

# ENVIRONMENT

**We take care of the environment by minimizing power consumption, waste, emissions and use of resources.**

**We set ambitious reduction targets to achieve climate neutrality.**

**We behave responsibly.**



Contributing to the United Nations SDGs

## TAKING CARE OF OUR ENVIRONMENT

The efficient use of resources and minimizing the impact on our natural environment in terms of emissions to air, water and land, remains a key priority for Gurit. We cater to the renewable energy industry – among others – and see it as our responsibility to be a leading example, actively minimizing our footprint. We have made further progress in widening the scope of our actions and improving the quality of data collected. However, the complexity of our business, supply chain and acquisitions and divestments poses additional challenges.

Material topics identified as most significant include adaptation and mitigation of climate change, pollution, resource use and circular economy, energy and waste.

We discuss these concerns in three sections within this chapter:

1. Reduction of greenhouse gas emissions
2. Resource utilization
3. Circularity

## GOVERNANCE AND ORGANIZATIONAL RESPONSIBILITIES FOR ENVIRONMENTAL CONCERNS

Environmental concerns are addressed in several workstreams of Gurit's sustainability organization (see Strategy & Targets chapter). The Resource Utilization workstream coordinates and supports initiatives such as energy saving and emissions, water management, waste and packaging reduction at our production sites. The Circularity workstream addresses product development aspects, including the use of bio-based ingredients, the use of recycled materials and the recyclability of our products. And, the Responsible Supply Chain workstream manages environmental aspects within our supply chain.

Compliance with legislation, anticipation of upcoming legislation and the implementation of best practice standards is supported by a dedicated Chemical Compliance Manager & Sustainable Products Lead, as well as the Group General Counsel & Head of Sustainability. The workstreams are coordinated by the sustainability team and the sustainability performance of Gurit is reviewed every two months at the Executive Committee level, with annual KPIs in place. The Board of Directors annually reviews performance and provides direction for targets.

Climate-related issues, targets, and monitoring are aligned with Sustainability governance described in the #GuritCares chapter.

- GRI 2-13 Delegation of responsibility for managing impacts
- GRI 2-24 Embedding policy commitments
- GRI 2-27 Compliance with laws and regulations
- GRI 3-3 Management of material topics

## ENVIRONMENTAL MANAGEMENT SYSTEMS & STRATEGY

Gurit's environmental management systems rely on policies, certifications, training and learning, and tools to collect, manage and analyse data. Our strategies and actions are outlined in this Report, as well as in the Gurit Sustainability Policy.

### ENVIRONMENTAL POLICY

Our Environmental Policy is the foundation for the avoidance, minimization or mitigation of possible impact on the environment, by efficiently utilizing resources, deploying clean technology, mitigating our impact on climate change and preventing any form of pollution. Compliance is achieved by deploying annual qualitative and quantitative targets, facilitated by the Resource Utilization and Circularity sustainability workstreams, as well as our focus on innovation and fostering clean technologies, all with a spirit of continuous improvement.

The Environmental Policy sits alongside the Gurit Water Management Guidelines, Hazardous Chemicals Management Policy, and Waste Management Guidelines, and forms part of our Group Sustainability Policy. It complements our commitments to the United Nations Global Compact (UNGC) and its environmental principles.

The related documents can be downloaded here:

→ [www.gurit.com/policies](http://www.gurit.com/policies)

### CHEMICAL MANAGEMENT

**In 2023, Gurit completed the implementation of a comprehensive global chemical safety management system** which helps us assess chemical risks, considering the latest hazard profile and exposure risk, as well as the impact on these if we were to make changes. **For this purpose, a new software platform (GoldFFX) has been introduced and rolled out at all production sites.**

We have also continued our programme of monitoring the safety and regulatory landscape of chemicals in our products through implementation of the Hazardous Chemicals Management Policy, which includes the management of chemicals that may have unacceptable human and environmental impacts.

More information can be found in the Safety First chapter.



STRATEGY,  
MGMT SYSTEMS,  
POLICIES,  
DUE DILIGENCE

## TOOL FOR DATA COLLECTION AND ANALYSIS

For the past three years, Gurit has been using the Sulytics platform for the collection of data across all sites. This provides an accessible way for our teams to input their local data, enables us to analyse performance and increases the consistency and accuracy of the data across the Group. While in 2023 only a few sites collected monthly data, we will roll out this monthly frequency to all Gurit sites for stationary and mobile combustion, electricity and heating, waste quantity, type and disposal, water withdrawal and discharge, and product quantities sold. This will help us to further understand the results of the sustainability initiatives implemented at the sites, detect any new challenges and have access to detailed data regarding the sustainability goals' progress.

## ISO 14001 CERTIFICATION

ISO 14001 sets out the criteria for an environmental management system, provides a framework for effective environmental management and assures that environmental impact is being measured and improved. **At the end of 2023 68% of our production sites were ISO 14001 certified: Albacete, Carmignano, Chennai (Wind), Dafeng, Quevedo, Falces, Izmir, Magog, Newport, Taicang, Tianjin, Volpiano, Zhuozhou.** ISO-certification is already being planned for the remaining 3 production sites: Chennai (Structural Profiles), Tamaulipas (Kitting), Tamaulipas (PET production).

- GRI 2-23 Policy commitments
- GRI 2-24 Embedding policy commitments
- GRI 201-2 Financial implications and other risks and opportunities due to climate change
- GRI 3-3 Management of material topics

## CLEANTECH

Gurit, as a long-term technical leader in the composites industry, and a major supplier to the wind energy sector, is using its technical knowhow and expertise to make improvements across the business which aim to reduce the company's – and our customers' – impact on the environment.

We use innovation to reduce emissions, make better use of our resources and use our technologies and processes responsibly to contribute to recycling and circularity.

Our CleanTech approach involves Gurit's technology and product development teams across all Business Units. These teams work alongside the cross-functional Resource Utilization, Circularity and Responsible Supply Chain sustainability workstreams.



The opportunities to reduce our environmental impact using clean technology are vast – which means it can also be a challenge to prioritize. We have used our memberships of industry associations as well as discussions with select customers to establish where our technical developments can have the biggest impact in terms of ours and our customers' sustainability.

Further evidence of our use of CleanTech to reduce our impact on the environment can be seen in Resource Utilization and Circularity chapters of this Report, where you see this icon.

## MANAGING ENVIRONMENTAL RISK

Three of our sustainability workstreams contribute significantly to the management and mitigation of environmental risk: Resource Utilization, Circularity, and Safety First (for all aspects related to chemical safety). In addition, environmental risk is assessed as part of our supply chain risk management process.

Further information can be found in the following chapters: Greenhouse Gas Reduction, Resource Utilization, Circularity, Safety First and Responsible Supply Chain.

The finance team introduced, for operational capex requirements, a possible extension of sustainable investment payback period. They also drafted and introduced a carbon pricing model for internal evaluations.

For environmental data and KPI metrics please see the Appendix.

## ENVIRONMENTAL IMPACT ASSESSMENT

**In 2023 most production sites conducted Environmental Impact Assessments** (risks, impacts, opportunities) to identify and assess the environmental aspects of the activities related to all Gurit manufacturing process. The identification of environmental aspects is carried out with consideration to its origin, operating conditions, and character. Once aspects have been identified, associated environmental impacts are assessed and rated to determine their level of significance.

We have continued with our annual site water risk assessments, focused on high-impact water sites.

Regular ISO 14001 audits continue to form a significant part of our environmental risk management strategy at Gurit.

## DOUBLE MATERIALITY ANALYSIS

**In 2023 Gurit conducted a double materiality analysis** to identify Gurit's impact on the environment, as well as the risk and opportunities environmental factors present to our company, such as climate change. A further step has been taken to prioritize all these impacts and factors. For the higher priority topics, we have carried out a financial risk analysis. The results of the materiality analysis inform our targets and actions planned for 2024. Further details of the 2023 double materiality analysis can be found in the Appendix at the back of the Report.

