



# ESG performance report

2020

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# Introduction

For Elkem, increased attention on sustainability in society is a great opportunity. Elkem's products are critical input factors to a vast number of applications that are necessary in sustainable solutions such as renewable energy, energy storage, mobility solutions, infrastructure improvements, digitalisation and health care.

The increasing demand for low-carbon technologies and products such as solar panels, batteries and electrical vehicles will therefore increase demand for several of Elkem's product segment within silicones, silicon and ferro-alloys. We are simultaneously engaging actively to reduce the environmental impact from our own production processes to create the materials necessary to enable a sustainable future.

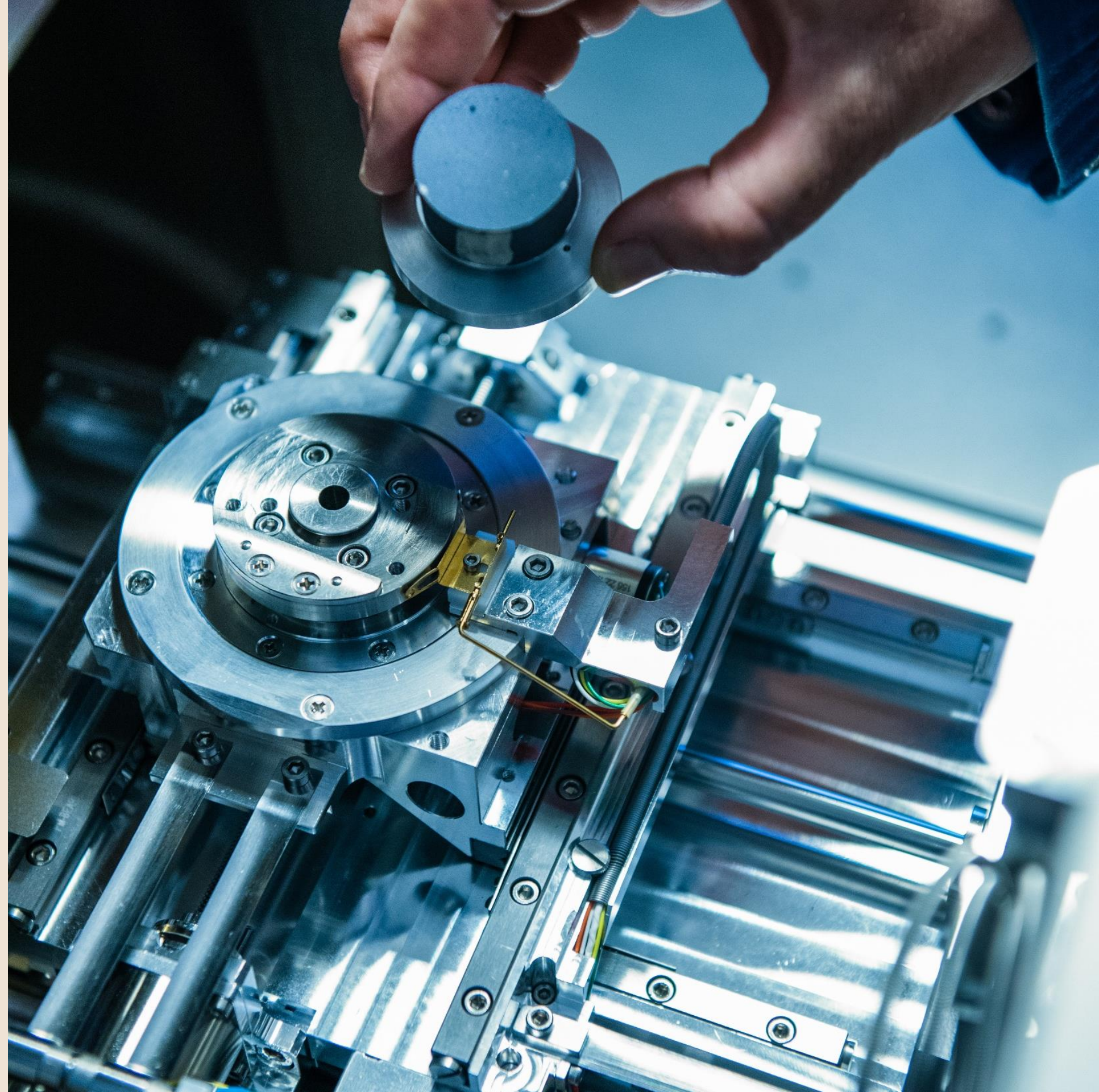
The financial sector is, together with other stakeholders, putting more emphasis on the financial risks related to insufficient sustainability initiatives and the expectations for non-financial disclosure are increasing. The accelerating need to understand the risks, opportunities and challenges, in non-financial reporting has influenced Elkem's sustainability work and reporting in 2020. Environmental, Social and Governance (ESG) related factors are becoming increasingly important for investment decisions and has become an important acronym for the 2020s.

