

# Financial Review 2020

Including Board of Directors' Review  
and Financial Statements

March 24, 2021

**Terrafame**



YEAR 2020 IN BRIEF

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Terrafame's purpose is to enhance low-carbon mobility with responsible battery chemicals. Terrafame's integrated production process – which begins in its own mine and ends with battery chemicals on one industrial site – is a unique and energy-efficient production chain that provides customers with battery chemicals that have a markedly smaller carbon footprint compared to the industry average.

<p><b>Net sales</b></p> <p><b>338.3 MEUR</b></p>	<p><b>EBITDA</b></p> <p><b>23.8 MEUR</b></p>	<p><b>EBITDA-%</b></p> <p><b>7.0 %</b></p>
<p><b>Operating result</b></p> <p><b>-16.9 MEUR</b></p>	<p><b>Own personnel, at year end</b></p> <p><b>870</b></p>	<p><b>All personnel at the site, on average apprx.</b></p> <p><b>2.000</b></p>
<p><b>Equity ratio, %</b></p> <p><b>48.1 %</b></p>	<p><b>LTIFR, own personnel</b></p> <p><b>8.3</b></p>	<p><b>LTIFR, all at the site</b></p> <p><b>9.8</b></p>
<p><b>Nickel, tn</b></p> <p><b>28,740</b></p>	<p><b>Zinc, tn</b></p> <p><b>55,100</b></p>	<p><b>Total mining volume, Mt</b></p> <p><b>35.3</b></p>

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- ▶ The annual production volume of nickel increased by 4.6% from 2019. The annual production of zinc remained at the same level as in 2019.
- ▶ Total production volumes were slightly below the full-capacity levels, which are 30,000 tonnes of nickel and 60,000 tonnes of zinc.
- ▶ Net sales increased by 9.0% from 2019.
- ▶ After a strong first half of the year, a long maintenance shutdown had a negative impact on the EBITDA in the third quarter, but the strong fourth quarter had a positive impact.
- ▶ In 2020, the focus of occupational safety was on developing partner companies' safety culture, and good results were achieved in this respect.
- ▶ Due to coronavirus pandemic, there have been some delays in the installations as well as delivery of materials and equipment in the battery chemicals plant project. The recruitment of production employees for the battery chemicals plant was completed, and the first ramp-up measures were implemented in late 2020. Battery chemicals production is expected to increase the company's net sales from the latter part of 2021 onwards.

## CEO's review

The annual production of nickel was 28,740 (27,468) in 2020, which is a new record for the annual production. After a strong first half of the year, the production volume in the third quarter was markedly lower because of a long and extensive production stoppage. The necessary connections between the battery chemicals plant and the existing production plant were implemented during the stoppage. High production levels were resumed in the fourth quarter, and we set a new quarterly production record. Zinc production was at the same level as in 2019, totalling 55,100 (55,222) tonnes. Total production volumes were slightly below the full-capacity levels, which are 30,000 tonnes of nickel and 60,000 tonnes of zinc.

After a steep decrease in the first quarter, the world market prices of nickel and zinc began to increase in April 2020. Terrafame's net sales increased by 9.0% in 2020 and were EUR 338.3 (310.4) million. After the weak third quarter, the strong fourth quarter was positively reflected in the EBITDA, which increased to EUR 23.8 (32.0) million. Free cash flow from operating activities after sustaining capex for the financial year was positive for the first time in Terrafame's history and increased to nearly 14 million euro thanks to the strong performance in the first and fourth quarters. The coronavirus pandemic did not affect deliveries.

In 2018, we made a strategic decision to focus on battery chemicals production, which is proving an excellent choice. The decision was based on the view that demand for nickel for electric car batteries will increase strongly, and it is growing even more strongly than expected. The number of EV's is predicted to multiply globally over a period of ten years, from around 3.2 million in 2020 to around 30 million in 2030. As a result of the strong growth forecasts, the price difference between our current nickel intermediates and the nickel sulphate used in batteries has already increased since the beginning of the year. The decision to build a battery chemicals plant was also based on the excellent suitability of Terrafame's current production for raw materials for battery chemicals. Analyses conducted by Skarn Associates and CRU in 2020 show that the nickel produced by Terrafame using bioleaching has the smallest carbon footprint among nickel producers globally. This makes Terrafame's current nickel intermediate an ideal raw material for battery chemicals. This is very important for the electric vehicle sector, which focuses on reducing carbon dioxide emissions from transport.

In 2020, we took significant steps towards completing our battery chemicals plant project. Most of the production employees were recruited in 2020, and most of their training was provided during the year. The recruitment process was completed at the end of 2020, and the production personnel now numbers 141.



**Joni Lukkaroinen**

CEO

**Terrafame Ltd**

The battery chemicals plant employs around 170 people in total, including maintenance, laboratory operations and logistics. At the end of 2020, the completion level of the construction project was 90%, and the first ramp-up measures were implemented. Commercial production will start in late spring 2021. Battery chemicals production is expected increase the company's net sales from the latter part of 2021 onwards.

An externally verified life-cycle analysis published in the autumn of 2020 shows that the carbon footprint of the nickel sulphate produced by Terrafame is more than 60% smaller than average. Concern about climate change is increasing among consumers, and electric cars are a significant way to reduce greenhouse gases. Electric cars do not generate emissions in transport. Electricity production is expected to be increasingly carbon neutral in the future, so emissions from the production of electricity for electric cars will also decrease.

Sustainable business operations are at the core of Terrafame's strategy. We seek to operate transparently and earn the trust of our stakeholders. In the summer, we published the company's first sustainability programme (2020–2024). The programme consists of themes that Terrafame and our key stakeholders consider important. Concrete measures have been determined for each theme for a period of five years. We will monitor the implementation of the measures in our sustainability review. In October 2020, Terrafame was approved to join the UN Global Compact initiative. We recognise the comprehensive value of good corporate citizenship, and we want to prove our commitment to sustainable business practices by supporting the ten principles of the Global Compact initiative. We will continue to develop our sustainable business operations in 2021.

Safety is one of our key values. In 2020, the focus of occupational safety was on developing partner companies' safety culture, and good results were achieved in this respect. In 2021, we will continue our systematic work to strengthen our safety culture through a project that aims to develop operating models for our company to ensure the continuous improvement of safety at work and reliable production.

2021 will mark a new era for us as a manufacturer of battery chemicals. We are proud to contribute to the fight against climate change by reducing the carbon footprint of transport through sustainably produced battery chemicals. I would like to thank our stakeholders for the last year and wish everyone a successful 2021!!



## Chairman of the Board's review

In 2020, Terrafame continued the determined work toward its renewed core mission of reducing the carbon footprint of road transportation with responsibly produced battery chemicals.

The company's strategic top project – the battery chemicals plant commencing operations in late spring 2021 – progressed almost on the original schedule and budget despite the exceptional year caused by the COVID-19 pandemic, which is an outstanding achievement from the project organisation considering the circumstances. Battery chemical production will shift the core of Terrafame's operations from mining to being a part of the success story of the Finnish chemical industry.

The electric mobility trend has continued its strong growth despite the pandemic. Once in full production, Terrafame's battery chemicals plant will produce nickel sulphate sufficient for approximately one million electric cars and cobalt sulphate sufficient for approximately 300,000 electric cars annually.

The battery chemicals plant is also of great significance to Finland, which seeks to turn the operations related to the battery value chain into a significant driver of the national economy. Once battery chemical production commences, Terrafame's operations will account for approximately 20% of the gross domestic product of the Kainuu region and employ over 5,500 people in Finland in total. In addition, the new business will significantly impact Finland's exports at the national level. Once the battery chemicals plant reaches full production within two years, its exports will increase to nearly EUR 650 million per year.

The significance of the carbon footprint and traceability of battery chemicals will be highlighted in the future. Terrafame has an edge on sustainability: the carbon footprint of the nickel sulphate produced by the company is over 60 per cent lower than the industry average.

Work safety has been one of Terrafame's main priorities since the company was established. The effective safety culture was also reflected in curbing the COVID-19 pandemic; strict safety measures helped Terrafame to avoid large chains of infection and to ensure the safety and health of its personnel, subcontractors and partners.

Terrafame continued its determined efforts to advance work safety also in 2020, and it remained a focus area of the company's Board of Directors and Management Team. Results continue to improve, and Terrafame and its partners' lost-time injury frequency rate declined considerably in 2020.



**Lauri Ratia**

Chairman of the Board

**Terrafame Ltd**

To further improve the safety results as part of its culture of continuous improvement, Terrafame launched a ROTI work safety and productivity program, in which the company collaborates with an external partner to search for ways to improve safe working practises and production reliability.

Despite the restrictions caused by the pandemic and the longer than usual maintenance stoppage at the end of summer, Terrafame's nickel and zinc production in 2020 almost reached the targets set in the production ramp-up phase.

In August 2020, Terrafame's owners agreed on funding rearrangements and further financing of the company with the aim of ensuring that Terrafame will be able to continue the development of its operations even under an uncertain market situation and finalise the investment project for its battery chemicals plant as planned.

Terrafame's future is looking bright in terms of mineral resources as well; according to the estimates updated in November 2020, the amount of nickel in Terrafame's measured, indicated and inferred mineral resources are 19.4 per cent higher compared to the estimate from 2018. Terrafame's ore reserves and mineral resources will enable operations for several decades to come.

In just half a decade, Terrafame has transformed from a producer of an intermediate metal product into a supplier of sought-after, competitive and responsibly produced specialty chemicals for the battery value chain. Turning challenges into victories has required comprehensive and effective cooperation between Terrafame's staff, the company's extensive partner network, owners and management.

I want to thank all those involved in our common effort for their cooperation and flexibility during the exceptional year 2020, and I wish everyone a safe and successful year 2021.

## Board of directors' review

### Market developments

#### Electric vehicle and battery markets

According to estimates by Rho Motion, global EV sales\* increased by around 50% from 2019 and were around 3.2 (2.2) million units.

In early 2020, EV sales decreased significantly in China because of the coronavirus pandemic. The impacts of the pandemic were reflected on sales in Europe and North America with a delay. However, sales started to recover rapidly in the spring. Towards the end of the year, sales increased particularly strongly in Europe, and their growth continued steadily in China as well.

The sales-weighted average pack size was 52 (56) kWh in December 2020. The average pack size started to decrease in May as a result of a strong increase in the sales of rechargeable hybrids in Europe in particular. The market share of NCM 811 batteries was 8% (5%) in December 2020. The market share of NCM 622 batteries grew globally the strongest and was 28% (14%) in December 2020.

\* including EVs and PHEVs

## Global EV sales

Includes battery electric vehicles (BEV) and and plug-in hybrids (PHEV)

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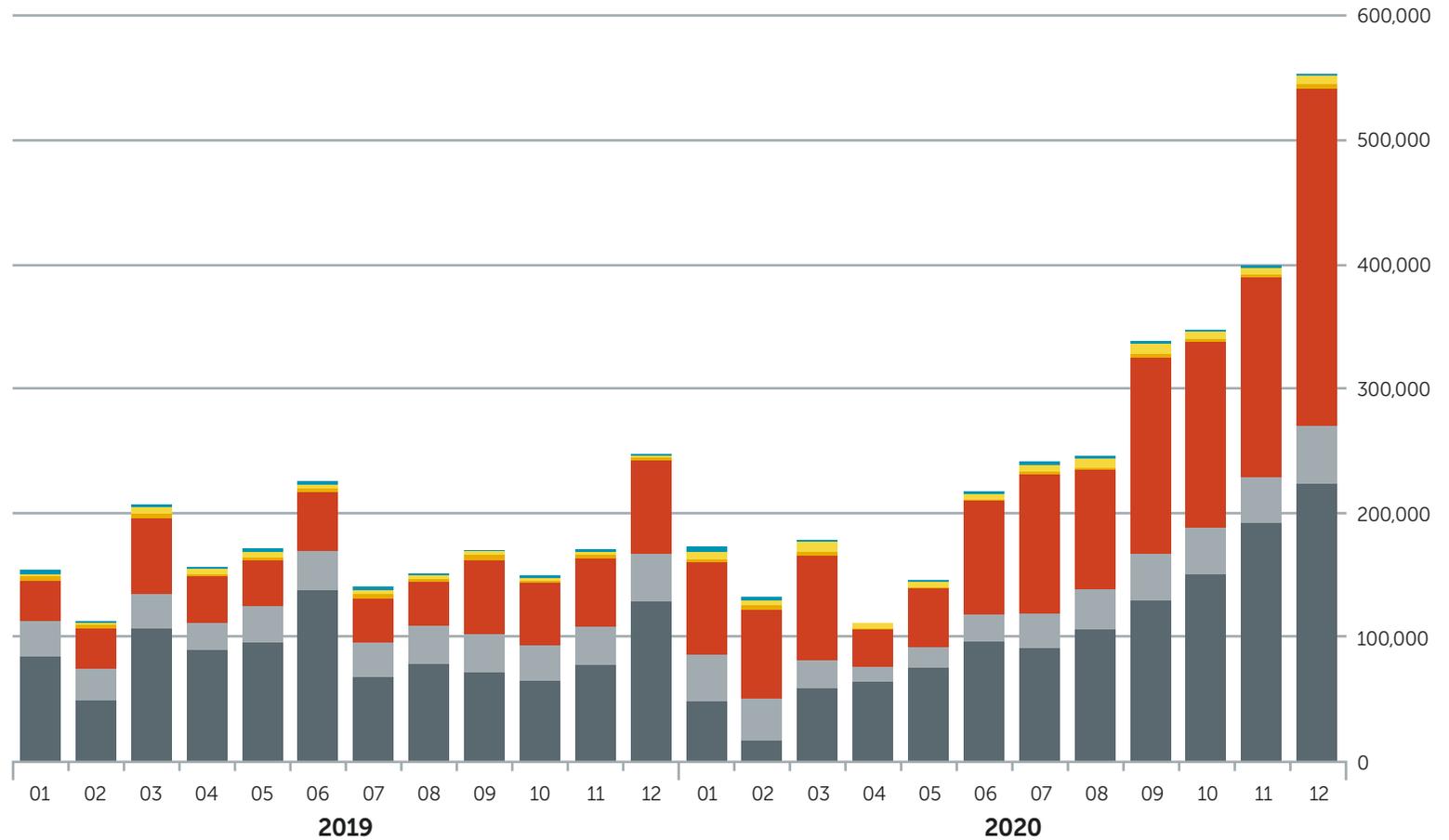
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- China
- USA and Canada
- EU and ETA
- Japan
- Asia Pacific Other
- Rest of the world

Source: Rho Motion



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## Nickel and zinc

The average market price of nickel on the London Metal Exchange in the fourth quarter of 2020 was 15,930 USD/t, which was 12.1% higher than in the third quarter (14,213). The price of nickel in the fourth quarter increased by 3.1% year-on-year (15,450). After a steep decrease in the first quarter of 2020, the price of nickel started to increase as a result of demand for stainless steel in China. The growth of the electric car market contributed to the increase in demand for nickel. However, the full-year average price of nickel on the London Metal Exchange in 2020 was 1.0% lower than in 2019 and was 13,789 (13,926) USD/t.

The average market price of zinc on the London Metal Exchange in the fourth quarter of 2020 was 2,628 USD/t, which was 12.6% higher than in the third quarter (2,335). The price of zinc in the fourth quarter increased by 10.1% year-on-year (2,388). The increase in the price of zinc was affected by the rapid reaction of producers to the impacts of the coronavirus pandemic, as well as the maintenance shutdowns implemented in China. However, the full-year average price of zinc on the London Metal Exchange in 2020 was 11.0% lower than in 2019 and was 2,267 (2,547) USD/t.

The total combined nickel stocks of the London Metal Exchange (LME) and the Shanghai Futures Exchange (SHFE) stood at 267,012 tonnes at the end of 2020. The stocks increased slightly from the end of the third quarter of 2020 (266,608) and significantly compared with the end of 2019 (188,097). The stock level at the end of the year corresponds to demand for around 6 (4) weeks. Zinc stocks stood at 231,304 tonnes at the end of 2020, corresponding to demand for around 1 week (less than 1 week at the end of 2019). The total combined zinc stocks decreased from the end of the third quarter of 2020 and stood at 266,136 tonnes. At the end of 2019, the stocks totalled 79,285 tonnes.



