GEALAN

INNOVATION MIT SYSTEM

Environmental Statement 2024

Figures and data for the year 2023

Environment and Responsibility

1. Foreword

Dear Readers and Employees,

This revised environment statement for 2023 documents the significance of environmental protection at GEALAN for its customers, partners and suppliers, our employees and other interested parties. On the following pages, we also report on the advances made towards achieving our environmental targets.

When it comes to operating and acting in unison with our environment as well as the raw materials and natural resources available, GEALAN has been guided by only the highest standards for decades. Year by year, practical advancements and developments and the investments made in connection with these activities aid us in being sustainable well beyond the provisions required by law. In addition, the targets we had set for ourselves for 2023 were by and large achieved, as can be seen in the following report.

Conserving energy and raw materials wherever possible by employing increasingly efficient technologies and intensifying the use of recycled materials was previously our main focus. Our sustainability efforts now go much further:

Since 2023, GEALAN has been researching alternative, sustainable raw materials and testing and further developing their use in high-quality PVC profiles. In 2024, GEALAN will again direct attention to such disruptive developments. These activities will not only further optimise our own carbon footprint through tangible CO_2 savings, they also have the potential to inspire an entire industry.

These measures are part of the efforts and endeavours in recent decades to continually improve GEALAN's operations and make it more sustainable. Sustainability took on even greater importance at GEALAN with the adjustment of the corporate strategy in 2023.

The current environmental statement includes a description of the two EMAS-certified locations of the GEALAN Group in Germany: GEALAN Fenster-Systeme GmbH and GEALAN Tanna Fenster-Systeme GmbH. Both companies have been certified according to EMAS (EC Eco-Management and Audit Scheme) since 1996 and according to ISO 14001 since 1997. With this unique selling point, GEALAN is a trailblazer in the PVC window profile system provider sector.

In our eyes, environmental protection and resource efficiency are the prerequisites for lasting corporate success. That is why we consider environmentally relevant aspects in every economic decision we make. We actively pursue dialogue with all interest groups. We not only do this to be seen as an open-minded company, but we also consider it our duty to help shape the development of the industry in terms of sustainability.

The GEALAN Management

Ivica Maurović
(Spokesperson of the Executive Board and Managing Director of Sales, Marketing and Systems Development)

Tino Albert
(Managing Director Technology and Finance)

Content

Imprint

Publisher:

GEALAN FENSTER-SYSTEME GMBH

Hofer Straße 80
D-95145 Oberkotzau
Tel.: 09286 / 77-0
Fax: 09286 / 77-22 22

GEALAN TANNA FENSTER-SYSTEME GMBH
Gewerbegebiet Kapelle-Nord 23
D-07922 Tanna
Tel.: 036646 / 306-50 10

Contact partner:
IMS officer: Sophia Lingner

Website: www.gealan.de
Email: info@gealan.de

2. General conditions

2.1 Locations

In order to make a significant contribution to climate protection, GEALAN has been procuring its entire electricity for the two German sites in Oberkotzau and Tanna on a CO_2-neutral basis since 2021.

A new raw materials warehouse was completed at the production and logistics site in Tanna and has since been moved into. The construction of a new fully automated high-bay warehouse was able to be started on schedule in May 2022 and took until the end of 2023 to complete.

GEALAN commissioned a new recycling plant at the Tanna site in May 2021. This was the first of three steps on the evolutionary path from a manual to an automated recycling process at GEALAN. This process has been further promoted in the past two years. As part of this continued development, additional silos for the storage of recycled materials were built in Tanna and at the administration and technology site in Oberkotzau. Moreover, new granulators were installed for shredding production waste, returns and materials from customer conversions. In 2023, GEALAN continued to press ahead with the automated recycling process with measures such as a new loading shed and the commissioning of a loading silo at the Tanna site, various process optimisations, and the modernisation of the recycling control system at the Oberkotzau site.

The qualitative and quantitative expansion of the in-house tool shop in Oberkotzau is moving along. After the digitalisation of facilities and processes and the gains achieved in efficiency as a result, and the reconstruction work carried out in the previous years, these measures continued to bear fruit in the year under review: in the Germany-wide "Excellence in Production" competition, GEALAN's toolmaking finished an outstanding third, thereby highlighting the system supplier's successful ambitions to keep on evolving.

The same can also been seen in the administrative buildings at the main site, where, in the course of modernisation, additional workplaces were able to be moved into in 2023 in line with the new office concept.

On the product side, GEALAN-COMFORT® has been available since 2023: the new floor-level threshold solution makes DIN 18040-compliant barrier-free transitions possible. Moreover, GEALAN-COMFORT® offers an aesthetically sophisticated solution with a flowing transition and without a visible threshold.

GEALAN also has a long-term human resources policy: it was recognised for the successful career development of its employees and for providing modern, future-oriented workplaces. For these accomplishments, the company received the LEADING EMPLOYER award once again at the beginning of 2024. This once again places the company among the top 1% of all employers in Germany after 2023.

GEALAN's sustainable corporate policy is also reflected in its regional commitment in the areas around its two German locations: the company was also the main sponsor of the Rockman Run series of running events in Upper Franconia in 2023. In addition, the handball players of SV 04 Plauen-Oberlosa receive active and financial support. Despite their league relegation, GEALAN continues to be involved to the same extent. The annual #GEALANTeamSupport campaign has also been running since 2021. GEALAN supports associations from the region and their selected projects with three donations of €1,000 each. GEALAN's extensive regional commitment is rounded off by another annual donation to the initiative 'Hilfe für Nachbarn e.V.' (Help for Neighbours) in the run-up to Christmas, which provides unbureaucratic assistance to people in need in the region.

Based on voluntary commitments, GEALAN has joined numerous initiatives and has been implementing their consistently sustainable guidelines and recommendations for years. This includes VinylPlus®, Umweltpakt Bayern (Environmental Pact of Bavaria), Nachhaltigkeitsabkommen Thüringen (Sustainability Agreement of Thuringia), the window recycling company Rewindo, VinylPlus Deutschland e.V. and Österreichischer Arbeitskreis Kunststofffenster (ÖAKF – Austrian Task Force for Plastic Windows).

2.2 Corporate policy

The GEALAN Group is a corporate network that develops, manufactures and finishes systems for windows and doors made of PVC U-profiles..

As a system provider, our company sells many other necessary parts besides the profiles to enable our customers to manufacture complete windows and doors.

Sustainability is more than a trend for GEALAN: we act economically and handle all raw materials with care – and have been doing so for more than 25 years. GEALAN produces high-quality PVC profiles in a process that conserves resources and is therefore environmentally friendly.

Our environmental management and the sustainability of our products are certified and regularly monitored. GEALAN works with numerous partners to promote environmental protection and sustainable development in the company and to constantly refine it through regular exchange.

Based on partnership collaboration, we strive for a high level of customer satisfaction and offer our customers competitive advantages through intelligent, high-quality and sustainable products, through delivery reliability and speed, as well as through perfectly aligned service and training. To ensure these customer benefits, we are constantly developing our integrated management system and creating synergy effects between the individual subject areas of environment, energy and quality. We achieve continuous improvement of our results by setting and reviewing goals.

Our employees play an important role here. They perform their tasks independently, in a quality-conscious, environmentally aware and resource-conserving manner, and with an awareness that their performance has a direct impact on our corporate success. We support them with category-based information events, customised professional and personal training and development measures, and with the opportunity to actively contribute improvements to their work processes and environment.

Our processes are another important element. They are designed to be comprehensible and transparent. With the premise that it is more effective to prevent mistakes than to correct them, we frequently analyse our processes and adapt them to the latest technological advancements. The necessary resources for this are provided by the management.

In addition to an efficient workflow, the main focus is on the careful use of various materials and energy resources in order to protect our employees and the environment from negative impact. To this end, we already pay attention to the energy efficiency of products and their potential impact on people and the environment when we procure them.

In order to be a strong, reliable partner for our customers, suppliers, authorities, the general public and our employees, we take compliance with legal and other requirements very seriously and always ensure open and transparent communication with the various interest groups.