- GRI 201-2 Financial implications and other risks and opportunities due to climate change
- GRI 2-25 Process to remediate negative impacts
- GRI 3-1 Process to determine material topics
- GRI 3-3 Management of material topics



# GREENHOUSE GAS REDUCTION

## GREENHOUSE GAS REDUCTION OVERVIEW 2023

### REDUCTION OF DIRECT AND INDIRECT GREENHOUSE GAS EMISSIONS

- ✓ Scope 1 GHG emissions reduced for a third consecutive year with a reduction of 22% from 2020 (base year).
- ✓ 7% reduction in our partial scope 3 GHG emissions compared with 2020 (base year).
- ✓ Greenhouse gas reduction-related bonus scheme developed, with implementation in 2024.
- ✓ Concrete Scope 2 actions set to reduce our GHG emissions related to electricity.

#### Challenges and Opportunities

- We are working to grow the reliability and accuracy of the data, both internally and in collaboration with external parties.
- New initiatives such as the Sustainability Awards are effective in increasing the engagement of our staff across our sites and we will continue to focus on similar activities.
- Plans are in progress that will allow us to meet our 2030 scope 2 target through conversion of sites to renewable energy, rather than compensating or offsetting.

Setting GHG reduction targets in a growing industry requires flexibility and adaptation to evolving circumstances. Gurit is still working to determine the best disclosing format that will lead to better standardization and comparability.

**We are committed to reducing emissions and increasing efficiency.**

**We have set ambitious reduction targets to achieve climate neutrality.**



Contributing to the United Nations SDGs

## GURIT'S GREENHOUSE GAS FOOTPRINT

We report our emissions for the Greenhouse Gas (GHG) Protocol **scope 1** (direct emissions), **scope 2** (purchased electricity), and a part of **scope 3** (indirect up- and downstream emissions). **In 2023, we implemented some improvements in the GHG data collection process.** However, the availability of reliable and comparable data is still a challenge for the teams and external parties involved. Our assessment of data quality is discussed in the methodology section of this chapter.

### ABSOLUTE EMISSIONS

IN TCO <sub>2e</sub>	2023	DATA QUALITY	DEVIATION FROM 2020 BASE YEAR	2022 AFTER COMPENSATION	2021 AFTER COMPENSATION & EAC	2021	2020	
<b>SCOPE 1: DIRECT EMISSIONS</b>	<b>9 534</b>		<b>- 22%</b>	<b>0</b>	<b>10 021</b>	<b>0</b>	<b>10 337</b>	<b>12 249</b>
Stationary combustion	7 173	●	- 26%		7 980		8 457	9 748
Mobile combustion	630	●	- 44%		679		808	1 122
Process emissions	1 428	●	+ 131%		1 151		814	618
Fugitive emissions	303	●	- 60%		210		258	762
<b>SCOPE 2: ELECTRICITY</b>	<b>28 655</b>		<b>+ 22%</b>	<b>0</b>	<b>28 788</b>	<b>0</b>	<b>26 688</b>	<b>23 550</b>
Electricity	28 460	●	+ 24%		28 226		26 165	22 920
District heating	195	●	- 69%		562		523	630
<b>SUBTOTAL SCOPE 1+2</b>	<b>38 198</b>		<b>+ 7%</b>	<b>0</b>	<b>38 809</b>	<b>0</b>	<b>37 025</b>	<b>35 799</b>
<b>SCOPE 3 (PARTIAL): INDIRECT EMISSIONS</b>	<b>63 081</b>		<b>- 7%</b>	<b>50 884</b>	<b>67 526</b>	<b>0</b>	<b>76 024</b>	<b>68 166</b>
Business travel	1 721	●	+ 19%		1 678		1 652	1 450
Employees commuting	3 553	●	- 22%		3 809		3 799	4 557
Transportation: raw materials <sup>4</sup>	10 823	●			13 602		15 937	-
Transportation: produced and traded products (upstream)	7 161	●	- 51%		9 312		11 337	14 544
Transportation: produced and traded products (downstream)	24 735	●	+ 18%		19 056		19 795	21 051
Waste generated in operations	1 828	●	- 56%		2 131		2 221	4 132
Fuel- and energy-related activities	6 680	●	- 18%		8 721		6 747	8 111
Capital goods	6 581	●	- 54%		9 217		14 536	14 321

Note 1: Each year corresponds to the sustainability reporting period 1.11. to 31.10.

Note 2: For detailed explanation of our greenhouse gas reporting, restatements required, factors applied, base year chosen and corrections made, please refer to "Technical statement on Greenhouse gas accounting" part of this chapter, and to "Scope of Sustainability data and reporting practice" in the Appendix.

Note 3: Based on the methods and tools we have to collect the data, as well as on the difficulties encountered, we have estimated the quality of the data collected in 2023: green (considered reliable) to red (data may be unreliable).

Note 4: For raw materials transportation, comparison done with 2021 as no data available for 2020 base year.

### EMISSIONS INTENSITY

In 2023 our scope 1 and 2 intensity was 75 tons of CO<sub>2e</sub> per million USD sales.

#### CARBON INTENSITY (SCOPE 1, 2)

EMISSIONS IN TONS OF CO <sub>2e</sub>	2023	2022	2021	2020
per million USD sales	75	74	74	58
per million CHF sales	83	78	79	62
per employee	14.35	13.9	12.63	10.27
per square meter of plant surface	0.06	0.05	0.06	0.06

Greenhouse gas emissions are calculated for the period of November to October while financial reporting and sales figure cover the period of January to December. Carbon intensity (tCO<sub>2e</sub> / employee) was restated because 2 employees from Gurit Tooling (Hong Kong) were included by mistake (site defined out of scope as not relevant for footprint assessment). 2022 carbon intensity was recalculated after 2022 footprint restatement.

- ↗ GRI 305-1 Direct (Scope 1) GHG emissions
- ↗ GRI 305-2 Energy indirect (Scope 2) GHG emissions
- ↗ GRI 305-3 Other indirect (Scope 3) GHG emissions
- ↗ GRI 305-4 GHG emissions intensity
- ↗ GRI 305-5 Reduction of GHG emissions
- ↗ GRI 3-3 Management of material topics

**In 2023, we have focused our climate change strategy on implementing GHG reduction initiatives across the company which would have a direct result on the annual footprint without any compensation or EAC purchasing.**

**For the third consecutive year, Gurit reduced scope 1 emissions, resulting in 22% reduction in 2023 compared with the base year of 2020.** These reductions are mainly related to stationary combustion, mobile combustion, and fugitive emissions.

**In 2023, our scope 2 emissions were comparable with the prior year.** The ramp-up of our production in Mexico and our Chennai campus in India, which hosts a PET extrusion and kitting process production as well as production and kitting of structural profiles, contributed to this stagnation. We are still working on various measures on the reduction of our scope 2 emissions, fostering green energy purchasing and direct generation of renewable energy at our sites so that we can achieve our targets.

**Most of our emissions fall into the scope 3 category, which have also reduced compared with the previous year and the base year.** Waste initiatives implemented at our sites have played a big part in reducing our scope 3 emissions, while additional initiatives have also reduced the emissions of capital goods categories.

- ↗ GRI 305-5 Reduction of GHG emissions



## GURIT GREENHOUSE GAS REDUCTION TARGETS

### BECOMING NET ZERO IS A CORPORATE RESPONSIBILITY

Gurit is committed to reducing its greenhouse gas footprint and as a major supplier to the wind turbine industry, we want to become a net-zero company by 2050.

