Environment

Politics Environment

Heimbach's economic and ecological sustainability is greatest when not only profit and growth are taken into account, but especially the requirements of future generations. We are particularly committed to the environment, nature and the conservation of resources.

We have formulated our environmental policy together with the management. It is the basis for implementing a context-based environmental management. The principles of action are binding for all employees. They are reviewed annually and updated as necessary.

It is our responsibility to create resource and environmentally friendly processes within the supply chain as well. Because we can only achieve this together, taking into account all stakeholders, sustainable action is firmly anchored in our organisation.

We need convinced employees who actively participate in Environmental Management. This is done through open communication, training and the opportunity to submit suggestions for improvements in operational environmental protection.

Laws, regulations and official requirements result in binding legal obligations for Heimbach, which we implement at the respective locations. In addition, it is important to us to continuously improve operational environmental protection and the sustainability of our actions. We will reduce energy consumption, cut down on the use of materials and the amount of waste, and use water sparingly as a resource. In these endeavours, we make use of the most economical technology.

"How we treat our environment determines our future".

Hans-Jürgen van der Veen, Immission and Water Protection Officer, Environmental Manager

Our SDG sustainability goals are:

In the course of the company´s history, we recognised very early on, that resources in our value chain are steadily gaining in importance. However, this does not only apply to Heimbach, but to the entire ecosystem. Environmental risks are increasing and becoming more complex. We do not consider risk to be merely a danger to our company; rather, we see our responsibility in the context of our fellow human beings and the environment. After all, economic and ecological requirements are given equal weight in our actions. We remain particularly committed to the environment, nature and the conservation of resources.

Operational Waste Management

(GRI 306-1 Waste generation and significant waste-related impacts)

At Heimbach, waste of the most diverse fractions is generated. We are responsible for its proper disposal. This must be integrated as efficiently as possible and in an ecologically as well as economically sensible way into the company's daily routine. We use the services of specialised companies for the different types of waste. We are responsible for the handling of our waste until it is finally disposed of in accordance with waste legislation.

The German Closed Substance Cycle Waste Management Act (Kreislaufwirtschaftsgesetz) sets out the requirements for us to handle waste in a safe and environmentally sound manner. We are committed to promoting the circular economy, conserving natural resources and protecting people and the environment in the generation and disposal of waste.

The principles of the waste hierarchy are binding for us. Avoiding waste is our highest priority. Changes in environmental framework conditions, e.g. new regulations in waste laws and ordinances, require constant adjustments to our operational waste management. In our operational waste management, we have analysed our current processes and reviewed them for current requirements. This includes, among other things, the classification and categorisation of waste, the recording of waste quantities and the determination of the necessary disposal routes.

For 2022/2023, our agenda includes:

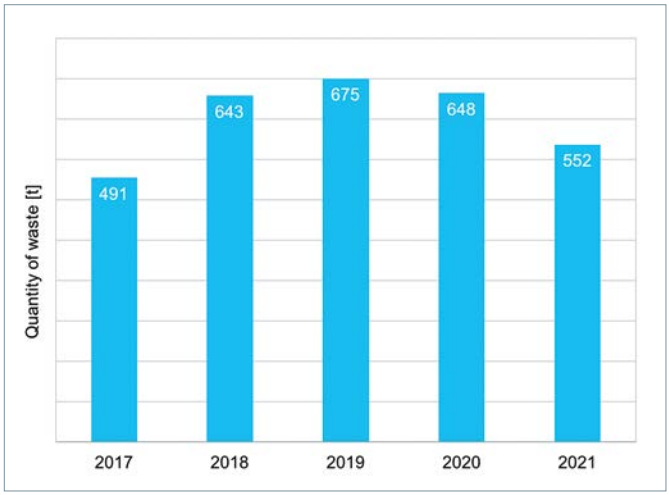
- Clean up material flows (production and commercial waste, residual waste).
- Co-operation with specialised companies (waste disposal security)
- Ensure high-quality disposal
- Implementing the requirements of the Closed Substance Cycle Waste Management Act
- Balance all waste and specify separate collection rate (target > 90%)
- Avoid mixed fractions
- Train employees

Waste quantities

Total annual waste generation

(GRI 306-3 Waste generated)

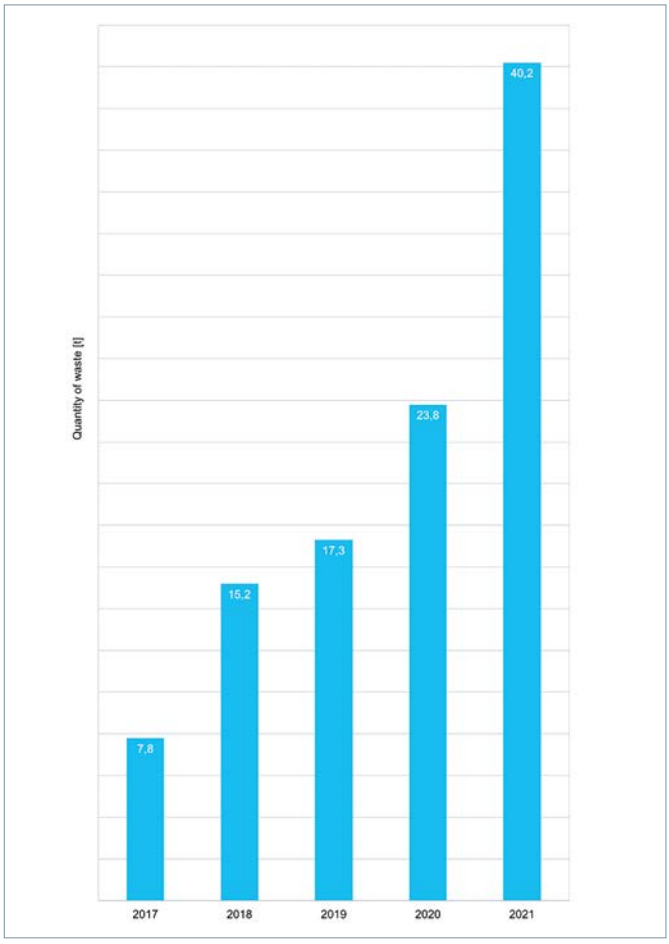
Heimbach checks all waste to ensure that it is correctly classified and categorised according to waste legislation. In 2021, waste with a total volume of 552 t was generated for recycling at the Düren site. (Target 2022: -10 t) We dispose of our waste for disposal via the public waste disposal company.