2.3 Products

Windows, doors and sliding solutions made from the latest generation of GEALAN profile systems have profile geometries that have been optimised down to the smallest detail and meet all technical requirements: whether for heat, sound and burglary protection, windows made from GEALAN PVC profiles are always at the cutting edge of technology. Products made of PVC profiles are easy to clean and require little maintenance. Largely resistant to weathering and environmental impact, they have a long service life and thus contribute to sustainable use, in some cases for decades.

GEALAN also addresses the widest range of conditions thanks to its product portfolio alignment: as a locally active yet internationally oriented company, GEALAN offers numerous solutions optimised and tailored to meet the needs of different countries and regions.

GEALAN already started factoring recycling into its product development at the end of the 1990s. This already applies during the design phase of new tools for profile production and during the manufacture of the profiles themselves, but also when it comes to the recyclability of the final product. GEALAN's products are thus designed sustainably throughout, from the first design sketch to the recyclable final product.

GEALAN is a co-partner of the company REWINDO – a recycling initiative of German plastic profile manufacturers. As such, the company is committed to using recycled old window material in the inner core of GEALAN profiles. It has sourced this material from the window industry's closed-loop recycling system for more than 20 years now. PVC from old windows is thus reused in an environmentally sensible way in new, highly insulating window profiles. GEALAN also feeds production residues back into the highly efficient recycling loop. Already more than 30 per cent of the PVC used at GEALAN is recycled material – and the trend is rising.

Since 2023, GEALAN has been researching alternative, sustainable raw materials and testing and further developing their use in high-quality PVC profiles. Detailed refinements to the PVC profile's carbon footprint have also been made since the reporting year, with the objective of creating more sustainable PVC formulations in which new bio-circular materials increasingly replace fossil-based ingredients in order to save many tons of carbon dioxide. Since certain bio-circular and circular raw materials have limited availability, these materials are currently managed in accordance with something known as the 'mass-balance principle', which is reviewed and certified by ISCC PLUS. GEALAN has now met the demanding criteria to be certified in accordance with ISCC PLUS for both its locations in Germany and will be able to achieve additional CO_2 savings along the supply chain thanks to the use bio-attributed raw materials. Certification of further locations is currently in the pipeline.

Durable and easy-to-clean windows made of GEALAN multi-chamber profiles ensure that the heat stays indoors and the noise outside. But other carefully considered product solutions from GEALAN also play their part in using energy and raw materials responsibly.

For more than 40 years, GEALAN has been protecting and enhancing PVC windows with GEALAN-acrylcolor®. This acrylic surface is inseparably bonded to the base body. It is resistant to external influences such as weathering or sunlight and is also low maintenance. Windows protected by this unique surface technology do not need to be painted or recoated during their service life, thus saving valuable resources. PVC profiles processed with GEALAN-acrylcolor® are also 100% recyclable. In the future, an ever-increasing number of GEALAN profile systems will be available with a protective, coloured PMMA surface. Efforts to expand GEALAN-acrylcolor®'s availability are well underway. This will allow more and more windows and doors to gradually be made sustainable and made to last a long time.

The new premium profile system GEALAN-KONTUR® with a construction depth of 82.5 mm is one such example: it combines modern design and excellent functionality in one system: modern style meets durability, but also offers the best thermal and sound insulation values.

GEALAN-LINEAR® is another newly designed window and door system that not only stands out due to its visually striking appearance. Like other GEALAN profiles, the use of recycled materials also sets a forward-looking milestone with regard to the environment. After all, a high proportion of the GEALAN-LINEAR® system profiles are supplied with a recycled core by default.

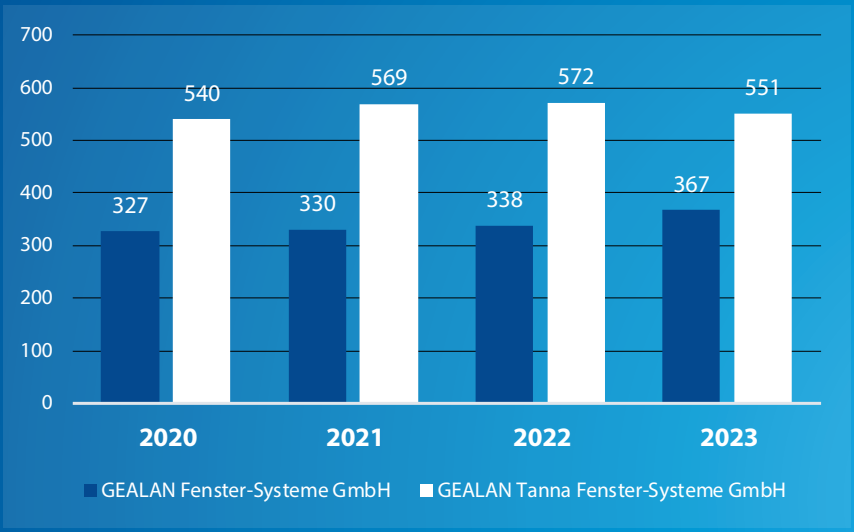
Since the energy-related improvement of existing buildings is an increasingly important topic for the future, GEALAN-LINEAR® is also an excellent choice for renovations and retrofits due to the narrow construction depth of 74 mm.

Smart windows and doors are conveniently connected: with TEXINO's Smart Home solutions, GEALAN makes it possible for you to create a healthy and safe home and achieve significant energy savings with just a few clicks. For instance, humidity sensors automatically ensure that rooms are ventilated as soon as the humidity level is too high. A carbon dioxide sensor can also optionally do this if a corresponding CO_2 level is exceeded.

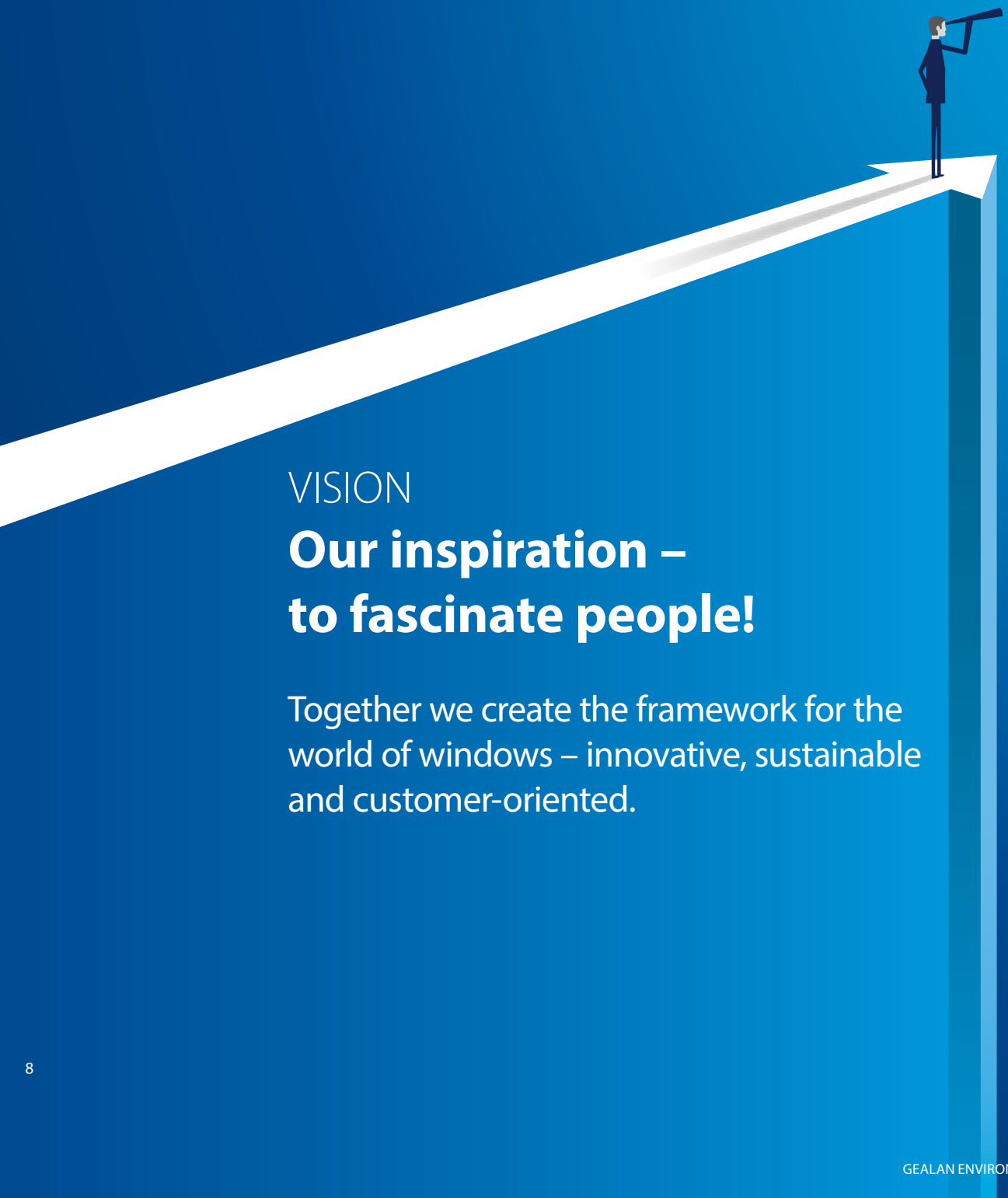
(Living) space is also a finite resource. Due to the increasing densification within cities, the sustainable use of the available space is becoming more and more important in building planning. The innovative GEALAN-SMOOVIO® sliding system offers a clever solution here: since there is no need to rotate the sash, the large opening element takes up hardly any (living) space. Optimised sealing tightness rounds off the modern sliding solution. Easy operation and a good price-performance ratio make GEALAN-SMOOVIO® a space- and resource-saving (i.e., sustainable) sliding solution, especially for multi-storey residential buildings.