*The ESG performance report highlights the way sustainability is integrated in the company, as it covers the most material and business core topics to the company.*

2020 was dominated by the extraordinary situation of the global pandemic, affecting all parts of society. The long-term implications of Covid-19 are yet to be fully understood, but Elkem's ambitions for a sustainable development has not changed.

We now have 10 years to fulfil the commitments in the 2030 Agenda of the United Nations Sustainable Development Goals. This ESG performance report highlights our efforts covered in the 2020 ESG report. For the full report:

<https://www.elkem.com/globalassets/corporate/esgsustainability/2020-reporting/elkem-esg-report-2020-web.pdf>



# We are Elkem

We combine natural raw materials, renewable energy and human ingenuity – for customers

## Customer focus

- Operational excellence
- Specialisation, innovation and R&D
- Environment, Social and Governance (ESG)



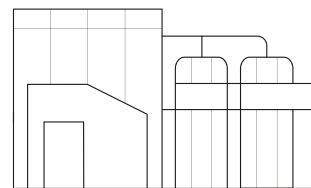
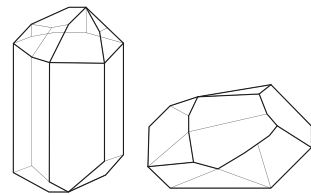
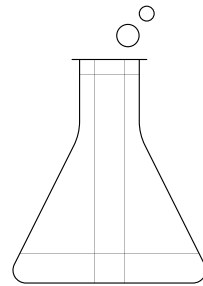
## Low cost sustainable input factors

- Quartz
- Carbon
- Biocarbon
- Renewable energy



## High temperature/chemical production processes

- Silicones
- Silicon, foundry products and microsilica
- Carbon solutions



# Our mission, commitments and achievements

Provide advanced material solutions shaping a better and more sustainable future, adding value to our stakeholders globally.



Elkem is a signatory to the UN Global Compact and apply sustainability in line with the principles of the UN Global Compact.



Elkem develops its business in support of the ambitions of the UN Sustainable Development Goals and Paris agreement.



Elkem has been recognised for transparency and actions on climate change, as part of the **CDP A List**, ranking at top 5%.



Elkem received a **gold** rating from Ecovadis, the world's most trusted business sustainability ratings, ranking at top 5%.



Elkem is certified as a Nasdaq ESG Transparency Partner.



The chemical industry's global initiative for improvement in environment, health, safety and security performance.

# ESG material topics to Elkem

Based on a materiality assessment aligned with GRI\*



## ENVIRONMENTAL

Minimise negative environmental impact throughout the value chain

- Climate change mitigation and GHG emissions
- Energy management
- Waste management
- Water management