According to AVV key (waste fractions)

According to the Ordinance on the List of Wastes (AVV), all waste must be correctly broken down and allocated (separate collection obligation). Their place of origin is decisive. Hazardous waste types are named in the AVV and marked as such.

Hazardous waste



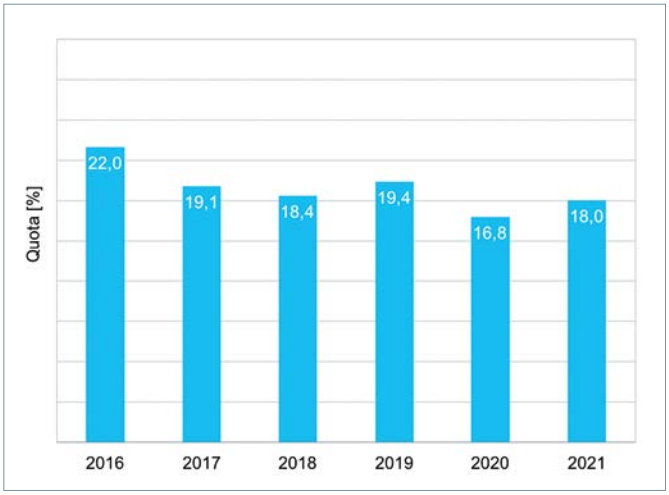
Heimbach strives to reduce waste types classified as hazardous and to substitute hazardous materials. With this approach, we avoid problematic waste in principle.

In 2021, 28 different types of waste were generated at our sites (2020: 31), 13 of which, with a total weight of 40.2 t, we classified as hazardous waste in accordance with the requirements of waste legislation (2020: 12; 23.8 t). These types of waste cannot always be avoided. In any case, they are always disposed of correctly in accordance with waste legislation. The largest items in 2021 were cooling lubricant and materials from renovation and demolition work. These wastes do not occur regularly. In general, Heimbach does not produce any hazardous production residues.

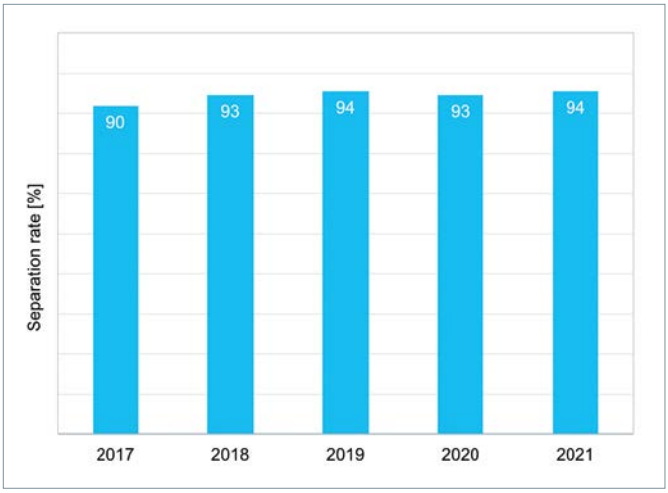
Material use and production waste

Fibres, yarns and monofilaments are used as textile pre-products in production. During the processing of these raw materials, textile waste is produced as a result of the process. We regularly check our yield losses (textile waste) in the use of materials. These are influenced by the product mix and unforeseeable events. To avoid losses, we actively influence and design the production processes accordingly. The goal for 2022 is to stabilise the amount of unavoidable production-related waste and to avoid further yield losses (target 2022: <18.5%). We pursue comparable goals in different production processes at all sites. The allocation and classification of waste types is based on local waste legislation, its implementation and the contractual regulations with the authorised waste disposal companies.

Yield losses



Separate collection rate



The separate collection quota according to GewAbfV serves to avoid mixed waste and refers to commercial municipal waste. The mixed waste types from the List of Wastes Ordinance should be < 10% at Heimbach. At least 90% of the commercial municipal waste is collected separately at our company. Heimbach collects all quota-relevant streams.

At our various locations, we ensure appropriate separate collection of comparable types of waste.

Waste / Circular Economy Goals:

Reduce waste volume (-10% by 2030) [Basis 2020].
Reduce total waste (-10 t in 2022)

Operational Water Management

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

Water is a vital and scarce resource whose availability is existential for Heimbach. We are aware that our manufacturing processes, facilities and operating resources have an impact on underground and surface waters. Therefore, sustainable water management is a central aspect of our Environmental Management System.