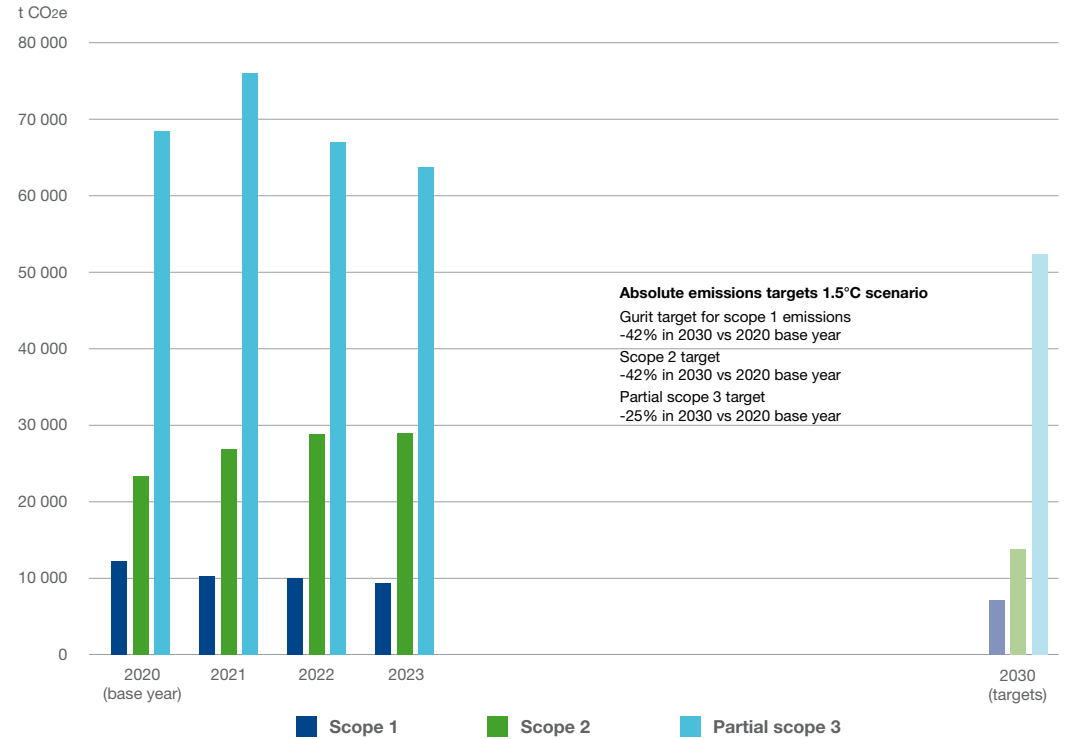
Taking 2020 as the base year, Gurit should achieve a 42% reduction in scope 1 and 2 emissions to be aligned with the IPCC Paris agreement to limit global warming to +1.5 °C.

For the period 2020-2030 Gurit pledges to reduce its greenhouse gas emissions as follows:

- **Scope 1 emissions:** 42% reduction compared to base year by 2030, in line with the +1.5°C scenario.
- **Scope 2 emissions:** 42% reduction compared to base year by 2030, in line with the +1.5°C scenario, with the ambition to go further and reach a 95% reduction and 100% switch to renewable electricity if commercially viable.
- **Scope 3 emissions:** 25% reduction compared to base year by 2030, with the ambition to reach a 42% reduction needed to stay within the +1.5°C target with the support of suppliers and customers as well as the regulatory framework.

➤ GRI 305-5 Reduction of GHG emissions

### GREENHOUSE GAS REDUCTION – PROGRESS AGAINST TARGETS

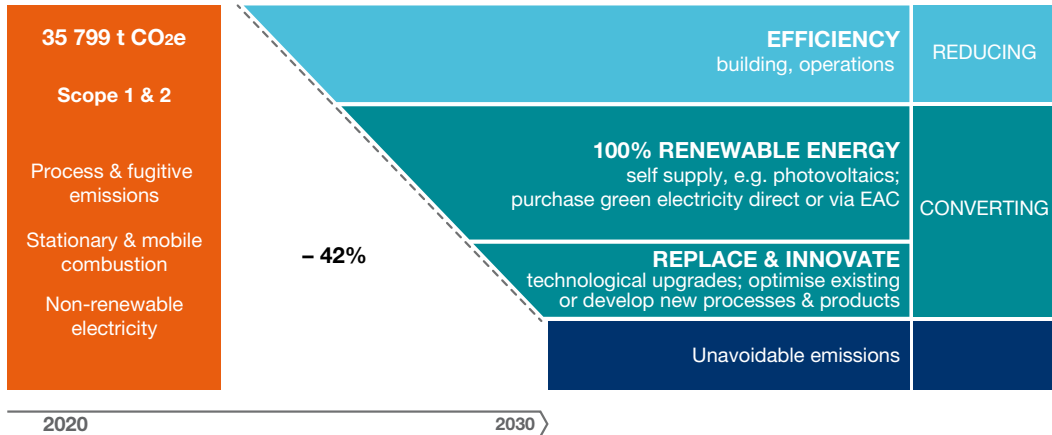


➤ GRI 3-3 Management of material topics







# GURIT GREENHOUSE GAS REDUCTION STRATEGY

## OUR STRATEGY



## KEY AREAS OF ACTION FOR EMISSION REDUCTION

In 2023, Gurit has not continued with the purchase of compensation certificates or EAC certificates, instead we fostered the implementation of reduction measures for scope 1 and 2 emissions. The Resource Utilization workstream supports our production sites in the reduction of their own emissions. An overview of these initiatives is below and detailed in the Resource Utilization chapter.

DIRECT OWN EMISSIONS (SCOPE 1)	EMISSIONS FROM OWN ENERGY CONSUMPTION (SCOPE 2)	EMISSIONS FROM UPSTREAM SUPPLY CHAIN (SCOPE 3)	EMISSIONS FROM PRODUCT USE (SCOPE 3)
 <ul style="list-style-type: none"> <li>- Reducing the emissions of our own locations</li> <li>- Reduction of all emission categories according to Greenhouse Gas Protocol</li> </ul>	 <ul style="list-style-type: none"> <li>- Energy efficiency measures</li> <li>- Own power generation (solar power rooftop)</li> <li>- Purchase of green electricity</li> </ul>	 <ul style="list-style-type: none"> <li>- Reduction of emissions in purchased products and services</li> <li>- Reduce transportation related emissions: regional procurement, routes optimization.</li> <li>- Reduce / optimize packaging</li> </ul>	 <ul style="list-style-type: none"> <li>- Circularity workstream: innovation, research into fossil-free, fully recyclable end-products (zero waste turbine components)</li> <li>- Engagement in industry-wide initiatives (wind, marine)</li> </ul>

#GuritCares we are committed to Greenhouse Gas emission reductions towards climate neutrality

## FURTHER ACTIONS TAKEN TO MITIGATE GHG EMISSIONS

Our efforts to reduce greenhouse gas emissions can be summarized as follows and are discussed in various chapters of this Report:

- A sustainability organization with targets and dedicated sustainability workstreams, e.g. Resource Utilization and Circularity, integrated at all levels and across all functions of the business.
- Sustainability principles and progress reviews are fully integrated into management meetings with monthly and twice-yearly reviews.
- Collection and analysis of emissions-related data with a qualified tool and supported by an external expert.
- Increased frequency of data collection from our sites for more accurate and real-time monitoring.
- Engagement with customers and industry partners: our procurement and product development teams work with our supply chain and industry partners to continue to reduce greenhouse gas emissions and to proactively address circularity and end of life challenges.
- Concrete actions include energy audits, energy tracking and monitoring of the highest scope 2 emitters and fostering specific reductions initiatives related to process emissions.

## ADDITIONAL DRIVERS TO ACHIEVE OUR GHG REDUCTION TARGETS IN 2030:

- **Extension of sustainable investment payback period**  
Since 2022, our operations are granted longer pay-back periods when considering and calculating investments that support the achievement of our sustainability targets.
- **Carbon pricing model**  
Our Resource Utilization sustainability workstream has set up a model to consider greenhouse gas and notably CO2 emissions for future investments and acquisition projects. The purpose of this model is to serve as an internal evaluation tool to review investments also from their greenhouse gas impact perspective. This internal model values a ton of CO2e with CHF 100.-  
In 2024 we will set specific measures to implement the carbon pricing model in the CAPEX approval process.
- **Greenhouse gas reduction related bonus**  
**In 2023, Gurit made the decision to introduce KPIs into its incentive systems related to greenhouse gas emissions scope 1 and 2. This will be applied for the first time for the year 2024.**  
This incentive has been set as a measure to motivate the implementation of GHG reduction initiatives across the company.

➤ GRI 2-25 Process to remediate negative impact  
➤ GRI 3-3 Management of material topics  
➤ GRI 305-5 Reduction of GHG emissions

## TECHNICAL STATEMENT ON GREENHOUSE GAS ACCOUNTING

### GREENHOUSE GAS PROTOCOL

The GHG accounting and reporting procedure for Gurit Holding AG is based on the 'The Greenhouse Gas Protocol: GHG Protocol: A Corporate Accounting and Reporting Standard – Revised Edition' (GHG Protocol) and the complementary 'Corporate Value Chain (Scope 3) Accounting and Reporting Standard' – the most widely used international accounting tools for government and business leaders to understand, quantify and manage GHG emissions. The standards were developed in partnership between the World Resources Institute and the World Business Council for Sustainable Development. The accounting was based on the principles of the 'GHG Protocol': Relevance, Completeness, Consistency, Transparency and Accuracy.