2.4 Organisation and employees

The sustainable development of the GEALAN Group is supported by the current 'GEALAN Strategy 2027', which includes various goals and initiatives in addition to the mission and vision. The strategy was developed by the management in collaboration with the executives.



Development of employee numbers at the EMAS sites in Oberkotzau and Tanna

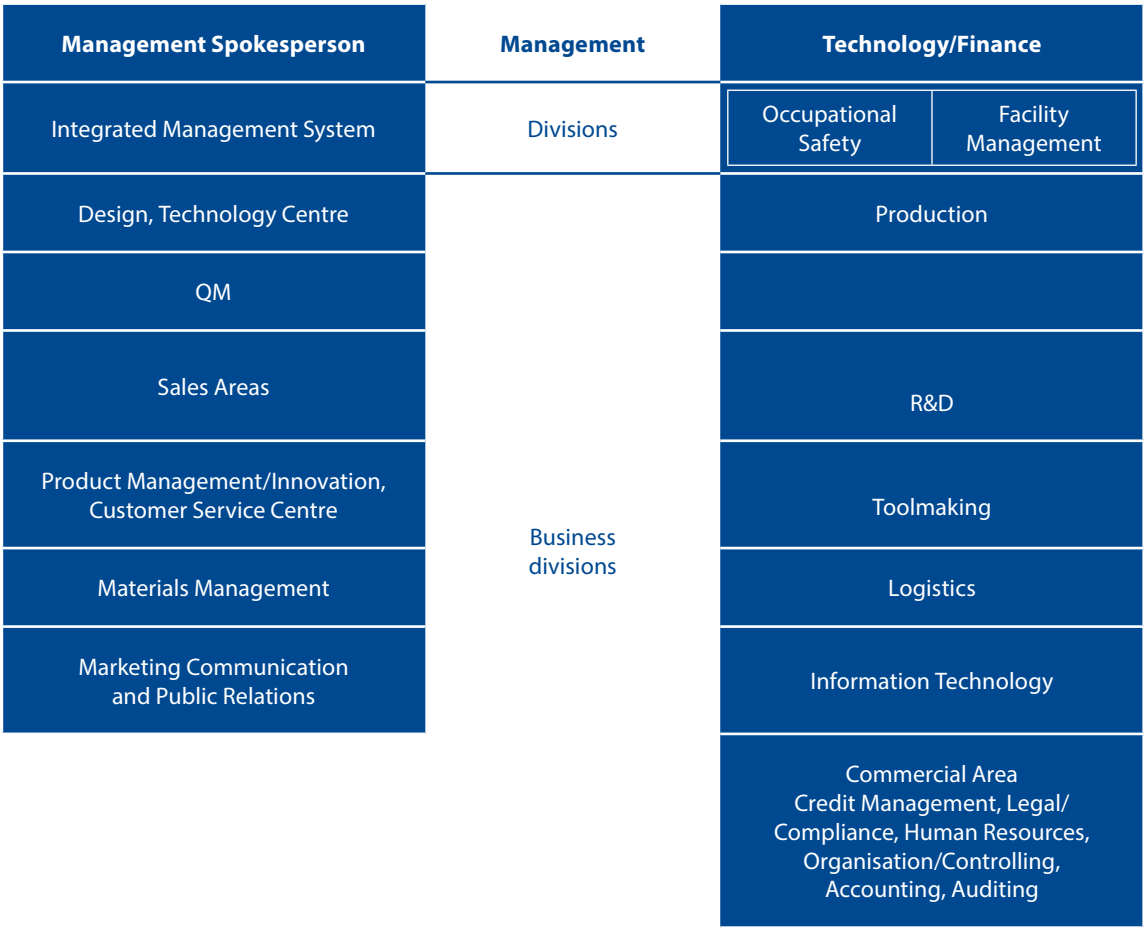


VISION

Our inspiration – to fascinate people!

Together we create the framework for the world of windows – innovative, sustainable and customer-oriented.

The following illustration shows the company structure:



2.5 Direct and indirect environmental aspects

Direct environmental aspects occur at the two company locations with the associated products, activities and services, which are subject to direct operational control.

Indirect environmental aspects can only be influenced by the organisation to a limited extent, as they primarily occur in interactions with third parties.

Environmental aspects are identified and assessed at least once a year within the setting of environmental committees and audits. Furthermore, the risks of the environmental aspects are determined annually and resulting measures are derived. Material quantities and their recyclability are also periodically checked.

In addition to the main environmental aspects (such as energy consumption, waste, hazardous substances and emissions), land use and the use of auxiliary and operating materials play a significant role and are considered in corporate decisions and in work groups.

For example, this includes constant monitoring and substitutability of materials or the company's own use of land at the Tanna site. The resource-conserving use of energy is strongly supported by the electricity tariff that has been in effect since July 2020.

3. Legal and other obligations

For both EMAS sites, compliance with legal regulations as well as official obligations are taken very seriously and are therefore consistently applied. There are no complaints or legal violations of environmental law at either site. For information on new, relevant legal regulations, we use a web-based legal database with a semi-annual update service on legal changes. This approach ensures a regulated procedure for passing on information about the legal situation to employees. This system is also supported through internal audits and inspections, which are used to observe the implementation of the relevant legal requirements.

Moreover, official wastewater inspections are carried out twice a year. Monthly self-monitoring inspections (wastewater measurements) and emission measurements are performed to ensure that all official requirements and limit values are in full compliance.

4. Environmental audit/internal audits

During the reporting period, several environmental audits were carried out by an environmental team consisting of the Integrated Management System division, the environmental coordinators, the energy officer as well as the occupational safety specialists and the fire safety officers.

The environmental management system was audited, assessed and, where necessary, adjusted with the involvement of the management. Extensive site inspections are part of the environmental audit.

The effectiveness of the environmental management system of the two companies GEALAN Fenster-Systeme GmbH and GEALAN Tanna Fenster-Systeme GmbH fulfils the requirements of the EMAS III regulation and/or a successful validation. The identified potential for improvement is summarised in a central list of measures and is being implemented by the specialist departments.