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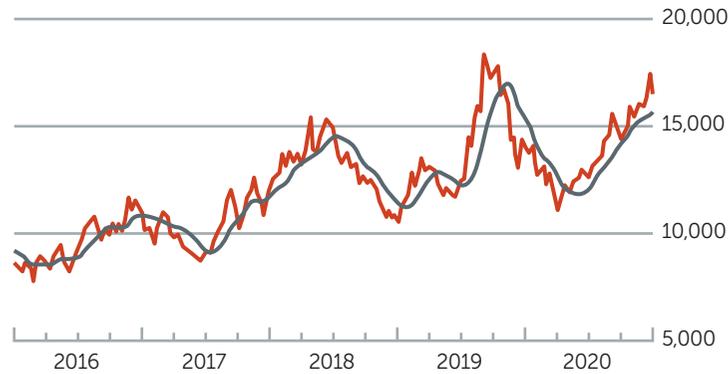
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## Nickel price development (USD/t)

1 January 2016 – 31 December 2020



● Day price on the London Metal Exchange

● Day price on the London Metal Exchange, 90 days average

Data source: Metal Bulletin

## Zinc price development (USD/t)

1 January 2016 – 31 December 2020



● Day price on the London Metal Exchange

● Day price on the London Metal Exchange, 90 days average

Data source: Metal Bulletin

## Exchange rate

The euro strengthened slightly against the US dollar in 2020. The average exchange rate in 2020 was USD 1.14 (1.12). The average EUR/USD exchange rate in the fourth quarter of 2020 was 1.19 (1.17 in the third quarter). In 2019, the EUR/USD exchange rate was 1.11 in the third quarter and 1.11 in the fourth quarter.



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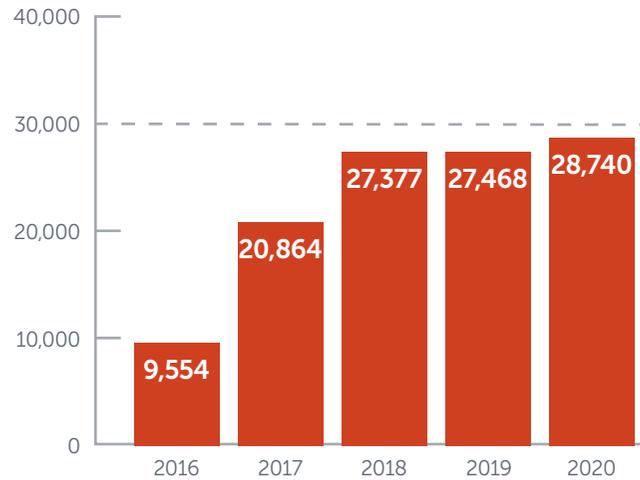
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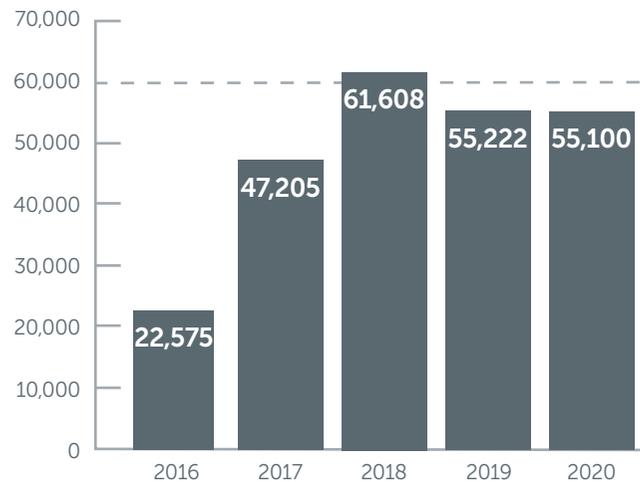
## Production

Nickel production increased by 4.6% year-on-year and was 28,740 (27,468) tonnes. Zinc production was at the same level as in 2019, totalling 55,100 (55,222) tonnes. Total production volumes were below the full-capacity levels, which are 30,000 tonnes of nickel and 60,000 tonnes of zinc.

### Nickel production, tonnes



### Zinc production, tonnes



In 2020, the total mining volume of Terrafame's open pit was 35.2 (32.3) million tonnes.

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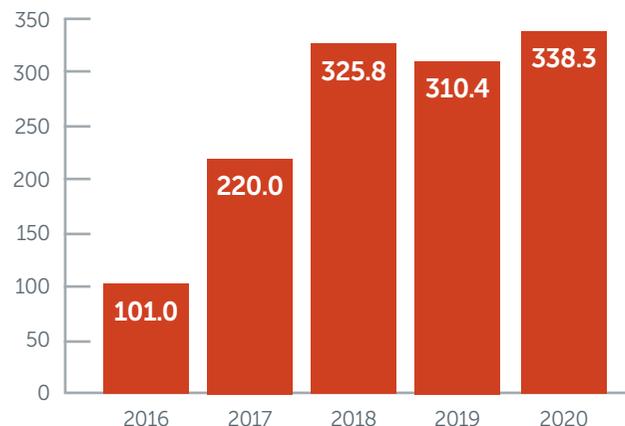
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## Net sales and financial performance

Terrafame's net sales increased by 9.0% in 2020 and were EUR 338.3 (310.4) million. Strong production during the first half of the year and in the fourth quarter was positively reflected in net sales. The coronavirus pandemic did not affect deliveries.

### Net sales, EUR million



In 2020, nickel-cobalt deliveries and the majority of zinc deliveries to end customers were made through Trafigura's sales network.

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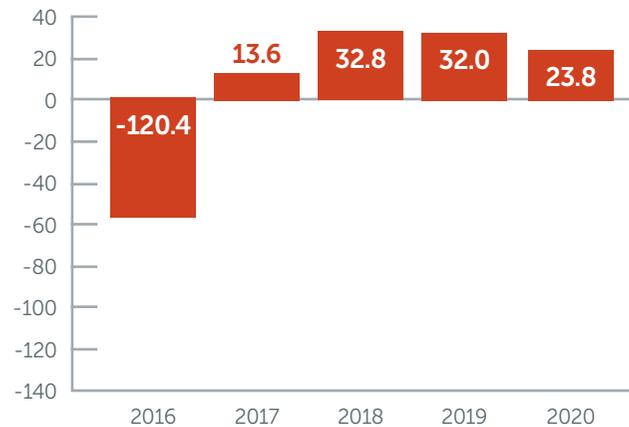
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The full-year EBITDA was EUR 23.8 (32.0) million, or 7.0% (10.3%) of net sales. After a strong first half of the year, a long maintenance shutdown had a negative impact on the EBITDA in the third quarter, but the strong fourth quarter had a positive impact.

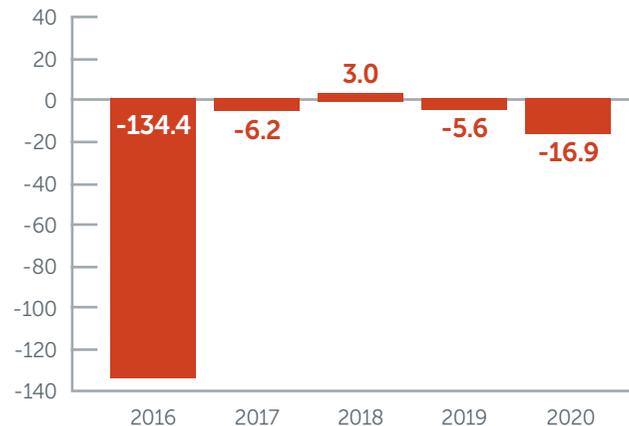
In 2020, the company's depreciation totalled EUR 40.7 (37.6) million and operating loss amounted to EUR -16.9 (-5.6) million.

The company's net financial items amounted to EUR 8.7 (-9.6) million, and profit/loss for the period was EUR -8.2 (-15.2) million.

## EBITDA, EUR million



## Operating profit, EUR million



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## Cash flow and financial position

In 2020, cash flow from operating activities was EUR 42.5 (10.6) million, of which change in networking capital comprised EUR 19.1 (-15.7) million. Cash flow from investment activities was EUR -171.7 (-105.8) million. Cash flow from investments was increased by significant construction efforts in the battery chemicals plant project.

At the end of 2020, the company's cash and cash equivalents totalled EUR 58.6 (61.9) million.

Terrafame's balance sheet total on 31 December 2020 was EUR 918.5 (749.5) million. Year-end inventories totalled EUR 220.5 (218.2) million. The company classifies its inventories into three groups: raw materials and consumables, work in progress, and finished products. The value of raw material and spare part inventories at the end of the financial period was EUR 24.2 (25.0) million. The value of work in progress was EUR 190.2 (186.2) million, and the value of the finished goods inventory was EUR 6.1 (6.9) million. The valuation principles for inventory items are presented in more detail in the Accounting principles, in section Intangible assets/Inventories on [page 55](#).

Trade receivables totalled approximately EUR 15.9 (15.2) million at the end of the financial period. Other receivables totalled approximately EUR 2.8 (0.2) million. Prepaid expenses and accrued income totalled approximately EUR 17.1 (13.8) million, the most significant of which were derivative receivables amounting to approximately EUR 12.7 (6.4) million due to hedging operations.

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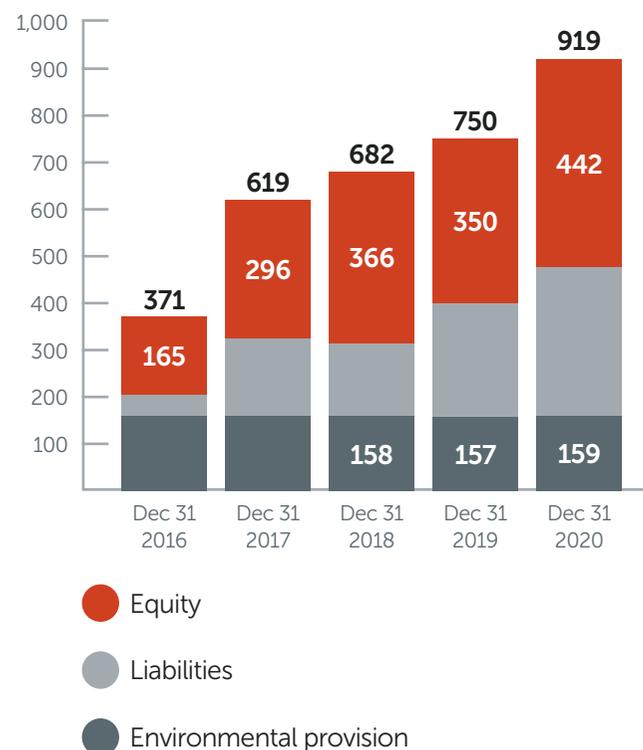
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Shareholders' equity on 31 December 2020 was EUR 442.1 (349.8) million. The total amount of debt was EUR 317.4 (242.4) million. In addition to this the balance sheet includes a rehabilitation provision for mine closure and environmental clean-up costs amounting to EUR 159.1 (157.4) million. More detailed information on the rehabilitation provision is provided in Accounting principles, in section Derivatives and hedge accounting/Rehabilitation provision for mine closure and environmental clean-up costs on [page 57](#).

Terrafame's equity ratio at the end of the financial period was 48.1 (46.7) percent, and net gearing was 31.0 (31.7) percent.

## Equity and liabilities, EUR million



The formulas for calculating the figures and the key figures are presented on [page 44](#).

## Capital expenditure

Capital expenditure is reviewed at Terrafame in two groups: investments in improving productivity and capacity, and investments in sustaining production.

Capital expenditure, MEUR	1-12/2020	1-12/2019	Change, %
Investments in sustaining production	39.5	42.1	-6.2
Investments in improving productivity and capacity	162.3	88.5	83.4
<b>Total capital expenditure</b>	<b>201.8</b>	<b>130.6</b>	<b>54.5</b>

Capital expenditure during 2020 totalled EUR 201.8 (130.6) million. Of this amount, EUR 162.3 (88.5) million were used to improve productivity and increase capacity, while sustaining capital expenditure amounted to EUR 39.5 (42.1) million.

The most important investments in increasing capacity were related to the construction of the battery chemicals plant, which will start in late spring 2021. In addition, the construction of the primary leaching area has progressed as planned.

At the end of 2020, the completion level of the battery chemicals plant construction project was 90%, and the first ramp-up measures were implemented.

The most significant investment projects related to sustaining production were the construction of the KL2 waste rock area, the construction of gypsum pond 3, the purchase of spare parts for mining equipment and ore crushing lines, changes to the conveyors in the secondary leaching area, and the start-up of the construction of the new roof to the intermediate storage building.

## Currency and commodity hedge transactions

In the 2020 financial period, the company continued to hedge its cash flow against a decrease in the US dollar exchange rate and metal prices in line with its hedging policy.

The company used hedge accounting. Additional information on hedging is given in note 2.8 to the financial statements on [page 67](#).

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## Financing arrangements

The Finnish Minerals Group has provided a total of EUR 456.8 million in equity financing for Terrafame from the original financing packages. In addition, as agreed, Terrafame received a total of EUR 191.2 million in equity financing in 2017 and 2018 from the Galena Funds, which are part of the Trafigura Group.

In the first quarter of 2020, Terrafame draw the Finnish Minerals Group's remaining portion of EUR 30 million and the Galena Funds' remaining portion of EUR 30 million, after which the company no longer has unused equity financing available from these financing packages.

In addition, the company has received around EUR 166.9 million in debt financing from Trafigura and around EUR 42.1 million in debt financing from Sampo. In the first quarter, Terrafame draw around EUR 18 million in debt financing from Trafigura and EUR 6 million in debt financing from Sampo plc. In August, Terrafame draw Trafigura's remaining portion of USD 50 million in debt financing in two instalments of USD 25 million.

In August 2020, Terrafame and its owners decided on refinancing and further financing to ensure its operational development in an uncertain market situation and the completion of the battery chemicals plant investment project as planned. Previous financing and loan arrangements had been negotiated before the decision on the significant investment in the battery chemicals plant was made.

The new financing arrangement consists of the rearrangement of current loans and a new equity financing commitment as follows:

- The funds managed by Galena Asset Management (Galena), as well as Sampo, will convert long-term loans (maturing in 2020) granted to Terrafame into shares in the company in the amount of around USD 29 million (EUR 25 million), using the call options previously granted to them.
- The Finnish Minerals Group and Galena agree to provide Terrafame with a total of up to EUR 115 million in equity financing. The equity financing will be provided in proportion to the current holdings of the Finnish Minerals Group and Galena. Accordingly, the Finnish Minerals Group is committed to providing up to around EUR 80.5 million in equity financing, and Galena is committed to providing up to around EUR 34.5 million in equity financing.

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- In addition, Trafigura and Sampo will transfer long-term loans (maturing in 2021) previously granted to Terrafame in the amount of around USD 32 million (around EUR 26 million) to be repaid in 2022.
- Trafigura also agrees to purchase additional volumes of zinc produced by Terrafame.

In October, Terrafame draw the first instalment of around EUR 23 million of the new equity financing negotiated with the Finnish Minerals Group and Galena. Around EUR 92 million of the financing remained unused at the end of the financial period.

The amounts presented in the following table cover all financial items, including any unused investment commitments, as well as debt financing items converted into equity.

	<b>Equity financing</b>	<b>Converted equity</b>	<b>Debt financing</b>	<b>Total financing</b>
Finnish Minerals Group	456.8			537.3
	80.5			
Galena Asset Management	191.2			225.7
	34.5			
Trafigura		20.2	146.7	166.9
Sampo Group		6.8	35.3	42.1
<b>Total</b>	<b>763.0</b>	<b>27.0</b>	<b>182.0</b>	<b>972.0</b>

Currency-denominated items have been translated to euros using the rate prevailing on the closing date of the review period.

## Shares and shareholders

Terrafame has one series of shares. At the end of 2020, the company had 4,263,163 shares, EUR 2.0 million in share capital, and EUR 442.1 (349.8) million in shareholders' equity.

