Protecting the environment

62%
renewable electricity

42%
of water recycled and reused

95%
of waste reused, recovered, or sent for recycling

Photovoltaic park, ST Bouskoura, Morocco

Our approach to the environment

PROTECTING THE ENVIRONMENT

We are committed to managing our business operations in an environmentally responsible way.

1993
first environmental policy

0.70
eco-footprint score in 2022

15
sites assessed for biodiversity

ST Agrate, Italy

At ST, we provide semiconductor solutions that play an important role in helping to solve environmental and social challenges. At the same time, our operations require natural resources and can have a negative impact on the environment if not managed properly. For nearly 30 years, protecting the planet has been a priority. We have worked consistently to minimize our overall environmental footprint and are committed to reaching carbon neutrality by 2027.

Driving environmental efficiency

Strong governance

We recognize the importance of conducting business in a responsible manner. In 1993, we established our first global environmental policy (the current version is available on www.st.com). Our sustainability charter (www.st.com/sustainabilitycharter) supports this policy by outlining our commitments and goals for 2025 and 2027.

Our approach to the environment is led by executive management and incorporated into our overall Company strategy. The corporate environmental team is responsible for developing programs and procedures. These are then implemented at operational level by local sustainability committees who develop a roadmap according to the needs of their respective sites.

At each manufacturing site, the Environmental, Health and Safety (EHS) steering committee is responsible for implementing the environmental policy. It is composed of members from facilities, production, human resources, and production support. The committee meets quarterly to review and update various topics, such as the site environmental performance or the status of compliance with environmental standards and requirements. Outcomes are shared with the site management for review, and appropriate actions implemented where necessary.

Robust management system

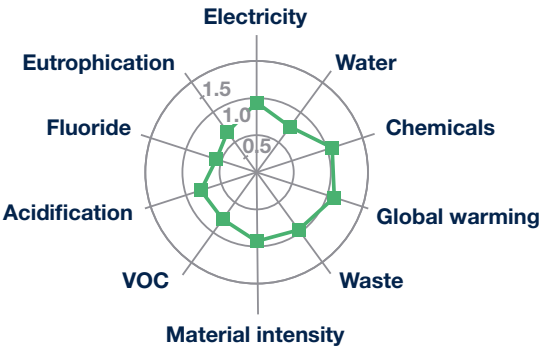
Our environmental management is aligned with recognized international standards, such as ISO14001, ISO50001, ISO14064, and EMAS[1]. Our performance and management systems are evaluated annually through third-party surveillance audits, and our certifications are renewed every 3 years. In 2022, all our sites maintained their certifications and our Kirkop (Malta) and Rennes (France) sites joined the 11 ST sites already ISO50001 certified.

To support our culture of continuous improvement, we also conduct internal audits every 3 years. In 2022, we conducted internal audits at seven sites.

In addition, we have a three-year program to conduct third-party EHS legal compliance audits. These assess the compliance status of our sites and limit risks related to our license to operate. The program covers 38 sites, including all our manufacturing sites, all sites with more than 150 employees and some smaller sites and warehouses. In 2022, we conducted nine EHS legal compliance audits.

Monitoring environmental performance

We evaluate our overall environmental performance by monitoring multiple indicators, such as resource consumption, waste, and air emissions.



All environmental data within ST is collected and reported regularly (monthly, quarterly, and yearly) on our central environmental database. Tracking the progress of each indicator allows sites to constantly adjust and improve their performance. We share the results and best practices with all teams during quarterly environment steering committee meetings.

Since 2001, we have used our 'eco-footprint' radar, an internal tool to analyze data on the inputs and outputs of our manufacturing operations. The smaller the footprint, the better the performance, with a score of 1.0 or below considered good. It allows us to compare the environmental impact of each ST manufacturing site, as well as our overall progress. We analyze the results to identify potential improvements and define the priorities we need to address. In 2022, our eco-footprint score was 0.70, better than our target of 0.75.

I 3-3 I

(1) EMAS: Eco-Management and Audit Scheme.

FOCUS

BIODIVERSITY

Declining biodiversity is a growing concern globally. Natural ecosystems are increasingly becoming disrupted, which poses direct threats to humanity. This loss can be attributed to several different factors, including industrial activity, making it critical for organizations to support global biodiversity objectives and the UN Sustainable Development Goals 14 (conserving and sustainably using the oceans, seas, and marine resources) and 15 (conserving life on land).

At ST, we maintain a vigilant and proactive approach to protecting the environment and we recognize the need for a comprehensive biodiversity strategy going forward. To date, several initiatives have been carried out to protect biodiversity of the areas around our sites, such as beehives, low mowing or insect hotels.

In 2022, we launched a survey across 22 of our sites to help us understand our impacts and assess actions already taken. Data was gathered on past studies and initiatives as well as on future projects of the respective sites. This enabled us to identify key areas for improvement.

In addition, we commissioned a specialist study from an external partner to provide an assessment on the biodiversity and ecosystems in the areas close to our sites and operations. Fifteen sites were assessed from our front-end and back-end activities, along with three R&D and design centers. Both qualitative and quantitative evaluations were used to define the environmental context of each site.

Our approach is centered around three key pillars:

- minimizing our impact
- protecting and restoring
- engaging local stakeholders

We defined a biodiversity index based on 10 criteria: governance and strategy; risks and opportunities; water; air; soil; naturality; forest; flora; fauna; and external partnerships. These are scored and prioritized depending on the local context, site maturity level and actions already in place. This will allow us to define priorities to address and monitor our overall progress year on year.

Through our continued efforts, we aim to gain a full understanding of our biodiversity impacts, which will enable us to establish relevant indicators, finalize our corporate biodiversity policy and implement robust environmental management systems. In parallel, our sites continue to implement local initiatives to protect nearby habitats.

Energy and climate change

PROTECTING THE ENVIRONMENT

We take action to mitigate the impact of our activities on climate change.

62%
renewable electricity used

-40%
scope 1 & 2 emissions (since 2018)

2027
carbon neutrality commitment

New photovoltaic carpark, ST Grenoble, France

Climate change is one of the biggest threats facing society. At ST, we recognize we have a responsibility to help address this global challenge.