### GHG ACCOUNTING

The accounting and footprint calculations were done with the support of an external consultant, the Swiss-based Sulytics company. The data inventory was based on data provided by Gurit. Data was collected by each site and entered directly into the Sulytics Tool, for which they received training. Data from the global procurement and human resources departments was centrally uploaded to the tool. The data itself underwent internal plausibility checks and advisory from a qualified external expert, however it has not been audited or verified by a third party. If no primary data was available, secondary data was considered, such as industry or national averages, expenditure, extrapolations based on information from other sites, or data from the GHG accounting of the previous year. Where inventory data was lacking, extrapolations and estimations were made by either Sulytics or Gurit experts such as the Head of Product Development, Product Managers, Site Managers or the Head of Operations of the production site concerned. This was undertaken according to their best knowledge, but such estimates cannot completely compensate for the absence of true data. Therefore, future variances in year-on-year data may or may not reflect an improvement of data quality, rather than a change in performance.

### EMISSION FACTORS

The emission factors for the different categories are based on renowned databases such as: Ecoinvent, the world's leading lifecycle inventory (LCI) database; the Department for Business, Energy & Industrial Strategy (BEIS) UK; the United States Environmental Protection Agency; and the International Energy Agency. Overall, the data inventory, emission factors and assumptions are in line with the GHG Protocol. The choice of assumptions and emission factors follow a conservative approach. Unless otherwise specified, all emission values in the greenhouse gas report are given in metric tons of carbon dioxide equivalent (tCO2e). We have therefore not only included CO2, but also the other greenhouse gases mentioned in the Kyoto Protocol, e.g., methane (CH4) and nitrous oxide (N2O). Global Warming Potential (GWP) is a measure of the climate impact of a GHG compared to carbon dioxide over a time period, and is necessary in order to apply one unit to all the different GHG. GHG emissions have different GWP values depending on their efficiency to absorb longwave radiation and the atmospheric lifetime of the gas. The GWP values used in GHG accounting considers the six GHGs covered by the United Nations Framework Convention on Climate Change (UNFCCC) and Kyoto Protocol. These are the GWP used by BEIS and are based on the 'Intergovernmental Panel on Climate Change (IPCC) Fourth Assessment Report (AR4)'.  
 → [ghgprotocol.org/corporate-standard](https://ghgprotocol.org/corporate-standard)

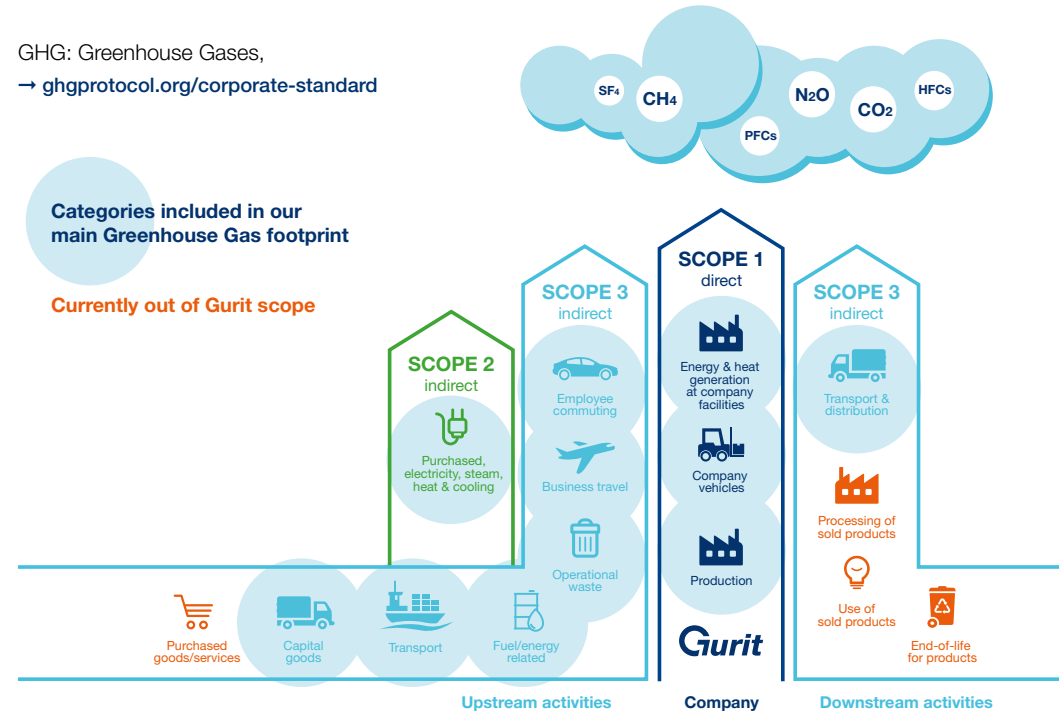
“For the third consecutive year, Sulytics has supported Gurit with a dedicated software to calculate the Greenhouse Gas emissions for scopes 1, 2 and 3, collecting relevant data from all sites. We have also supported Gurit with the correct calculation of the carbon footprint. Acknowledging that the quality and availability of data is a continuous process and will still evolve over the years, in particular for scope 3, I am confident that the data presented today is a fair representation of the carbon footprint that supports Gurit on its emission reduction ambitions.”



**Adrian Siegrist**, Carbon footprinting expert, MSc Environmental Sciences & Atmospheric Physics, ETH Zurich, Founder and Managing Partner at Sulytics GmbH

## METHODOLOGY: THE GHG PROTOCOL

GHG: Greenhouse Gases,  
 → [ghgprotocol.org/corporate-standard](https://ghgprotocol.org/corporate-standard)



Our greenhouse gas footprint data is available on our website in a machine-readable format:

→ [www.gurit.com/ghg](https://www.gurit.com/ghg)

- GRI 2-5 External assurance
- GRI 305-1 Direct (Scope 1) GHG emissions
- GRI 305-2 Energy indirect (Scope 2) GHG emissions
- GRI 305-3 Other indirect (Scope 3) GHG emissions



# RESOURCE UTILIZATION



## RESOURCE UTILIZATION OVERVIEW 2023

### EFFECTIVE RESOURCE UTILIZATION, MINIMIZE WASTE AND INCREASE RECYCLING

- ✓ Water risk assessments carried out for sites in high stress regions.
- ✓ Energy audits were carried out at the majority of production facilities and learnings replicated at other sites.
- ✓ Environmental impact assessments were completed by the majority of production sites.
- ✓ Gurit joined the Operation Clean Sweep® program.
- ✓ Sustainability Award launched to raise awareness of initiatives around Gurit sites.
- ✓ Most energy, waste and water initiatives implemented at a site level were underpinned by technology improvements, reinforcing our commitment to a CleanTech approach.

#### Challenges and Opportunities

- We acknowledge there are gaps in our sites' quantitative data and are working to address this.
- Monitoring the resource utilization initiatives and their progress due to the lack of specific data. Periodic reporting will be set in 2024 to address this challenge.
- It is both a challenge and an opportunity to foster a strong culture and increase employee engagement around climate change and resource utilization.

**We operate efficiently by minimizing power consumption, waste, emissions and use of resources.**



Contributing to the United Nations SDGs

**FOR RESOURCE UTILIZATION METRICS RELATED TO THIS CHAPTER (ENERGY, WASTE, WATER AND MORE) PLEASE REFER TO THE CORRESPONDING METRICS SECTION IN THE APPENDIX**

## PURPOSEFUL USE OF RESOURCES

Efficient raw material use and the management of other resources, alongside strong and effective waste, energy and water management, are material to our footprint and the achievement of our sustainability targets. As such, 2023 has seen further focus and action in these areas.

## GOVERNANCE AND ORGANIZATIONAL RESPONSIBILITIES

The Resource Utilization sustainability workstream brings together representatives from all business units and sites, guided by a workstream lead, sponsored by a member of the Executive Committee, and working closely with the sustainability core team. They meet monthly to monitor progress towards their targets and share best practice ideas; and provide updates to the Executive Committee at their monthly sustainability review. The Executive Committee also reviews targets and progress annually.

## MANAGEMENT SYSTEMS FOR EFFICIENT RESOURCE UTILIZATION

Each Gurit site is responsible for playing its part in effective and efficient resource utilization, and the workstream has set up the following tools, policies and management systems to support Group and site efforts.