On 31 December 2020, Suomen Malmijalostus Oy ('Finnish Minerals Group', 'FMG') held 66.8 per cent, Galena funds 31.3 per cent and Sampo 1.9 per cent of Terrafame shares. Actions that impacted the holdings in 2020 are as follows:

	Galena 2	Galena 3	Sampo	FMG	Trafigura	Total
<b>Shareholding 31.12.2019</b>	<b>13.0 %</b>	<b>14.6 %</b>	<b>0.6 %</b>	<b>71.8 %</b>	<b>0.0 %</b>	<b>100.0 %</b>
31.12.2019	480,630	542,639	21,348	2,660,547	0	3,705,164
<b>Changes in shares in the period:</b>						
Equity registrations	114,820	187,009	38,273	187,009		
Share transfer						
Interest and arrangement fees in shares	7,502	3,585	19,801			
<b>31.12.2020</b>	<b>602,952</b>	<b>733,233</b>	<b>79,422</b>	<b>2,847,556</b>	<b>0</b>	<b>4,263,163</b>
<b>Shareholding 31.12.2020</b>	<b>14.1 %</b>	<b>17.2 %</b>	<b>1.9 %</b>	<b>66.8 %</b>	<b>0.0 %</b>	<b>100.0 %</b>

After the financial arrangements described above in the chapter "Financial arrangements", the holdings of Terrafame's shareholders would distributed as follows:

Finnish Minerals Group	<b>67.2 %</b>
Galena Funds (Trafigura)	<b>31.1 %</b>
Sampo plc	<b>1.7 %</b>

In the future, Finnish Minerals Group's holding may fall to 50.1 per cent at the lowest, provided that Trafigura, Galena and Sampo use their call options to subscribe for shares and the interest on the loans is paid as shares. In such a case, Galena and Trafigura would hold approximately 45.0 per cent of Terrafame shares and Sampo approximately 5.0 per cent.

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During the financial period 2020, the company had a EUR 32.5 (32.5) million counter-guarantee granted by the State for arranging collateral in accordance with environmental permits. Legal and other administrative services were bought for a total of EUR 0.5 (0.4) million and administrative services for R&D projects for a total of EUR about 0.3 (0.2) million from Finnish Minerals Group.

The sales of nickel cobalt sulphide and zinc sulphide to Trafigura Ventures V B.V. company amounted to EUR 331.7 (322.9) million during the financial period.

The financing arrangements realised with the related-party companies Finnish Minerals Group, Trafigura Ventures V B.V. and Galena funds are presented in the 'Financing arrangements' section of the annual review.

All business transactions between Terrafame and its related parties conformed to accepted market practices.

A more detailed description of related party transactions is given in **note 5** to the financial statements.



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## Governance

As a non-listed company, Terrafame observes, as applicable, the Securities Market Association's Corporate Governance Code in force. The Corporate Governance Statement 2020 is published as a separate report but simultaneously with the Board of Directors' report and is available at [www.terrafame.fi](http://www.terrafame.fi).

## Annual General Meeting

The Annual General Meeting of 2020 was held on 4 March. The AGM confirmed the financial statements for 2019, decided on the disposal of the result in accordance with the Board's proposal, and discharged the Board members and CEO from liability.

The composition of seven Board members was confirmed at the AGM. The members of the Board are Lauri Ratia, Esa Lager, Tuomo Mäkelä, Matti Hietanen, Jesus Fernandez, Emmanuel Henry and Riitta Mynttinen. Lauri Ratia was elected Chair of the Board and Matti Hietanen as Vice Chair of the Board.

Elected as the company's auditor is the authorised auditing firm KPMG Oy Ab, with Antti Kääriäinen, APA, as principal auditor.

## Management Team

The members of Terrafame's Management Team at the end of 2020 were:

<b>Joni Lukkaroinen</b>	Chief Executive Officer
<b>Antti Arpalahti</b>	Chief Production Officer
<b>Kristian Granit</b>	Chief Refining Officer
<b>Veli-Matti Hilla</b>	Chief Sustainability Officer
<b>Janne Palosaari</b>	Chief Commercial Officer
<b>Sanna Päiväniemi</b>	Chief Communications Officer
<b>Matti Rautiainen</b>	Chief Maintenance Officer
<b>Ville Sirviö</b>	Chief Financial Officer
<b>Seppo Voutilainen</b>	Chief Mining Officer

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## Statement of non-financial information

This statement has been drawn up in accordance with Chapter 3a of the Finnish Accounting Act 1336/1997, which is based on Directive 2014/95/EU of the European Parliament and of the Council. The disclosure of non-financial information is optional for Terrafame.

In addition to the topics required by the Finnish Accounting Act, the statement on non-financial information includes a description of safety management at Terrafame and the company's tax contribution in accordance with the guidance issued by the Government Ownership Steering Department on 1 October 2014.

## Responsibility management

The Board of Directors of Terrafame Ltd is responsible for the organisation and integration of corporate responsibility management with Terrafame's business operations and adopting Terrafame's operating principles.

Terrafame's values – safety, commitment and efficiency – are reflected in all its operations. Terrafame is committed to delivering safely and sustainably produced high-quality products to its customers. This promise is an integral part of the company's objectives.

Terrafame operates fully in accordance with the laws and regulations issued by the authorities. The company is committed to the UN Global Compact principles in its operations. We also respect the ILO Declaration on Fundamental Principles and Rights at Work in our operations. In addition, all Terrafame employees and all partners operating within the industrial site must comply with the Code of Conduct and the principles of the sustainability policy adopted by the company's Board of Directors. Policy implementation is supported by Terrafame's certified management systems (ISO 9001, ISO 45001 and ISO 14001) and more detailed operating guidelines.

Operations within the industrial site must be safe for both the company's own employees and those of its partners in all circumstances and situations. Safety aspects must be taken into account in the tasks carried out on Terrafame's industrial and mining sites, with regard to the demanding processes, chemicals, metal ore, and large machines and equipment in particular. Occupational safety risks are related especially to maintenance and construction work.

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With respect to the environment, Terrafame is committed to operating sustainably and in accordance with the environmental permits in force. The company is committed to continuously improving its environmental performance, managing all operational risks and reducing its environmental impact. The goal is to use natural resources efficiently, as well as striving to minimise the environmental impact of the company's operations. Emissions are minimised by selecting optimal and energy-efficient technological solutions.

Terrafame operates responsibly and transparently. We openly and honestly provide our employees, partners, neighbours and stakeholders with information about our operations and their impact.

Terrafame aims to ensure that its manufactured products are clean and usable. The methods used in the production chain are proven to be more environmentally friendly than many conventional methods, because they consume less energy and generate lower carbon dioxide and nutrient emissions. Production methods are continuously being made more efficient. The objective is to improve financial performance, reduce the carbon footprint and energy consumption, and mitigate environmental impacts.

Terrafame participates in the activities of the Finnish Network for Sustainable Mining through the Finnish Mining Association (FinnMin), and is committed to operating in accordance with the Finnish Towards Sustainable Mining (TSM) Standard.

In terms of responsibility, it is essential to minimise the environmental impact of Terrafame's operations to prevent any significant adverse effects on the residents of the nearby areas or the surrounding natural environment. At the beginning of the process, in mining operations, it is essential to minimise the impacts of noise, dust and vibration, while leach cycle management is essential during bioleaching. In the recovery of metals, it is important to use chemicals safely and manage the chemical processes. In terms of emissions control, it is essential to steer the process so that emissions into the air and water can be minimised.

In the spring of 2021, the company will publish a separate sustainability report with more detailed information about the environmental impact of its operations, among other aspects. The report will monitor the implementation of Terrafame's sustainability programme for 2020–2024.



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## Risk management related to responsibility

Terrafame complies with the risk management principles adopted by its Board of Directors. The key safety, process, environmental and operational business risks are updated annually, and the results and measures are discussed by the company's Management Team and Board of Directors. The company's assessment of its environmental, safety and process risks is updated comprehensively every three years by examining thousands of individual risks. This comprehensive process was initiated in 2019. Significant risks identified during risk assessment are reduced by technical improvement, investment and competence development, for example.

## Business model and value creation

The strategic goal of Terrafame's business operations is for the company to be one of the world's most cost-effective and responsible producers of battery chemicals. The business model is based on an integrated and energy-efficient production chain and the efficient use of resources.

Terrafame's mineral resource and ore reserve estimates were updated in accordance with the JORC code (2012) in November 2020. Its measured, indicated and inferred mineral resources amount to 1 499 million tonnes, with a metal content of 3.9 million tonnes of nickel and 0.3 million tonnes of cobalt. The amount of nickel had increased by 19.4% from the previous estimate (2018). Terrafame has the largest nickel ore reserves in Europe.

In addition to relying on the company's highly professional employees, its business model is based on the extensive use of a partner network. We require our partner companies to be as strongly committed to responsible operations as Terrafame, in addition to compliance with Terrafame's Code of Conduct. We offer our partner companies the opportunity to grow and develop alongside Terrafame.

Thanks to its bioleaching-based metal processing, Terrafame has the smallest carbon footprint among nickel producers globally.

Integrated production within a single industrial site also enables the efficient use of side streams. The company is working continuously and systematically to further improve its operational excellence.

Costs of CO<sub>2</sub> emissions steer towards the use of carbon-neutral energy.

The share of nickel in batteries is increasing.

A strong European car industry creates the basis for own regional battery value chain.

Concerns about climate change are driving consumers to favor electric cars.



**IMPACTS**

**Economic value added**

- Wages and salaries (incl. pensions expenses) 46.5 MEUR
- Taxes and tax-like charges, receivable 12.3 MEUR
- Purchases 470.0 MEUR
- Net financial items -9.4 MEUR

**Committed personnel**

- New employees 145
- Training 3.1 days per person

**Safe work environment**

- The LTIFR of the entire industrial site decreased to 9.8 in 2020 (2019: 14.2)
- At the end of the year, a project was launched to further develop the safety culture

**Fulfillment of customer promises**

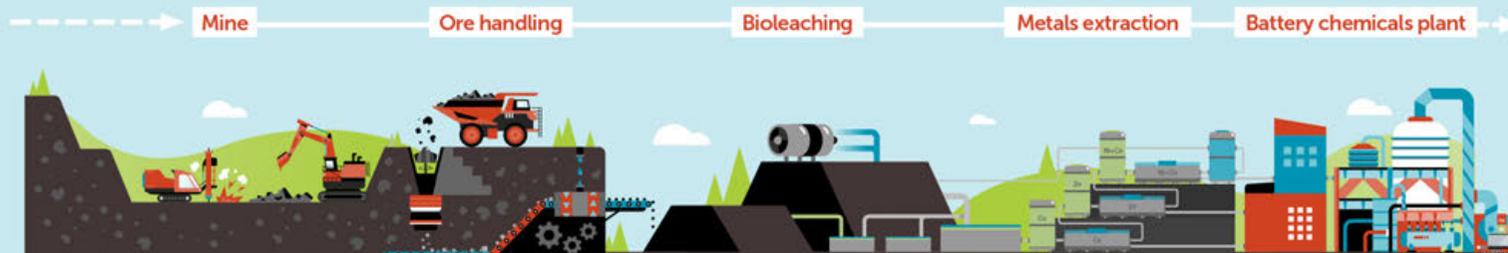
- Terrafame's nickel sulphate carbon footprint over 60% lower than average
- Strong sales support and logistics services
- Quality is ensured by precise process control (Statistical Process Control)

**TRACEABLE PRODUCTION CHAIN, SMALL CARBON FOOTPRINT**

Terrafame's integrated production from its own mine to battery chemicals in one industrial site constitutes a unique and an energy-efficient production chain that produces customers battery chemicals with a clearly lower carbon footprint than the industry average.

**Financial capital**

- Equity 442.1 MEUR
- Equity ratio 48.1%
- Capital expenditure 59.7% of net sales



**Net sales**

- 338.3 MEUR

**Production**

- 28,740 t nickel and 55,100 t zinc
- One of the largest in the world battery chemical production lines

**RESOURCES**

**The largest nickel ore reserves in Europe**

- 1,499 million tonnes, containing 3.9 Mt nickel and 0.3 Mt cobalt (JORC)
- Allows production to continue for decades

**Skilled personnel**

- Own personnel 870 in total
- Wide orientation and training programmes
- Certified quality and management systems

**Wide partner network**

- An average of 150 long-term partner companies in the industrial site
- A total of 1,166 employees of contractors and subcontractors
- Cooperation with academies and research institutes

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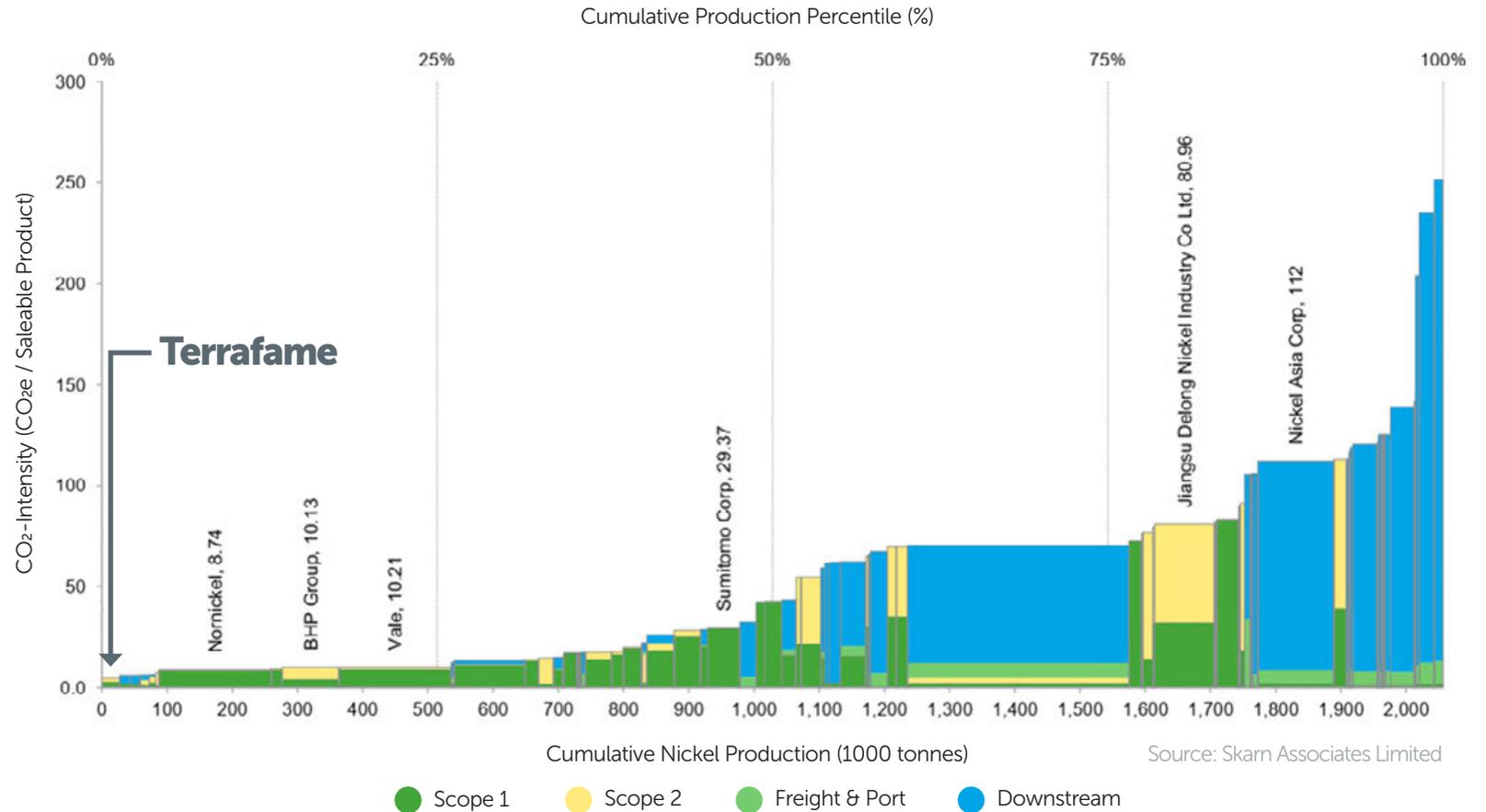
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## Global nickel producers ranked by 2019 CO<sub>2</sub>-equivalent-intensity



In 2020, its spearhead project – the construction of a battery chemicals plant – progressed to the finalisation phase. Commercial production at the plant will begin in late spring 2021. With the battery chemicals plant, the company's current main product – nickel-cobalt sulphide – will be further processed into chemicals used in the manufacture of batteries for electric cars, and the company will move forward in the value chain from being a manufacturer of metal intermediates to a special chemical company.