At the same time, water is a local resource, as its availability depends on local conditions. With our water use, we are an integral part of the watershed. The functioning of a watershed is complex and poses particular challenges for us as a company. We distinguish between water consumption and water use. Water consumption describes the part of the water withdrawn from the watershed that is absorbed into products or evaporates, i.e. is not returned to the ecosystem. Water use describes the part of the water withdrawn that is returned to the ecosystem. This includes all wastewater, cooling water, wastewater from our processes or precipitation water that we feed into the ecosystem.

With our water use, we have to adapt to local conditions in order to achieve a reduction of possible water risks.

In accordance with the maxim "use" instead of "consume", water is used in the course of production and returned to its natural cycle as unchanged as possible. The protection of surface and ground water is important to us. Naturally, we take into account all applicable laws and regulations. We already create the appropriate conditions during the planning and construction of production facilities.

Possible effects on the climate are included in our sustainable water management. For example, we include floods and possible heavy rainfall in our risk assessment. Risks associated with the use of surface water, e.g. during dry periods, or the protection of properties from extreme weather events are the main focus here.

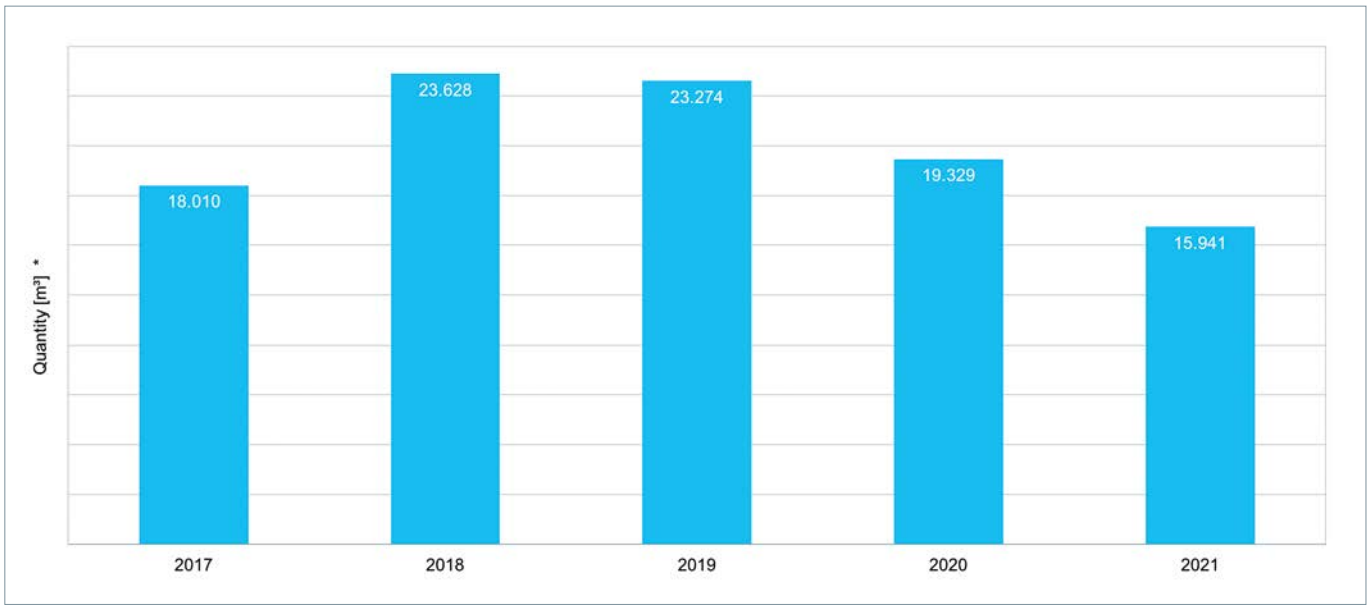
However, sustainable water management must also take into account economic management and be reflected in cost savings. Accordingly, we consider all types of water relevant to Heimbach. All supply and disposal channels are regularly checked, as is compliance with legal requirements.