## SOCIAL

Increase positive social impact throughout the value chain

- Health and safety
- Labour rights




## GOVERNANCE

Ensure compliance and alignment of company objectives

- Corporate governance
- Risk management

# Sustainability agenda and material results

Develop our business in support of the UN SDGs and Paris agreement

Sustainability agenda		Material topics	Indicators*	2020	2019	2018	Ambition
	<b>Environmental: Minimise negative environmental impact throughout the value chain</b>	Climate change mitigation and GHG emissions	Direct (scope 1) GHG emissions	2.38 mill tonnes	2.18 mill tonnes	2.64 mill tonnes	20% replacement of renewable by 2021, 40% by 2030
			Renewable share of direct emissions (bio)	20%	18%	21%	
			Indirect (scope 2) GHG emissions	916 000 tonnes	872 000 tonnes	874 000 tonnes	
		Environmental management, incl. energy management	Energy consumption	6,228 GWh	6,010 GWh	6,400 GWh	Energy recovery increase year on year
			Electrical consumption from renewable energy	83%	83%	79%	
		Waste management	Waste generated	356,156 tonnes	-	-	
			Waste reused or recycled	67%	-	-	
	Water management	Water consumption, total freshwater consumption	86.9 million m3	-	-	Full water discharge permit compliance	
	<b>Social: Increase positive social impact throughout the value chain</b>	Health and safety, including EHS in supply chain	Total recordable injury rate – employees	2.3	2.2	2.2	Zero injuries
			Total recordable injury rate - contractors	4.7	4.6	5.0	
		Labour rights, including human rights	Incidents of child labour	0	0	0	Condemnation of human trafficking
			Incidents of forced labour	0	0	0	
			Collective bargaining agreements	64%	61%	-	
	<b>Governance: Ensure compliance and alignment of company objectives</b>	Corporate governance	Confirmed incidents of corruption and misconduct reported	11	-	-	Zero tolerance for harassment of any kind
			Incidents of discrimination	0	1	1	
Risk management		TCFD standard: Financial implications and other risks and opportunities due to climate change	In progress	Decided	-	Implement climate risk management according to TCFD	

## Climate change mitigation and GHG emissions

Indicator	Unit	2020	2019	2018
<b>Direct GHG emissions – scope 1</b>				
<i>Total scope 1 Co2 equivalents, incl. methane and diesel</i>	Million tonnes	2.38	2.18	2.5
Direct CO2 emissions from fossil sources	Million tonnes	2.29	2.15	2.54
CO2 emissions from renewable sources (biogenic)	Thousand tonnes	547	448	313
Share of renewable carbon sources, in Norwegian smelters	%	20%	18%	21%
Share of renewable carbon sources, the group	%	19%	17%	11%
<b>Indirect GHG emissions – scope 2</b>				
<i>Total scope 2 location based emissions</i>	Thousand tonnes	916	872	874
<b>Emission (GHG) intensity</b>				
GHG intensity, revenue	Tonnes/ MNOK	0,00012	0,00012	0,00011

Target	Status
<b>20% replacement of direct fossil CO2 emissions for Norwegian smelters by 2021, 40% by 2030.</b>	Increase in overall CO2 emissions from 2019 due to higher production volumes, but a decrease in carbon intensity. 20% replacement of direct fossil CO2 emissions for Norwegian smelters by use of biocarbon.
<b>Full understanding of indirect CO2 emissions.</b>	Mapping of scope 3/indirect emissions started in 2020. A comprehensive report on scope 3 will be disclosed in the CDP report by summer 2021.

Policies and management approach, including climate risk mitigation based on TCFD framework: <https://www.elkem.com/sustainability/energy-and-environment/climate-change---mitigation-and-adaptation/>

**What is Elkem's biocarbon strategy and why is it important for our climate strategy? See page 18-19 in the ESG report.**

**Scope 3:** In 2020, we started mapping our scope 3 emissions. This work will continue in 2021, and we aim to report on our most material scope 3 emissions from 2021.

During the past few years Elkem has expanded our production and therefore also seen an increase in the group's total CO<sub>2</sub> emissions. Since 2017, Elkem has increased production with seven smelting furnaces: two in Norway, four in China and one in Paraguay.

All of these expansions, except from the furnace in Paraguay comes from acquiring existing capacity. The furnace in Paraguay runs solely on hydroelectric power and uses only bio-carbon as a reductant, making its operations close to carbon neutral.

The increase in CO<sub>2</sub> is also connected to the acquisition of upstream silicone activities in China, which uses a coal fired boiler to produce steam used in the production process.

The total scope 1 emissions for Elkem was 2.38 million tonnes in 2020. The emissions are up from 2.15 million tonnes in 2019 due to higher production volumes.

The renewable share of CO<sub>2</sub> emissions, from biogenic sources, was 547,000 tonnes, up from 448,000 tonnes in 2019, an increase of 22% and 19% of total group emissions.

More than 75% (1.88 million tonnes) of the direct fossil CO<sub>2</sub>-emissions from our production come from the smelting process, where carbon (C) reacts with oxygen in quartz to produce silicon/ferrosilicon.