1. **Environmental Policy**  
An environmental policy setting Group-wide standards and commitments has been rolled out to all sites.
2. **Water Risk Management Guidelines**  
All sites have implemented the Water Management Guidelines.
3. **Hazardous Chemicals Management Policy**  
As outlined in the Safety First chapter, Gurit has a Hazardous Chemicals Management Policy and related standards implemented at all relevant sites.
4. **Waste Management Guidelines**  
**Guidelines published in 2023 with the aim of avoiding, minimizing or mitigating the possible impact that waste generation has on the environment.**
5. **Data collection platform**  
The Sulytics data collection platform is used by all sites to track resource utilization, environmental and other sustainability data on a monthly, quarterly or annual basis.
6. **Chemicals Management Database**  
**During 2023, Gurit completed the roll-out of the GoldFFX chemicals management database to all sites.**
7. **Best practice library**  
**In 2023, we started collating examples of best practice at our sites in a central online portal and sharing them at our monthly meetings.**

## 8. Training and communication

To train employees in new tools, trends and standards, the content of our internal Learning Management System is complemented by webinar training and monthly internal communication channels.

- GRI 2-23 Policy commitments
- GRI 3-3 Management of material topics
- GRI 306-1 Waste generation and significant waste-related impacts
- GRI 306-2 Management of significant waste-related impacts
- GRI 306-3 Waste generated

## IDENTIFYING IMPACTS AND MANAGING ENVIRONMENTAL RISKS

Regular audits form a significant part of our sustainability strategy at Gurit. These are self-audits, internal audits, and external audits by specialists or certification bodies.

**In 2023, we carried out detailed water risk assessments for those sites in high stress regions** (according to the water stress level estimated by the World Resources Institute Aqueduct 4.0 / Water Risk Atlas).

In 2022, we designed **an environmental impact assessment, which most of the production sites completed by the end of 2023**. The assessment allows us to evaluate the environmental impact of our actions both in our production processes and across our sites. For 2024 we have set a target to use the information gathered to identify risks and define mitigation actions.

## ISO CERTIFICATION

The certification of our sites with ISO 14001 has further progressed. The newly set-up or acquired sites have been added to the roll-out plan 2023-2024. Please see the Environmental Management chapter for details.

- GRI 2-13 Delegation of responsibility for managing impacts
- GRI 2-25 Process to remediate negative impacts
- GRI 3-3 Management of material topics

## CLEANTECH AT GURIT

We use innovation to reduce emissions, make better use of our resources, and use our technologies and processes responsibly to contribute to recycling and circularity. See more information in the Environmental Management chapter.

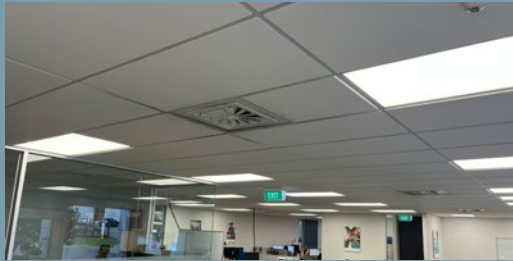
**You will see this icon where a CleanTech approach has been used.**



RISK MANAGEMENT

## ENERGY SAVING INITIATIVES WITHIN GURIT

Work continues at our sites to reduce our energy consumption both in our production processes and across all our sites' locations. All these actions have contributed to 10% reduction of energy consumption within the organization between 2020 and 2023.



Replacing old lights with LED lights at several sites



Installation of E-car chargers for staff to use during the working day



Upgrading heat exchange units to reduce energy consumption

**In 2023, our scope 2 emissions were comparable with the base year.** We are pleased to have been able to maintain this rate while ramping up two sizable production sites.

We have identified opportunities in 2024 to get on track with the conversion of our sites to renewable energy, addressing our scope 2 emissions. We plan to do this through new electricity supply contracts at several sites whose current contracts end this year; working with our biggest emitting sites on a detailed plan of action to reduce their emissions; and requiring all sites to implement at least one electricity reduction initiative this year.

**The energy audits that we carried out at all main production facilities in 2023 will be used to inform the energy reduction plans.** The learnings from the audits will be used to generate plans for the sites that were not audited. Our target is to carry out energy audits every four years.

See the Resource Utilization Metrics in the Appendix for more details on our year on year progress.

- GRI 302-1 Energy consumption within the organization
- GRI 302-4 Reduction of energy consumption
- GRI 305-5 Reduction of GHG emissions
- GRI 3-3 Management of material topics





## SUCCESSFUL REDUCTION OF WASTE GENERATED

When it comes to waste, at Gurit we not only focus on the materials we dispose of but aim to reduce the environmental impact throughout our whole production process. This includes the efficient use of resources, re-designing packaging to reduce transportation requirements, and the recovery of materials so we can recycle, re-use or re-introduce them to the production cycle (see also the Circularity chapter).



From November 2022 to October 2023, the total weight of waste generated and reported by Gurit sites was 12 660 metric tons, which is a 7% decrease from last year. 50% of this waste has been recycled during the reporting year.

### POLLUTION PREVENTION PROGRAMME: OPERATION CLEAN SWEEP®



In 2023, Gurit joined the Operation Clean Sweep® program, designed to prevent resin pellet loss to the environment. Gurit has started to implement its housekeeping and containment practices in line with this international program.

Read more: → [www.opcleansweep.org](http://www.opcleansweep.org)

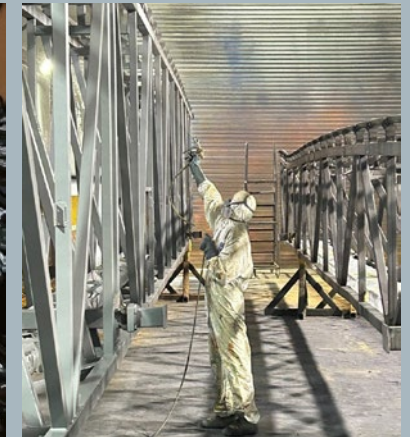
- GRI 305-5 Reduction of GHG emissions
- GRI 306-1 Waste generation and significant waste related impacts
- GRI 306-2 Management of significant waste-related impacts
- GRI 306-3 Waste generated
- GRI 306-4 Waste diverted from disposal
- GRI 3-3 Management of material topics



Too thin for most applications, the foam core skims leftover after processing are highly suitable for wingfoil board production (New Zealand)



A local company takes bobbin ends of unused carbon fiber and uses our waste to produce a thin carbon textile (Spain)

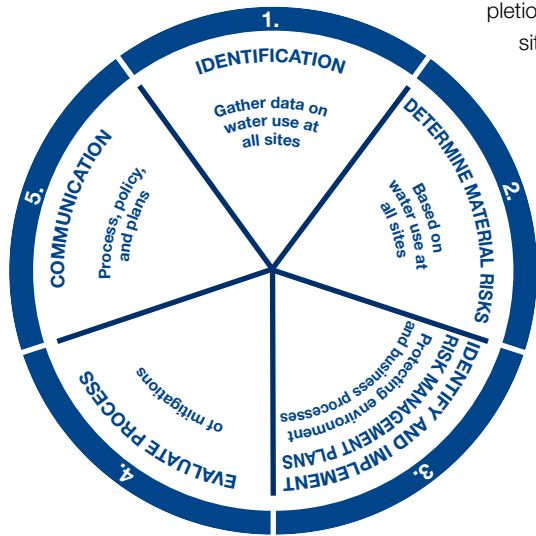


Airless painting is now used to protect the steel structure and frames, reducing pollutants, material use and waste (China)

## WATER AS A SCARCE RESOURCE

Gurit recognizes that water is a scarce resource, and that water management is essential for the effective functioning of our sites and for maintaining a healthy environment and workforce.