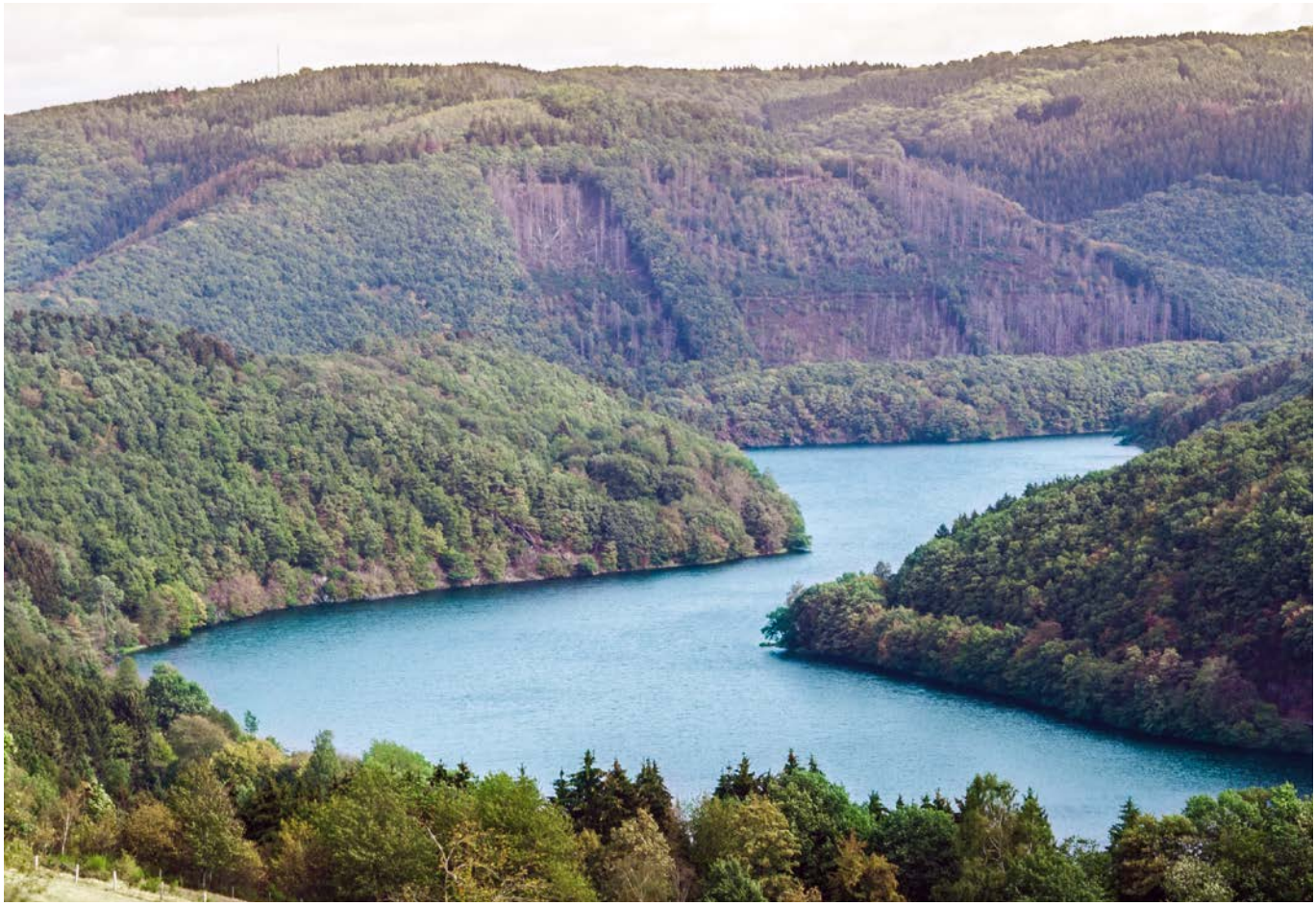
We will implement the following measures in 2022/2023:

- Minimise water consumption, optimise water use
- Improve wastewater characteristics and comply with minimum requirements
- Generate energy from wastewater (heat recovery)
- Investigate energy-efficient water supply
- Consider potential risks from climate change such as drought, floods, heavy rainfall
- Regularly check how drinking water can be saved on an ongoing basis.
- Design our drinking water distribution system to meet demand
- Use cleaning agents in the smallest possible dosage
- Preferably use environmentally friendly cleaning agents
- Refrain from using washing-active substances or special-purpose treatments in the fixing process
- Decalcify equipment on a regular basis (decalcification systems)
- Properly store and use substances hazardous to water
- Regularly maintain, clean and empty separation systems (for grease and oil)

Drinking water

The sustainable management of water as a resource is of particular importance to us. At the Düren site, we are supplied with high-quality drinking water and are committed to using this valuable resource sparingly. Heimbach complies with all technical and hygienic requirements for the use of drinking water.