CO<sub>2</sub> numbers from other sources, including heating and fuel, are based on standard conversion factors in accordance with the EU Emissions Trading Systems (EU ETS) Guidelines. Elkem reports the company's emissions according to the GHG Protocol.

PwC has undertaken a limited assurance engagement of the Scope 1 and 2 GHG emissions for the period 1 January 2020 - 31 December 2020. The report is available on page 60 in [ESG report](#).

**Elkem was awarded on the CDP Climate A-List in 2020. [\[link\]](#)**



## Energy management

Indicator	Unit	2020	2019	2018
Energy consumption	GWh	6,400	6,010	6,228
Energy recovery	GWh	711	698	645
Energy efficiency	GWh	50,4	51	313
Energy efficiency investments	NOK million	36,6	165,6	
Energy intensity, revenue	GWh/MNOK	0,27	0,27	0,25
Share of total gross electricity based on renewable energy production	%	83%	83%	

Target	Status
Energy recovery increase year on year.	13 GWh increase in 2020.
Energy recovery project in Salten on track.	Some delay and will go online in 2021.

Policies and management approach:

<https://www.elkem.com/sustainability/elkems-environmental-and-energy-strategy>

Energy efficiency and sustainable sourcing of energy is of utmost importance to secure energy supply while at the same time reducing Elkem's global greenhouse gas footprint.

Parts of Elkem's value chain are highly energy intensive, with silicon, ferrosilicon and foundry alloys being produced in electric arc furnaces. Elkem's smelting furnaces consume around 5.6 TWh of electricity per year.

Recovered heat from smelting furnaces can be utilised as hot water for district heating, steam for other production processes and to generate new electricity. Electricity is sold back to the grid, hot water and steam are used internally and externally to supply other companies and communities in the vicinity of each plant.

Through our EHS management policy, all units shall have environmental programmes covering energy and resource utilisation. Well established groupwide audit and reporting systems for EHS are also being expanded to include a higher level of focus on environmental and energy issues.

As all plants shall have energy management systems, there is no corporate requirement of ISO 50001 certification. In 2020, four site are certified. With an increased attention to energy use, Elkem is in the process of initiating ISO 50001 certification requirements for plants with high energy consumption.



**83% of total gross electricity consumption is based on renewable energy production**

## Waste management

Indicator	Unit	2020	Comment
<i>Type of waste and treatment</i>			
<b>Total waste generated</b>	<b>Tonnes</b>	<b>356,156</b>	Includes both onsite and offsite landfills
Non-hazardous waste to landfill	Tonnes	48,077	Delivered to approved sites
Hazardous waste to landfill	Tonnes	6,031	Includes incineration both with and without energy recovery
Non-hazardous waste to destruction	Tonnes	2,399	Includes incineration both with and without energy recovery
<b>Total waste directed to disposal</b>	<b>Tonnes</b>	<b>118,511</b>	33% of total process waste generated
By-product to recycling/sales, ex. microsilica	Tonnes	94,690	Raw materials, slag and production fines
Oils and chemicals to recycling	<b>Tonnes</b>	<b>1,945</b>	
Scrap, packaging etc. to recycling	Tonnes	4,687	
Microsilica	Tonnes	136,322	Off-gas fume processed to sales product
<b>Total waste diverted from disposal</b>	<b>Tonnes</b>	<b>237,645</b>	<b>67% of total waste generated</b>
Mining activities	Tonnes	308,263	Tailings and crushing residue (natural rock without chemical processing) from mining
Waste intensity, revenue	Tonnes/ MNOK	9,89	

Target	Status
<b>Percent reduction of process waste to landfill and destruction by 2025.</b>	Not defined yet.

Policies and management approach:

<https://www.elkem.com/about-elkem/environment-health-and-safety/ehs-management-systems/>

An in-depth understanding of process flows and waste streams, including waste in shipment and hazard classification can be found on page 21 in ESG report.

Elimination of waste is one of Elkem's key strategies for successful operations and is mentioned specifically in [Elkem's General Policy](#). We aim to consider all raw material and process waste as by-products that can be reused or sold.

With the expansion of Elkem to include the chemical production of silicones from silicon, the characteristics of our waste streams have changed.