In 2020, we announced our commitment to becoming carbon neutral by 2027. Our carbon neutrality program includes:

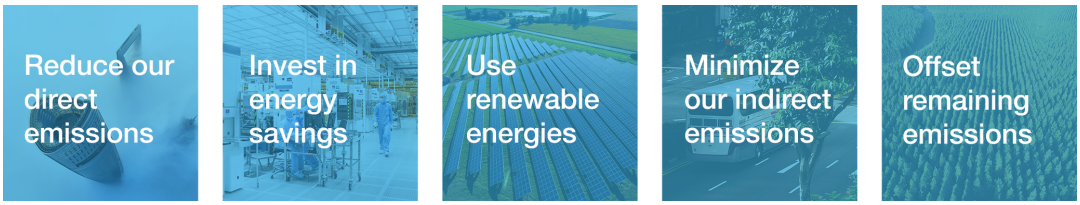
- a comprehensive strategy covering the reduction of direct and indirect emissions, including product transportation, business travel, and employee commuting
- the sourcing of 100% renewable energy by 2027
- an intermediate milestone, to be achieved by 2025, with full compliance with the 1.5°C scenario defined in the Paris Agreement adopted at COP21, endorsed by the Science Based Targets Initiative (SBTi)

CARBON NEUTRAL

by 2027

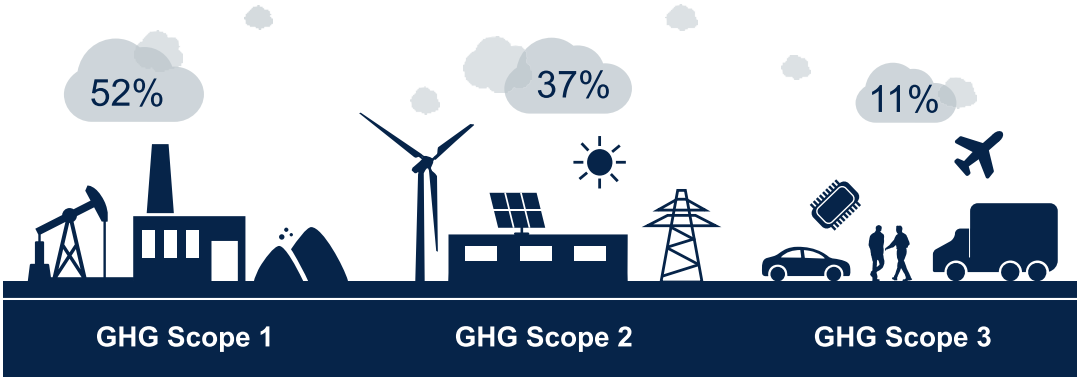
Moving towards carbon neutrality

Our carbon neutrality program comprises five main workstreams. I 3-3 I



The programs in place in all our manufacturing sites address our direct and indirect emissions in accordance with scopes 1, 2 and partly 3 of the GHG Protocol. In 2022, we decreased our CO_2 equivalent emissions by 59% (per unit of production) compared to 2016.

Breakdown of GHG emissions I 305-1 I 305-2 I 305-3 I



Scopes 1, 2, 3 according to Greenhouse Gas (GHG) Protocol.

Reducing our direct emissions

Our direct emissions, as defined by scope 1 of the Greenhouse Gas (GHG) Protocol, represent more than 50% of our total GHG emissions. In 2022, our direct emissions (measured in tons CO_2 equivalent) increased by 5% in absolute terms, but we reduced our direct emissions per unit of production by 1% compared to 2021. The increase in direct emissions was mainly due to a rise in production volumes, as well as delays in the delivery and installation of abatement systems.

The use of perfluorinated compounds (PFCs) in the manufacture of semiconductors accounts for a significant proportion of our direct air emissions. It is therefore a central part of our environmental strategy to reduce their use and ensure they are treated appropriately before being released into the atmosphere. As part of our carbon neutrality journey, all our sites have invested in initiatives to reduce their direct emissions. Our Ang Mo Kio site (Singapore), one of the highest contributors to our total GHG emissions, installed 12 additional abatement systems to reduce PFCs. This resulted in a 4.7% reduction in PFC emissions per unit of production compared to 2021. Our Crolles (France) and Agrate (Italy) sites also installed additional abatement systems during 2022.

Investing in energy saving

In 2022, we decreased our energy consumption (per unit of production) by 19.8% compared to 2016, in line with our 2025 goal of a 20% reduction. However, there was an increase in our absolute energy consumption (+5%), due to a significant increase in production. Overall, this demonstrates the positive impact and efficiency of our actions.

All our manufacturing sites develop initiatives to optimize their energy consumption. Environment, health and safety (EHS) teams at our major sites worked on 45 projects during 2022, saving an additional 24GWh of energy. Since 2018, we have invested around US$42 million in energy-saving programs which have saved approximatively 112GWh of energy per year. This is in line with our objective to save at least 150GWh per year by 2027. I 302-4 I

Energy-saving projects we have implemented include the upgrade of point-of-use chillers and dry pumps at our Ang Mo Kio site (Singapore), saving more than 3.7GWh/year, and the installation of new free cooling systems in our Catania site (Italy), with an estimated saving of 4GWh/year.

Energy-saving initiatives are not exclusive to our manufacturing sites. To maximize our impact, we have engaged the entire organization in our carbon neutrality journey.

Our IT organization plays an important role by improving the energy efficiency of our service delivery. Allowing a higher temperature in data centers reduces the energy required for cooling. In addition, by using virtual server technology, we can reduce the number of physical servers – and therefore power consumption – required for the same amount of work. We estimate these actions save approximately 10.2GWh/year.

In France and Italy, we have created specific committees dedicated to energy management.

FOCUS

ENERGY EFFICIENCY

Reducing energy consumption is part of our goal to be a carbon neutral company by 2027. As part of our response to the energy crisis of 2022, we accelerated our energy-saving measures across the Company. We established energy crisis teams in France and Italy to drive short- and medium-term energy reduction programs at all sites. The committees are responsible for implementing the programs and monitoring performance to ensure manufacturing activities can continue in case of power rationing or cuts during winter.

Energy efficiency activities at each site are based around three key pillars.

- Cleanrooms: current programs are being stepped up wherever possible.
- Office spaces: temperature control; switching off lights, office equipment, drinks dispensers, and neon signs in the evening and at weekends; accelerated deployment of LED lighting. IT measures include temperature optimization of computer rooms and the use of energy-efficient equipment.
- Continuity plans in collaboration with national and local stakeholders, notably utility companies, electricity grid management, and public authorities.

All these actions help to mitigate the impacts of the energy crisis and accelerate our energy-saving programs, in line with our carbon neutrality objectives.