5. Implementation of the Environmental and Energy Programme 2023 at the Oberkotzau and Tanna sites

The environmental and energy programme's targets planned for GEALAN's locations in Oberkotzau and Tanna in 2023 were largely met. Only two targets had to be postponed: firstly, the comprehensive introduction of an energy management system throughout the GEALAN Group in compliance with ISO 50001 had to be postponed and is now a target we aim to reach by the end of 2024; secondly, installation of the heat pump in construction phase 2 in Tanna was delayed slightly.

Although the heat pump is already installed, heat recovery for heating the building will not be put into operation until the third quarter of 2024, when the weather conditions require it.

Longer-term targets are still being developed and are on the right track to being achieved within the respective deadline. The status of the respective targets is provided in the table below:

Target	Measure/project	Expected benefit/improvement	Target date
Standardisation in the group of companies	Comprehensive introduction of an energy management system in the GEALAN Group in compliance with ISO 50001	Standardisation of energy policy and increase in sustainability	Dec. 23
Resource savings of 50,000 kWh per year up to and including 2035	Optimisation of heating control for the integration of HRU	Reduction by 50,000 kWh/a	Dec. 23
	Claw vacuum pump system M22.1	Reduction of 20,000 kWh/a	Dec. 23
Expansion of the metering point concept	Provision of weather-adjusted key figures by 2027 through the expansion of Efficio	Weather adjustment/normalisation of key figures for better comparability over the years	Dec. 25
Process optimisation	Integration of a high-bay warehouse to improve the availability of semi-finished and finished goods	'Reduction of forklift hours by 10,000 operating hours per year as of 2024 and thus a reduction of 17.8 kg/h CO_2 emissions'	June 24
Increase biodiversity	Conversion of agricultural land to mixed forest	'Reduction of CO_2 emissions by approx. 140,000 kg CO_2/a'	Sept. 24
Transformation of energy forms	Installation of a heat pump BA2	Reduction by 350,000 kWh/a	Dec. 23
Conservation of resources	Increase of the recycling share to 55% in sash combination	'Reduction of 1.8 t CO_2/t PVC (compared to raw material)'	Dec. 24
Conservation of resources	Increase of recycling share to 37.5% post-consumer material by 2030	'Reduction of 53,299 t CO_2 based on 2022 consumption'	Dec. 30
Reduction of emissions	Redesign and implementation of the TNV	Plant design for future expansion of lamination; use of other energy sources to operate the plant (CO_2 reduction); possibility of heat recovery	Dec. 24
Improvement of waste management	Concept development for future sorting of returned goods from customers	'Sorting rate will be increased by approx. 5% after implementation of the concept'	Dec. 23

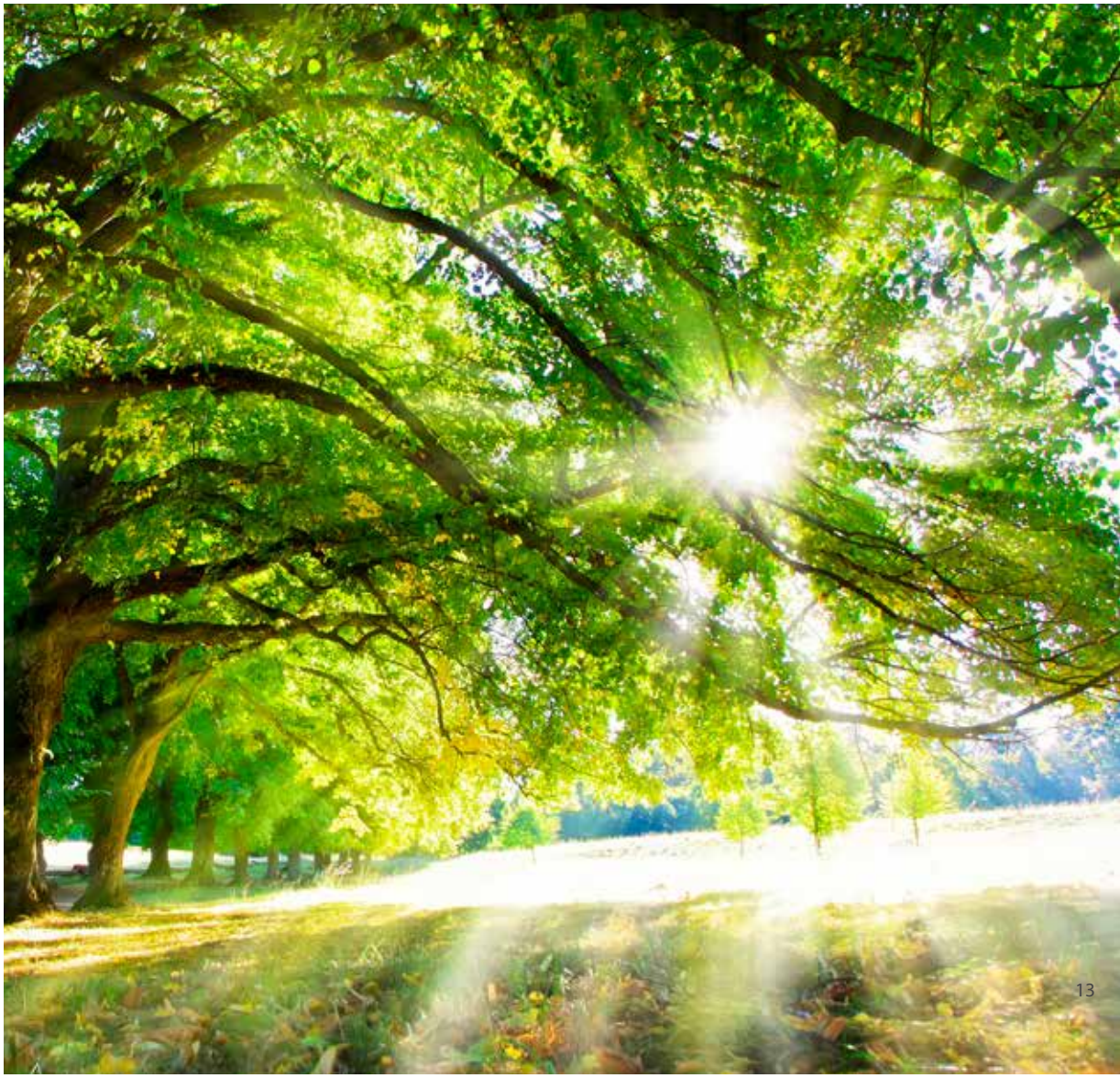
6. Environmental performance

6.1 Database and documentation

The environmental performance is based on regularly recorded input and output quantities. They show which substances and resources enter the respective site and which leave it again.

Since the reference to an individual item among roughly 28,000 items is not meaningful and not informative, the quantity of raw materials is used as a benchmark for the environmental performance indicators for the Tanna site.

This also considers resource consumption of the materials reprocessed in the internal materials cycle. For the Oberkotzau site, new key figures had to be established after the relocation of the plant to Tanna. Therefore, the number of employees at the site is used as the reference value.