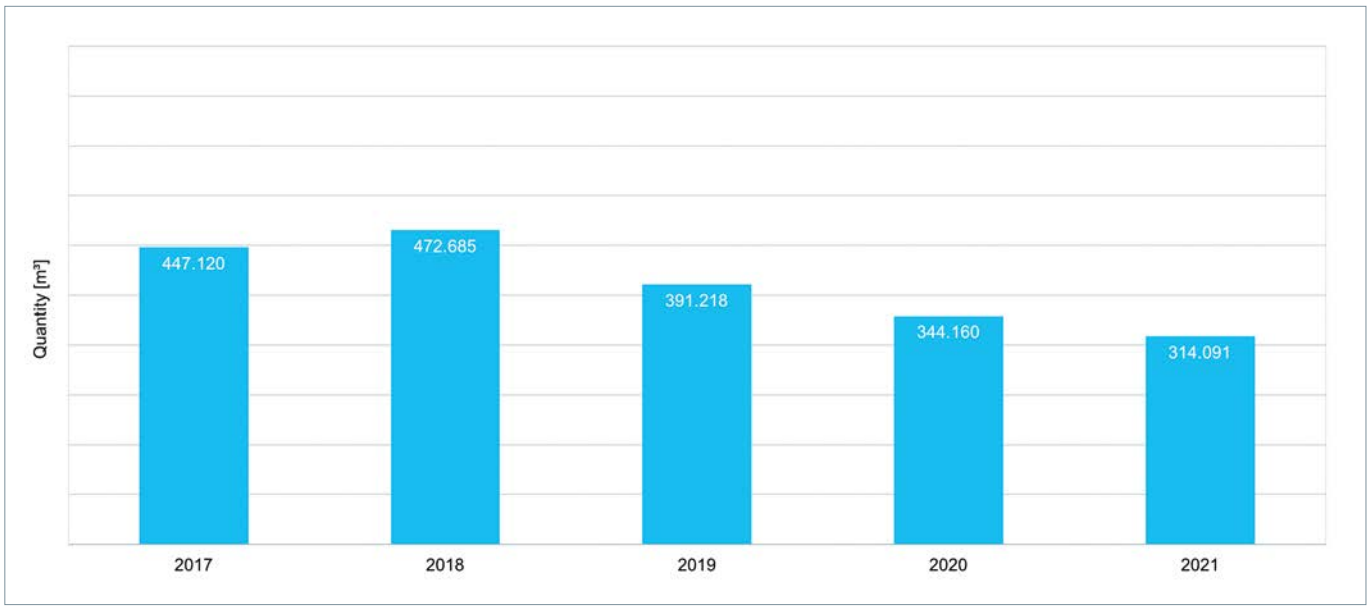


Rur, National Park Eifel

Water withdrawal from the Rur for cooling and process water

At the Düren site, Heimbach uses river water from the Rur. Most of it is used as cooling water and is discharged directly back into the Rur. To ensure that the discharge has no adverse effects on the water body, it is continuously monitored.

The priority is to use the cooling water efficiently while complying with the monitoring values. At the same time, we will constantly check the perspective water withdrawal in relation to our production volume and ensure a withdrawal below the permissible amount. (Target 2022: < 400,000 m^3)



Withdrawal

Actual situation 2021:

Drinking water:	15,942 m³
River water:	314,091 m³
of which	
Cooling water:	234,649 m³
Service water:	79,442 m³

Target 2022: Efficient and demand-oriented abstraction of cooling water and ecologically harmless reintroduction

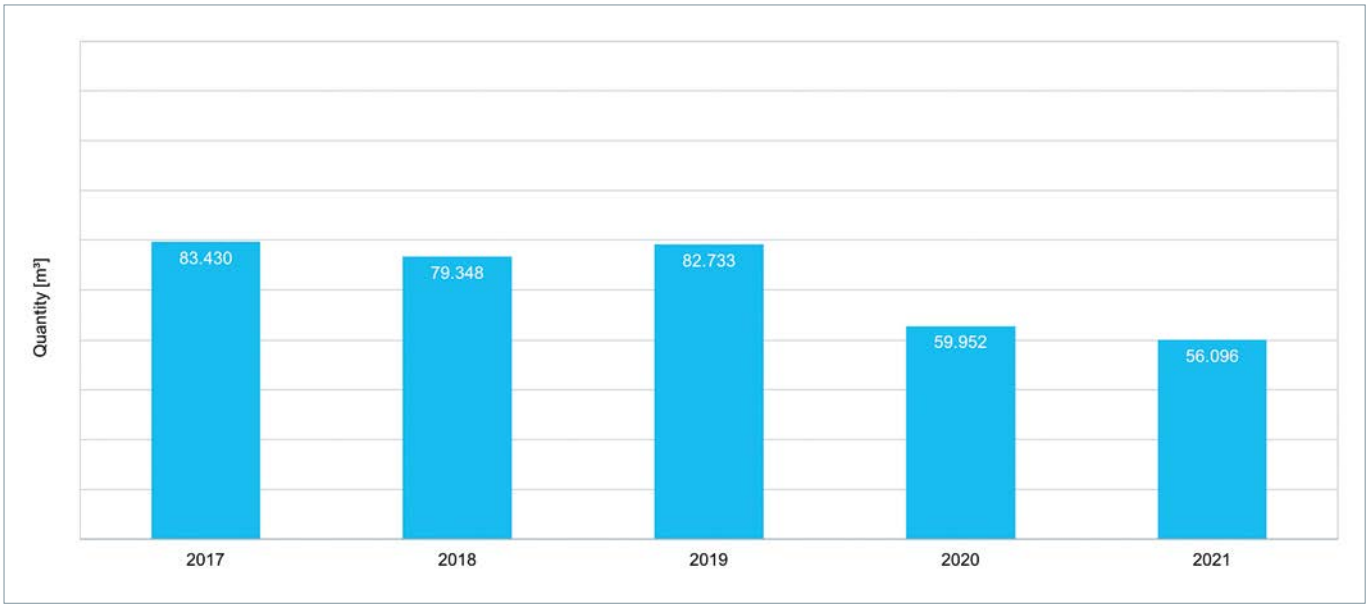
Indirect discharge - wastewater treatment plant

Polluted water (sanitary, wash water, etc.) enters the treatment plant together with production wastewater contaminated by use. Before mixing, our production wastewater is monitored. The contamination of our wastewater is similar to that in private households and is not problematic for the wastewater treatment plant. As indirect dischargers of wastewater, we are aware that our polluted wastewater is also returned to the ecosystem after treatment.

Target 2022: Our wastewater quality must comply with the annexes of the Wastewater Ordinance. It is monitored regularly. In order to further improve wastewater quality and reduce the amount of wastewater, we will continue to orient our processes towards sustainable use of water (discontinue operation of washing machine, reduce use of textile washing and auxiliary agents).