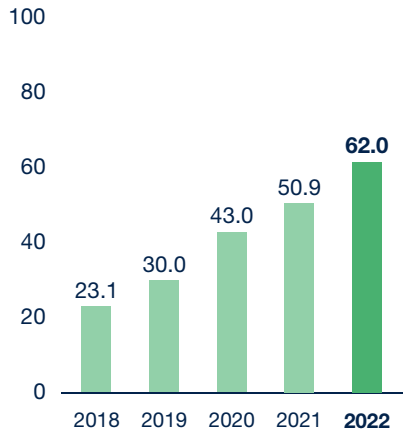
Using renewable energies

Almost 92% of the energy we use comes from electricity. Renewable sources provided 62% of the electricity we purchased in 2022, compared to 51% in 2021. Green sourcing helped us reduce our emissions by the equivalent of 464,624 metric tons of CO_2, corresponding to 464,624 individual one way flights from Milan to New York. This is mainly due to purchasing more green electricity certificates.

62%

renewable electricity

Renewable electricity[1] (%) | 302-1 |



[1] Covers our 11 main manufacturing sites, plus Rennes, Castelletto and Grenoble.

As part of the move towards more renewable energy sourcing, our Bouskoura site (Morocco) benefited from the electricity produced by 12 wind turbines installed in the framework of a power purchase agreement (PPA). In 2022, these turbines supplied 56% of the power used by the site, contributing to a reduction in CO_2 emissions of about 31,500 metric tons.

The site also extended its 4,000m^2 photovoltaic carport. An additional 3,100m^2 of solar panels will supply approximately 0.9GWh of electricity from 2023. This will complement the 1GWh already supplied annually, which partially powers the site's cleanroom.

Similarly, solar power installations at our sites in Catania (Italy) and Grenoble (France) produce 2GWh of green electricity annually. Our Grenoble site also installed a new photovoltaic carport during the year. The 10,900m^2 of solar panels will produce 2.7GWh of electricity annually, from 2023.

Solar and wind PPAs will play a major role in our transition to 100% renewable electricity by 2027. Cross-functional teams have been working throughout the year on an ST energy procurement strategy. Our ambition is to identify new-build project opportunities which meet 'additionality' criteria. This means selecting projects that bring new capacity into the grids in locations where we operate. To achieve this, we will initiate strategic and long-term partnerships.

Marie Thorax
Energy Procurement Manager, EMEA

As part of our transition towards renewable energy, I am expanding our EMEA green energy supply with long-term procurement contracts. These will support the development of new renewable energy assets, such as wind farms and solar parks, and inject additional renewable electricity into the grid. In terms of carbon offsetting, we are building a strategy that focuses on promoting high-quality projects with robust methodologies and reliable funding. It is an exciting journey to be part of ST's contribution to global efforts to combat climate change."

Minimizing our indirect emissions from transportation

From 15 material topics defined in scope 3 of the GHG Protocol, we have selected three areas to report where we can maximize our impact:

- employee commuting
- business travel
- goods transportation

The COVID-19 pandemic affected our scope 3 emissions for 2 years, making it difficult to report linear progression. In 2022, we noted a 22% increase compared to 2021. Emissions due to goods transportation, which represent 51% of our scope 3 emissions, increased by 19% during 2022. This was partly due to growth in our business and higher production volumes. The post-pandemic return to business travel and employee commuting also contributed to this increase.

However, compared with pre-pandemic figures (2019), in 2022 we saw a decrease of 50% in emissions related to business travel and 13% in emissions related to employee commuting, despite a headcount increase.

Our sites reinforced sustainable employee commuting concepts, promoting green transportation and car sharing. The deployment of flexible working arrangements, such as working from home, also helps to minimize our emissions. I 305-3 I

Offset remaining emissions

Our current environmental programs and data do not include carbon offsetting projects. Developing carbon offset programs is the final step of our carbon neutrality program.

In 2022, we created our vision for a balanced portfolio of offset projects, based on a long-term commitment to local projects and innovative solutions. Our criteria will focus on the quality of the carbon credit certificates generated. The objective is to combine nature-based solutions with technology solutions, for both carbon removal and avoidance. We will select and develop these projects in the coming years in collaboration with our stakeholders, according to local opportunities and needs.

Addressing climate-related risks

Since 2020, when we publicly declared our support for the Taskforce on Climate-related Disclosure (TCFD), we have been working towards implementing TCFD recommendations (see also **Risk management** and **TCFD index**).

We adopt a 'double materiality' perspective when considering climate-related risks:

- impact of our activities on the environment and people
- impact of climate change on our activities

In 2022, our environmental and resilience teams continued to work closely together to address physical risks resulting from climate change that are either chronic (induced by longer-term shifts in climate patterns) or acute (event-driven) in a way that is consistent with the TCFD and the EU Green Deal classification. This is illustrated in the table below.

Addressing natural hazards risks

	Temperature-related	Wind-related	Water-related	Solid mass-related
Chronic	Changing temperature (air, freshwater, marine water)	Changing wind patterns	Changing precipitation patterns and types (rain, hail, snow/ice)	Coastal erosion
	Heat stress		Precipitation or hydrological variability	Soil degradation
	Temperature variability		Ocean acidification	Soil erosion
	Permafrost thawing		Saline intrusion	Solifluction
			Sea level rise	
			Water stress	
Acute	Heat wave	Cyclone, hurricane, typhoon	Drought	Avalanche
	Cold wave/frost	Storm (including blizzards, dust and sandstorms), including medicanes	Heavy precipitation (rain, hail, snow/ice)	Landslide (including rock fall)
	Wildfire	Tornado	Flood (coastal, fluvial, pluvial, groundwater)	Subsidence
			Glacial lake	

Covered by climate change study	Covered by specific site studies when required
Covered by water scarcity study	Non-applicable to ST footprint

Source: EU commission

In 2021, we commissioned a science-based study from AXA Climate to assess current and future climate risks on our 140 most critical locations (ST and partner sites in 23 countries). To guide our adaptation efforts, the analysis was based on two climate change scenarios defined by the United Nations Intergovernmental Panel on Climate Change (IPCC):

- RCP4.5 (+2.4°C by 2100 vs pre-industrial levels)
- RCP8.5 (+4.3°C by 2100 vs pre-industrial levels)

For each scenario and location, climate projections for 2030 and 2050 show the likely impacts across a range of indicators, such as number of days of heatwaves, high winds, and heavy rain. This allows us to calculate a combined climate-related 'peril score' for each location.

Also in 2021, we commissioned a second study from Quantis, an environmental consultancy, focusing on the characteristics and impact of water scarcity and our carbon footprint (see **Water**).

In addition to these global analyses, we also carry out site-specific studies on natural hazards, according to local conditions.