Waste generated was reported in full externally for the first time in 2020. The total amount of process waste generated was 356,156 tonnes.

In addition to raw material and production waste that goes to disposal or is reused/recycled, our mining activities generated 308,263 tonnes of tailings in 2020. All of this was returned to the mining sites for further use in mining activities or as part of our programme to refurbish mining site for return to farming or to their natural state.

The waste management applies to all kinds of waste throughout the value chain with a high focus on efficient utilisation of all resources, reduction of waste generation in the different production, transportation, and storage processes and on reuse, recycling, or sales of residual waste. Any residual waste left after other efforts is disposed of in accordance with local regulations.



**67% of process waste was reused or recycled.**

## Water management

Indicator	Unit	2020	2019	2018
<b>Total freshwater consumption</b>	<b>Million m3</b>	<b>86.9</b>	<b>79.8</b>	<b>36.2</b>
Process wastewater discharge	Million m3	16.5	12.7	14.9
COD flow	Kg	262,700	324,700	413,400
COD flow, emissions to revenue	Kg/MNOK	10.94	14.59	16.56
Freshwater use, revenue	m3/MNOK	3618.7	3584.7	1450.2

Elkem has decided to disclose all relevant information in accordance with CDP Water. The first report will be disclosed in 2021.

Target	Status
<b>Full water discharge permit compliance.</b>	No significant spills to water.
<b>Zero spills of D4/D5</b>	Zero spills of significant environmental impact.

Water management is covered by Elkem's environmental policy. Key points are Elkem's commitment to give EHS first priority and to strive to be an environmentally conscious company.

**What is Elkem's position and management strategy of D4/D5? Read more under our "Policy positions and statements":**

<https://www.elkem.com/sustainability/sustainability-reports/statements-and-positions/>

As a fully integrated value chain for the production of silicon and silicones, Elkem has several interphases with water related impacts. The challenges are different both through the value chain and across the actual regions. Most of our plants have dry high temperature smelting processes. Still, these processes are typically based on hydroelectric power and water is used for cooling purposes. These sites are typically located in areas with access to significant freshwater resources and no water stress issues.

The production of silicones in France and China are intricately linked to chemical reactions in aqueous solutions, advanced water treatment plants and control programmes.

At some of our sites, both water scarcity and potential impact on river basins and ecosystems are recognised. All key environmental impacts are identified and documented with measurements showing performance compared to permits given by government authorities where Elkem operates, and/or improvement targets set by Elkem.

Key performance indicators on discharges are reported on a regular basis. We are also conducting surveys to identify potential pollution from old industrial sites including abatement measures.

### Key performance 2020

There were no significant spills into water in 2020, defined as those that have a lasting environmental impact, or significant environmental incidents. In 2020 water treatment facilities issues were solved, and the plants were able to meet all requirements without production reduction.

### Improvement plan 2021

- Strengthen transparency by adoption to CDP Water.
- Improve descriptions of water risk assessments, measures, and control programmes.
- Improve reporting on run off water from plant areas.
- Water treatment plants for several plants

## Health and safety

Indicator	2020		2019		2018	
	Number	Rate	Number	Rate	Number	Rate
<b>Work-related injuries</b>						
<b>Employees</b>						
Fatalities	0	0	1	0.1	0	0
High-consequence work-related injuries	1	0.1	1	0.1	6	0.5
Lost workday injuries	10	0.8	14	1.1	15	1.1
Other recordable injuries	19	1.5	14	1.1	14	1.1
<b>Total recordable injury (TRIs and TRIR)</b>	<b>29</b>	<b>2.3</b>	<b>28</b>	<b>2.2</b>	<b>29</b>	<b>2.2</b>
Hours worked - million	13,10		13,05		13,14	
<b>Contractors</b>						
Fatalities	0	0	0	0	0	0
High-consequence work-related injuries	0	0	0	0	2	0.5
Lost workday injuries	6	2.2	7	2.0	8	2.0
Other recordable injuries	7	2.5	9	2.6	12	3.0
<b>Total recordable injury (TRIs and TRIR)</b>	<b>13</b>	<b>4.7</b>	<b>16</b>	<b>4.6</b>	<b>20</b>	<b>5.0</b>
Hours worked - million	3,95		3,51		2,76	