Measuring concept

A new measuring concept helps us to further specify water consumption and withdrawals. For this purpose, new consumption points are defined and the need for water meters is determined. These measures will enable us to determine more precisely the actual water consumption, i.e. the amount of water that we do not return to the ecosystem at our site. (2021: 23,346 m³, *GRI 303-5 water consumption*). This is evaporation from our drying processes and air humidification. We will check the points of use for their savings potential and reassess the KPI afterwards. We expect these measures to result in a positive development for our water use by 2023.



Discharge

Actual situation 2021:

Indirect discharge:	56,096 m³
Direct discharge:	254,075 m³
of which	
Cooling water:	234,649 m³
Precipitation water:	19,426 m³

Furthermore, we want to improve wastewater quality by reducing the pollutant load and protecting water use from harmful environmental impacts. Our wastewater volume in indirect discharge in 2021 was: 56,096 m³ (target 2022: < 60,000 m³).

Water Management targets:

Reduce the amount of water used (cooling water, process water, drinking water) (-10% by 2030) [base 2020].
Water withdrawal from the Rur < 400,000 m³ (2022)
Indirect discharge < 60,000 m³ (2022)

Operational Energy Management

Heimbach uses the energies electricity (light, compressed air, drive units), heating oil and gas (heat, steam) as well as water (cooling). Conserving resources and reducing emissions is our goal.

We see it as a central task to minimise energy consumption in the long term and to continuously improve energy performance and energy efficiency. This is done in harmony with our economic and ecological goals. The state of the art is our minimum requirement in this respect.

For targeted implementation, Heimbach already introduced an energy management system (DIN EN ISO 50001) at the Düren site in 2013 and put together a corresponding team.

One of the main goals for the coming years is to increase the share of renewable energies. To this end, photovoltaic projects will be realised at various locations throughout the Group in the next few years.

We will regularly inform and sensitise all employees and actively promote the exchange of knowledge - this is the only way to sustainably improve our energy efficiency.

The goals of our awareness measures are:

- Explain the changed legal framework for energy procurement and consumption.
- Explain energy costs, quantities and the associated environmental impacts
- Identify factors influencing costs and consumption
- Document the site's key energy figures
- Explain technical and organisational measures
- Motivate employees to make suggestions for improvements regarding energy saving

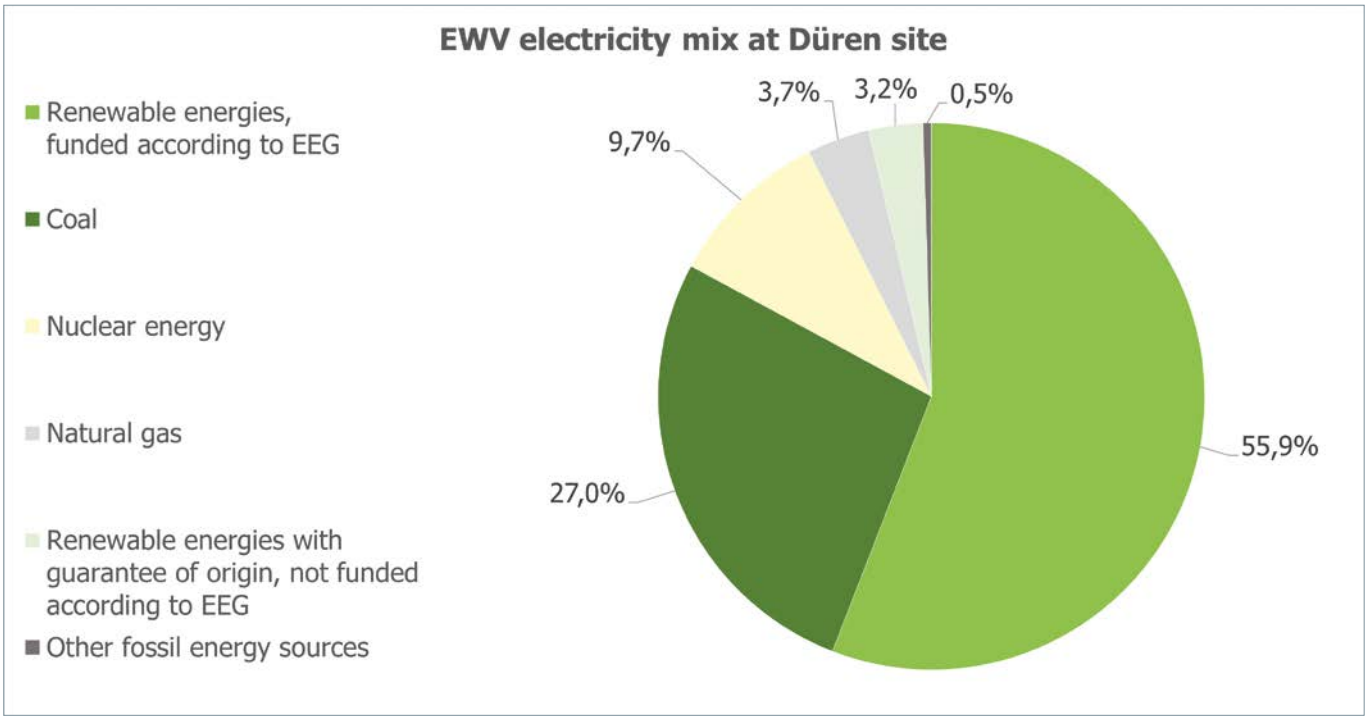
Energy

The procurement of natural gas, heating oil, diesel, liquid gas and electricity is carried out centrally by the technical purchasing department. It is important to us to consider economic and ecological aspects equally. The head of purchasing is a member of the energy team and reports to monthly team meetings.