Overall, the purpose of these various climate-related analyses is to inform our site-level business interruption risk assessments and business impact analyses, as well as our site resilience index. Ultimately, they feed into our regularly updated improvement, mitigation, and adaptation plans, helping us address environmental and resilience issues in the medium to long term.

We are proactively addressing the transition to a lower-carbon economy. In this context, we are in the process of further identifying and assessing policy, legal, technology, and market transition risks, across the short, medium and long terms, as per TCFD provisions. At the same time, we are actively investing in developing and launching new products to help our customers implement new energy-saving applications, transforming risk into opportunity (see **Sustainable technology** and **Innovation**).

Progress towards SBTi validated targets

As part of our carbon neutrality program, ST joined SBTi at the end of 2020. This initiative provides a clearly defined pathway for companies to reduce their GHG emissions. We were the first semiconductor company with approved targets to limit warming to no more than 1.5°C.

Our SBTi approved targets related to 1.5°C compliance are intermediate targets within our carbon neutrality commitment:

- 50% reduction of direct (scope 1) and indirect (scope 2) emissions by 2025 compared to 2018
- 80% renewable electricity sourcing by 2025

By the end of 2022, we were on track towards these targets, achieving 40% and 62% respectively.

SCIENCE BASED TARGETS
DRIVING AMBITIOUS CORPORATE CLIMATE ACTION
BUSINESS AMBITION FOR 1.5°C

Progress versus SBTi targets (KTons)[1,2] | 305-1 | 305-2 | 305-5 |

	2018	2019	2020	2021	2022
Direct emissions Scope 1 (KTons)	692	560	489	484	**507**
Indirect emissions (purchased electricity) Scope 2 market-based[3] (KTons)	772	707	567	474	**360**
Total emissions Scopes 1, 2	**1,464**	**1,266**	**1,055**	**958**	**867**
Renewable electricity/purchased electricity (%)	23.1%	30.0%	43.0%	50.9%	**62.0%**

(1) The sums may not add up due to rounding of the figures.
(2) Covers our 11 main manufacturing sites, plus Rennes, Castelletto and Grenoble.
(3) Market-based method calculation according to GHG Protocol standard.

Contributing to the Sustainable Development Goals

Our commitments and programs as described above contribute to:

SDG target 7.3 – By 2030, double the global rate of improvement in energy efficiency.

SDG target 8.4 – Improve progressively, through 2030, global resource efficiency in consumption and production.

SDG target 13.1 – Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries.

2027 sustainability goal	Status	Comments
SG9: Be carbon neutral by 2027 in all direct and indirect emissions from scope 1 and 2, and focusing on product transportation, business travel and employee commuting emissions for scope 3.		972KT net CO_2 eq emissions
SG10: Adopt 100% renewable energy sources by 2027 through energy procurement and green energy installations.		57% of total energy (62% of total electricity)
SG11: Implement programs to reduce energy consumption by at least 150GWh per year by 2027.		24GWh saved in 2022 112GWh saved since 2018

2025 sustainability goal	Status	Comments
SG12: Reduce energy consumption per wafer by 20% in 2025 vs 2016.	✓	-20%
80% of renewable electricity by 2025.		62%
-50% absolute Scope 1 and Scope 2 GHG emissions by 2025 (2018 baseline).		-40%

Water

PROTECTING THE ENVIRONMENT

We are committed to tackling the challenges of water scarcity and wastewater treatment across our operations.

A
list for
CDP water security

42%
of water recycled and reused

-12%
water consumption since 2016

Deionizer system, ST Rousset, France

Water is a limited natural resource that is essential to people, life, and business. Population growth and climate change make it increasingly important to protect this shared resource.

We implement solutions to reduce water extraction and consumption and work closely with local stakeholders, institutions and political representatives in the communities where we operate.

Tackling the numerous challenges of water supply has been part of our strategy since 1994 and becomes more important year after year.

Our comprehensive management approach includes water stress assessments, conservation programs, water efficiency, and wastewater treatment. I 3-3 I 303-1 I

Strengthening our efforts

We recognize our responsibility for water-related challenges wherever we operate. In 2022, we partnered with a consulting company to update our water policy and strategy. We conducted a series of internal workshops with teams throughout the organization to set our water ambition, targets and goals. We also consulted external stakeholders to collect and review feedback on our water strategy.

Bluerisk

Paul Reig
Founder, Bluerisk

Bluerisk partnered with ST to enhance its water strategy in response to emerging water challenges for semiconductor producers. We worked with practitioners across ST, along with external stakeholders, to develop an overall ambition and set targets to help ST accelerate innovative solutions to protect water resources and deliver long-term value."

It is our ambition to increase the water resilience of our sites and implement mitigation strategies to minimize risks related to water availability and biodiversity. This process includes reviewing our energy supply to select the most water-efficient energy sources.

We aim to minimize any impact from our operations on local communities through careful management and committed partnerships; and create value by providing responsible products and technologies. Our long-term goal is to engage our external stakeholders to implement solutions that protect water resources and deliver long-term societal value, especially in water-stressed areas.

Recognized by CDP

We have been participating in CDP's annual water security survey since 2004. Preparing our submission helps us identify areas for improvement and provides a platform for our customers to assess our water performance. In 2022, ST was officially recognized by CDP as a global leader in corporate transparency and action on water security. We were one of only 107 companies to make the Water Security A List out of nearly 15,000 organizations. This reflects our efforts across all our operations to reduce our water footprint and other related risks.

CDP
DISCLOSURE INSIGHT ACTION
A LIST
2022
WATER

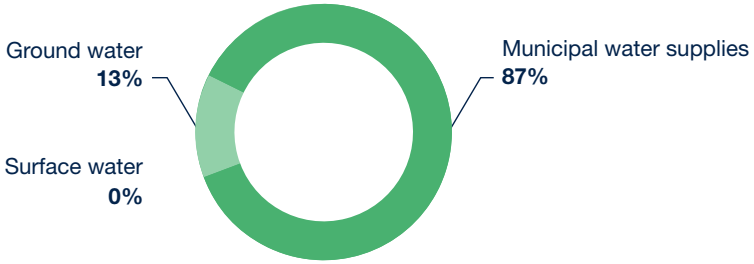
Assessing impact and water-related risks

Water withdrawal

A reliable water supply is essential to the semiconductor manufacturing process. All ST sites manage their water-related risks according to their needs and water availability. Each site monitors the volume of water it uses and complies with local permits. Only two of our manufacturing sites use groundwater for their operations.

In 2022, 13% of the water used throughout our operations came from groundwater sources, and 87% from municipal water supplies.