Concern about climate change is increasing among consumers, and electric cars are a significant way to reduce greenhouse gases. Electric cars do not generate emissions in transport. Electricity production is expected to be increasingly carbon neutral in the future, so emissions from the production of electricity for electric cars will also decrease. Around 3.2 million electric cars were sold globally in 2020, and the number is expected to increase to around 30 million by 2030.

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The annual nickel sulphate capacity of Terrafame's battery chemicals plant will be sufficient for around 1 million batteries for electric vehicles, and its cobalt sulphate capacity will be sufficient for around 300,000 batteries, provided that the battery size remains at its current level (50 kWh), and that the latest battery technology (NCM 811) is used. The commercial production of Terrafame's battery chemicals plant will begin in late spring 2021, and the plant will start operation in a growing electric car market. With the battery chemicals plant, Terrafame's products will contribute to the electrification of transport, which aims to combat the ongoing climate change. In other words, climate change is not only a risk but an opportunity for the company.

An externally verified life-cycle analysis published in the autumn of 2020 shows that the carbon footprint of the nickel sulphate produced by Terrafame is more than 60% smaller than average. In terms of mileage, this means that the carbon footprint of one kilo of nickel sulphate produced by Terrafame corresponds to 10 kilometres driven in a petrol-fuelled passenger car, as opposed to 30 kilometres on average in nickel production. In practice, this means that when nickel sulphate produced by Terrafame is used in electric car batteries, the annual reduction in carbon dioxide emissions corresponds to 3,400 million kilometres driven in a petrol-fuelled car, which is around 85,000 times the distance around the world. Through its responsible production, Terrafame also significantly contributes to reducing the life-cycle impact of its customers' products. Terrafame offers a transparent and genuinely traceable European battery chemicals supply chain for the value chain for electric car batteries.

When the commercial production of battery chemicals begins, Terrafame will move forward in the value chain for electric car batteries, and the start-up of production will have significant impacts on Terrafame's business model. Up until now, more than half of the nickel intermediates produced by Terrafame have been delivered to be used as a raw material for battery chemicals through the sales network of Trafigura, one of its two principal owners. With the start-up of its own battery chemicals production, Terrafame will sell the battery chemicals that it produces directly to customers, with Trafigura serving as its sales agent. The quality and purity requirements for battery chemicals also set new requirements for the logistics chain. In 2020, the company's commercial organisation was reinforced in response to changing sales and logistics processes.

Asia and Europe will continue to be the main market areas for Terrafame's business operations. The production of battery cells and cathode active materials is currently centralised in Asia. However, several projects are in progress to build a regional battery value chain in Europe. Terrafame has good opportunities to assume a leading role in this value chain as a European manufacturer of battery chemicals.

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Terrafame aims to continuously improve environmental safety and reduce its environmental load. The sulphate quota provided in the environmental permit for emissions into water was not exceeded in 2020, although the sulphate load almost doubled from the previous year. Terrafame used 80 % of its sulphate quota, or 13,067 tonnes. The increase in the sulphate load was mainly caused by precipitation, which was higher than normal in 2020.

In 2020, a total of 8.0 (4.5) million cubic metres of purified water was released from the industrial site. Unlike in previous years, the Nuasjärvi lake discharge pipe was in use throughout the year. Purified discharge water was also released through old routes to the Oulu River and Vuoksi waterways. Because of the rainy winter months, the neutralisation process to purify and reduce the process solution was used from January to March 2020. The neutralisation process increases the sulphate content in purified water, which is why the monthly limit of 2,000 mg/l for the flow-weighted average sulphate content in purified water was exceeded slightly in February (2,044 mg/l), March (2,031 mg/l) and April (2,159 mg/l). In addition, the sulphate load of 1,184 t on Nuasjärvi lake through the discharge pipe was slightly higher than the permit limit (1,000 t/month) in April. The neutralisation process was restarted in November and was in operation for the rest of the year. The sulphate content and load remained within the permit limits for the rest of the year.

The most significant environmental risks in Terrafame's operations are related to leach cycle management in bioleaching, water management and chemical management. In 2020, leach cycle management played a key role, because precipitation was higher than usual. A new gypsum pond was taken into use late in the year as a risk management measure, although the Regional State Administrative Agency for Northern Finland had not yet granted an environmental permit for its use. Terrafame had applied for the permit for the new gypsum pond already in August 2017. At the beginning of November, Terrafame filed a notification with the Kainuu Centre for Economic Development, Transport and the Economy (ELY Centre) in line with section 123 of the Environmental Protection Act (527/2014). On 19 November 2020, the Kainuu ELY Centre approved Terrafame's notification concerning the exceptional circumstances. In connection with the decision, the Kainuu ELY Centre issued regulations concerning, among other aspects, the use of gypsum ponds and the management of solution circulation. The introduction of the pond enabled the continuation of the neutralisation processes and excess water to be removed from the leach cycle. This enabled the company to ensure the environmental safety of the leach cycle despite the heavy rains.



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During 2020, the Kainuu ELY Centre urged Terrafame to pay attention to the long-term development of water management, as well as to dam safety. Water management was further developed by building a two-line run model for the centralised water treatment plant to ensure that the processing of run-off water and process-based water that contains sulphates could be separated. This change will be introduced during 2021. With regard to dam safety, the monitoring of dams and dam safety documentation and reporting were developed, among other aspects.

A total of 20 environmental incidents occurred and were reported to the supervisory authorities (Kainuu ELY Centre) during 2020. The majority of the incidents were related to exceptional situations in leach cycle or water management. Terrafame has a low threshold for reporting incidents.

Terrafame has a permit process in progress with regard to the renewal of its master permit with the Regional State Administrative Agency for Northern Finland. The application was submitted in August 2017 and supplemented in July 2018. Terrafame expects a decision concerning the permit in 2021. The Regional State Administrative Agency for Northern Finland granted an environmental permit for the production of heat and steam for the battery chemicals plant in October 2020, and an environmental permit for the entire battery chemicals plant in January 2021.

The Finnish Safety and Chemicals Agency (Tukes) granted a chemical permit for the battery chemicals plant in September 2020. Terrafame initiated a new environmental permit process during 2020 by submitting an application to the Regional State Administrative Agency for Northern Finland for the construction and use of the KL1 waste rock area. Terrafame had two environmental impact assessment (EIA) procedures in progress. One concerned the final disposal of the water treatment sludge in various parts of the mining site that accumulated during the activities of the previous operator; the other concerned the use of the Kolmisoppi ore deposit and the expansion of the mining concession. Both EIA procedures were completed in early 2021 and are proceeding to the environmental permit phase with the Regional State Administrative Agency for Northern Finland.

In the spring of 2020, Terrafame and Metsähallitus signed an agreement by which Terrafame acquired land from Metsähallitus within the planned expansion area of the mining concession, as well as from the Kivijärvi lake region. The transaction settled all claims made by Metsähallitus regarding the water and land areas it owns.

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On 6 February 2020, the Finnish Government decided to grant a uranium extraction permit to Terrafame. An appeal against the Government decision has been submitted to the Supreme Administrative Court. Terrafame estimates that it will take around two years before the final decision is issued on the permit.

A report was completed in 2020 to calculate the carbon footprint of nickel sulphate. The report was prepared by an international expert company, and the results were verified by an independent third-party expert. The results were compared with the results of a corresponding report by the Nickel Institute. The results were excellent: the carbon footprint of nickel sulphate, the main product of Terrafame's battery chemicals plant, was more than 60% smaller than the industry average. It was already known that the carbon footprint of nickel sulphide, Terrafame's current main product, is markedly smaller than that of traditional production methods.

Terrafame aims to improve its energy efficiency and reduce its emissions from energy production. A new 10 MW solid fuel energy plant built by Adven, a partner company, was started up in late 2020. The plant uses renewable fuel to produce steam and heat energy for the production of battery chemicals, and for other needs in the industrial area. The partner company is also developing the energy production infrastructure and energy efficiency as a whole in the plant area. During 2020, Terrafame started a project to produce process steam using the excess energy of hydrogen plants. The project will be completed in early 2021. With the bioenergy plant and the recovery of waste energy, these measures will reduce carbon dioxide emissions by 9,000 tonnes per year, and the carbon dioxide emissions from Terrafame's heat production by 90%.

With regard to the Finnish Towards Sustainable Mining (TSM) Standard, Terrafame conducted self-assessments and internal audits concerning all assessment tools during 2020.

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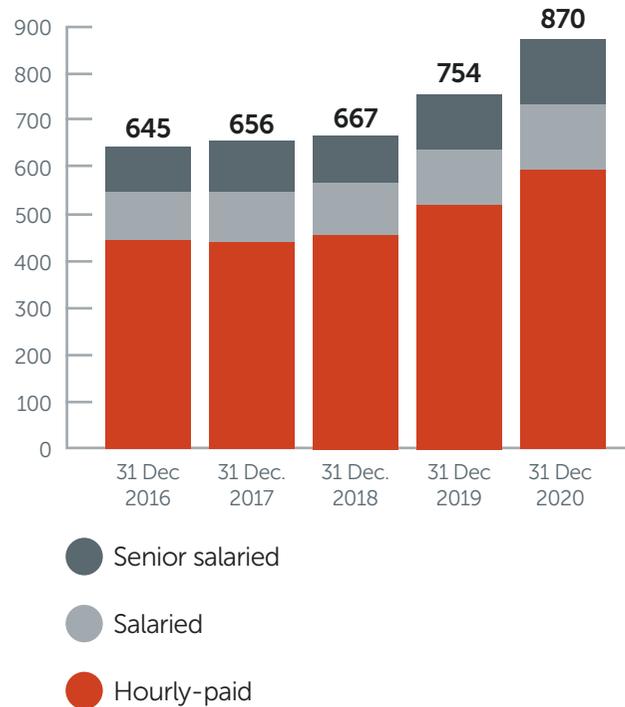
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## Social and HR affairs and respect for human rights

Nearly 2,000 people were regularly employed on Terrafame's industrial site during 2020.

At the end of the year, Terrafame had 870 (754) employees, of whom 97 (77) were fixed-term employees. The company provided 52 people with a summer job. In addition to the company's own employees, an average of altogether 1,166 (735) people (FTE) employed by its contractors and sub-contractors worked within the industrial site. The number increased as a result of the people working on the construction site of the battery chemicals plant in particular. The total number of personnel increased by 15% from 2019, especially because employees were recruited for the battery chemicals plant during the summer and autumn.

### Terrafamen personnel



The company's personnel strategy focuses on capacity building, competence development and skilful supervisory work, as well as on building effective internal cooperation across the company.

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In 2020, the company continued to invest in personnel development. The new battery chemicals plant provided employees with opportunities for job rotation and career development.

In addition to recruitment, employees were hired through apprenticeship training programmes.

The employees of the battery chemicals plant were provided with intensive training to support the safe and efficient start-up of the plant.

Terrafame encourages its employees to develop their knowledge and skills through training.

During the year, around 110 employees studied alongside work to complete vocational qualifications in the process industry, maintenance and electrical installation, for example, as well as specialist vocational qualifications in technology. Other training activities also continued at a solid level, although less face-to-face training was provided than before because of the coronavirus situation. In addition to vocational training, extensive training was provided in occupational safety, chemicals and first aid, for example. Supervisory work was also further developed through training and coaching. The TRFM Masters programme was started in 2020.

The purpose of the course is to increase employees' understanding of the company's business operations, value creation, production process, financial position, business environment, strategy and values. The total amount of training provided was 3.1 (4.2) days per person. The total amount of supervisory training was 1.5 (4.3) days per person.

In 2020, we recruited altogether 145 (95) persons. The increase is mainly due to the new battery chemicals plant. The internal and external recruitment and training of experienced process and maintenance professionals, which began in 2019 to build a production organisation for the battery chemicals plant, was largely completed in 2020. The battery chemicals plant employs around 170 people in total, including maintenance, laboratory operations and logistics.

We continued to develop our cooperation with educational institutions and our induction process to ensure the availability and commitment of highly competent people. Our intensive one-week induction process focuses on Terrafame's operating principles, safety procedures and values in particular. The induction process for supervisors is more extensive, including guidance on management in line with our values, as well as on supervisory work practices. We cooperate closely with educational institutions, especially Kainuu Vocational College and Kajaani University of Applied Sciences. The most significant results of the cooperation include the regional reinforcement of training in the process industry, and electrical and automation engineering, for example. The concrete forms of cooperation include practical training, summer jobs, theses and teacher visits.

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Two other major changes affecting the operating culture were the progress in operator-driven reliability and the change in the work culture caused by the coronavirus situation. The operator-driven reliability model improves operational reliability and efficiency, and provides employees with professional development opportunities. The training provided in 2017–2019 and the pilot project laid a strong foundation for expanding the operating model. Most Terrafame employees transferred to remote work in 2020. This change ran very smoothly for our highly professional and committed staff. Effective interaction between the employees and the employer is also an important resource in the workplace community, and cooperation activities were carried out in a good spirit. Participation opportunities were provided through various committees such as the cooperation committee, occupational health and safety committee, and the leisure committee.

The jobs and conditions offered by Terrafame are varied, which also sets requirements for measures to maintain working capacity and wellbeing at work, and to prevent their associated risks. The company offers extensive occupational healthcare services. Various exposures and working capacity risks are monitored systematically and continuously. Early support and alternative work models were actively applied. Workplace and ergonomics studies were targeted at the various task areas throughout the year. Employees' sickness absences accounted for an average of 4.8 % (5.0) of the theoretical regular working hours. To maintain mental and physical wellbeing, the company provides its employees with sporting and cultural benefits, as well as subsidised meals at work.

In its human resources management, Terrafame complies with national rules and regulations, as well as international conventions on human rights and labour markets. The company respects freedom of association and abides by legally binding collective agreements. Employee participation and consultation have been organised in accordance with national rules and regulations. The company has adopted an equality plan, which is updated periodically. Terrafame promotes equal opportunities, equal employment and career development in the spirit of the Act on Equality between Women and Men and in compliance with Terrafame's Equality Plan. Terrafame has updated its processes, policies and guidelines on the processing of personal data to comply with the EU General Data Protection Regulation (GDPR).

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## Partner network

Around 150 long-term partner companies operated within the Terrafame industrial site in 2020. Partner companies play a significant role in production work. During the year, an average of 1,166 (735) people (FTE) employed by contractors and sub-contractors worked on the site. The number also increased as a result of the people working on the construction site of the battery chemicals plant. Production involves significant purchases of materials such as process chemicals and fuels. Terrafame's purchases of services and materials totalled around EUR 467 (391) million in 2020. Most of this consisted of purchases of materials related to the production process, purchases of services and purchases related to the construction of the battery chemicals plant. Services and materials were purchased from more than 1,000 suppliers, most of which are located in Finland and elsewhere in the European Union.

Partners are required to commit to high-quality operations, safety and the continuous improvement of efficiency. Partners who stand out with their responsible operations are invited to participate in tendering repeatedly. Partner companies are evaluated based on basic information, and cooperation relationships are developed systematically over the long term.

Terrafame's contractual terms and conditions were updated during 2020. Terrafame requires all its partners and subcontractors to comply with its Code of Conduct, which determines general responsibilities and obligations. These are further specified by the company's policies and guidelines. Partners are expected to share the company's values and operate responsibly. In addition, all partners, service providers and subcontractors must comply with Terrafame's sustainability principles. The Code of Conduct and the sustainability policy are available on the company's website at [www.terrafame.com/terrafame-ltd.html](http://www.terrafame.com/terrafame-ltd.html) -> Sustainability.

Suppliers and all parties acting on their behalf are required to comply with current legislation on occupational health and safety. Suppliers and their subcontractors must agree to comply with all applicable national and international regulations concerning ethical and responsible business operations, such as the prevention of bribery, corruption and illegal work.

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The most significant risks are related to any measures or omissions arising in the selection of partners and in the supply chain that violate company policies and may result in financial losses, in addition to the risk of sanctions and reputation risk. The company's management and purchasing organisation play the most important role in terms of risks. As far as possible, Terrafame seeks to identify any ethical risks related to business partners before establishing a partnership with them.

Terrafame assesses the operations of its partner companies through regular audits conducted during the contract period, after the completion of work and when selecting new partners through competitive bidding. The company has a system in place to maintain a real-time register of the companies operating within the industrial site, as well as their subcontractors. The system monitors the companies in terms of the requirements of the Act on the Contractor's Obligations and Liability When Work Is Contracted Out. The companies are also monitored in terms of training requirements for employees. Significant omissions and violations are subject to sanctions, while good performance that promotes safety is rewarded.

