ISEE (2024b). Résultats du recensement 2019. Online: https://www.isee.nc/population/recensement

Kowasch, M. (2018). Nickel mining in northern New Caledonia - a path to sustainable development? Special Issue « Nickel laterites: from exploration to processing », Journal of Geochemical Exploration 194, 280-290.

Kowasch, M. and Merlin, J. (2024). Conflicts and legitimacy of environmental organisations facing mining projects in New Caledonia-Kanaky. In: Kowasch, M., Batterbury, S.P.J. (eds.), Geographies of New Caledonia-Kanaky. Cham/Switzerland: Springer, pp. 85-102. https://doi.org/10.1007/978-3-031-49140-5_8

Kyunghoon, K. (2023). Extraction et protectionnisme : industrialiser l'Indonésie. Le Grand Continent. En ligne : https://legrandcontinent.eu/fr/2023/08/23/extraction-et-protectionnisme-lindustrialisation-de-lindonesie/

Merle, I. (2024). Le personnel politique en charge du dossier calédonien fait mine d'ignorer le poids de l'histoire. The Conversation, May 22, 2024. Online: https://theconversation.com/le-personnel-politique-en-charge-du-dossier-caledonien-fait-mine-dignorer-le-poids-de-lhistoire-230589

Mouterde, P. (2024). Un projet du groupe minier français Eramet en Indonésie inquiète les associations. Le Monde, March 2, 2024. Online: https://www.lemonde.fr/planete/article/2024/03/02/un-projet-du-groupe-minier-francais-eramet-en-indonesie-inquiete-les-associations_6219607_3244.html

NC 1ère (2024a). Que contient le pacte sur le nickel calédonien en attente de signature ? 26/3/2024. Online: https://la1ere.francetvinfo.fr/nouvellecaledonie/que-contient-le-pacte-sur-le-nickel-caledonien-en-attente-de-signature-1473729.html

NC 1ère (2024b). Koniambo nickel, la fin d'une épopée de près de 50 ans dans le Nord calédonien. 31/8/2024. Online: https://la1ere.francetvinfo.fr/nouvellecaledonie/province-nord/koniambo-nickel-la-fin-d-une-epopee-de-pres-de-50-ans-dans-le-nord-caledonien-1517666.html

Nickel Institute (2024). 04 – First use of nickel. Online: https://nickelinstitute.org/en/about-nickel-and-its-applications/#03-nickel-mining-production

Nouvel Obs (2024). Nouvelle-Calédonie : la cheffe des loyalistes juge « révolu » le projet d'un archipel uni et plaide pour une séparation des provinces. Online: https://www.nouvelobs.com/societe/20240714.OBS91123/nouvelle-caledonie-la-cheffe-des-loyalistes-juge-revolu-le-projet-d-un-archipel-uni-et-plaide-pour-une-separation-des-provinces.html

Perraud, A. (2024). En Nouvelle-Calédonie, « la réduction des inégalités stagne depuis 2009 ». Online: https://www.mediapart.fr/journal/france/260524/en-nouvelle-caledonie-la-reduction-des-inegalites-stagne-depuis-2009

Guitton-Boussion, J. (2024). Nouvelle-Calédonie : un accord « colonialiste » sur le nickel attise les tensions. Online: https://

reporterre.net/Nouvelle-Caledonie-un-accord-colonialiste-sur-le-nickel-attise-les-tensions

Pantz, P.-C. (2024). Géopolitique du nickel : Indonésie/Nouvelle-Calédonie, destins liés? Revue Défense Nationale n° 8721, 34-140.

Requin, A., Nguyen, A., Monteil, S., Le Moine, D., Desfossés, P. (2023). Avenir de la filière du nickel en Nouvelle-Calédonie. Online: https://www.igf.finances.gouv.fr/files/live/sites/igf/files/contributed/Rapports%20de%20mission/2023/VF_250723_Rapport_nickel.pdf

Ris, C. and Gorohouna, S. (2017). Twenty-five years of inequality-reduction policies in school achievement in New Caledonia. Pacific Dynamics: Journal of Interdisciplinary Research 1(2), 232-249.

Sallier, P.A. (2024). Nouméa, les géants suisses du négoce au cœur de la crise. TdG (Tribune de Genève), May 21, 2024. Online: https://www.tdg.ch/nouvelle-caledonie-les-geants-suisses-au-cur-de-la-crise-904088031585

Thydjepache, J.-L. (2024). The impact of the MinErAL from the perspective of a Kanak. In: Rodon, T., Thériault, Keeling, A., Bouard, S., Taylor, A. (eds.), Mining and Indigenous Livelihoods – Rights, Revenues, and Resistance. Routledge, London/New York, pp. 315-316.

Turton, S. (2024). New Caledonia unrest deals further blow to nickel industry. Nikkei Asia, May 24, 2024. Online: https://asia.nikkei.com/Business/Business-Spotlight/New-Caledonia-unrest-deals-further-blow-to-nickel-industry

WMD (World Mining Data) (2024). Production of Mineral Raw Materials of individual Countries by Minerals. Online: https://www.world-mining-data.info/?World_Mining_Data___Data_Section

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Contact authors: JThydjepache[at]koniambonickel[dot]nc, matthias[dot]kowasch[at]phst[dot]at, simonpjb[at]unimelb[dot]edu[dot]au

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Website: miningbeyondhotair.org
Contact: bha.powi@univie.ac.at

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