Water withdrawal by source in 2022 (%)[1] I 303-3 I SDG 6.4



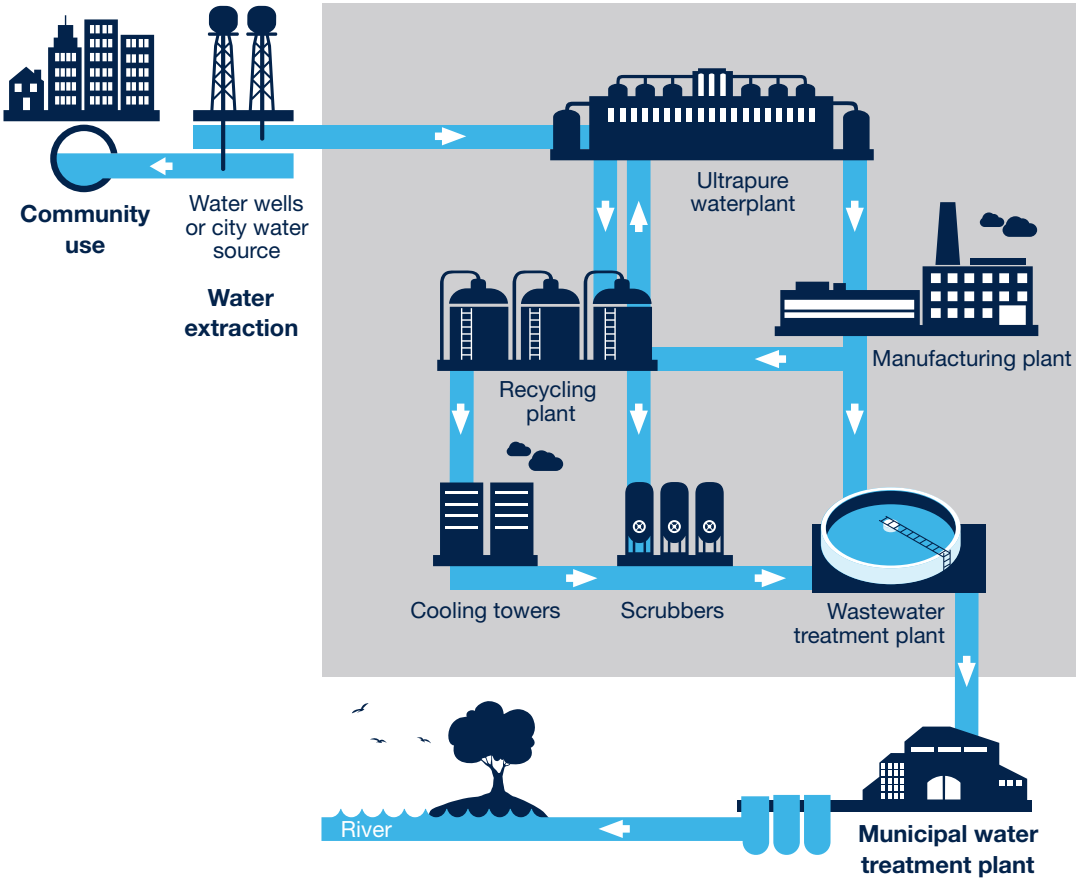
[1] All water withdrawal is freshwater.

Addressing water-related risks

In 2021, we conducted a water assessment to evaluate our global water footprint. The aim was to identify areas of high water stress and the water-related risks of our operations, as well as assessing our impact on local communities. Using the lifecycle assessment approach, we evaluated our direct and indirect impacts. We also identified that most of our manufacturing sites are at medium risk for operational and external risks, water quality and scarcity, using the Water Risk Filter 5.0 methodology.

In 2022, we went one step further, asking our manufacturing sites to assess relevant risks and formalize water saving action plans. As a result, all sites were successful in defining remedial actions. These action plans are reviewed quarterly at both manufacturing and corporate level. Results are part of the sustainability scorecard that is shared with the Corporate Executive Committee quarterly.

Typical ST water cycle



Reducing our water usage

Save water

Manufacturing semiconductors requires a large volume of water. We strive to continuously improve water efficiency across our operations. In 2022, we reduced our water consumption per unit of production by 12% compared to 2016. Our 2025 goal is to improve our water efficiency by 20% vs 2016. To meet this target, we are working towards implementing our enhanced water strategy and action plans.

12%

reduction in water consumption since 2016

Water usage varies from site to site according to local conditions, such as raw water quality, treatment technologies and local strategies. Usage is split across four main areas:

- ultrapure water production
- cooling
- heating, ventilation, and air conditioning
- drinking water

Identifying and measuring water usage is the first step in assessing areas for improvement, such as technical upgrades or optimizing processes and tools. Our manufacturing sites are encouraged to identify and deploy a range of different initiatives to save water.

FOCUS

ADVANCING TOWARDS A SUSTAINABLE WATER FUTURE

Process optimization in the semiconductor industry has led to an increase in water consumption across back-end operations. In 2022, our Calamba site (the Philippines), conducted a study to address water mass balance, reduce its water footprint and increase water recycling rates. The study was initiated due to the site's high water consumption levels. Detailed data collection and analysis identified a number of issues to be resolved, along with remedial solutions. As a result, a 3-year budget has been allocated to focus on reducing raw water consumption and increasing the site's recycling rate from 30% to 60%.

In line with this best practice, all our back-end sites have accelerated their water efficiency targets to align with Company policy. In 2023, they will work with a strategic partner to define a water roadmap, with the goal of reaching an overall water recycling rate of 60% by 2026.

In collaboration with a supplier, our Catania site (Italy) reduced its water consumption of 100,000m^3/year by improving the management of the water inlet flow and reducing wastage. Combined with other improvements, the site decreased its water consumption by 2% in absolute terms and by 7% per unit of production compared to 2021.

Reuse and recycle

One of our main approaches to overall water conservation is to reuse and recycle. However, as the semiconductor production process relies on ultrapure water, it is not always possible to reuse processed water. Although water can be treated and recycled into ultrapure water, it is more often reused to cover facility needs, such as cooling towers, scrubbers, and thermal processing units.

In 2022, our water recycling rate reached 42%, a 2-point increase compared to 2021. Although this demonstrates progress, we know that further efforts are needed to reach our 2025 goal of 50%. We have identified the sites where we need to accelerate actions to achieve our goal.

42%

of water recycled and reused

Our Kirkop site (Malta) focused on improving the water recycling rate in 2022 through better segregation of wastewater, and optimization of the reverse osmosis process. Despite challenges due to the hot climate and the introduction of new chemical processes, the engineering team managed to raise the recycling rate to 45% in 2022 from 44% in 2021.