No violations related to corruption or human rights were detected or reported during the year.

## Occupational and process safety

Safety is one of the core values at Terrafame, and the development of a safety culture has been one of the main priorities since the company was established. The company's management is committed to safety work, and safety is also strongly promoted by the company's Management Team and Board of Directors. Terrafame has a safety bonus system, which applies to all employees and is used to reward good safety performance.

In Terrafame's operations, the most significant occupational safety risks are related to maintenance and construction work, large machinery and the use of chemicals. However, most injuries are sustained during normal installation work, or as a result of slipping and falling in yard areas, for example.

In 2019, the rolling 12-month lost-time injury frequency rate (LTIFR), or the number of accidents resulting in absence per one million person-hours, for the companies that worked at the battery chemicals plant was 33, which is very high at Terrafame's circumstances. The rate for companies operating regularly in the area (e.g. partner companies supporting production and maintenance) was also high: 17.5. Safety work therefore focused on the development of the safety of partner companies' employees in particular.

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During the year, the induction programme for partner companies' employees was updated, and the company benefitted from the safety expertise of Trafigura, one of its owners. As a result of the measures implemented during 2020, the lost-time injury frequency rate for the companies working at the battery chemicals plant decreased considerably, standing at 11.4 (32.9) at the end of 2020. The lost-time injury frequency rate for production and maintenance partners decreased as well, standing at 9.7 (17.5) at the end of the year.

In 2020, the lost-time injury frequency rate for Terrafame's own employees was 8.3 (9.6), slightly lower than in the previous year. Terrafame's own induction programme was also updated during 2020, with safety playing an even more important role than before. A safety park was built on the industrial site for training the employees of Terrafame and its partners. Terrafame's safety network was established at the end of 2020 to promote the implementation of safety guidelines for production departments and partners, for example. At the end of 2020, the ROTI project was initiated in cooperation with an international expert organisation. The project focuses on safety and operational reliability in production.

Strong efforts are being made to ensure hygiene at work. For example, all employees are subject to regular occupational hygiene measurements once a year, and inspection and counselling visits are made to various work areas. According to the biomonitoring results for 2020, the total concentration of nickel in the urine of Terrafame employees corresponds to the average concentrations in Finland. Personal protective equipment matrices were designed for the battery chemicals plant during 2020. The purpose is to minimise metal exposure at the new plant through the correct selection of protective equipment. Terrafame also requires its partner companies operating within the industrial site to organise regular biomonitoring in the same manner as Terrafame conducts the biomonitoring of its own employees.

In terms of process safety, the most significant risks are related to hydrogen sulphide plants, hydrogen plants and the use of chemicals. With regard to process safety, it is important that processes are run smoothly without any unexpected ramp-ups or shutdowns. During 2020, several measures were implemented to prepare for the start-up of the battery chemicals plant and the use of new chemicals such as ammonia. Ammonia filters were added to ventilation in safety facilities on the industrial site, and training related to ammonia was provided to the employees of Terrafame and its partners. The internal rescue plan was also updated, and rescue training was provided. Process safety is a key part of the operations of the battery chemicals plant, which has been taken into account in the design of the plant and the training of employees.

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Terrafame takes the various aspects of information security into account when developing its systems. The need for data processing is assessed on a case-by-case basis in the preparation of both technical and administrative measures, and solutions are selected and operations developed to ensure that the high information security requirements are met. Various technical methods for security risk management are applied, including firewalls, email scanning, antivirus protection and multi-factor authentication. In addition, employees are kept informed and urged to be careful and maintain a healthy distrust with regard to opening links and attachments.

## Tax contribution

Terrafame's commitment to accountability also extends to tax matters. Terrafame has an important social duty and a regional role to play, especially in the Kainuu region. The company only operates in Finland and does not, therefore, pay taxes in other countries.

Tax reporting is based on the guidance on tax reporting issued on 1 October 2014 by the Government Ownership Steering Department of the Prime Minister's Office. The report excludes mandatory insurance premiums that are included in salary costs. These insurance premiums, which are directly related to salaries, are dealt with as direct salary costs, due to the nature of these kinds of insurance. The company does not report small amounts of value-added tax included in foreign travel and training costs.

Terrafame started the ramp-up of production in 2015, and the companies do not yet have any taxable income. However, a considerable amount of tax expenses have accumulated due to the energy and fuel taxes related to the companies' operations. In addition, the company has paid taxes related to the acquisition and ownership of assets, as normal.

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## Tax categories of Terrafame Ltd in 2020 and 2019

<b>Taxes paid, EUR 1,000</b>	<b>2020</b>	<b>2019</b>
<b>Direct taxes paid</b>	<b>1,285</b>	<b>829</b>
Income taxes, operating at a loss	0	0
Asset transfer taxes	48	0
Property tax	544	454
Employer's health insurance contributions	490	257
Parafiscal charges	203	118
<b>Indirect taxes paid</b>	<b>5,998</b>	<b>5,597</b>
Electricity taxes, net	943	576
Electricity taxes	3039	2,819
Electricity taxes, return	-2,096	-2,243
Insurance premium tax	412	465
Fuel taxes, net	4,642	4,553
Fuel taxes	5,393	5,298
Fuel taxes, return	-750	-745
Waste tax	1	3
<b>Taxes collected and accounted for</b>	<b>-10,555</b>	<b>18,175</b>
Tax withheld in advance	8,562	7,798
Value-added tax, net	-19,116	10,377
Value-added tax, sales	78,267	85,072
Value-added tax, purchases	-97,384	-74,695
<b>Total</b>	<b>-3,272</b>	<b>24,601</b>
Ratio of tax payments to net sales	-0,97,%	7,93,%

On 31 December 2020, the company had unrecognised deferred tax assets of approximately EUR 25.3 million. This consist of the confirmed but unrecognised loss of about EUR 30.1 million for the previous fiscal years which will cover for the estimated tax of about EUR 4.8 based on the taxable result for the fiscal year 2020.

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The company's key strategic goal has been clear from the start of operations: the company aims to be in the most cost-effective quartile of the world's nickel producers. The ramp-up of production has gone smoothly and the company is now set to continue its dedicated and systematic efforts to improve its operational excellence.

Terrafame's strategic direction was outlined in autumn 2018. At the time, the decision was made to invest in a battery chemicals plant. Once completed, the plant will use the metal recovery plant's current main product – nickel-cobalt sulphide – as its raw material. When the company starts to refine the intermediate currently sold as a raw material to metal refining companies, it will move forward in the metal refining value chain to become a manufacturer of specialty chemicals. The new plant is one of the world's largest production units for nickel sulphate used in electric vehicle batteries.

For Terrafame as a company, moving forward in the refining chain also means repositioning itself in the battery chemicals market. The aim is to turn Terrafame into a strong industrial brand that displays the company's deep roots in Kainuu as well as its operational strengths: the significant nickel resources of the Sotkamo mine, the unique integrated production process from the open pit to battery chemicals, the low carbon footprint of the production, the sustainable and traceable European supply chain as well as the skilled staff.

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## Research and development

Terrafame develops its processes mainly in connection with its normal business operations, and the development measures qualify as ordinary business expenses.

Research on the bioleaching process using microbiological and mineralogical techniques continued in 2020 with the aim of maximising the output. A three-year pilot process was initiated to develop the secondary leaching phase. In addition, bioleaching heaps were studied to develop agglomeration, aeration and irrigation processes.

Surface structure trials were continued in the secondary leaching area and at the gypsum ponds to study various ways of covering these areas in the future.

A three-year trial related to waste rock was initiated in the autumn of 2017. The research work continued in 2020, and a new trial arrangement was established in the area. The purpose of the trial operations is to obtain information that can be used in the development and monitoring of the base structures of waste rock areas. Another aim is to examine opportunities to benefit financially from the low concentrations of valuable minerals in waste rock.

Terrafame contributes strongly to the development of European and Finnish battery strategy. As part of the European IPCEI-programme the testing of the process and product quality of the battery chemicals plant continued in the form of continuous pilot-scale test runs at the technology supplier's research centre. As a result, the process parameters and the quality of the final products were verified. The process liquids and final products generated were also used to start the operation of the company's own quality laboratory and introduce its analytical methods. In addition to the process development, online process analyzer was purchased and installed in IPCEI project in order to improve process monitoring and control. Terrafame has also continued cooperation within the national research projects such as the BATCircle 1.0 and 2.0 projects coordinated by Aalto University.

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On 20 January 2021, the Regional State Administrative Agency for Northern Finland granted an environmental permit to Terrafame for its battery chemicals plant, where commercial production is scheduled to begin in late spring 2021.

On 5 January 2021, Terrafame announced that Heini Hämäläinen, MSc (Tech.), had been appointed as Chief HR Officer and a member of the Management Team as of 25 January 2021. Her predecessor, Petri Parjanen, MSc (Psych.), MBA, left the company on 9 August 2020.

## Estimate of major risks and uncertainties

Terrafame complies with the risk management policy adopted by the Board of Directors. Efforts are made to identify risks, their impact on company business and operations is assessed, and risk management measures are planned as required. Key operational business risks were also assessed in 2020.

The company's operations are affected by various generic risks of the mining industry, including the risks of the impact of environmental permits, other permits, taxes and fees on company expenses. Key business risks include fluctuations in exchange rates and the price of nickel and zinc, the counterparty risk associated with customers and other business partners, as well as risks related to the prices of major raw materials and energy.

The key risks in Terrafame's production operations are related to occupation safety and the environmental safety of the process. The key risks identified in the risk assessment are reduced, for example, by making technical improvements, investing and developing the competence of employees.

The coronavirus pandemic did not affect Terrafame's operating activities during the 2020 financial period, but there have been some delays in the installation work as well as delivery of materials and equipment in the battery chemicals plant project.

Terrafame has a designated Covid-19 team that regularly discusses matters related to the pandemic to ensure the continuity of operations under exceptional circumstances. The situation is being monitored closely, and the related measures will be updated quickly when necessary.

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## Outlook for 2021

The significant uncertainty of metal price development will continue.

Commercial production at the battery chemicals plant will start in late spring 2021. Battery chemicals production is expected to increase the company's net sales from the latter part of 2021 onwards.

Power supply difficulties constrained production at the beginning of the year.

Terrafame continues to invest in improving its safety culture, production and cost-effectiveness.

## Board of Directors' proposal for the disposal of the result

Terrafame Ltd's result for the financial period for 2020 shows a loss of EUR 8 216 671,35.

On 31 December 2020, Terrafame's distributable equity totalled EUR 440 046 354,52. The Board proposes that the loss be transferred to the retained earnings/loss account and that no dividend be paid.



## Key figures and formulas for calculating the figures

Scope of operations	2020	2019	2018	2017	2016
Net sales, MEUR	<b>338.3</b>	310.4	325.8	220.0	101.0
Balance sheet total, MEUR	<b>918.5</b>	749.5	681.6	618.5	370.7
Total capital expenditure, MEUR	<b>201.8</b>	130.6	81.5	92.7	84.3
as % of net sales	<b>59.7</b>	42.1	25.0	42.1	83.2
Average number of personnel	<b>833</b>	722	669	694	626
<b>Profitability</b>					
EBITDA, MEUR	<b>23.8</b>	32.0	32.8	13.6	-120.6
EBITDA-%	<b>7.0</b>	10.3	10.1	6.2	n.a.
EBIT	<b>-16.9</b>	-5.6	3.0	-6.2	-134.5
EBIT-%	<b>n.a.</b>	n.a.	0.9	n.a.	n.a.
Net profit	<b>-8.2</b>	-15.2	-6.2	-9.6	-124.9
<b>Solvency</b>					
Equity ratio, %	<b>48.1</b>	46.7	53.6	47.8	44.6
Net gearing, %	<b>31.0</b>	31.7	-0.9	-5.8	-26.3

Terrafame has adopted the IFRS 16 Leases standard as permitted by section 5:5b of the Finnish Accounting Act and by the IAS Regulation (EU) in its financial accounting effective 1 January 2019, using the simplified approach. The cumulative impact of the implementation of the standard has been recognized on the balance sheet and the comparative figures have not been restated. The comparative figures regarding lease liabilities are presented according to the Finnish Accounting Act.

### Equity ratio:

(Equity + minority interest)  
× 100 / Balance sheet total –  
short-term and long-term advance  
payments received

### Net gearing:

(Interest bearing debt – cash funds)  
× 100 / Equity + general provisions

# Financial Statements

## 1 January – 31 December 2020

### Balance sheet

#### Assets (EUR 1,000)

Non-current assets	Note	31.12.2020	31.12.2019
Intangible assets	2.1	761	1,079
Tangible assets	2.2	600,340	438,999
<b>Non-current assets total</b>		<b>601,101</b>	<b>440,078</b>
<b>Current assets</b>			
Inventories	2.3	220,486	218,157
Long-term receivables			
Deferred tax assets	2.4	2,532	227
Short-term receivables			
Amounts owed by group companies	2.5	104	177
Trade receivables		15,761	15,066
Other receivables		2,792	173
Prepayments and accrued income	2.6	17,088	13,751
Cash and cash equivalents		58,646	61,896
<b>Current assets total</b>		<b>317,409</b>	<b>309,448</b>
<b>Assets total</b>		<b>918,510</b>	<b>749,526</b>

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## Equity and liabilities (EUR 1,000)

Equity	Note	31.12.2020	31.12.2019
Subscribed capital	2.7	2,000	2,000
Other reserves			
Invested unrestricted equity		706,032	596,297
Fair value reserve	2.8	-10,129	-909
Retained earnings (loss)		-247,640	-232,433
Loss of the financial year		-8,217	-15,208
<b>Equity total</b>		<b>442,046</b>	<b>349,748</b>
<b>Provisions</b>	2.9	<b>159,077</b>	<b>157,398</b>
<b>Long-term liabilities</b>			
Loans from credit institutions	2.10	192,238	140,857
Deferred tax liabilities	2.11	0	0
<b>Long-term liabilities total</b>		<b>192,238</b>	<b>140,857</b>
<b>Short-term liabilities</b>			
Amounts owed to group companies	2.12	286	281
Loans from credit institutions	2.13	3,588	31,931
Trade payables		81,002	49,922
Other liabilities		1,132	2,674
Accruals and deferred income	2.14	39,141	16,715
<b>Short-term liabilities total</b>		<b>125,149</b>	<b>101,523</b>
<b>Liabilities total</b>		<b>317,387</b>	<b>242,380</b>
<b>Equity and liabilities total</b>		<b>918,510</b>	<b>749,526</b>

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## Income statement (EUR 1,000)

	Note	2020	2019
<b>Net sales</b>	3.1	<b>338,258</b>	<b>310,426</b>
Cost of goods sold	3.2	-325,350	-291,941
Gross profit		12,908	18,485
Sales and marketing expenses	3.3	-2,750	-1,391
Administrative expenses	3.4	-19,646	-17,621
Other operating revenues		983	1,338
Other operating expenses	3.5	-8,418	-6,437
<b>Operating profit/loss</b>		<b>-16,922</b>	<b>-5,625</b>
<b>Financial income and expenses</b>	3.6		
Interest income and other financial income		16,945	1,155
Interest and other finance expenses		-8,239	-10,737
<b>Financial income and expenses</b>		<b>8,706</b>	<b>-9,582</b>
<b>Profit/Loss before tax</b>		<b>-8,217</b>	<b>-15,208</b>
<b>Profit/Loss for the financial year</b>		<b>-8,217</b>	<b>-15,208</b>

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## Cash flow statement (EUR 1,000)

<b>Cash flow from operating activities</b>	<b>2020</b>	<b>2019</b>
Result for the financial period	-8,217	-15,208
Adjustments		
Depreciation and amortisation	40,731	37,622
Unrealised foreign exchange gains and losses	-11,259	1,297
Other income and expenses, non-cash items	1,679	-965
Financial income and expenses	2,553	8,285
Other adjustments	-26	-172
<b>Cash flow before change in net working capital</b>	<b>25,461</b>	<b>30,859</b>
<b>Change in net working capital</b>		
Change in trade and other receivables; increase (-) / decrease (+)	-274	4,558
Change in inventories; increase (-) / decrease (+)	-2,329	-18,961
Change in trade payables and other liabilities; increase (-) / decrease (+)	21,233	-1,332
Cash flow before financial items and income tax	44,092	15,124
Interest paid and other financial expenses	-4,903	-5,145
Interest received, operational	3,302	664
<b>Cash flow from operating activities (A)</b>	<b>42,491</b>	<b>10,644</b>
<b>Cash flow from investing activities</b>		
Investments in tangible and intangible assets	-186,956	-118,571
Proceeds from sale of tangible and intangible assets	33	12,725
<b>Cash flow from investing activities (B)</b>	<b>-186,924</b>	<b>-105,846</b>

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## Cash flow statement (EUR 1,000)

<b>Cash flow from financing activities</b>	<b>2020</b>	<b>2019</b>
Paid increase in equity	82,999	0
Proceeds from long-term borrowings	66,471	62,947
Repayment of long-term borrowings	0	-28,619
Proceeds from short-term borrowings	0	28,619
Repayment of short-term borrowings	-2,516	-203
Repayment of short-term lease liabilities	-3,388	-2,551
<b>Cash flow from financing activities (C)</b>	<b>143,566</b>	<b>60,192</b>
<b>Impact of exchange rate changes on the amount of foreign currency cash</b>	<b>-2,384</b>	<b>210</b>
<b>Change in cash and cash equivalents; increase (+) / decrease (-)</b>	<b>-867</b>	<b>-35,010</b>
Cash and cash equivalents at the beginning of the period	61,896	96,696
<b>Cash and cash equivalents at the end of the period</b>	<b>58,646</b>	<b>61,896</b>

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## 1. Accounting principles

Terrafame Ltd is domiciled in Sotkamo, Finland. Terrafame is a group company of Finnish Minerals Group, whose parent company is Suomen Malmijalostus Oy, Helsinki, Finland. Copies of the consolidated financial statements of the Group are available at the office of Finnish Minerals Group and they can be viewed on the company's website at [www.mineralsgroup.fi](http://www.mineralsgroup.fi).