Target	Status
<b>Total Recordable Injury Rate (including fatalities: Zero)</b>	<ul style="list-style-type: none"> <li>■ 1 high-consequence work-related injury (fingertip amputation). Zero for contractors.</li> <li>■ A total of 29 recordable injuries (Total recordable injuries include lost workday, medical treatment and restricted work injuries) where main types of injuries were lacerations, bone fractures, burns and sprains/strains.</li> </ul>
<b>Work related illnesses: Zero</b>	
<b>First aid injury rate: Ensure reporting of all first aid injuries</b>	In addition to recordable injuries, a total of 147 high-potential work-related incidents (high risk incident) were identified at Elkem sites in 2020, down from 160 in 2019.
<b>High Risk Incidents (HRI): Ensure reporting of all HRIs</b>	All recordable injuries and high-potential incidents are fully investigated, and measures are implemented to prevent similar incidents from happening in the future.

Our EHS efforts are based on **a zero-harm philosophy** and our EHS management system is implemented to systematically work towards this goal.

**Policies and EHS management system:**

<https://www.elkem.com/about-elkem/environment-health-and-safety>

A strong health and safety culture is the essence of our licence to operate. Elkem takes full responsibility for all activities on Elkem property and is committed to ensure that employees and contractors working at Elkem sites can do so without harm.

Elkem has a strict reporting regime for injuries and requires all injuries to be reported, investigated and mitigated independent of severity. Of a lost workday rate (LWR) of 0.8 injuries per million work hours for own employees, only one injury was defined as high severity in 2020. This is a reduction from 2019 when the LWD rate was 1.1 and the number of high severity injuries 3.

Elkem has a comprehensive Corporate EHS audit programme where all production sites are audited on site minimum every other year. The target for 2020 was 20 audits. Because of COVID19 travel restrictions only 7 of these were done during the year. The rest will be moved to 2021 when travel restrictions are lifted.

There were no fatalities at the Elkem plants in 2020.



**77% of all Elkem sites operated without recordable injuries in 2020.**

**Elkem's global commitment is shown by:**

- Having clearly defined responsibilities and accepting accountability for EHS at all levels of the organisation.
- Always prioritising individual health and safety when choices have to be made.
- Setting ambitious goals and striving for continuous improvement in EHS.
- Using the same EHS systems, tools and methods, and having the same expectations to EHS performance wherever we operate around the world.

## Labour rights, including gender equality

Indicator	Unit	2020	2019	2018
<b>Labour rights indicators</b>				
Employees covered by bargaining agreements	%	64%	61%	
Turnover rate	%	6%	8%	5.4%
Reported incidents of child or forced labour in Elkem or with suppliers	Number	0	0	0
Reported incidents of discrimination	%	0	1	1
Annual employee development discussions	%	85%	65%	59%
<b>Female share</b>				
Total female share	%	25%	25%	25%
Women in management teams	%	24%	23%	23%
Women in corporate management team	Number	1 of 9	1 of 10	1 of 10
Female share of board of directors	%	36%	36%	50%
Female share in leadership programme	%	19%	32%	25%
Female share – operators / blue-collar	%	21%	18%	18%
Female share – staff / white-collar	%	34%	34%	34%
Female share in trainee programme	%	58%		

Target	Status
<b>Zero tolerance of behaviour that conflict with basic human rights.</b>	Human Rights Impact Assessment (HRIA) and human rights training programme to be launched in 2021.
<b>Zero tolerance of any form of harassment, discrimination, threatening or inappropriate behaviour.</b>	Zero reported incidents in 2020.
<b>Annual development discussion with closes leader for all employees.</b>	Some setbacks (85% of employees) in 2020, due to Covid-19 and the integration of new units in the company.
<b>Increased share of women, year on year.</b>	Stable at 25% over the last years.
<b>Increased share of women in management teams.</b>	Up 1% in 2020. Due to organisational changes management teams were re-organised and can not directly be compared from 2019. Drop in women participation in leadership programme from 32% to 19%.

Relevant policy commitments, such as the Elkem Code of conduct, Code of conduct for business partners and the Human Rights policy:  
<https://www.elkem.com/about-elkem/environment-health-and-safety>

Elkem does not accept any behaviour that conflicts with basic human rights including any form of harassment, discrimination, threatening or inappropriate behaviour. The organisation embraces the dignity of all human beings and the Elkem values support the commitment to human rights. At the core of this Elkem is labour rights including freedom of association, right to collective bargaining, and avoiding the use of forced or child labour.