Similarly, in Morocco, where water is a particularly scarce resource, our Bouskoura site implemented several action plans to reduce its water consumption and improve the water recycling rate. In 2022, despite higher water demand due to an increase in production, the site succeeded in maintaining a recycling rate of 55%. This was largely due to the increased capacity of the wastewater treatment plant.

Treating wastewater

Wastewater from our manufacturing processes contains pollutants such as heavy metals and toxic solvents. It is our responsibility to ensure all used water is appropriately treated before discharging it back into the natural environment.

To mitigate any risk of pollution, our wastewater is treated on site or in municipal treatment plants before being discharged. Our manufacturing sites are continually improving their treatment of wastewater and the quality of water discharge, which is carefully controlled and monitored online.

Contributing to the Sustainable Development Goals

Our commitments and programs as described above contribute to:

SDG target 6.4 – Substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity.

SDG target 8.4 – Improve progressively, through 2030, global resource efficiency in consumption and production.

2025 sustainability goal	Status	Comments
SG13: Improve our water efficiency by 20% by 2025 vs 2016.		-12%

Annual sustainability goal	Status	Comments
SG14: Recycle at least 50% of the water used each year.	✗	42%

Waste

PROTECTING THE ENVIRONMENT

We strive for zero waste, by minimizing resource consumption, recycling and implementing circular economy programs.

95%
of waste reused, recovered, recycled

43%
reduction in waste sent to landfill

Zero
waste concept prioritized

Sludge, ST Shenzhen, China

Managing our waste

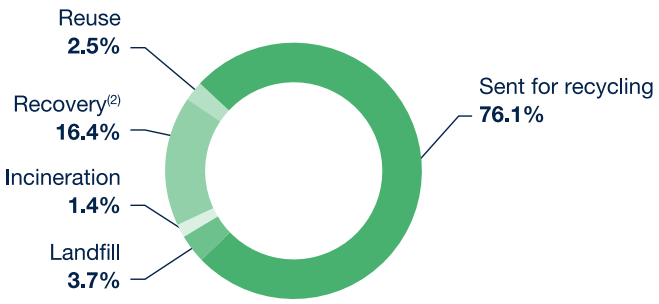
Generating waste is an inevitable part of our operations. Acknowledging this, we have developed a comprehensive waste management strategy to limit our negative impacts. We focus on the classification, separation and safe disposal of waste using an approach driven by local regulations and Company policy. Our priority is to reduce, reuse and recycle and we consider landfill and incineration to be a last resort. I 3-3 I

Improving our performance

In 2022, 95% of the waste generated by our operations was either reused, recovered, or sent for recycling. This achievement allowed us to reach our 2025 target early. We also reduced the quantity of waste sent to landfill from 6.8% in 2021 to 3.7% in 2022. Although this was an improvement, we still fell short of our target of 3%.

95%
of waste reused, recovered, or sent for recycling

Waste split in 2022[1] (%) I 306-3 I



[1] The sums may not add up to 100% due to rounding of the figures.[2] Waste burnt with recovery of energy (combustion).

Reducing landfill waste is an ongoing priority. Following the UL zero waste certification of our Shenzhen site (China) in 2021, our Calamba site (the Philippines) successfully passed this third-party certification for landfill diversion in 2022. The UL zero waste validation program focuses on monitoring and measuring material flows through external audits and document validation, with the aim of eliminating landfill disposal. The overall goal was not only waste reduction, but also waste recovery and proper segregation. To facilitate this, the site implemented a number of new initiatives, including 'no disposable Wednesdays', color-coded bins, WEEE recycling, and a solid material waste recovery shed (see quote).

Robert Portento
Environment specialist, ST Calamba (the Philippines)

We started promoting the concept of zero waste in 2021. We implemented a range of waste reduction and recovery programs and encouraged employees to adopt a zero-waste lifestyle, while building management awareness. After promoting these new initiatives, we managed to reuse and recycle 98% of our waste in 2022. At Calamba the journey does not end here, our dedication, passion and collective responsibility towards this cause will continue."

Striving for less

We believe the best waste is no waste. We apply this approach at all our manufacturing sites to minimize unnecessary resource consumption and waste generation.

Prioritizing zero waste

In 2022, our Ang Mo Kio site (Singapore) reviewed its waste management strategy. The process started with waste identification to get a full understanding of the types of waste generated by each department. It also focused on establishing the factors that lead to incorrect waste disposal.

Action points were defined to increase awareness and competency at the site. These included consolidating waste types into a formal library, developing a weblink search feature and developing training to implement the actions identified. Employee outreach initiatives were rolled out to reduce plastic, increase recycling and encourage community mindfulness in relation to reducing our carbon footprint.

Resin is used at our back-end manufacturing sites to encapsulate components. In 2022, our Muar site (Malaysia) implemented a resin recycling system known as co-processing to eliminate disposal of the material to landfill. Co-processing involves using waste materials with energy content as an alternative to fossil fuels. Through this process, the spent resin can be used to heat kilns in the cement industry, reducing waste and, in turn, the carbon footprint of the industry.

The advantages of using cement kilns for waste management include:

- complete burnout of waste due to high temperatures and long resident time
- destruction of the organic component in the waste material due to the high oxygen component of the kiln
- no secondary waste generated during co-processing as the ashes are incorporated into the cement mixture
- no adverse effect on emissions

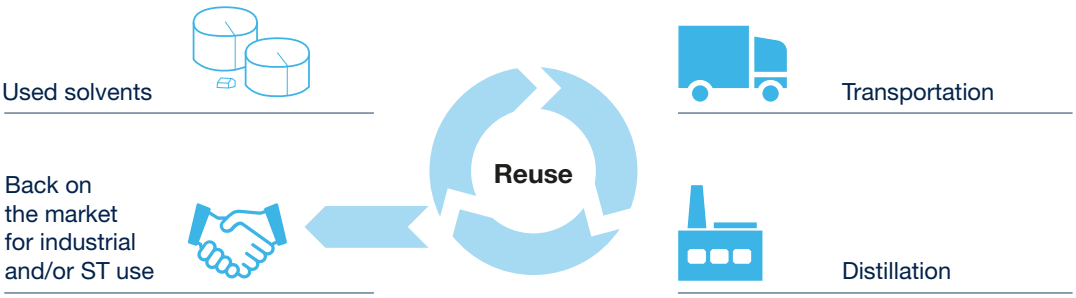
Through co-processing, our Muar site has reduced the amount of waste sent to landfill from 30% to 2%.