6.2 GEALAN Fenster-Systeme GmbH

INPUT	2020	2021	2022	2023
1 Raw materials (t)	1,620	3,630	3,688	6,036
2 Auxiliary and operating materials (t)	5.93	5.75	4.58	3.52
3 Municipal water (m^3)	5,324	4,151	4,865	4,365
4 Energy (MWh)	6,699	7,026	7,080	6,384
4.1 Electricity	4,001	3,886	3,674	3,366
4.2 Natural gas	1,002	1,238	1,321	871
4.3 Heating oil	74	161	147	71
4.4 Fuels	1,622	1,741	1,938	72
OUTPUT				
6 Non-hazardous waste[(1)] (t)	254	329	251	205
7 Hazardous waste[(2)] (t)	12	17	23	15
8 Wastewater (m^3)	5,324	4,151	4,865	4,365
9 CO_2 emissions[(3)] (t) (calculated)	1,834	885	960	896
9.1 Electricity	1,070	0	0	0
9.2 Natural gas	243	300	320	185
9.3 Heating oil	23	50	45	22
9.4 Fuels	498	535	595	689
10 VCM emissions in (t) (calculated)	0.0014	0.0031	0.0019	0.0019
11 Other emissions (t) (calculated) [(4)]	4,254	4,263	4,090	3,684
11.1 SO_2	1,277	1,274	1,205	1,079
11.2 NO_x	2,782	2,792	2,695	2,432
11.3 PM_{10}	0.195	0.198	0.190	0.173

[(1), (2)] For clarity, the total is referenced. The breakdown can be seen in the waste report.
[(3)] CO_2 emissions: total emissions from electricity generation, heating energy and fuel consumption.
[(4)] Source: GEMIS 4.95 [calorific value/direct emissions (without upstream chains)] as of: 04/2017

6.3 GEALAN Tanna Fenster-Systeme GmbH

INPUT	2020	2021	2022	2023
1 Raw materials (t)	67,844	79,032	83,054	70,216
1.1 Recycled materials, external purchase (t)	2,273	6,922	6,351	5,017
1.2 Internal recycled materials (t)	12,077	14,575	14,252	12,886
2 Auxiliary and operating materials (t)	502,13	653,81	624,90	547,03
2.1 Adhesive+cleaner+primer[0]	456	603	576	454
3 Water (m^3)	16,527	13,640	14,230	15,344
4 Energy (MWh)	31,929	35,598	35,598	30,905
4.1 Electricity	28,595	31,731	31,429	28,112
4.2 Heating oil	1,644	1,932	1,560	982
4.3 Liquid gas	466	481	498	518
4.4 Fuels	1,224	1,454	1,494	1,293
OUTPUT				
5 Semi-finished and finished goods (t)	67,702	78,837	82,660	68,881
5.1 Profiles (goods) (t)	49,600	59,830	59,031	49,736
5.2 Recycling rate[1] (%)	29	36	35	36
6 Non-hazardous waste[2] (t)	1,110	1,253	1,356	1,055
7 Hazardous waste[3] (t)	28	31	21	23
8 Wastewater (m^3)	16,527	13,640	14,230	15,344
9 CO_2 emissions[4] (t) (calculated)	8,642	1,136	1,028	843
9.1 Electricity	7,649	0	0	0
9.2 Heating oil	509	599	483	305
9.3 Liquid gas	121	125	129	116
9.4 Fuels	363	412	416	422
10 VOC emissions[5] (t) (calculated)	11.4	14.4	13.8	13.8
11 VCM emissions (t) (calculated)	0,059	0,068	0,069	0,069
12 Other emissions (t) (calculated)[6]	23,336	28,916	28,430	25,231
12.1 SO_2	9,334	10,395	10,178	8,967
12.2 NO_x	12,871	17,261	17,013	15,164
12.3 PM_{10}	1,131	1,260	1,238	1,100

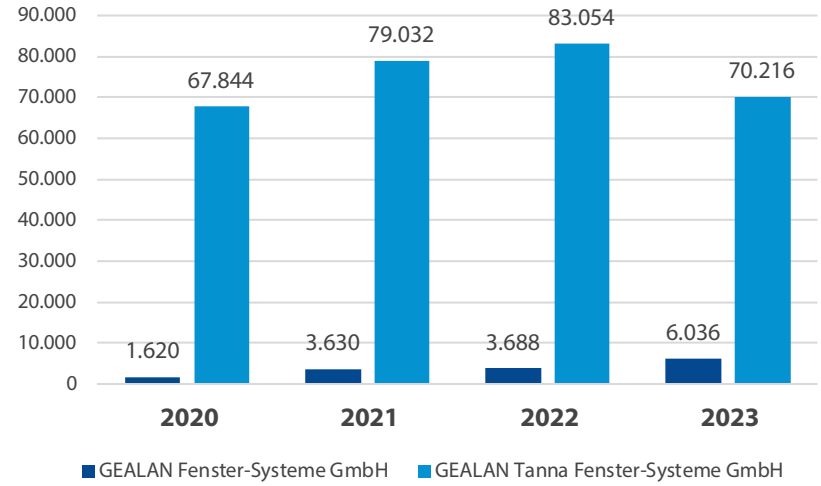
[0] Auxiliary and operating materials only shown for profile coating.
[1] The recycling quota describes the ratio between reused recycled material and finished goods.
[2], [3] For clarity, the total is referenced. the breakdown can be seen in the waste report.
[4] CO_2 emissions: total emissions from electricity generation, heating energy and fuel consumption.
[5] VOC emissions calculated before thermal afterburning.
[6] Source: GEMIS 4.95 [calorific value/direct emissions (without upstream chains)] as of: 04/2017

7. Environmental indicators

7.1 Raw materials

In 2023, roughly double the amount of raw materials was processed at the site in Oberkotzau in 2022. A sharp drop is recognisable in Tanna, however, as a result of a decline in orders.

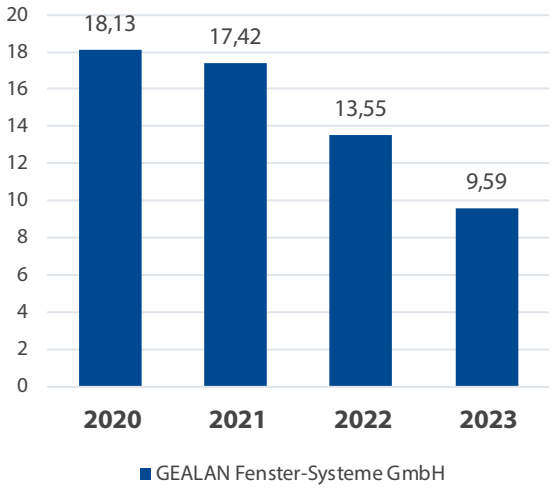
Raw materials in t/a



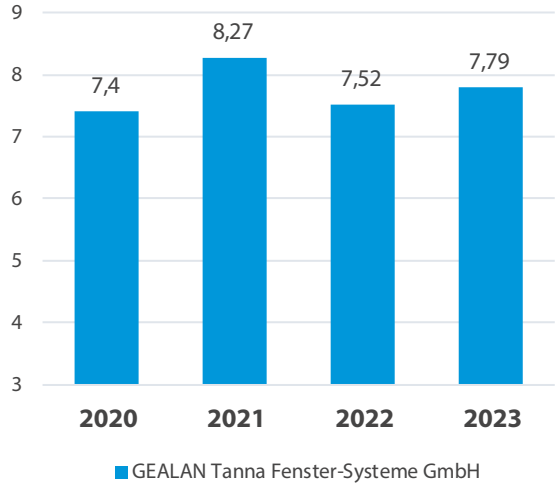
7.2 Auxiliary and operating materials

In 2023, the volumes/quantities of auxiliary materials and operating materials consumed at both locations were able to be reduced. This reduction is the result of the lower production volumes and does not have a positive effect on the specific indicators at the Tanna plant. Due to the wide range of versions, it is the various decorative films for our profile finishing that have an impact.