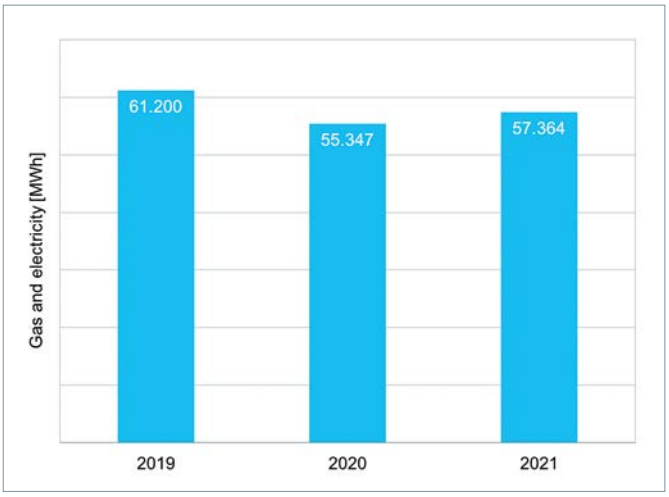
Fossil energy sources are used as follows:

- Natural gas = production, heating
- Fuel oil = heating, emergency generators
- Diesel = industrial trucks
- Liquid gas = industrial trucks

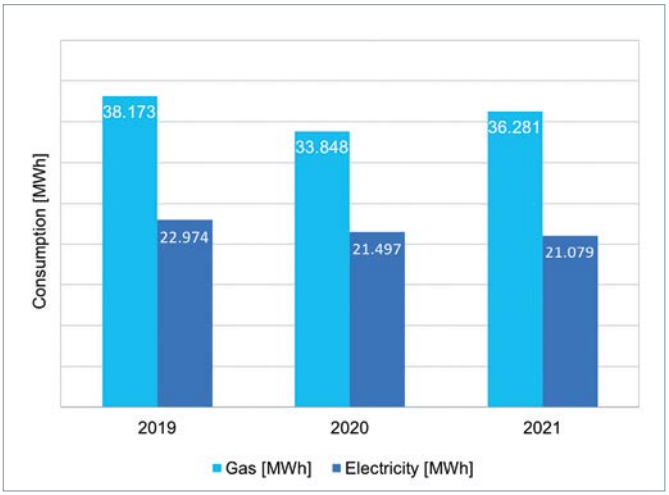
Current electricity labelling of our current supplier *(GRI 305-2 Indirect energy-related GHG emissions (Scope 2))*



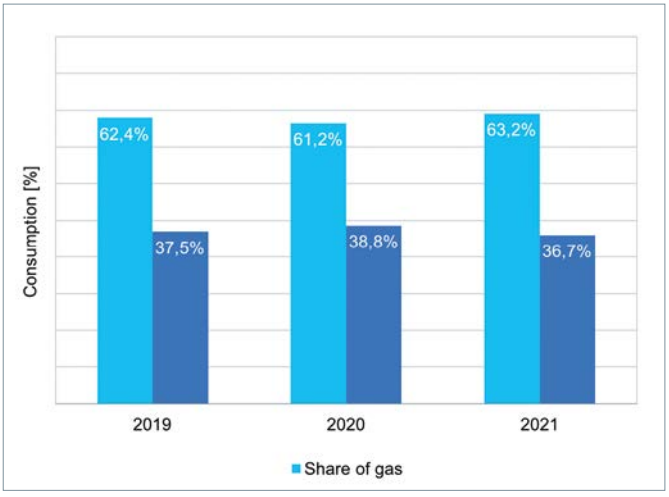
Consumption figures from the group:
Total consumption of PMC-Sites
(GRI 302-1 Energy consumption within the organisation)



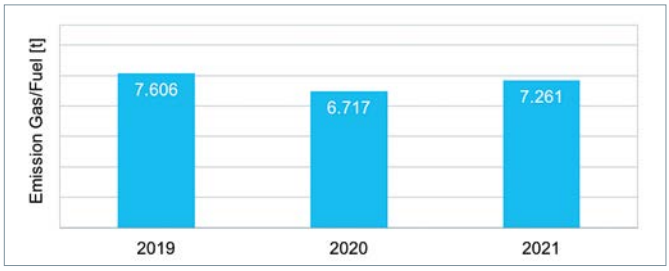
Breakdown of consumption by gas and electricity
(GRI 302-1 Energy consumption within the organisation)



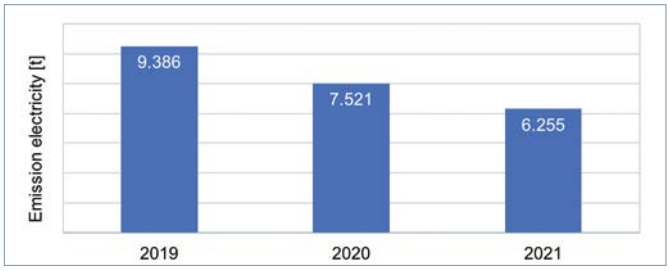
Energy type Share of total consumption
(GRI 302-1 Energy consumption within the organisation)