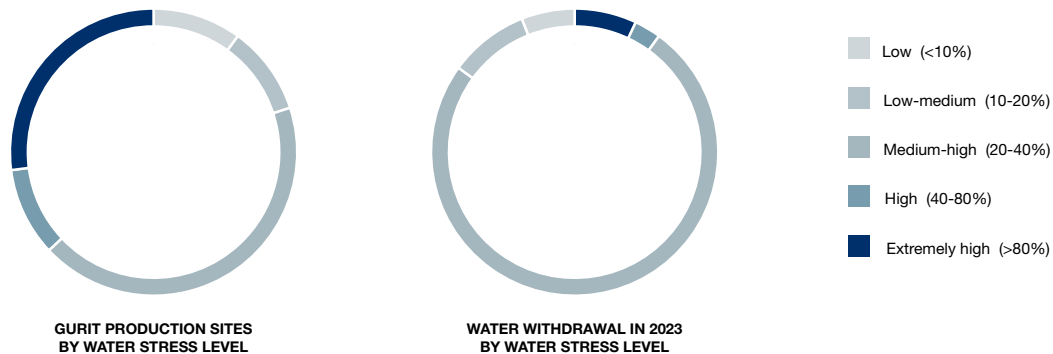
### HOW GURIT RESPONSIBLY MANAGES WATER



Following the introduction of Water Management Guidelines and the completion of a water management risk assessment by our production sites, **this year we have undertaken more detailed water risk assessments for those sites in high stress regions** (according to the water stress level estimated by the World Resources Institute Aqueduct 4.0 / Water Risk Atlas – Read more: → [www.wri.org/applications/aqueduct/](http://www.wri.org/applications/aqueduct/))

In 2024, risk mitigation measures will be identified, and a plan developed. The effectiveness of mitigations will be evaluated through reduction in water use, reduction in specialist waste or more efficient processes.

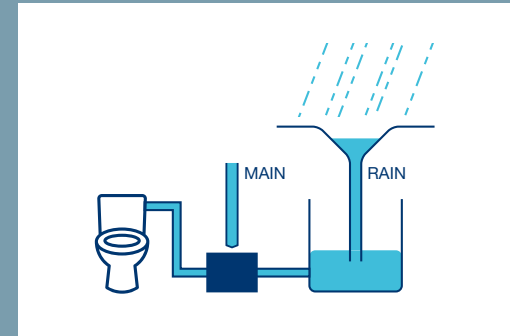
### AQUEDUCT WATER STRESS ANALYSIS FOR GURIT SITES IN 2023



Note: Water withdrawal includes Tap water (municipal water supplies) and Groundwater (drawn directly from well), excludes Grey Water, Sewage and Water recycled or reused on site. Based on Aqueduct 4.0 / Water Risk Atlas, the water stress level of Gurit sites has been updated. Compared to 2022 evaluation, 5 sites have a higher level in 2023 and 3 sites a lower level.

## MONITORING OUR CONSUMPTION AND PREVENTING SPILLS

Our production facilities use water responsibly and take water consumption into account when designing processes. **Water withdrawal has again decreased in 2023 (-18% compared to 2022), with alternative supplies (rainwater, recycled water, grey water) representing 14% of the total water withdrawal in 2023.** See the Metrics in the Appendix for more details.



As part of an overhaul to the existing building rainwater system, Gurit Auckland (New Zealand) now uses rainwater for the toilet system at the site



Gurit Carmignano (Italy) installed a new steam generator which achieved a saving of up to 3m3 heated water per day, also reducing energy use

Local regulations on maintaining the quality of waterways and discharge of harmful substances to the local environment are strictly adhered to. In addition to local regulatory requirements, potential risks are evaluated through water management risk evaluations.

Gurit sites have not registered any significant spills during this reporting period, except for a diesel tank pipe leakage. An estimated 23.5 liters of diesel entered the water drainage system and spilled into the river. Isolation belts were laid in the river to prevent diesel from spreading, until the leakage point was found and repaired. The diesel in the rainwater pipe was cleaned out and enhanced checks were implemented for major hazards.

### GURIT SUSTAINABILITY AWARDS

In 2023 Gurit launched its inaugural Sustainability Awards with two categories, one of which was Resource Utilization. More information can be found in the #GuritCares – Our Sustainability Strategy & Targets chapter.

- GRI 303-1 Interactions with water as a shared resource
- GRI 303-2 Management of water discharge related impacts
- GRI 303-3 Water withdrawal
- GRI 303-4 Water discharge
- GRI 303-5 Water consumption
- GRI 3-3 Management of material topics



**CASE STUDY: MAGOG, CANADA  
WORKING WITH LOCAL PARTNERS TO REDUCE, REUSE AND RECYCLE**



“We began our sustainability journey at Magog by getting some basic support from Synergie Estrie. Following a successful program of recycling tempered glass, we gained some positive momentum and we have now successfully completed a number of sustainability projects, especially around resource utilization, where we work with several local partners and follow an approach of Reduce, Reuse, Recycle.”

**Philippe Cyr**, Continuous Improvement & Environment Engineer

Gurit’s site in Magog, Canada, specializes in the production of Corecell™ structural foam core. The site is one of Gurit’s most established locations and is where the story of Corecell began, nearly 30 years ago. This legacy of innovation carries through to the culture and philosophy of the site today, where sustainability has become integrated into daily activities and is a key driver for change.



**COMPACTING WASTE TO REDUCE VOLUMES FOR TRANSPORT**

Waste resulting from foam core production is bulky and light. To reduce the volume of waste, Gurit uses the Bin Masters compacting service. This has resulted in the reduction of the required container transportation by 40%, reduced costs, and improved the cleanliness of the exterior courtyard.



**RECYCLING OF EMPTY PLASTIC CONTAINERS**

About 1 ton of plastic per year is diverted from landfill through the recycling of empty plastic containers. The Plastimum company, a recycler located near Magog, crushes and pelletizes this plastic which will be sold and reused.



**RECYCLING TEMPERED GLASS PLATES**

Tempered glass plates are used for assembling the molds for the production of Corecell. The plates often break during the production process or during polymerization. Gurit first assessed the manufacturing process and then put in place measures to reduce the breakage rate. Any plates that are broken are now recycled by 2 suppliers: Groupe Bellemare and 2M Ressources, resulting in around 30 tons per year diverted from landfill. Both companies convert the glass to be used as an industrial sandblasting material or as filtration glass in swimming pools.



**LOCAL COMPANIES REUSE OUR WASTE PACKAGING**

Gurit Magog supports two local artisanal businesses who advocate for sustainable development. Once a month, they collect packaging waste (cardboard boxes, bubble wrap and wrapping paper) that Gurit employees have put aside. This prioritizes reuse rather than recycling, and our employees feel a sense of pride as they support wider sustainability initiatives in the region.



**PROJECT FOR THE RECOVERY OF WASTE FROM OUR FOAM**

Working with specialists Investissements Quebec, we have carried out a characterization of our structural foam core waste and have identified potential reuse by hot compression mold. We will investigate the possibilities further in 2024.



**WATER MANAGEMENT PROJECT FOR WATER TANKS**

Wastewater at our Magog site must be treated by an accredited supplier due to the acrylonitrile content. To improve our onsite water management, Gurit Magog received funding for a research project with an external expert looking for alternatives to reduce or reuse the wastewater which contributes to good governance and aligns with our social responsibility commitments and water management guidelines.



**CHANGING TO LED LIGHTING**

Having moved to LED lighting across most of the site in late 2022 (resulting in savings of 456 282 kWh per year), in 2023 our Magog team started work on phase 2, which was to update the weak non-LED lighting in the chemical area. An electrical compliance assessment was first carried out by certified external contractor, GCM Consultants, to ensure that the improvements lead not only to a brighter, but also a safer and more energy-efficient area on our site.