Terrafame Ltd's financial statements are available at [www.terrafame.com](http://www.terrafame.com).

### Basis of preparation

The company has prepared its annual accounts in accordance with Finnish accounting legislation and Finnish Accounting Standards (FAS). The financial statement information is reported in tables and related texts in thousands of euros and in the report of the Board of Directors in millions of euros to one decimal place. The comparative figures reported in brackets are figures for the financial period 2019. All the presented figures have been rounded according to general rounding rules, so the sum of the individual figures may be different from the sum presented. Key figures have been calculated using exact values. Comparative information has been adjusted where necessary to correspond with the information of the year under review.

### Translation of items denominated in foreign currencies

Transactions in foreign currencies are entered in euros at the rates prevailing at the transaction date or average rates provided by central banks. Foreign currency-denominated receivables and liabilities have been translated into euros using the rates prevailing at the balance sheet date. Foreign exchange gains and losses related to business operations are included in the corresponding items of net sales, operating expenses or financial income and expenses.

### Revenue recognition

Revenue is recognised from a sale when evidence of an arrangement exists, the title has been transferred to the customer, the price is determinable, and collection of the sales price is reasonably assured. Revenue is recognised net of sales-related foreign exchange gains and losses and any applicable sales taxes. Most sales are priced in US dollars. The time of revenue recognition is determined on the basis of the terms of delivery used.

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A large proportion of the company's production is sold under long-term contracts, but sales revenue is only recognised on individual sales when persuasive evidence exists that all of the following criteria have been met:

- all material risks and rewards of ownership have been transferred to the buyer;
- there is no continuing managerial involvement to the degree usually associated with ownership or effective control over goods sold;
- the amount of revenue can be reliably determined;
- the costs incurred or to be incurred in respect of the sale can be reliably determined; and
- the flow of future economic benefits to the seller is probable.

Upon delivery, a preliminary invoice is drawn up based on preliminary analysis and measurement results and the market prices of the month preceding the month of delivery. Preliminary invoices are entered as sales. The final analysis and measurement results are normally obtained within a few months. Any preliminary invoices are adjusted based on the final analysis and measurement results. Furthermore, the prices of delivered metals are adjusted to correspond to the market prices of the agreed pricing period.

With regard to preliminary invoices for which final analysis and measurement results have not yet been obtained, the sales prices and euro-denominated valuations are adjusted so as to correspond to the average market prices of the month of the financial statements and the exchange rates at the date of closure of the accounts. With regard to these deliveries, the company also considers the need to make write-downs due to the changes in analysis and measurement results. Such write-downs were not made in the financial statements of 31 December 2020. The metal hedges for metal tonnes sold have been taken into account in the valuation of sales.

## Pension obligations

The company has pension schemes in accordance with local conditions and practices. These are arranged with an external insurance company. Pension costs are entered as expenses in the year in which they accrue.

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## Deferred tax assets and liabilities

Deferred tax assets and liabilities are calculated on temporary differences between the book value and taxable value, using the tax rates enacted by the balance sheet date. Deferred tax assets arising from taxable losses carried forward are recognised up to the amount for which there is likely to be taxable income in the future, and against which the temporary difference can be used. Deferred tax assets or tax liabilities with respect to the fair values of derivative contracts have been recognised in the company's balance sheet. Deferred tax assets and liabilities recognised according to adaptations of Section 5:5b of the Finnish Accounting Act are presented in the notes to the income statement.

## Tangible assets

Tangible assets have been recognised in the balance sheet at cost, less planned depreciation. Interest and financing costs relating to significant investment projects are capitalised in accordance with the Section 4:5.2–3 of the Finnish Accounting Act. Non-current tangible assets include, among other things, buildings, infrastructure, machinery and equipment used in mining and metal recovery operations, laboratory equipment, vehicles, roads, power lines and structures for environmental protection. Acquisition cost includes expenditure that is directly attributable to the acquisition, construction or production of the item.

Non-current assets bought from the bankruptcy estate of Talvivaara Sotkamo Ltd on 15 August 2015 have been amortised in accordance with the original depreciation plan by applying the normal planned depreciation periods, with the exception that a write-down of approximately EUR 76 million was made on the acquired tangible assets: the net expenditure of acquired tangible assets as at 15 August 2015 was approximately EUR 202.6 million, on which a write-down of EUR 76 million was made, and the acquired tangible assets were entered in the company's balance sheet in the amount of EUR 126.6 million.

Spare parts with a useful life of more than one year have been recognised in non-current assets as of the 2017 financial statements. On 31 December 2020, their value totalled EUR 13.9 million.

Where parts of an item of tangible assets have different useful lives, they are accounted for as separate items.

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Mining of ore in surface mining operation requires surface material to be moved and waste rock to be mined. Resulting costs have been capitalized and will be depreciated by using units of production method as the mining progresses according to mining plan.

Construction in progress and land are not depreciated. Depreciation on other assets is calculated using the straight-line method to allocate their cost over their estimated useful lives, as follows:

<b>Asset type</b>	<b>Depreciation period</b>
Roads and power lines	25 years
Buildings and structures	10–40 years
Leaching heap base structures	10–30 years
Machinery and equipment	4–25 years
Furniture, fixtures and fittings	5–10 years
Vehicles	5–10 years
Fixed asset spare parts	3 years
Structures for environmental protection	25 years

Carrying amounts are reassessed in connection with each financial statement. The reassessment is based on the company's estimates of ore reserves, mineral resources, production capacity and other relevant factors.

Gains and losses on disposals are determined by comparing the proceeds with the book value and are recognised within other operating income or expenses, respectively, in the income statement.



## Implementation of the IFRS 16 Leases standard

Terrafame has applied the IFRS 16 Leases standard as permitted by section 5:5b of the Finnish Accounting Act and by the IAS Regulation (EU) in its financial accounting starting from 1 January 2019, using the simplified approach.

The standard requires that all leases be recognized on the lessee's balance sheet. As a lessee, the company is required to recognize a right-of-use asset representing its right to use the underlying leased asset and, correspondingly, a lease liability representing its obligation to make lease payments, in its balance sheet. The right-of-use asset is depreciated in accordance with a depreciation schedule determined on the basis of the lease term or useful life of the asset. Interest on a lease liability is presented in finance expenses.

The company applies the standard's exemption to the assets of short-term leases and leases of low-value and these are not recognized as right-of-use assets and lease liabilities on the balance sheet. As a result, the payments associated with such leases are recognized as an expense in the income statement on a straight-line basis over the lease term. From the lessor's point of view, lease agreements are still divided into two categories: finance leases and other leases. The company has not concluded any significant agreements as a lessor. These agreements are classified according to IFRS 16 as other leases.

As a result of the adoption of the standard, the company has recognized right-of-use assets on its balance sheet under machinery and equipment on the basis of lease liabilities concerning vehicles and mobile mining equipment.

## Other intangible assets

Other intangible assets are recognised in the balance sheet at cost, less planned amortisation. Other intangible assets mainly comprise IT applications and geological data supporting the company's business operations, which are amortised over 3–5 years.

## Research and development expenditure

Research expenditure is recognised as an expense as incurred. The company has not capitalised development expenditure during the financial period 2020 or earlier.

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## Inventories

The company classifies its inventories into three groups: raw materials and consumables, work in progress, and finished products.

Raw materials and consumables are valued at the average acquisition cost of the goods in stock. A so-called write-down on slow-moving items is made on the slow-moving goods in the raw materials and consumables inventory. If an item has been in stock for more than a year, a write-down of 25 percent is made. The write-down increases 25 percentage points annually, so the value of an item that has been in storage more than four years is zero.

Work in progress and finished products (metal content for sale) are presented in the balance sheet as valued at actual production costs but up to the net realisable value of the products on the balance sheet date. Net realisable value refers to the estimated selling price in the ordinary course of business, less the production costs necessary to making work in progress and finished products ready for sale.

The acquisition cost of work in progress and finished products (production cost) includes the fixed and variable costs of production and maintenance that supports production, as well as depreciation on these functions, based on the realised production costs in the production process. The acquisition cost excludes borrowing costs.

Finished products include nickel-cobalt sulphide, zinc sulphide and copper sulphide. Work in progress includes metals in the ore in primary and secondary heaps, as well as metals in the leaching process or metal precipitation and filtration process that can be processed for sale as a finished product.

The amount of metal contained in work in progress is measured by calculating the metal tonnes added to and removed from the production process. The recoverable quantities of nickel, zinc, copper and cobalt included in work in progress are determined based on the estimated ore concentrations based on geological studies, the estimated recovery percentages of metals in the bio heap leaching process and the recovery percentages of the metals production plant.

Ore concentrations, the amount of metals in the production process and the metals recovery percentage are reviewed monthly.

With the net realisable value being higher than the at-cost value, the finished product inventory of 31 December 2020 was valued at EUR 6.1 million at-cost on the basis of the acquisition cost. Work in progress has been valued in the company's financial statements as of 2017 on a cost basis, as it was lower than the net realisable value. The value of work in progress on a cost basis was EUR 190.2 million on 31 December 2020.

The value of inventories determined in accordance with the principle of net realisation value includes discretionary factors related to, for instance, the measurement of metal volume in work in progress, metals recovery percentages, production costs, the production time necessary to complete sales, and sales prices.

## Derivatives and hedge accounting

### Derivatives

The derivatives used by the company were acquired for hedging purposes, and hedge accounting has been applied to them. Any unrealised change in the value of derivatives that are considered effective hedges are recognised, in accordance with Section 5:2a of the Finnish Accounting Act, at fair value in the balance sheet's fair value reserve as per the valuation report for the last day of the reporting period. The fair values of derivatives are based on valuations of external counterparties.

The realised earnings-related impacts of changes in the value of effective hedging instruments that are covered by hedge accounting are presented uniformly with the hedged item. In the event of any ineffective hedging, changes in the fair value of hedging instruments are recognised in profit or loss.

### Hedge accounting

The company applies hedge accounting in accordance with Section 5:2a of the Finnish Accounting Act to all hedging instruments it holds. At the beginning of the hedging arrangement, the relationship between each hedging instrument and the hedged asset, as well as the risk management objectives, are documented by hedging instrument type. The effectiveness of the hedging relationship is assessed at the beginning of hedging and in quarterly accounts at a minimum.



## Cash flow hedging

The company's hedging activities are entirely focused on cash flow hedging. The effective portion of changes in the fair values of derivatives acquired for the purpose of hedging forecasted cash flows are recognised in the fair value reserve under equity. Changes in fair value are recognised in profit or loss for the same periods in which hedged cash flows affect the result.

## Provisions

Provisions are recognised when the company has a present legal or constructive obligation as a result of past events, and when it is probable that an outflow of resources will be required to settle the obligation and a reliable estimate of the amount of the obligation can be made.

A provision is made for mine closure costs and legal claims on the following conditions: the obligation relates to a closed or prior financial period, its materialisation is deemed certain or likely upon preparation of financial statements, the corresponding income is neither certain nor likely, the obligation is based on law or commitment to third parties, and the obligation can be identified but its precise amount or time of realisation is not known.

## Rehabilitation provision for mine closure and environmental clean-up costs

A rehabilitation provision for mine closure costs is made with respect to the estimated future costs of closure and restoration, and for environmental restoration and rehabilitation to the condition required by the environmental permits granted for mining operations.

Prevention of the threat of environmental pollution entails environmental and landscaping obligations. After mining operations have ceased, any machinery and equipment, chemicals, fuels and waste involving the risk of environmental pollution must be removed from the site. This will be carried out as part of normal mining operations. In addition, open pits must be restored to the condition required by public safety.

The majority of the estimated restoration costs arises from the closure of waste rock dumps and primary and secondary leaching areas, the treatment and clean-up of primary and secondary leaching solution channels, the construction, covering and landscaping of gypsum ponds, the clean-up of waters and precipitates caused by the gypsum pond leak of 2012, the treatment of rock drainage, the fencing of open pits and the ex post supervision of the mining site.

The mine closure plan is based on the covering of areas with water- and oxygen-impermeable material, and long-term aftercare. It is assumed that environmental monitoring of the mine will continue for 30 years after closure of the mine.

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Restoration costs have been estimated in accordance with the cost level at the date of closure of the accounts.

The bioleaching method used by Terrafame is of such a nature that the process cannot be stopped abruptly at the end of operations. In order to ensure environmental safety, bioleaching must be continued until most of the metals have been recovered at the metals production plant. Also, the safe management of solution circulation requires a phased ending. Mining and ore crushing will be terminated after the closure decision.

The shutdown of bioleaching and metals recovery processes is expected to last approximately three to four years. During the first two years, primary phase leaching will be terminated, and primary leaching ore will be transferred to the secondary heap in accordance with permit requirements. In the first two years, the metals production plant will normally be operated on hydrogen sulphide precipitation, and the resulting metals will be sold. During this time, detailed closure plans will be drawn up, and regulatory processes required for closure will be initiated.

After the third year, bioleaching will still be operational in secondary leaching, and when the metal concentrations of the solution decrease, the metals production plant will transfer to sodium hydrogen sulphide precipitation, which will continue to produce small amounts of product for sale. This phase is estimated to last from one to two years, after which the bioleaching and the operations of the metals production plant will be discontinued, and the dilute solutions formed will be treated either at the central water treatment plant or by any other suitable purification method.

An environmental provision for the closure of the mine of EUR 159.1 million has been set to cover the closure costs for thirty years from the date the actual closure measures commence. The environmental provision covers, for example, closure of bioleaching areas, necessary soil rehabilitation measures, solution and water management, and environmental monitoring. It is estimated that the central water treatment plant will be used for around ten years, after which lighter purification methods will be adopted. The company assesses the amount of the environmental provision annually. The assumption is that a decision on the closure of mining operations would have been made at the balance sheet date.