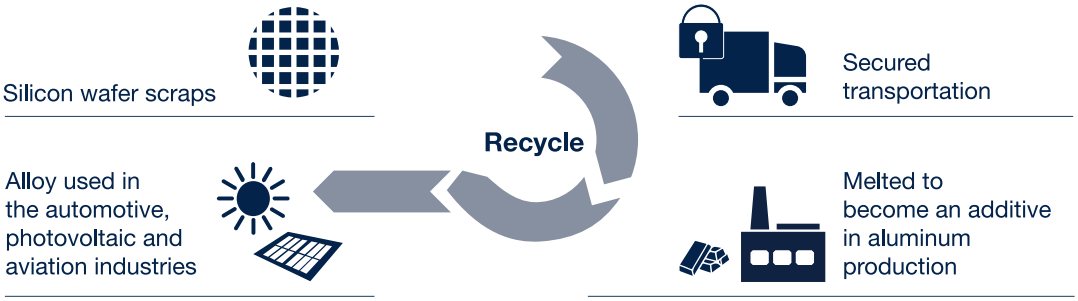
In 2022, our Tours site (France) carried out a study with an external partner to establish a more efficient method for nickel recycling. As a result of the study, it identified a process to extract nickel from a liquid solution using evaporative crystallization. This new process will be implemented in 2023, saving 120 tons of waste annually. The site is also researching a separate system for recycling nickel sludge.

Promoting a circular economy

Moving towards a circular economy benefits the environment, people, and our company. For several years, we have been implementing solutions to create value from the residual waste generated from our activities.

- Fluoride sludge is transformed into pellets for the metallurgy industry.
- Sulfuric acids are used for recycling batteries.
- Deflashing waste powder is sent for precious metal recovery.
- Palladium is recovered for reuse in the automotive industry.
- Electronic waste is dismantled; some parts are reused, and precious metals are recovered.
- Solvents are sent for distillation and reuse.
- Solvents are burned and the energy recovered.
- Ammonia in wastewater is treated and used in agricultural fertilizers.
- Landfill industrial waste is transformed into solid combustible material and used in cement factory furnaces.
- Silicon wafer scraps are used for aluminum production for the automotive, aviation and photovoltaic industries.
- Paper, cardboard, plastics, and wood are recycled.
- Organic waste is transformed into compost.
- Spent resin and sludge are used in the cement and brick industry.
- COVID-19 protection masks from our French sites are transformed into plastic pellets. Since 2021, we have sent more than 5,600kg of masks for recycling.



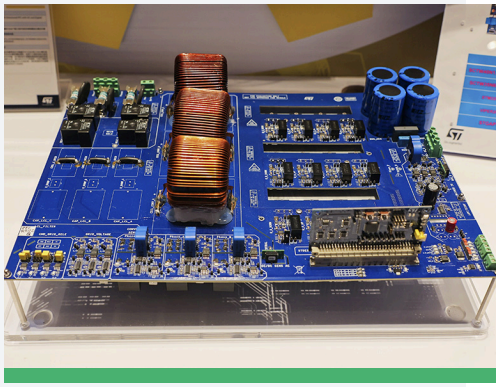


Managing waste beyond our operations

We launched a regional campaign in 2022 to engage employees in green initiatives and encourage them to reduce, reuse and recycle more. To celebrate Earth Day, a series of events was launched by our sales offices in Seoul (Korea), and Hong Kong, Shanghai and Shenzhen (China). The aim was to propose and develop local initiatives within the framework of ST's global sustainability strategy. These proposals included quizzes and public awareness programs designed to raise site accountability and contribute to a circular economy.

FOCUS

AI TO CREATE VALUE FROM E-WASTE



Due to changing consumer demands, electronic waste (e-waste) is one of the fastest growing waste streams globally. E-waste includes appliances, such as computers, cell phones or refrigerators, as well as components from manufacturing. Current treatment methods only recover low quantities of precious metals from e-waste, with the remainder being lost and becoming pollutants.

Our Agrate and Catania sites (Italy) collaborated with a research laboratory and waste recycling company to develop a method to monitor and recycle electronic boards more effectively. ST provided electronic boards along with data on components and their material composition to help develop the system.

A machine learning process is applied to the boards to select components through an image processing system. Once the metals are identified, the boards can be appropriately dismantled, and the selected components can be treated together to increase the metal recycling rate. Using AI to optimize the collection, disassembly, and recycling process helps to support sustainable production and consumption, increases resource efficiency, and improves product end of life management.

Controlling hazardous substances

Our various manufacturing processes can generate hazardous or potentially hazardous waste, such as chemical substances and contaminated plastics. We pay attention to all types of hazardous waste (see **Chemicals**). We seek to identify the best solution among all available treatment technologies to minimize any adverse impact from our activities. In 2022, we identified 42% of our waste as hazardous, 95% of which was reused, recovered, or sent for recycling. The remaining waste was disposed of and treated locally by specially authorized companies.

Contributing to the Sustainable Development Goals

Our commitments and programs related to waste and effluents as described above contribute to:

SDG target 3.9 – Substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution, and contamination.

SDG target 6.3 – Improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally.

SDG target 12.4 – Achieve the environmentally sound management of chemicals and all wastes throughout their lifecycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment.

2025 sustainability goal	Status	Comments
SG16: Reuse or recycle 95% of our waste by 2025.	✓	95%

Annual sustainability goal	Status	Comments
SG15: Ensure an annual landfill waste rate below 3%.	✗	3.7%

Chemicals

PROTECTING THE ENVIRONMENT

It is our priority to responsibly manage chemicals and replace hazardous substances wherever possible.

700+
new risk assessments conducted

100%
PFOA-free across our sites

18,000+
people trained on chemicals

Photolithography equipment, ST Agrate, Italy

We carefully manage the chemical substances and materials we use throughout our operations. This allows us to monitor and address our impacts on people and the environment and to comply with legal and customer requirements.

Applying a rigorous approach

Our use and handling of chemicals is led by a precautionary approach, as set out in Principle 15 of the Rio Declaration and in the ST sustainability charter, available at **www.st.com/sustainabilitycharter** . I 2-23 I

At each of our manufacturing sites, a chemical committee meets regularly to review and evaluate best management practices for identified hazards. Modifications to existing processes are also considered and implemented where necessary. The committee uses a comprehensive approach to make decisions on chemical usage. This includes evaluating chemical compositions, hazards, use conditions, engineering controls, medical recommendations, and industrial hygiene requirements. Risk management measures, personal protective equipment (PPE), waste management, administrative controls, and training requirements are also considered. By rigorously applying this process, we can identify critical substances as soon as they are introduced or reclassified.