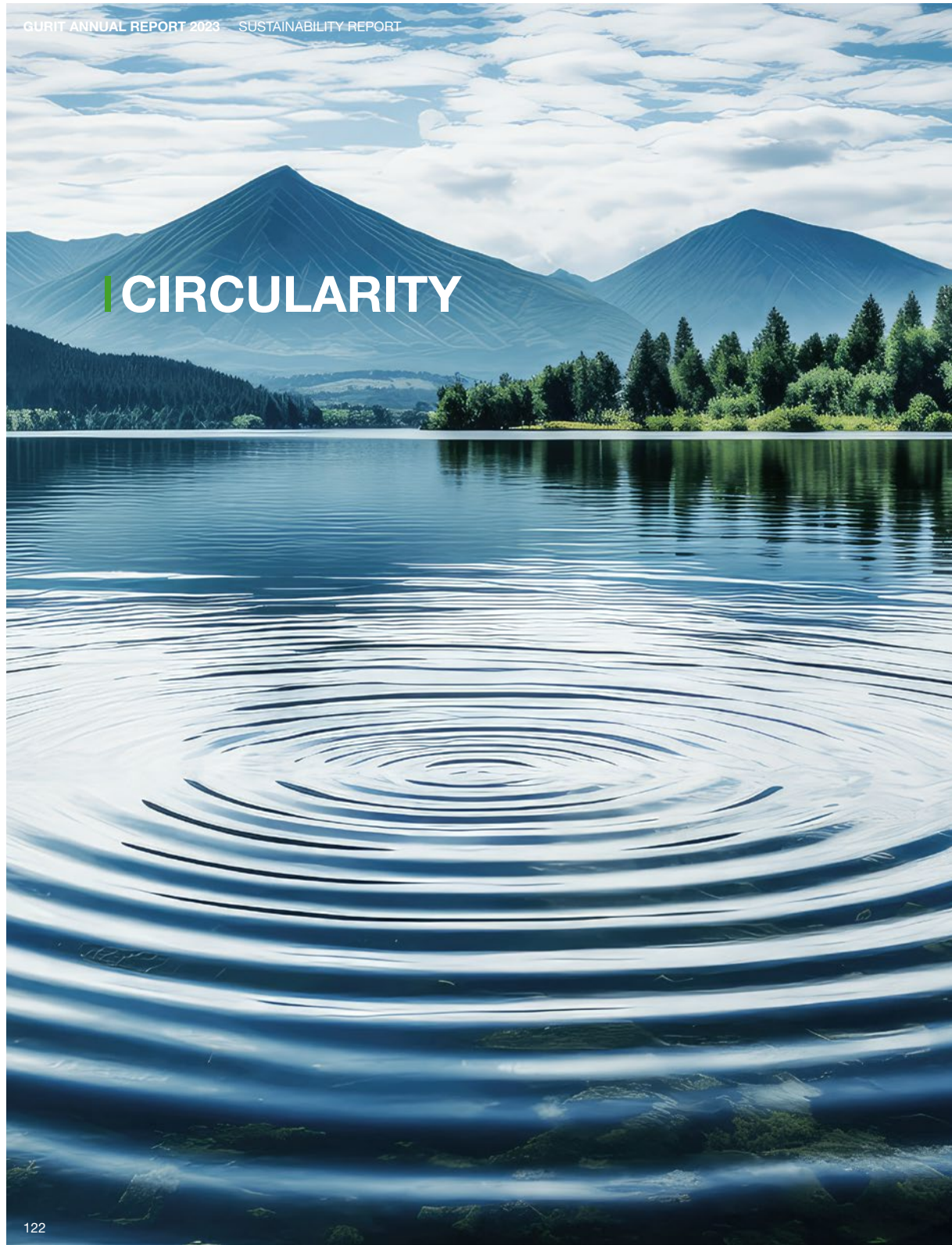
**RECOGNITION FOR SUSTAINABILITY**

**At the Gala for the 29th Awards for Environmental Excellence in the Eastern Townships, Gurit Magog was awarded with Distinction in the large company category for its sustainability achievements through the partnership with Synergie Estrie.**



(L-R): Gurit Magog team members: Jean-François Bernier, Sylvie Desjardins, Kellen De Souza, Philippe Cyr, Hakim Rahma





# CIRCULARITY

## CIRCULARITY OVERVIEW 2023

### CIRCULARITY AND END OF LIFE AS PART OF PRODUCT STRATEGY

- ✓ Introduction of the Gurit Product Design for Safety and Sustainability (PDSS) guiding principles that provide a framework for new product developments.
- ✓ Assessment of circularity implementation across Gurit sites, using the Circulytics tool.
- ✓ Engagement with over 25 organizations and a member of four funded projects to investigate and increase innovation around circularity and the end-of-life challenges.
- ✓ Implementation and evolution of a green products roadmap.
- ✓ Undertaken technology projects to recycle waste PET from customers.
- ✓ Expanded our post-consumer recycled PET feedstocks by processing a broader range of colored plastic.

#### Challenges and Opportunities

- Lack of data within the industry supply chain limits the current scope of LCA process.
- Low maturity of infrastructure and supply chain creates challenges with end-of-life processing.

**We promote circularity in all Gurit product ranges.**

**We identify and promote sustainable end of life and circularity solutions through product development.**



Contributing to the United Nations SDGs

## CIRCULARITY AS A FOUNDATIONAL PRINCIPLE

Our planet has finite resources and circularity is an essential concept to mitigate this fact. Our customers in the wind turbine sector and other advanced composites markets, such as boatbuilding, are keen to develop fully circular products. At Gurit, circularity is a material topic, and we want to play an active role by providing solutions and support for both our customers and, in turn, their customers to achieve this. Advanced composites are made to last for decades, so decommissioning of these composites at the end of their useful product life, in the most efficient and ecological way, is a task the entire composites industry has started to address systematically.

### GOVERNANCE AND ORGANIZATIONAL RESPONSIBILITIES

The Gurit Circularity workstream aims to increase the circular approach within Gurit and establish relevant supporting capabilities. The workstream lead is the Head of Technology. Periodic updates to the Executive Committee and an annual review ensure alignment with both our business and sustainability strategies. Gurit has its own teams of dedicated specialists and experts in product development, application centers and laboratories. Sustainability and circularity are integrated into their daily routines and approach to work.

- GRI 3-3 Management of material topics
- GRI 306-2 Management of significant waste-related impacts
- GRI 306-3 Waste generated
- GRI 306-4 Waste diverted from disposal

## OUR MANAGEMENT PROCESSES & STRATEGIES TO ADVANCE CIRCULARITY

The circular economy is a complex challenge that impacts companies and activities throughout the supply and value chain. Gurit strives to act within its sphere of influence and to work together with partners to promote the goals of the circular economy.

We have developed several processes and strategies to help us progress our circularity work:

#### KEY PROCESSES

- Product design for safety & sustainability
- Life cycle analysis
- Circulytics assessment

#### KEY STRATEGIES

- Increasing recycled and bio-based materials in our products
- Developing end of life solutions
- Engaging with industry on circularity projects
- Implementing CleanTech initiatives where appropriate

#### CLEANTECH AT GURIT

We use innovation to reduce emissions, make better use of our resources, and use our technologies and processes responsibly to contribute to recycling and circularity. See more information in the Environmental Management chapter.

**You will see this icon where a CleanTech approach has been used.**



## GUIDELINES FOR PRODUCT DESIGN FOR SAFETY & SUSTAINABILITY



Evolution of strategies for a more sustainable future such as the EU Green Deal and the EU Chemical strategy for sustainability have led to the development of a variety of frameworks and legislative changes that support the innovation of Safe and Sustainable by Design (SSbD). Frameworks such as SSbD and Product Environmental Footprint (PEF) methods promote a harmonized approach to sustainability metrics and measures.

The principles of these frameworks have been used **in 2023 to develop the Gurit Product Design for Safety and Sustainability (PDSS) as a set of guiding principles that provide a framework for all new product developments, or product improvements, within Gurit.**

The PDSS encompasses the product lifecycle within Gurit's sphere of influence including purchased products, product manufacture and processes, and product application. The PDSS evaluates a product in three key areas:

1. Human health assessment
2. Environmental safety assessment
3. Social and economic sustainability assessment

Each point in the product lifecycle may be assessed by a variety of tools and metrics, and recommendations for these can be found alongside the guidelines. Each data point may act as a comparison to the previous product iteration or against industry standard products. Whilst ensuring that the new product development is either equal to or (preferably) better than the incumbent product, the framework can aid in decision making when carrying out product development as well as highlight critical data gaps with the aim of closing them.

Gurit is clear that identified data gaps should not hinder efforts to create a more sustainable product offering and it is anticipated that this process develops over time as more data becomes available. For example, chemical safety and LCA data are becoming mandatory requirements, so the availability of such data is expected to increase in the coming years. In the meantime, the PDSS takes into consideration the limited availability of LCA scope and data.

In 2024 we plan to run two new product development pilot programs using the guidelines.



“Implementation of the PDSS allows us to consider new product developments from a holistic, whole-product viewpoint, ensuring that it’s not only the technical requirements that are met, but also ensuring that all aspects of the product’s lifecycle are as sustainable as possible. Allowing us to ultimately develop a more sustainable product portfolio.”