## 2. Notes to the balance sheet

### 2.1. Intangible assets (EUR 1,000)

	Intangible rights	Other capitalized long-term expenditures	Investments in progress	Total
<b>Carrying amount at 31 December 2019</b>	<b>937</b>	<b>50</b>	<b>92</b>	<b>1,079</b>
Gross carrying amount at 1 January 2020	2,418	144	92	2,654
Increase	103	0	84	187
Capitalisation for the year	0	176	-176	0
Gross carrying amount at 31 December 2020	2,521	320	0	2,841
<b>Accumulated amortisation and impairment losses</b>				
at 1 January 2020	1,481	94	0	1,575
Amortisation for the year	469	36	0	505
<b>Accumulated amortisation and impairment losses</b>				
at 31 December 2020	1,950	130	0	2,080
<b>Carrying amount at 31 December 2020</b>	<b>571</b>	<b>190</b>	<b>0</b>	<b>761</b>

## 2.2. Tangible assets (EUR 1,000)

	Land	Buildings	Machinery and equipment	Other tangible assets	Construction in progress	Total
<b>Carrying amount at 31 Dec 2019</b>	<b>1,409</b>	<b>49,215</b>	<b>98,552</b>	<b>162,650</b>	<b>111,308</b>	<b>423,134</b>
Gross carrying amount at 1 Jan 2020	1,409	64,866	157,915	187,560	111,308	523,058
Increase	1,221	20	9,962	0	189,697	200,900
Capitalisation for the year	0	335	8,500	35,906	-44,740	0
Transfers	0	0	0	0	0	0
Decrease	0	0	-57	0	0	-57
Gross carrying amount at 31 Dec 2020	2,630	65,221	176,320	223,466	256,264	723,901
Accumulated amortisation and impairment losses at 1 Jan 2020	0	15,652	59,363	24,910	0	99,924
Decrease	0	0	0	0	0	0
Amortisation for the year	0	4,093	22,721	10,877	0	37,692
Depreciation for reductions	0	0	-50	0	0	-50
Accumulated amortisation and impairment losses at 31 Dec 2020	0	19,745	82,034	35,787	0	137,565
<b>Carrying amount at 31 Dec 2020</b>	<b>2,630</b>	<b>45,476</b>	<b>94,287</b>	<b>187,679</b>	<b>256,264</b>	<b>586,336</b>

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## 2.2. Tangible assets (EUR 1,000)

	<b>Machinery and equipment</b>	
	<b>Right-of-use assets</b>	<b>Total</b>
<b>Carrying amount at 31 Dec 2019</b>	<b>15,865</b>	<b>15,865</b>
Gross carrying amount at 1 Jan 2020	17,799	17,799
Increase	685	685
Decrease	-11	-11
Gross carrying amount at 31 Dec 2020	18,472	18,472
Accumulated amortisation and impairment losses at 1 Jan 2020	1,934	1,934
Decrease	0	0
Amortisation for the year	2,534	2,534
Depreciation for reductions	0	0
Accumulated amortisation and impairment losses at 31 Dec 2020	4,468	4,468
<b>Carrying amount at 31 Dec 2020</b>	<b>14,004</b>	<b>14,004</b>

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## IFRS 16 Leases standard notes (EUR 1,000)

<b>Maturity analyses</b>	<b>2020</b>	<b>2019</b>
No later than 1 year	3,512	3,360
Later than 1 year and no later than 5 years	9,021	11,887
Over 5 years	0	0
<b>Carrying amount at 31 December</b>	<b>12,533</b>	<b>15,248</b>
<b>Items recognised in profit or loss</b>		
Lease expenses	22	33
Lease expenses	4,565	3,284
Depreciation by item class	2,534	1,697
Interest losses from leasing liabilities	438	370
Above Leasing costs are included in Other operating expenses		
Items booked in Cash flow statement		
<b>Payments from lease agreements total</b>	<b>7,975</b>	<b>5,868</b>

## 2.3. Inventories (EUR 1,000)

	31.12.2020	31.12.2019
Raw materials and consumables	24,231	25,016
Work in progress	190,150	186,237
Finished goods	6,105	6,904
<b>Total</b>	<b>220,486</b>	<b>218,157</b>

The value of raw materials and consumables on 31 December 2020 includes a provision of EUR 7,160 thousand for slow-moving inventory, which reduces the value of inventory. The corresponding provision on 31 December 2019 was EUR 6,407 thousand.

## 2.4. Deferred tax assets (EUR 1,000)

	31.12.2020	31.12.2019
Deferred tax assets	2,532	227

According to estimates, the company has approximately EUR 126.5 million of confirmed and to-be-confirmed losses, and approximately EUR 66.1 million of deferred depreciation. Deferred tax assets or tax liabilities for derivatives have been recognised in the company's balance sheet.



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## 2.5. Amounts owed by Group companies (EUR 1,000)

Trade receivables	31.12.2020	31.12.2019
Finnish Minerals Group	104	177
<b>Total</b>	<b>104</b>	<b>177</b>

## 2.6. Prepayments and accrued income (EUR 1,000)

	31.12.2020	31.12.2019
Other prepayments and accrued income	4,419	7,387
Derivative receivables	12,668	6,364
<b>Total</b>	<b>17,088</b>	<b>13,751</b>

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## 2.7. Equity (EUR 1,000)

	31.12.2020	31.12.2019
Subscribed capital at the beginning of the period	2,000	2,000
<b>Subscribed capital at the end of the period</b>	<b>2,000</b>	<b>2,000</b>
Fair value reserve at the beginning of the period	-909	6,382
Increase	89,981	133,993
Decrease	99,201	141,284
<b>Fair value reserve at the end of the period</b>	<b>-10,129</b>	<b>-909</b>
Invested unrestricted equity at the beginning of the period	596,297	589,677
Investment in invested unrestricted equity	109,735	6,620
<b>Invested unrestricted equity at the end of the period</b>	<b>706,032</b>	<b>596,297</b>
Retained earnings at the beginning of the period	-247,640	-232,433
Retained earnings at the end of the period	-247,640	-232,433
<b>Loss for the period</b>	<b>-8,217</b>	<b>-15,208</b>
<b>Retained earnings</b>	<b>-255,857</b>	<b>-247,640</b>
<b>Total equity</b>	<b>442,046</b>	<b>349,748</b>

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## 2.7. Equity (EUR 1,000)

<b>Restricted equity at the end of the period</b>	<b>31.12.2020</b>	<b>31.12.2019</b>
Subscribed capital	2,000	2,000
Fair value reserve	-10,129	-909
<b>At the end of the period</b>	<b>-8,129</b>	<b>1,091</b>
<b>Distributable equity at the end of the period</b>		
Retained earnings	-247,640	-232,433
Loss for the period	-8,217	-15,208
Fair value reserve	-10,129	-909
Invested unrestricted equity	706,032	596,297
<b>At the end of the period</b>	<b>440,046</b>	<b>347,748</b>

The fair value reserve comprises the market value of derivatives covered by hedge accounting.

## 2.8. Notes to hedging derivatives (EUR 1,000)

	31.12.2020			31.12.2019			2020	2019
	Fair value			Fair value			Notional amount USD	Notional amount USD
Currency and interest rate derivatives	Positive	Negative	Net	Positive	Negative	Net		
Foreign exchange forwards	10,133	0	10,133	565	1,358	-793	381,500	177,000
Currency options	0	0	0	0	0	0	0	0
<b>Metal derivatives</b>							<b>Tonnes</b>	<b>Tonnes</b>
Nickel forward contracts	2	10,783	-10,781	1,904	5,876	-3,972	14,350	8,600
Nickel options	0	0	0	0	0	0	0	0
Zinc forward contracts	2	9,481	-9,479	3,649	0	3,649	32,100	17,800
Zinc options	0	0	0	601	601	0	0	0
<b>Derivatives total</b>	<b>10,136</b>	<b>20,264</b>	<b>-10,128</b>	<b>6,719</b>	<b>7,835</b>	<b>-1,117</b>		
Long-term derivatives	1,287	4,405	-3,118	0	0	0		
Short-term derivatives	8,849	15,859	-7,010	6,719	7,835	-1,117		
			<b>31.12.2020</b>			<b>31.12.2019</b>		
Balance assets, gross amount			12,668			6,364		
Balance liabilities, gross amount			25,329			7,500		

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The fair value calculation of hedges is based on market rates and quotations on the balance sheet date in accordance with the hedging portfolio. Counterparties for derivative transactions have been approved in accordance with the company's hedging policy. Intercompany receivables and liabilities are connected on a transaction level with each counterparty and accounted for on a daily level by transaction.

The importance of hedging instruments to the company's financial position and projected profitability for the next 12 months was high on 31 December 2020. The company had set up a cash flow hedge against a weakening US dollar with a hedging rate of approximately 65 percent of its projected estimated USD denominated net cash flow. Similarly, a hedging rate of approximately 58 percent was also applied to set up a hedge against falling nickel prices for the company's projected nickel deliveries for the following year utilising derivatives and fixed-term sales agreements. For planned zinc deliveries company has set up a hedge with a hedging rate of approximately 68 percent. In addition, in line with its hedging policy, the company had set up hedges for almost all of its nickel and zinc deliveries, which had been completed and reported under sales already earlier. As a result, the change in market prices after the closing of the accounts has hardly no effect on the deliveries reported as sales for the financial period 2020.

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## 2.9. Obligatory provisions (EUR 1,000)

<b>Long-term Rehabilitation provision</b>	<b>31.12.2020</b>	<b>31.12.2019</b>
At the beginning of the period	157,398	158,363
Increase	1,679	0
Decrease	0	965
At the end of the period	159,077	157,398
<b>Long-term total</b>	<b>159,077</b>	<b>157,398</b>
<b>Estimated cost of the rehabilitation provision</b>		
Rehabilitation of primary and secondary heaps, waste rock fields and gypsum pond area	130,194	126,815
Repairing of gypsum pond leak damage 2012	20,000	20,000
Rehabilitation and fencing of the open pit area	883	2,583
Environmental monitoring of the mining area after finishing rehabilitation	8,000	8,000
<b>Estimated rehabilitation costs total</b>	<b>159,077</b>	<b>157,398</b>

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## 2.10. Long-term loans from credit institutions (EUR 1,000)

<b>Installment credit</b>	<b>31.12.2020</b>	<b>31.12.2019</b>
At the beginning of the period	313	143
Increase	0	355
Decrease	-75	-185
<b>At the end of the period</b>	<b>239</b>	<b>313</b>
<b>Leasing liabilities</b>		
At the beginning of the period	11,887	0
Increase	528	14,525
Decrease	-3,394	-2,638
<b>At the end of the period</b>	<b>9,021</b>	<b>11,887</b>

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## 2.10. Long-term loans from credit institutions (EUR 1,000)

<b>Long-term loans I</b>	<b>31.12.2020</b>	<b>31.12.2019</b>
At the beginning of the period	66,345	92,991
Increase	0	0
Decrease	0	-28,434
Valuation	-5,607	1,788
<b>At the end of the period</b>	<b>60,739</b>	<b>66,345</b>
<b>Long-term loans II</b>		
At the beginning of the period	62,311	0
Increase	27,013	62,592
Decrease	0	0
Valuation	-7,831	-281
<b>At the end of the period</b>	<b>81,493</b>	<b>62 311</b>
<b>Long-term loans III</b>		
At the beginning of the period	0	0
Increase	42,519	0
Decrease	0	0
Valuation	-1,773	0
<b>At the end of the period</b>	<b>40,746</b>	<b>0</b>
<b>Long-term loans total</b>	<b>192,238</b>	<b>140,857</b>

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## Option and other special rights

(pcs)	31.12.2020	31.12.2019
<b>Batch 1</b>	0	566,712
Maximum number of shares to be issued		
<b>Batch 2</b>	0	244,265
Maximum number of shares to be issued		
<b>Batch 4</b>	0	244,264
Maximum number of shares to be issued		
<b>Batch 5</b>	0	140,190
Maximum number of shares to be issued		
<b>Batch 6</b>	0	93,460
Maximum number of shares to be issued		
<b>Batch 7</b>	1,034,008	
Maximum number of shares to be issued		
<b>Batch 8</b>	582,033	
Maximum number of shares to be issued		
<b>Batch 9</b>	21,518	
Maximum number of shares to be issued		
<b>At the end of the period</b>	<b>1,637,559</b>	<b>1,288,891</b>

With the consent of the option right holders, was annulled all the existing resolutions passed on and after 10 February 2017 regarding issuance of option rights and all the existing option rights entitling to shares in the Company. There is issued option rights entitling holders to subscribe for new shares of the Company to replace the option rights annulled. The subscribed Option Rights may be transferred by each Warrantholder to a Permitted Transferee. No subscribed Option Rights may, directly or indirectly, be pledged. The subscription price agreed for the option batch seven is equal to and for batches eight and nine 10 percent higher than the subscription price at the time of the closing of the financing arrangements implemented in 2020. The subscription period for the batch seven is 27th of August 2020 in one lot. For batch eight subscription period has been split in two accordingly 84% (8 1) 27 August 2020 – 31 December 2023 and 16% (8 2) 27 August 2020 – 31 December 2024. For batch nine subscription period is 27 October 2020 – 30 June 2024. Batch eight and nine is not required to use in one lot.

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## 2.11. Deferred tax liabilities (EUR 1,000)

	31.12.2020	31.12.2019
Deferred tax liabilities	0	0

## 2.12. Specifications of Group liabilities (EUR 1,000)

Short-term liabilities to group companies	31.12.2020	31.12.2019
Trade payables		
Finnish Minerals Group	286	281
<b>Total</b>	<b>286</b>	<b>281</b>

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## 2.13. Short-term loans from financial institutions (EUR 1,000)

<b>Instalment credit</b>	<b>31.12.2020</b>	<b>31.12.2019</b>
At the beginning of the period	137	155
Increase	75	185
Decrease	-135	-203
<b>At the end of the period</b>	<b>76</b>	<b>137</b>
<b>Leasing liabilities</b>		
At the beginning of the period	3,360	0
Increase	3,540	5,912
Decrease	-3,388	-2,551
<b>At the end of the period</b>	<b>3,512</b>	<b>3,360</b>
<b>Short-term loans I</b>		
At the beginning of the period	28,434	0
Increase	0	30,000
Decrease	-27,015	0
Valuation	-1,419	-1,566
<b>At the end of the period</b>	<b>0</b>	<b>28,434</b>
<b>Short-term loans from financial institutions total</b>	<b>3,588</b>	<b>31,931</b>

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## 2.14. Current liabilities/Accruals and deferred income (EUR 1,000)

	31.12.2020	31.12.2019
Interests	1,732	2,100
Salaries, fees and other expenses	6,951	6,082
Other accrued liabilities and deferred income	5,129	1,032
Derivative liabilities	25,329	7,500
<b>Total</b>	<b>39,141</b>	<b>16,715</b>

## 3. Notes to the income statement

### 3.1. Net sales (EUR 1,000)

Industry distribution	2020	2019
Metals	338,258	310,426
<b>Total</b>	<b>338,258</b>	<b>310,426</b>
<b>Geographical distribution</b>		
Europe	338,275	310,184
Asia	0	0
United States	-17	242
Australia	0	0
<b>Total</b>	<b>338,258</b>	<b>310,426</b>

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## 3.2. Cost of goods sold (EUR 1,000)

<b>Raw materials and consumables</b>	<b>2020</b>	<b>2019</b>
Purchases during the financial year	-114,479	-119,045
Change in stocks	-785	-1,625
	-115,264	-120,671
External services	-70,257	-66,344
<b>Total</b>	<b>-185,521</b>	<b>-187,015</b>
<b>Change in Inventory</b>		
Change in Work in progress	3,913	15,583
Change in Finished goods	-799	5,004
<b>Total</b>	<b>3,114</b>	<b>20,587</b>
<b>Personnel expenses</b>		
Wages and salaries	-31,820	-27,806
Pensions expenses	-5,139	-5,155
Other personnel expenses	-1,083	-857
<b>Total</b>	<b>-38,042</b>	<b>-33,818</b>
<b>Depreciation</b>		
Depreciations	-40,087	-37,100
<b>Total</b>	<b>-40,087</b>	<b>-37,100</b>
<b>Other expenses</b>		
Other Cost of goods sold expenses	-64,814	-54,595
<b>Total</b>	<b>-64,814</b>	<b>-54,595</b>
<b>Cost of goods sold total</b>	<b>-325,350</b>	<b>-291,941</b>

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## 3.3. Sales and marketing expenses (EUR 1,000)

<b>Personnel expenses</b>	<b>2020</b>	<b>2019</b>
Wages and salaries	-940	-806
Pensions expenses	-147	-147
Other personnel expenses	-31	-25
<b>Total</b>	<b>-1,118</b>	<b>-979</b>
<b>Depreciation</b>		
Depreciation	-62	0
<b>Total</b>	<b>-62</b>	<b>0</b>
<b>Other expenses</b>		
Other Sales and Marketing expenses	-1,569	-412
<b>Total</b>	<b>-1,569</b>	<b>-412</b>
<b>Sales and Marketing expenses total</b>	<b>-2,750</b>	<b>-1,391</b>

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## 3.4. Administrative expenses (EUR 1,000)