Consumption of auxiliary and operating materials in kg/employee



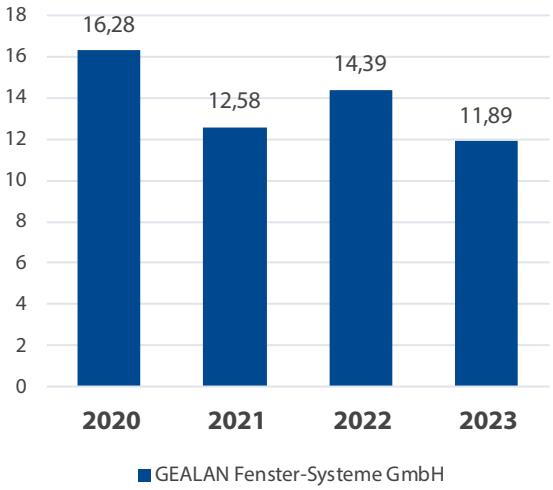
Consumption of auxiliary and operating materials in kg/t of processed raw material



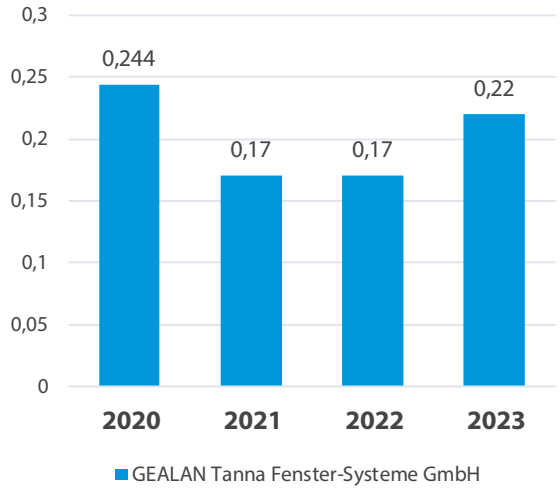
7.3 Water

At the Oberkotzau site, water consumption corresponds to process water for tool-making in addition to industrial water. Compared to the previous year, water consumption fell sharply, especially due to the lower capacity utilisation of the tool shop. At the location in Tanna, however, specific water consumption is slightly higher due to lower production quantities.

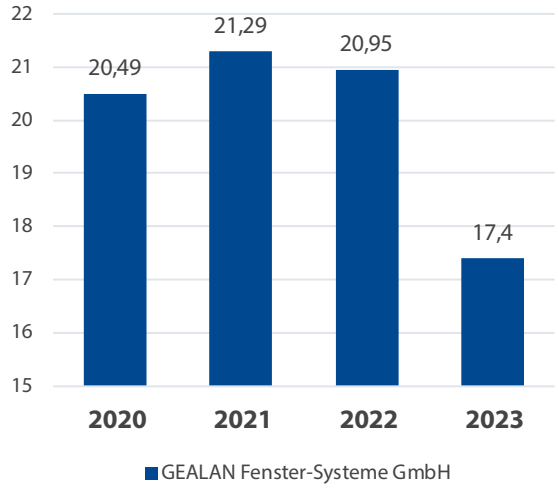
Consumption of water in m³/employee



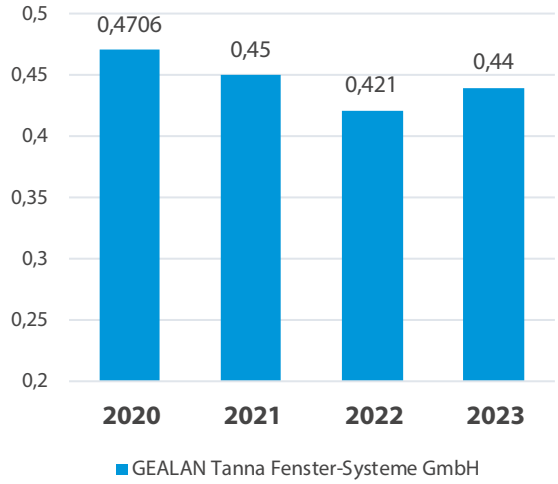
Consumption of water in m³/t of processed raw material



Energy consumption in MWh/employee



Energy consumption in MWh/t of processed raw material



7.4 Energy

At the Oberkotzau site, energy consumption per employee continued to decline in comparative terms. Since the indicator is heavily influenced by the tool shop's energy consumption, this trend can also be explained by the capacity utilisation of the tool shop. In comparison to last year, energy consumption per tonne of raw material at the Tanna site remained at a similar level, but with a slight increase.

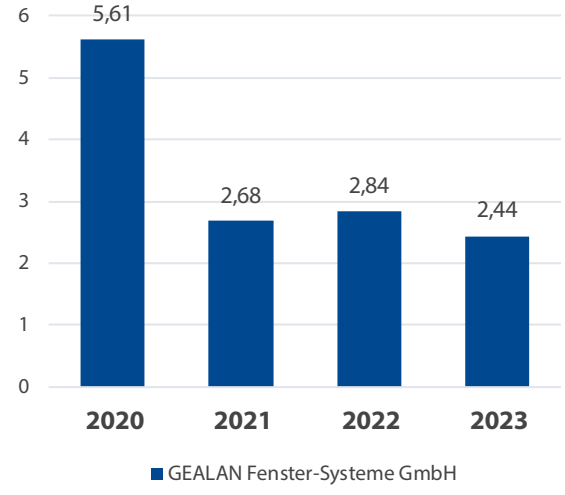
7.5 CO_2 emissions

The calculated CO_2 emissions in Oberkotzau are the sum of the emissions from natural gas, heating oil and fuel consumption. At the Tanna site, the emissions are the sum of heating oil, liquefied petroleum gas and fuel consumption.

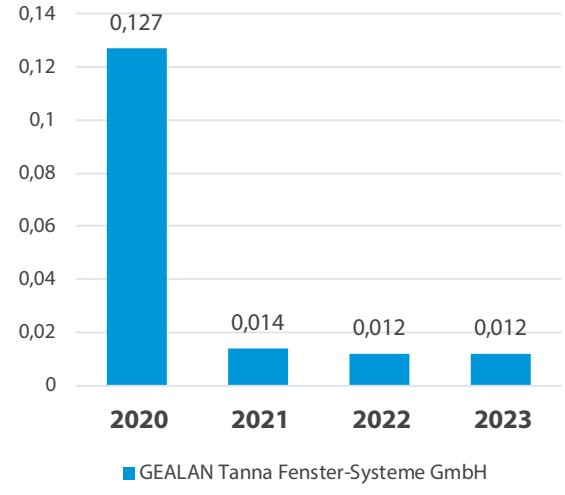
In 2023, CO_2 emissions amounted to 2.44 tonnes per employee and 0.012 tonnes per tonne of raw material. CO2 emissions in Oberkotzau are thus on a constant (or even decreasing) level. The cause for this reduction is the lower capacity utilisation of our tool shop.

In total, the calculated CO_2 emissions for both sites amount to 1,739 t CO_2 equivalents.

CO_2 emissions in t/employee

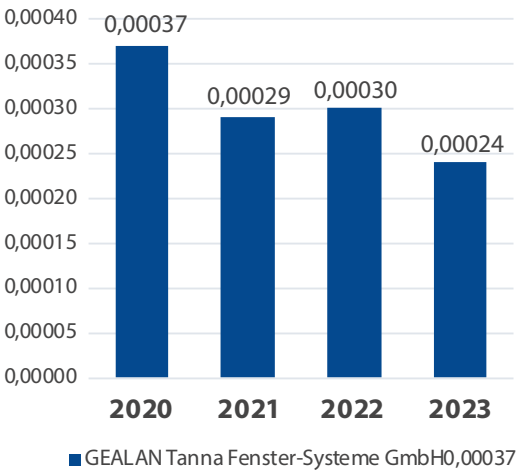


CO_2 emissions in t/t of processed raw material



7.6 VOC emissions

The existing afterburning system at the Tanna site has been approved in accordance with the Federal Immission Control Act. Among other things, the VOC emissions are affected by the steadily decreasing batch sizes and the resulting increased cleaning work on the laminating systems. Emissions in 2023 – also in terms of the metres of laminated material – are on the decline.



7.7 Noise

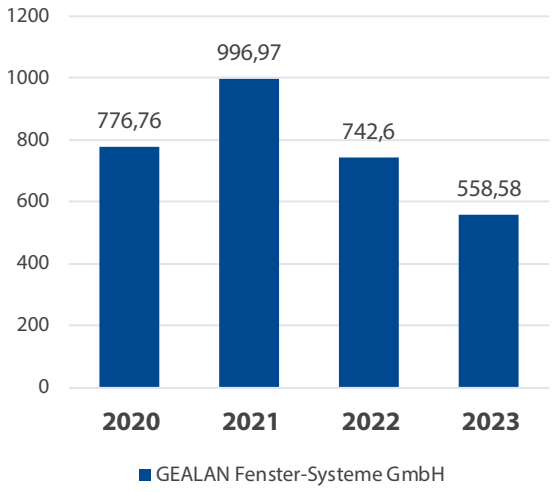
The environmental impact during normal operation primarily includes the noise emissions caused by the transport traffic of the delivering and collecting haulage companies, the company cars and the employee vehicles.