Elkem fully endorses employees' freedom of association and collective bargaining rights. These rights give employees the ability to influence changes and find solutions together with their employer.

Respect for human rights is one of Elkem's values. The group is fully committed to avoid complicity in human rights abuses, and to respect, protect and promote human rights throughout our operations.

As we grow and enter into new and challenging markets, we see the need to take on a more systematic approach to our human rights strategy. We will therefore conduct Human Rights Impact Assessment (HRIA) in selected areas, where we work to identify Elkem's actual impact and the risk of impact on human rights throughout our value chain. This will be concluded in 2021.

Based on the HRIA, we will identify Elkem's human rights priorities and launch a human rights action plan. In 2021, we are also launching a human rights training programme.

The female share in Elkem was 25% in 2020, and Asia was the region with the highest proportion of female employees, with 27%. The female share of part time employees was 60% and the female share of temporary hires was 18%.

The female share of management teams reporting to top management in Elkem is at 24%. However, there are great differences within the organisation. Some places in the organisation, women accounted for over 50% of plant or site management where in other locations, there are no women in management at all.

## Corporate governance, including compliance

Indicator	Unit	2020	2019	2018
Total number of misconduct reports	Number	11	-	-
Total number of confirmed incidents of corruption	Number	3	-	-
Total number of incidents in which employees were dismissed or disciplined for corruption	Number	2	-	-
Employees who received ethics and code of conduct training	% of target group	57%	-	-
Employees who received anti-bribery and corruption training	% of target group	51%	-	-
Confirmed incidents when contracts with business partners were terminated or not renewed due to violations related to corruption	Number	0	-	-
Public legal cases regarding corruption brought against the organisation or its employees	Number	0	-	-
Employees who received competition law compliance training	% of target group	74%	-	-
Employees with confirmed commitment to the Code of conduct	%	98%	100%	70%
Employees with confirmed commitment to anti-bribery and anti-corruption policy	%	51%	100%	70%
Employees with confirmed commitment to competition law policy	%	74%	100%	70%
New raw materials suppliers subject to assessment and pre-qualification screening	%	100%	73%	80%
New raw materials suppliers subject to supplier audits	%	>90%	100%	100%
New suppliers who have signed Elkem's Code of conduct for business partners	%	90%	-	-
Adverse human rights events identified in supply chain	Number	0	0	0

Target	Status
<b>Adhere to the Norwegian Code of Practice for Corporate Governance (NUES)</b>	The board's report on corporate governance can be found in the annual report, on <a href="#">page 37</a> .
<b>The metrics for the CEO for 2020</b>	Health and safety performance with target of zero high severity (life changing) incidents Environmental performance target of zero major environmental cases
<b>All new raw material suppliers subject to assessment and pre-qualification screening on social and environmental criterias</b>	Target met in 2020.
<b>All new suppliers of raw materials subject to supplier audit.</b>	Some audits where not performed due to Covid-19 restrictions.
<b>All new suppliers to sign Elkem's Code of conduct for business partners</b>	CRM system will be implemented in 2021, and will require mandatory signing of the Code of conduct for business partners.

### Governing documents and tools:

<https://www.elkem.com/about-elkem/corporate-governance/Governing-documents-and-tools/>

Elkem encourages its more than 6,800 employees as well as external parties to report possible dishonest or illegal conduct in the business to HR or the legal/compliance department without risk of negative reactions. A global whistle blowing channel was updated in 2019/2020, and full reporting according to the new reporting structure was first published for the full year 2020.

Elkem is committed to avoiding anti-competitive practices across all operations. The competition law compliance policy outlines what behaviour is considered acceptable and not. Elkem conducts anti-competitive practice risk assessments to identify high risk jurisdictions and employee groups that are most exposed and to anti-competitive practices. In addition, assessments are made to identify red flags and mitigate any gaps.