<b>Personnel expenses</b>	<b>2020</b>	<b>2019</b>
Wages and salaries	-3,424	-3,938
Pensions expenses	-615	-712
Other personnel expenses	-229	-140
<b>Total</b>	<b>-4,268</b>	<b>-4,790</b>
<b>Depreciation</b>		
Depreciation	-311	-277
<b>Total</b>	<b>-311</b>	<b>-277</b>
<b>Other expenses</b>		
Other Administrative expenses	-14,923	-12,443
<b>Total</b>	<b>-14,923</b>	<b>-12,443</b>
<b>Auditors' remunerations</b>		
Audit	-92	-91
Certificates and reports	-3	-2
Tax consultancy	0	0
Other services	-49	-17
<b>Total</b>	<b>-144</b>	<b>-110</b>
<b>Administrative expenses total</b>	<b>-19,646</b>	<b>-17,621</b>

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## 3.5. Other operating expenses (EUR 1,000)

<b>Personnel expenses</b>	<b>2020</b>	<b>2019</b>
Wages and salaries	-762	-653
Pensions expenses	-121	-120
Other personnel expenses	-25	-20
<b>Total</b>	<b>-908</b>	<b>-793</b>
<b>Depreciation</b>		
Depreciation	-271	-215
<b>Total</b>	<b>-271</b>	<b>-215</b>
<b>Other operating expenses</b>		
Other operating expenses	-7,239	-5,428
<b>Total</b>	<b>-7,239</b>	<b>-5,428</b>
<b>Other operating expenses total</b>	<b>-8,418</b>	<b>-6,437</b>

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## Personnel expenses total (EUR 1,000)

	2020	2019
Wages and salaries	-38,833	-34,107
Pensions expenses	-6,279	-6,300
Other personnel expenses	-1,399	-1,071
<b>Total</b>	<b>-46,512</b>	<b>-41,478</b>

<b>Wages and fees for Members of Board of Directors</b>	<b>-293</b>	<b>-292</b>
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### Average number of company personnel

Salaries and senior salaried	267	223
Blue-collar	566	499
<b>Total</b>	<b>833</b>	<b>722</b>

## Depreciation, amortisation and impairment charges total (EUR 1,000)

	2020	2019
Intangible assets	-469	-466
Other capitalised long-term expenditure	-36	-25
	-505	-491
<b>Tangible assets</b>		
Buildings	-4,093	-4,078
Machinery and equipment depreciation	-22,721	-20,844
Machinery and equipment depreciation right-of-use assets	-2,534	-1,697
Other tangible assets depreciation	-10,877	-10,512
	-40,226	-37,131
<b>Total</b>	<b>-40,731</b>	<b>-37,622</b>

## 3.6. Finance income and finance cost (EUR 1,000)

Finance income	2020	2019
Other interest and financial income	16,945	1,155
<b>Total</b>	<b>16,945</b>	<b>1,155</b>

<b>Other interest and financial income include exchange rate profit</b>	<b>16,774</b>	<b>541</b>
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Finance income for the financial period include interest income of approximately EUR 171 thousand and interest gains of EUR 16 774 thousand, of which realised foreign exchange gains EUR 3,131 thousand. Of the unrealised foreign exchange gains on finance income, EUR 13 643 thousand consists of the valuation of FX denominated loans and financial assets using the exchange rate at the balance sheet date. Correspondingly, of the comparative period's foreign exchange gains, EUR 491 thousand derives from the valuation of financial assets.

Finance expenses	2020	2019
Other interest and financial income	-8,239	-10,737
<b>Finance expenses total</b>	<b>-8,239</b>	<b>-10,737</b>

<b>Financial expenses to others include exchange rate losses</b>	<b>-2,410</b>	<b>-1,901</b>
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Financial expenses include interest losses from leasing liabilities	-438	-370
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<b>Financial income and expenses total</b>	<b>8,706</b>	<b>-9,582</b>
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The finance expenses for the financial period include EUR 5,829 thousand of interest and finance expenses. The finance expenses for the comparative period include EUR 8,836 thousand of interest and finance expenses and EUR 1,788 thousand of unrealised exchange rate losses on the valuation of FX denominated loans.

## 4. Notes to the commitments (EUR 1,000)

<b>Amounts payable on rental and leasing agreements</b>	<b>2020</b>	<b>2019</b>
No later than 1 year	391	434
Later than 1 year and no later than 5 years	598	890
<b>Total</b>	<b>989</b>	<b>1,324</b>
<b>Other liabilities</b>		
<b>Fixed assets serving as collateral for installment credit</b>	<b>328</b>	<b>425</b>
<b>Installment credit</b>		
No later than 1 year	76	137
Later than 1 year and no later than 5 years	239	313
<b>Total</b>	<b>315</b>	<b>450</b>
<b>Other service agreement liabilities</b>		
No later than 1 year	8,341	0
Later than 1 year and no later than 5 years	5,600	0
<b>Total</b>	<b>13,941</b>	<b>0</b>
<b>Bank deposit</b>	<b>150</b>	<b>150</b>

## Securities complying with environmental and mining permits (EUR 1,000)

Beneficiary	Type of security	31.12.2020 Amount of security total	31.12.2019 Amount of security total
Kainuu Centre of Economic Development, Transport and the Environment;	Credit insurance	127,945	122,030
Security in accordance with permit decision no. 52/2013/1	Bank guarantee	1,500	1,500
Security in accordance with permit decision no. 43/2014/2	Bank guarantee	6	6
Security in accordance with permit decision no. 43/2015/1	Bank guarantee	100	100
Security in accordance with permit decision no. 3/2017/1	Bank guarantee	50	50
Security in accordance with permit decision no. 76/2017/1	Bank guarantee	100	100
Decision of the Finnish Safety and Chemicals Agency Tukes, 30 June 2014, KaivNro: 2819	Bank guarantee	100	100
Decision of the Finnish Safety and Chemicals Agency Tukes, 30 June 2014, KaivNro: 2819	Bank guarantee	35	35
Decision of the Finnish Safety and Chemicals Agency Tukes, 30 June 2014, KaivNro: 2819	Bank guarantee	50	50
<b>Total</b>		<b>129,886</b>	<b>123,971</b>
Other securities	Bank guarantee	2,453	2,453
Real estate investments' VAT refund liability		2,690	3,644
Business mortgages		320,000	320,000
Real estate mortgage		1,200,079	1,200,079
Mining certificate, mine register number 2819, mining concession	Pledged	yes	yes

Business mortgages and Real estate mortgages are pledged for Company's long term financing agreements.

## 5. Related party transactions

The key related parties of Terrafame Ltd include Suomen Malmijalostus Oy, the State of Finland, Galena Private Equity Resources Investment 2 L.P., Galena Private Equity Resources Investment 3 L.P. and Galena Private Equity Resources Investment 4 L.P. funds, as well as Trafigura Ventures V B.V. The related parties also include members of Board, CEO and Management Team members of the company, persons responsible for Terrafame Ltd's commercial agreements, and immediate family members of persons referred to here, as well as entities over which they or their immediate family members have control. Terrafame's related parties also include entities in which the Government of Finland exercises control or considerable influence. Terrafame has applied an exemption pursuant to which it only reports significant transactions with Government-related companies.

Financing arrangements are in place between the company and three funds – Trafigura Ventures V B.V., Galena Private Equity Resources Investment 2 L.P., Galena Private Equity Resources Investment 3 L.P. and Galena Private Equity Resources Investment 4 L.P. – as well as between the company and Finnish Minerals Group. The value of the company's related-party borrowings connected with the financial arrangement is EUR 147.4 million. The commercial agreements between Terrafame and Trafigura Ventures V B.V. generated EUR 319.3 million in sales during the financial period. The company has acquired legal and other administrative services worth EUR 0.5 million and management services for product development projects worth EUR 0.4 million from Suomen Malmijalostus Oy. The maximum limit for the counter-guarantee granted by the State for arranging collateral in accordance with environmental permits was lowered during the financial period 2019 at the company's initiative to EUR 32.5 million and remained stable.

All business transactions between Terrafame Ltd and its related parties were market-conform.

YEAR 2020 IN BRIEF

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CHAIRMAN OF THE BOARD'S  
REVIEW

BOARD OF DIRECTORS' REVIEW

KEY FIGURES

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BOARD OF DIRECTORS' PROPOSAL

AUDITOR'S REPORT

## Business transactions with related parties (EUR 1,000)

<b>Goods and services sold</b>	<b>31.12.2020</b>	<b>31.12.2019</b>
Associate and joint ventures		
Other related party ventures	318,665	338,086
Ventures total	318,665	338,086
<b>Total</b>	<b>318,665</b>	<b>338,086</b>
<b>Goods and services purchased</b>		
Associate and joint ventures		
Other related party ventures	33,013	32,120
Ventures total	33,013	32,120
<b>Total</b>	<b>33,013</b>	<b>32,120</b>
<b>Credits</b>		
Other related party ventures	147,420	121,733
Ventures total	147,420	121,733
<b>Total</b>	<b>147,420</b>	<b>121,733</b>

## Board of Directors' proposal for the measures to be taken owing to the loss for the financial period

Terrafame Ltd's result for the financial period shows a loss of EUR 8,216,671.35 . The Board of Directors proposes to the Annual General Meeting that no dividend be distributed, and that the loss be retained in shareholders' equity.

In Helsinki, February 24, 2021

### Lauri Ratia

Chairman of the Board

### Matti Hietanen

### Esa Lager

### Tuomo Mäkelä

### Jesus Fernandez

### Emmanuel Henry

### Riitta Mynttinen

### Joni Lukkaroinen

CEO

## Auditor's confirmation

A report on the audit has been issued today.

In Sotkamo, March 9, 2021

KPMG Oy Ab

Authorised Public Accountants

**Antti Kääriäinen**

APA

## Auditor's Report

### To the Annual General Meeting of Terrafame Oy Report on the Audit of the Financial Statements

#### Opinion

We have audited the financial statements of Terrafame Oy (business identity code 2695013-5) for the year ended 31 December 2020. The financial statements comprise the balance sheet, income statement, cash flow statement and notes.

In our opinion, the financial statements give a true and fair view of the company's financial performance and financial position in accordance with the laws and regulations governing the preparation of financial statements in Finland and comply with statutory requirements.

#### Basis for Opinion

We conducted our audit in accordance with good auditing practice in Finland. Our responsibilities under good auditing practice are further described in the Auditor's Responsibilities for the Audit of Financial Statements section of our report. We are independent of the company in accordance with the ethical requirements that are applicable in Finland and are relevant to our audit, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

#### Responsibilities of the Board of Directors and the Managing Director for the Financial Statements

The Board of Directors and the Managing Director are responsible for the preparation of financial statements that give a true and fair view in accordance with the laws and regulations governing the preparation of financial statements in Finland and comply with statutory requirements. The Board of Directors and the Managing Director are also responsible for such internal control as they determine is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.



In preparing the financial statements, the Board of Directors and the Managing Director are responsible for assessing the company's ability to continue as a going concern, disclosing, as applicable, matters relating to going concern and using the going concern basis of accounting. The financial statements are prepared using the going concern basis of accounting unless there is an intention to liquidate the company or cease operations, or there is no realistic alternative but to do so.

## Auditor's Responsibilities for the Audit of Financial Statements

Our objectives are to obtain reasonable assurance on whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with good auditing practice will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of the financial statements.

As part of an audit in accordance with good auditing practice, we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the company's internal control.
- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by management.

- Conclude on the appropriateness of the Board of Directors' and the Managing Director's use of the going concern basis of accounting and based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the company's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the company to cease to continue as a going concern.
- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events so that the financial statements give a true and fair view.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

## Other Reporting Requirements

### Other Information

The Board of Directors and the Managing Director are responsible for the other information. The other information comprises information included in the report of the Board of Directors. Our opinion on the financial statements does not cover the other information.

In connection with our audit of the financial statements, our responsibility is to read the information included in the report of the Board of Directors and, in doing so, consider whether the information included in the report of the Board of Directors is materially inconsistent with the financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated. Our responsibility also includes considering whether the report of the Board of Directors has been prepared in accordance with the applicable laws and regulations.

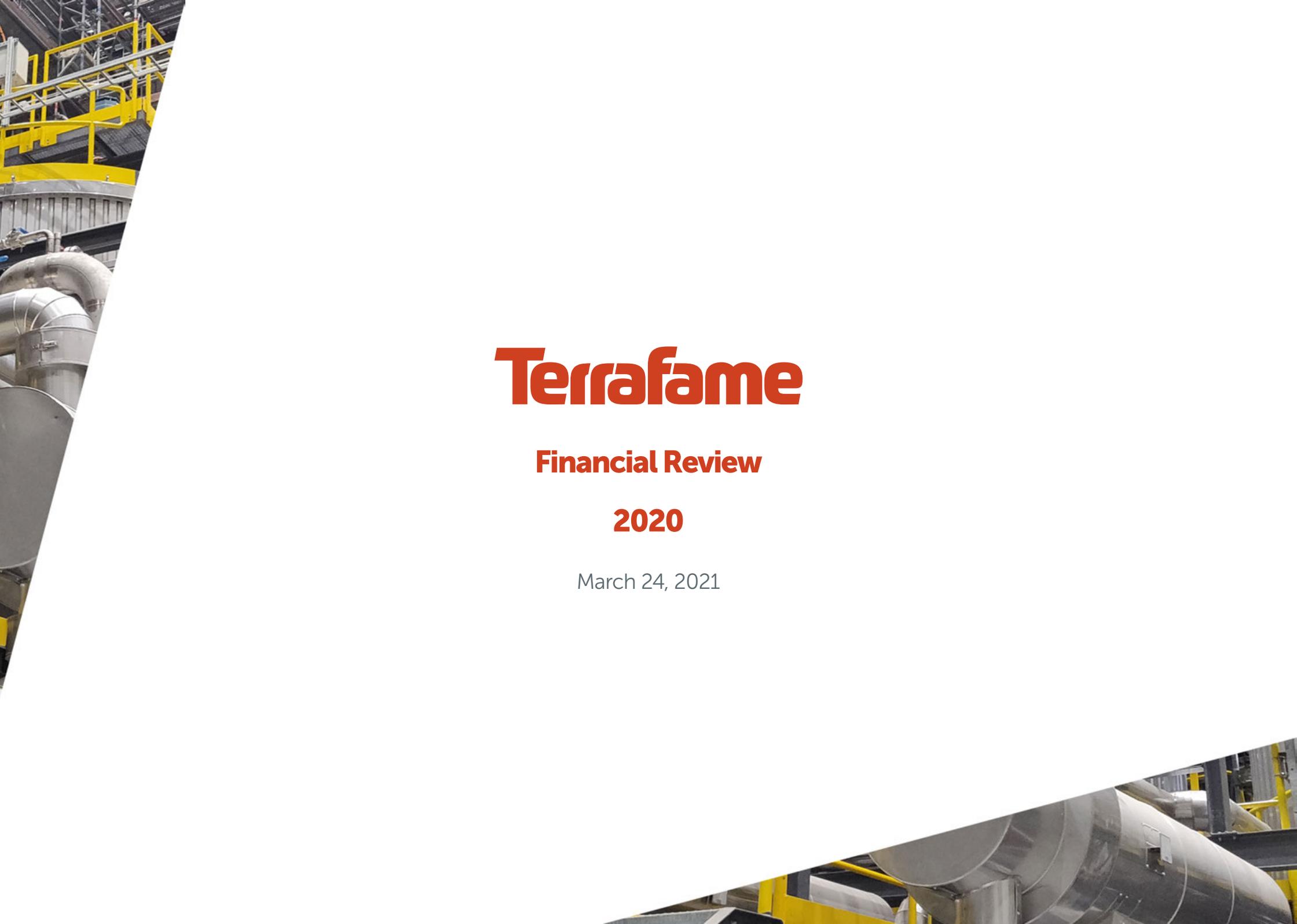
In our opinion, the information in the report of the Board of Directors is consistent with the information in the financial statements and the report of the Board of Directors has been prepared in accordance with the applicable laws and regulations.

If, based on the work we have performed, we conclude that there is a material misstatement in the information included in the report of the Board of Directors, we are required to report this fact. We have nothing to report in this regard.

Sotkamo, Finland, 9 March 2021

**Antti Kääriäinen**

Authorized Public Accountant



# Terrafame

## Financial Review

**2020**

March 24, 2021