A time frame is set especially for delivery traffic, which is being strictly observed. No complaints about noise have been received from residents at either of the EMAS sites. The noise emission requirements are checked and documented at regular intervals through self-monitoring.

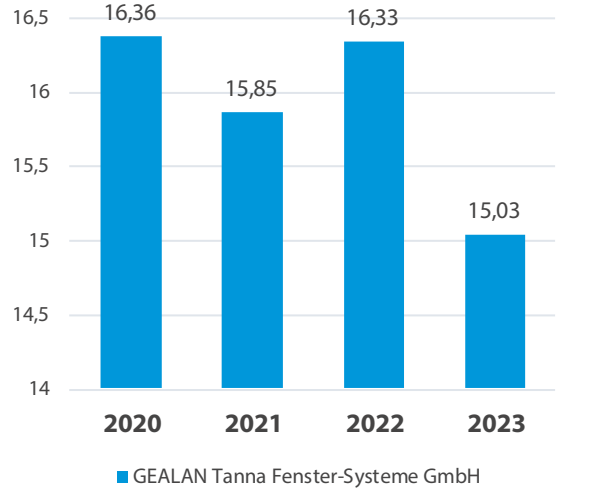
7.8 Waste – non-hazardous

The waste generated at the sites is collected separately and recycled in a regulated and monitored manner.

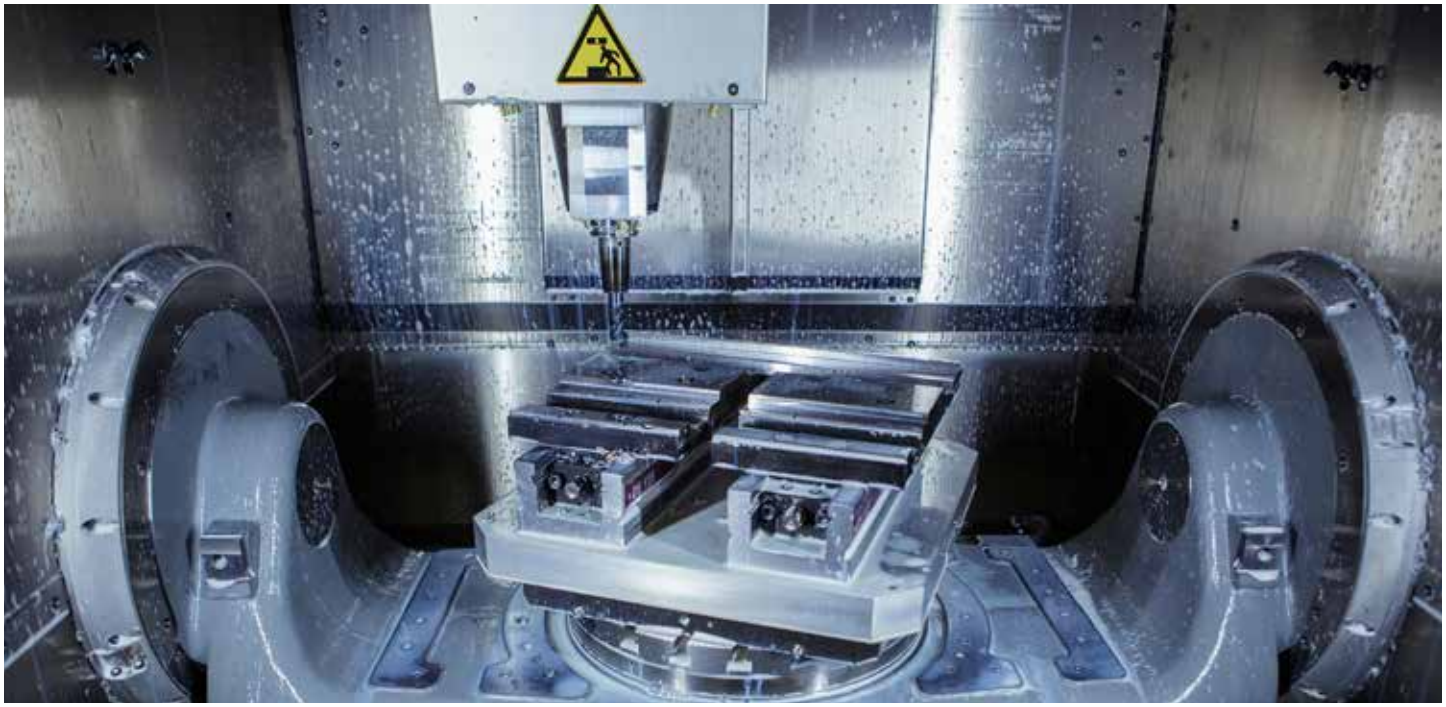
Non-hazardous waste in kg/employee



Non-hazardous waste in kg/t of processed raw material

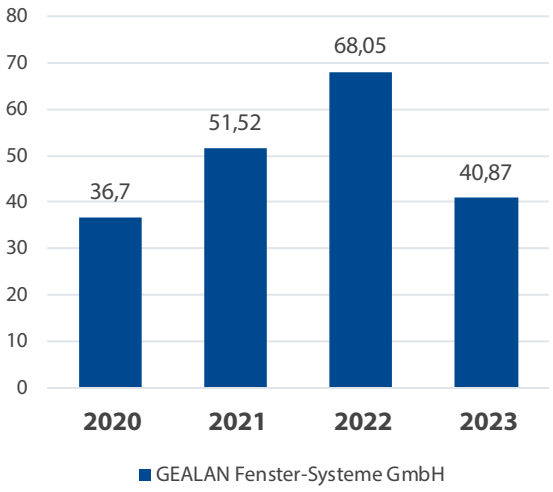


Compared to previous years, there has been a significant decline at both locations in 2023. This positive trend is the result of less wood packaging usage. GEALAN regularly invests in steel containers to transport our profiles to clients. Transporting our recycled materials in silo trucks also helps to greatly reduce the number of big bags. Moreover, we're witnessing a drastic reduction in mixed municipal waste.

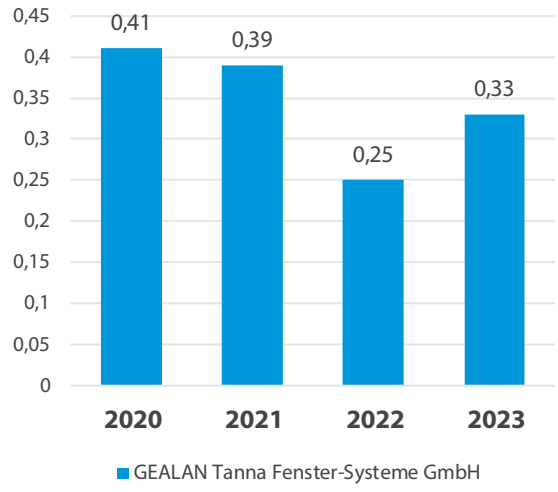


7.9 Waste – hazardous

Hazardous waste in kg/employee



Hazardous waste in kg/t of processed raw material



The hazardous waste per employee at the Oberkotzau site fell due to the lower capacity utilisation of the tool shop. At the Tanna site, hazardous waste per tonne of raw material rose slightly again. The absolute figures indicate an increase of 2 tonnes, due among other things to the maintenance intervals and the resulting degassing fluids from the extrusion process.