Elkem has a zero-tolerance policy against corruption. Elkem has multiple operations across jurisdictions and in several high-risk countries. Elkem also deals with government officials for permits and other administrative issues. In order to enhance the efficiency of Elkem's internal controls and measures to prevent bribery and corruption, compliance is conducting an anti-bribery corruption risk assessment (ABC risk assessment) of the company's global operations. This assessment will be finished in 2021 and forms the basis for the anti-bribery and corruption programme going forward. It will be updated on a regular basis as well as when entering new markets and by introduction of new products.

# Risk management

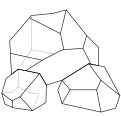
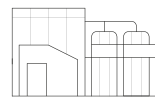
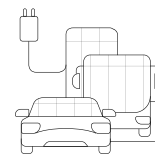
Main risks in Elkem	Risk
1	"Black swan"
2	Covid-19
3	Sales volume and production mix
4	Sales price
5	Currency
6	M&A and organic projects
7	Regulatory and political framework conditions
8	Environment and climate
9	Governance, compliance and ethics
10	Cyber risk
11	Explosion / fire

Target	Status
<b>Implementation of the TCFD* framework for climate risk management</b>	Implementation of the climate risk management tool TCFD was decided in 2020.  Full TCFD report will be published in 2021.

The full overview of Elkem's risk management and description is found on page 47- 49 in the annual report:  
<https://www.elkem.com/globalassets/corporate/documents/annual-report-2020-web.pdf>

\* Taskforce on Climate-related Financial Disclosure

## Sustainability risk mapping

<b>Opportunities and strength</b>	<ul style="list-style-type: none"> <li>83% electricity from renewable sources</li> <li>Increase share of biocarbon and biochemicals</li> <li>Potentially benefitting from stronger environmental and social standards</li> </ul>	<ul style="list-style-type: none"> <li>Potential for further energy efficiency and recovery</li> <li>Product development e.g. Polycyclic aromatic hydrocarbon (PAH) free products</li> <li>Carbon capture storage and utilisation</li> <li>Strong product stewardship</li> <li>Improve safety through automation</li> </ul>	<ul style="list-style-type: none"> <li>Carbon footprint in value chain vs. competition</li> <li>Products enabling reduced GHG emissions</li> <li>Increasing end-products' durability</li> <li>Replacing oil-based plastics and raw materials</li> </ul>
<b>Value chain</b>	Raw materials 	Production and processes 	Markets and end products 
<b>Challenges and weaknesses</b>	<ul style="list-style-type: none"> <li>Carbon material (coal) required for smelting processes</li> <li>Limited sustainable biocarbon available</li> <li>Land use for quartz mining and biocarbon production</li> </ul>	<ul style="list-style-type: none"> <li>CO<sub>2</sub> emissions and CO<sub>2</sub> prices</li> <li>NO<sub>x</sub>, SO<sub>2</sub>, dust and PAH emissions</li> <li>Water management</li> <li>Hazardous waste and landfill</li> <li>Chemical safety</li> </ul>	<ul style="list-style-type: none"> <li>Continuous tightening of environmental regulations</li> <li>Cyclics (D4, D5, D6) listed as substances of very high concern</li> <li>Chemical reputation / market preference change</li> </ul>

Ultimately the board of directors has the responsibility to ensure that Elkem has appropriate risk management systems reflecting the extent and nature of the group's activities. This includes responsibility for ESG related issues.

Elkem's operational philosophy, according to the Elkem Business System (EBS), is to organise resources close to the value chain and operative functions. This principle also applies to risk management, which is an integrated part of the line management's responsibility.

### More information about Elkem's work on climate risk:

<https://www.elkem.com/sustainability/energy-and-environment/climate-change---mitigation-and-adaptation/>

# Resources

- Full ESG report:  
<https://www.elkem.com/globalassets/corporate/esgsustainability/2020-reporting/elkem-esg-report-2020-web.pdf>
- GRI index:  
<https://www.elkem.com/globalassets/corporate/esgsustainability/2020-reporting/elkem-2020-gri-index.pdf>
- Governing policies:  
<https://www.elkem.com/about-elkem/corporate-governance/Governing-documents-and-tools/>
- Statements and positions:  
<https://www.elkem.com/sustainability/sustainability-reports/statements-and-positions/>
- Annual report 2020:  
<https://www.elkem.com/globalassets/corporate/documents/annual-report-2020-web.pdf>

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Delivering your potential