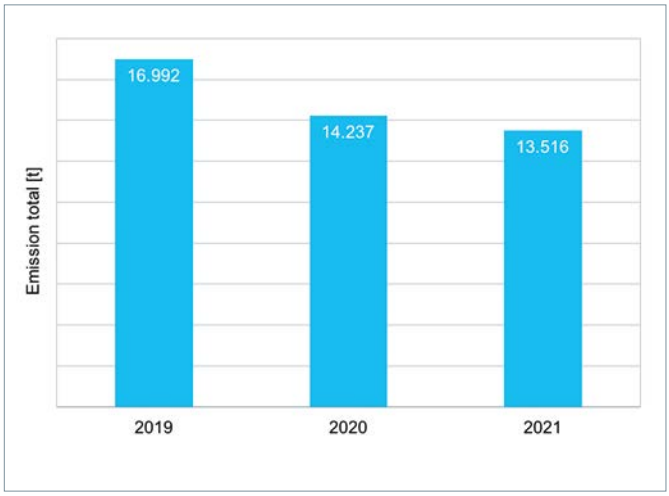
CO_2 emission Scope 1
(GRI 305-1 Direct GHG emissions (Scope 1))



CO_2 emission Scope 2
(GRI 305-2 Indirect energy-related GHG emissions (Scope 2))



CO_2 emissions Total Scope 1 + Scope 2
(GRI 305-1 Direct GHG emissions (Scope 1) (GRI 305-2 Indirect energy-related GHG emissions (Scope 2))



Saving gas through innovative heating concepts
(GRI 302-1 Direct GHG emissions (Scope 1))
(GRI 302-4 Reduction of energy consumption)

In recent months, it has suddenly become clear what it means when gas suddenly becomes scarce. There is pressure on the boiler and innovative heating concepts are needed. Our active plants in Europe and Asia are already making a positive contribution to heat recovery. In the course of further sustainability projects, we expect to be able to save about 14,000 MWh of gas annually.

As a partner of the paper industry, an intact environment is in our very own interest. We want a future in which future generations also have every chance of a good and happy life. Both are on the same page for us.

600,000 kWh of gas saved

(GRI 302-1 Energy consumption within the organisation)

Every kilowatt hour not consumed helps. At the beginning of May, we adapted the energy supply at our site in Düren. A boiler for supplying heat to the offices and production halls was completely switched off. Compared to the previous year, we were able to save 600,000 kWh of gas. This corresponds to 108 tonnes of CO_2. Although there were still cool days in May, the consensual conclusion is: Acting with foresight pays off twice.

Heat recovery Düren site

Through a heat recovery system, the gas consumption of the boiler could be reduced by about 2,634 MWh compared to 2018. By installing 3 heat pumps, the steam boiler can now be switched off during the summer months. This will save approximately 80 MWh of gas and 8 MWh of electricity annually during the summer months. A themofixing calender is now supplied with hot water from heat recovery instead of steam.

Energy of the future *(GRI 305-5 Reduction of GHG emissions)* *(GRI 302-4 Reduction of energy consumption)*

The summer of 2022 presents itself in a way that was hardly imaginable just a few years ago. Temperatures were high and rain was scare. The water levels of large inland waterways such as the Rhine are tending towards zero. The river Ahr, which only a year ago caused one of the worst flood disasters in recent history, dried up on some days in the gravel bed before it even reached the Rhine, and crops dried up in the fields. The potential consequences of climate change seem to be becoming more and more apparent.

In addition, the war in Ukraine in the spring of 2022 shows how vulnerable dependence on fossil fuels from other parts of the world can make us. We will have to pay the price for this in the winter time.

In order to make our own energy supply more independent in the future and at the same time contribute to climate protection, we will significantly push the expansion of renewable energies. A step in this direction was taken in the first half of 2022 at Heimbach Specialities in Belgium. A photovoltaic system was installed on the roofs of the site there. 406 panels with a total area of approx. 780 m^2 provide a total electrical output of approx. 162.4 kWp. The expected annual electricity production amounts to approx. 150 MWH. This is expected to cover about 8% of the annual demand. Excess capacity at weekends is fed into the electricity grid and is thus available to the general public.

Solar power is also generated at our Chinese site in Suzhou. As part of the expansion of production capacities, the newly created roof areas are being equipped with photovoltaic modules. In the future, 850 MWh of electricity will be produced here. These two plants alone will reduce annual CO_2 emissions by 900 tonnes.
And this is just the beginning. The expansion of photovoltaic plants is being pushed strategically.

In an action plan for the next five years, more than six million euros have been earmarked for the promotion of green electricity. The planned measures include the massive expansion of renewable energies, but also initiatives to use electricity more efficiently.
In the future, the Heimbach Group will generate 6,500 MWh of its own solar power annually. This will save approximately 2,600 tonnes of carbon dioxide each year.

Photovoltaic plant Heimbach-Belgium

Photovoltaic plant Heimbach-China

Strategy 2050 and targets 2022ff

Our strategic goal for the Heimbach Group is to reduce our GHG emissions [CO_2] with regard to Scope 1 and Scope 2 by 50% by 2035 compared to the base year 2017 and to be climate neutral (Scope 1+2) in 2050.

Detailed targets on our way there are:
Gas savings: approx. 14,000 MWh annually
Electricity consumption: use of 100% renewable energy
GHG emissions [CO_2]: Savings of 2,600 t annually
Recording of all Scope 3 emissions by 2025
Service vehicles: expansion of e-mobility by 2025

"The energy of the future must be sustainable and renewable."

Markus Werner, Energy Manager