8. Core indicators

8.1 GEALAN Fenster-Systeme GmbH

INDICATORS	2020	2021	2022	2023
Raw materials (t)	1,620	3,630	8,895	6,036
Energy demand (MWh)	6,699	7,026	6,987	6,384
Energy efficiency MWh/t	**4.14**	**1.94**	**0.79**	**1.06**
Water (m^3/t)	3.29	1.14	0.55	0.72
Water (m^3/employee)	16.28	12.58	14.39	11.89
Waste non-hazardous (kg/t)	156.79	90.63	28.22	33.96
Waste hazardous (kg/t)	7.41	4.68	2.59	2.49
Biodiversity – degree of sealing in %	**90.03**	**81.98**	**81.98**	**81.98**
Total areas (m^2)	28,156	31,292	31,292	31,292
Sealed areas (m^2)	25,350	25,652	25,652	25,652
Near-natural areas (m^2)	2,806	5,640	5,640	5,640
Emissions				
CO_2(t/t)	1.132	0.244	0.10	0.15
VCM (g/t)	0.864	0.854	0.21	0.31
SO_2 (kg/t)	0.788	0.351	0.135	0.179
NO_x (kg/t)	1.717	0.769	0.303	0.403
PM_{10} (kg/t)	0.120	0.055	0.021	0.029

8.2 GEALAN Tanna Fenster-Systeme GmbH

INDICATORS	2020	2021	2022	2023
Raw materials (t)	67,844	79,032	83,054	70,216
Semi-finished and finished goods (t)	67,702	78,837	82,660	68,881
Energy efficiency (MWh/t)	0.471	0.450	0.429	0.440
Material efficiency [1] (%)	**99.79**	**99.75**	**99.53**	**98.10**
Water (m^3/t)	0.24	0.17	0.17	0.22
Water (m^3/employee)	30.61	23.97	24.88	27.85
Waste non-hazardous (kg/t)	16.36	15.85	16.33	15.03
Waste hazardous (kg/t)	0.41	0.39	0.25	0.33
Biodiversity – degree of sealing in %	**81.87**	**81.87**	**85.06**	**85.19**
Total areas (m^2)	120,409	120,409	121,626	121,626
Sealed areas (m^2)	98,574	98,574	103,457	103,609
Near-natural areas (m^2)	21,835	21,835	18,169	18,017
Emissions				
CO_2 (t/t)	0.127	0.014	0.01	0.01
VCM (g/t)	0.870	0.860	0.83	0.98
VOC (t/t adhesive)	0.0250	0.0239	0.0240	0.0304
SO_2 (kg/t)	0.138	0.132	0.123	0.128
NO_x (kg/t)	0.190	0.218	0.205	0.216
PM_{10} (kg/t)	0.017	0.016	0.015	0.016

[1] Material efficiency: Semi-finished and finished goods in t/raw material in t

9. Environmental and energy programme for Tanna and Oberkotzau from 2024 onwards

Target	Measure/Project	Expected benefit/improvement	Target date
Standardisation in the group of companies	Comprehensive introduction of an energy management system in the GEALAN Group in compliance with ISO 50001	Standardisation of energy policy and increase in sustainability	12/2024
Expansion of the metering point concept by 2027	Provision of weather-adjusted key figures by 2027 through the expansion of Efficio	Weather adjustment/normalisation of key figures for better comparability over the years	12/2025
Process optimisation	Integration of a high-bay warehouse to improve the availability of semi-finished and finished goods	Reduction of forklift hours by 10,000 operating hours per year as of 2024 and thus a reduction of 17.8 kg/h CO_2 emissions	6/2024
Increase biodiversity	Conversion of agricultural land to mixed forest	Reduction of CO_2 emissions by approx. 140,000 kg CO_2/a	9/2024
Conservation of resources	Increase of the recycling share to 55% in sash combinations	Reduction of 1.8 t CO_2/t PVC (compared to raw material)	12/2024
	Increase of recycling share to 37.5% post-consumer material by 2030	Reduction of 53,299 t CO_2 based on 2022 consumption	12/2030
	Use of 25% recycled PMMA in the production of AcrylColor profiles from January 2025 onwards	Reduction of CO_2 emissions, not currently quantifiable	01/2025
	Development of a solution approach to recycle sealing materials	Reduction of CO_2 emissions, not currently quantifiable	12/2024
	Use of 250t bio-attributable PVC in production in 2024 (mass-balance principle)	Reduction of CO_2 emissions, ca. 90% compared to raw material	12/2024
Reduction of emissions	Redesign and implementation of the TNV	· Plant design for future expansion of lamination · Use of other energy sources to operate the plant (CO_2 reduction) · Possibility of heat recovery	12/2024

Declaration of validity

Declaration by the environmental inspector on assessment and validation processes

The undersigned EMAS environmental inspector Dipl.-. Ing. (FH) Jürgen Schmallenbach (DE-V-0036), accredited or licensed for the sector Manufacture of plastic products 22.2 (NACE code), confirms to have verified whether the sites of GEALAN Fenster-Systeme GmbH in Oberkotzau and GEALAN Tanna Fenster-Systeme GmbH in Tanna – as indicated in the environmental statement with registration numbers (DE-S-106-00003) and (DE-S-154-00004) – meet all requirements of Regulation (EC) No. 1221/2009 of the European Parliament and of the Council of 25 November 2009 and Commission Regulation (EU) 2017/1505 of 28 August 2017 as well as Commission Regulation (EU) 2018/2026 of 19 December 2018 on the voluntary participation by organisations in a Community Eco-Management and Audit Scheme (EMAS).

By signing this declaration, the environmental inspector confirms that

- the assessment and validation was carried out in full compliance with the requirements of Regulation (EC) No 1221/2009, Regulation (EU) 2017/1505 and Regulation (EU) 2018/2026,
- the result of the assessment and validation confirms that there is no evidence of non-compliance with applicable environmental legislation,
- the data and information in the sites' environmental statement depict a reliable, credible and true scenario of all the activities of the organisation/sites within the scope stated in the environmental statement.

This statement cannot be equated with an EMAS registration. EMAS registration can only be carried out by a competent body in accordance with Regulation (EC) No 1221/2009. This statement may not be used as a stand-alone basis for public information.

Oberkotzau/Tanna/Maselheim, 06/06/2024

Dipl.-Ing. (FH) Jürgen Schmallenbach, Master's degree in engineering
Environmental Inspector (DE-V-0036)

Schmallenbach – CONSULTING & CERTIFICATION
Äpfinger Berg 3
D-88437 Maselheim

EMAS
GEPRÜFTES UMWELTMANAGEMENT
DE-106-00003
DE-154-00004

Publication dates

This Environmental Statement was approved by the management in June 2024 and submitted to the environmental inspector for validation. It is published in an annually updated form and checked and validated by the environmental inspector. The next update of the environmental statement will be published in May.

Glossary

GEALAN-acrylcolor®	In the colouring process, the PVC base is fused indissolubly with the coloured acrylic glass
GEALAN-LINEAR®	Profile system with 74 mm construction depth
GEALAN-KONTUR®	Profile system with 82.5 mm construction depth
GEALAN-SMOOVIO®	Sliding system with 74 mm construction depth
TEXINO	Smart home solution that can be connected with windows and doors to control the indoor climate
DIN EN 14001:2015	German version of the International ISO Standard entitled: 'Environmental management systems – requirements with guidance for use' (ISO 14001:2015)
EMAS III, EG-VO No 1221/2009	Eco Management and Audit Scheme stands for the voluntary commitment of companies and organisations to improve the environmental protection of their operations
Emissions	Substances, noise, heat, cold emitted to the environment
Auxiliary and operating materials	e.g. cleaners, lubricants, adhesives and printer ink
PVC	Polyvinyl chloride
TAB	Thermal afterburning
VCM	Vinyl chloride monomers
VOC	Volatile organic compounds
NOx	Generic term for a group of highly reactive gases all containing nitrogen and oxygen in different quantities [such as nitrogen monoxide (NO) and nitrogen dioxide (NO_2)]
PM10	Particulate matter with an aerodynamic diameter of 10 micrometers or less (µm)
SO_2	Sulphur dioxide