**Amy Moram** Chemical Compliance Manager and Sustainable Products Lead

## LIFE CYCLE ANALYSIS

Life Cycle Analysis (LCA) is a methodology that allows us to assess the impact our products, processes and activities have on the environment from conception, through use, to end of life.

The LCA process involves calculations based on a range of factors, such as raw materials purchased, transportation, energy use in our plants, packaging, and waste. We use the data internally to understand and minimize the environmental impacts of our products and to drive changes.

There are however challenges with the LCA process such as a lack of data within the industry supply chain, which limits the current scope. Disruptions and inflation leading to possible frequent changes of both suppliers, transportation means and distances, as well as certain product components, add further complexity to the task.

## CIRCULYTICS

Circulytics is a tool, developed by the Ellen MacArthur Foundation, to measure a company’s circular economy performance. It measures enablers (such as strategy and planning) and outcomes (providing a snapshot of how circular a company is in terms of material flows, product design, energy use, and more), helping companies set and track progress against targets in order to become more circular. **Gurit used Circulytics in 2023 to assess the circularity of its organization.** Strengths were seen in strategy, planning, products and materials. The gaps identified include operations and asset management, which will be examined and addressed in 2024.



↗ GRI 3-3 Management of material topics  
↗ GRI 306-2 Management of significant waste-related impacts

## ACTIONS TO MANAGE RISKS AND OPPORTUNITIES RELATED TO CIRCULARITY

**In 2023 we took the following actions to ensure alignment and relevance of our circularity work within our business and within the industry.**



- 1. Data-driven decision-making approach, using tools and processes such as Circulytics and LCA.**
- 2. Implementation and evolution of a green products roadmap** to better coordinate work across all product ranges and ensure alignment with business strategy.
- 3. Worked with an increased number of industry partners** to ensure our efforts are aligned with the market direction, to ensure the best use of our expertise in developing circularity initiatives, and leverage diverse expertise from key stakeholders throughout the supply chain to develop circularity technologies and relevant solutions.
- 4. Developed technology projects to recycle waste PET from customers,** however the logistical challenge of returning the waste remains. Our next step is to establish the supply chain and business model to manage this.

↗ GRI 2-25 Process to remediate negative impacts  
↗ GRI 3-3 Management of material topics  
↗ GRI 306-2 Management of significant waste-related impacts

## INCREASING RECYCLED AND BIO-BASED MATERIALS IN OUR PRODUCTS

Gurit aims to increase the proportion of recycled and low-footprint bio-based raw materials used in Gurit’s standard product ranges.

### BIO BASED CHEMISTRY

Sustainable chemistry at Gurit means developing product ranges with lower hazards to protect employee and customer health (see the Chemical Safety section in the Safety First chapter), utilizing lower carbon supply chains (see Responsible Supply Chain chapter), and increasing the share of bio-based products within our range.



Bio-based materials supply chains do not always equate to more sustainable products and Gurit has been careful to balance such approaches with ensuring product toxicity levels and performance are best in-class. The bio-based supply chains are only selected where they lower the carbon footprint and environmental impact of petroleum-based incumbents. Life Cycle Analysis and the PDSS guidelines will help us with the decision-making around this.



Additionally, Gurit considers biodiversity and social impact as important factors, and we uphold SDGs 14 and 15 while developing new products and improving existing products and processes. Our product development teams avoid choosing bio-based raw materials that would compete with food production or generate an incentive for monocultures detrimental for biodiversity.

**We have the ambition of ‘bio based as standard’ and we estimate the volume of bio-based raw material was around 1% in 2021, 5% in 2022 and 6% in 2023.** Gurit resins that are now available as standard products with guaranteed bio content are: Ampro Bio, Prime 37, Ampreg 30 and Ampreg 31.

## RECYCLED PET STRUCTURAL FOAM

PET is an extruded thermoplastic structural foam that offers great benefits in terms of the balance of thermal resistance mechanical performance and cost.


Gurit's Kerdyn™ PET is made from up to 100% recycled PET, mainly sourced from post-consumer bottles, for which there is a well-developed and resilient supply chain. Gurit both internally recycles the waste PET post-consumer bottles and externally sources recycled PET, which is converted into PET foam then used by our customers as a lightweight structural material or energy saving insulation in a wide range of end products such as wind turbine blades, boats, vehicles and buildings.

In addition, the Gurit process allows for waste from production to be recycled back into the extruder to produce fresh foam core material, this reused PET represented 31.3% of the total PET used in our plants in 2023.



IN 2023, WE RECYCLED

# 920 MILLION



POST-CONSUMER PET DRINKING BOTTLES  
INTO PET STRUCTURAL FOAM CORE

In sites where we co-locate PET extrusion and kitting, Gurit can recycle kitting waste for customers directly, efficiently and with no impact from transportation due to our co-located plant design.

We are committed to playing a part in reducing PET bottle waste on at least 3 continents globally. **In 2023 we expanded our recycling feedstock options for Kerdyn PET structural foam, to include a broader range of colored plastics.**

- GRI 3-3 Management of material topics
- GRI 306-2 Management of significant waste related impacts
- GRI 306-3 Waste generated
- GRI 306-4 Waste diverted from disposal
- GRI 301-3 Reclaimed products and their packaging materials

## NATURAL FIBRES AS SUSTAINABLE REINFORCEMENTS

Along with traditional glass, carbon and hybrid fiber fabrics, Gurit also offers natural flax fiber products. Flax is a sustainable natural fiber that offers significant environmental benefits, including a CO2 footprint reduced by up to 75% compared with carbon fiber. It can be grown as a rotational crop, enriches the soil and requires significantly less water and energy during its production when compared with carbon.



Flax does not have the same properties as carbon fiber and cannot fully replace it at this point in time, despite its compelling environmental benefits. However, it can be used in combination with traditional reinforcements, depending on the application and properties required, and in a variety of weaves and formats. It can be used by itself as a single skin or as a sandwich laminate with other sustainable materials.

Examples of flax fiber materials distributed by Gurit are two lines developed by the Swiss partner company Bcomp: ampliTex™, a flax fiber fabric; and powerRibs™, a solution for stiffening thin-walled structures inspired by the veins on a plant leaf.

The combination of our low toxicity bio resin with natural fiber solutions is another step towards a bio-based composite panel solution suitable for use in multiple industries.

## END OF LIFE

At Gurit, our product development teams keep the end of the product life in mind and try to anticipate what solutions will exist when the final product may reach this point after a few decades. Options currently considered for composite components at the end of their useful life include:

- Life extension
- Re-life
- Repair
- Recycle
- Reuse

### LIFETIME EXTENSION & REPAIR SOLUTIONS

Gurit offers repair solutions to extend the service life of wind turbine blades which is typically around 20 - 25 years. Gurit has a range of OEM-qualified and certified low-toxicity epoxy materials for in-field repairs as well as in-factory blade finishing and repairs, including laminating and infusion resins, fillers, adhesives and gelcoats. Our efficient repair solutions extend life cycles and contribute to minimizing downtime, with repair time reduced from approximately two days to four hours.



### REUSE

Repurposing wind turbine blades for other applications such as pedestrian bridges, roadbuilding or the construction industry is an option that is well supported by Gurit's extensive database of material properties and engineering expertise.

### RECYCLING

Gurit continues to investigate and contribute to research into the recycling of composites. It is not straight forward – composite structures are inherently mixed material structures, which have been designed to withstand harsh environmental conditions over decades of use and are therefore not easily recycled. Although several different recycling approaches currently exist, there is a trade-off between the economic cost of processing waste, the environmental impact, and the value of the reclaimed material.

**In 2023, Gurit continued to work with industry and academic partners to advance composite recycling technologies.**

➤ GRI 3-3 Management of material topics

## ENGAGING WITH INDUSTRY STAKEHOLDERS

**In 2023, Gurit engaged with over 25 entities to investigate and increase innovation around circularity and the end-of-life challenges that exist for composites and composite components.**

Some examples include:

- **Repoxyble** – one year into a three-year European Horizon program with the aim of creating closed-loop recyclable bio epoxy composites, to which Gurit provides resin and formulation technology.
- A European funded program to develop industrial scalable recycling processes for wind turbine rotor blades. Gurit provides expertise in materials recycling, PET, pultrusion and thermoset composite knowhow.

**In addition, in 2023 Gurit collaborated on six customer or supplier end of life projects.** These are ongoing and further information will be released in due course.



➤ GRI 3-3 Management of material topics