We recorded 4,310 chemicals in use in 2022 and we conducted more than 700 new risk assessments, achieving over 23,000 validated risk assessments by the end of the year.

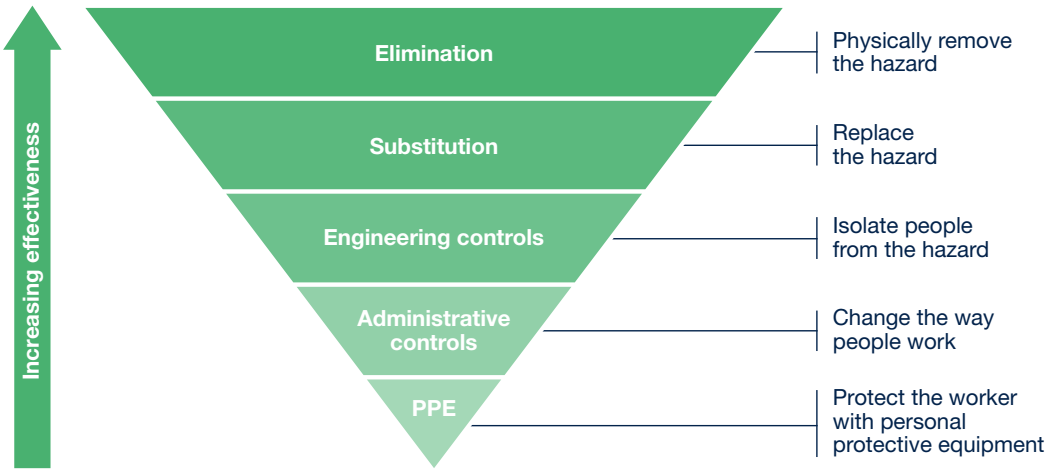
700+
new risk assessments

To minimize potential environmental, health and safety (EHS) risks, both to our workers and the environment, we have stringent guidelines for identifying and assessing major risks. We use a four-step risk assessment process

that incorporates two complementary methodologies. It is the site manager's responsibility to ensure these risk assessments are conducted and any residual risk is minimized.

Since early 2000, we have applied the hierarchy of controls approach to our chemical management procedures. When specific chemicals or materials cannot be eliminated or substituted with less hazardous alternatives, we implement engineering measures and administrative controls to reduce workers' and environmental exposure. I 3-3 I

Hierarchy of Controls



Safety of our people

Our goal is to prevent occupational injury and illnesses for all our workers. The health of all employees working with chemical substances is monitored through medical surveillance. This includes biomonitoring – a process to assess an individual's exposure to natural and synthetic chemicals based on analysis of human tissue and fluid samples. As an additional precaution, we regularly analyze the air in work areas to verify that our risk management measures are effective. The results are compared to applicable threshold limit values (TLV). In 2022, over 11,000 measurements were performed, all but eight of these measurements were below the applicable TLVs. Further investigation showed the eight measurements that failed were the result of insufficient ventilation, which has now been corrected.

All workers receive specialist training before being assigned potentially hazardous tasks or implementing process changes. At present, this includes instruction and preparation to:

- identify specific hazards
- recognize and understand chemical labels
- apply management methods
- only use equipment in good condition
- select and wear the required PPE
- be ready to react in case of contamination, contact, or an emergency
- ensure preventive maintenance
- properly dispose of spent chemicals according to waste management practices

18,000+

hours of training on chemicals

In 2022, we provided more than 18,000 hours of training on chemical substance management across our manufacturing sites.

Protecting the environment

Reducing environmental emissions across the domains of air, water, and waste is a priority. We treat our emissions (see **Water**, **Waste**), and where possible, enforce replacement programs for hazardous substances throughout our value chain.

Volatile organic compounds (VOC) are compounds that easily become gases or vapor, some of which may have adverse effects on human health and the environment. We pay specific attention to controlling VOC emissions and use online monitoring to make sure our installations are working effectively.

Substituting hazardous substances

We search for the best solutions using technology and innovation to replace hazardous materials in our manufacturing processes.

Removing perfluorooctanoic acid (PFOA) related substances

Following 10 years of continued efforts, we reached our objective of being 100% PFOA-free in 2022. This was 3 years ahead of our target, as defined by the World Semiconductor Council and European Union regulation. The phasing out of chemicals containing PFOA-related substances used in the photolithography process was completed in February at our Crolles site (France). An alternative product was qualified and introduced into manufacturing. This required adjustments in several processes to achieve the necessary component performance.

This meant that PFOA-related substances were totally eradicated across all our operations without any supply chain disruption, while improving process quality and equipment efficiency, and maintaining product performance.

100%

PFOA-free

Working together for alternatives to lead

We have been part of the Die Attach5 industry consortium since its inception in 2009. The consortium is composed of five semiconductor companies and works on identifying alternatives to lead-based solders. Over the last 14 years, more than 160 materials from 15 suppliers have been evaluated, with around 50 undergoing extensive testing. So far, no reliable lead-free technology has been found for power semiconductor components, but the research is promising for a long-term solution.

In July 2022, consortium members met at our Agrate site (Italy). They discussed the practicalities of manufacturing with the selected new materials, as well as the viability of the test results. The preliminary results identified several new materials suitable for the manufacturing of advanced devices.

Striving for better

In 2012, di (2- ethylhexyl) phthalate (DEHP) was added to REACH[(2)] Annex XIV preventing its use in Europe. We immediately started a program to replace it, which resulted in all European products being DEHP-free by 2013. Subsequently, we decided to go beyond the regulation and replace the substance across all products worldwide. At present, only our Muar site (Malaysia) is using DEHP in an ancillary material in the assembly process. A substitute solution and process have been proposed to customers and are in the final phase of qualification.

[(2)] REACH: Registration, Evaluation, Authorization and Restriction of Chemicals.

Giulia Mancini
Chemical Programs Senior Manager,
Corporate Sustainability

Managing chemicals is complex and requires a multi-faceted approach. We address emerging EHS regulations and anticipate future regulations while taking into consideration new customer demands. Any substance elimination or process changes must be carefully implemented to ensure manufacturing remains stable and quality is maintained. This involves continual communication with internal and external teams to find the best solutions. Ultimately these actions help us protect people, preserve the environment, and provide the highest standards for our customers."

Aligning with stakeholders' expectations

Compliance

We follow the highest standards to ensure compliance with all applicable regulations on chemicals for our manufacturing sites and our products. It is the responsibility of each site to ensure compliance, based on their specific operations.

When developing new products, their compliance is verified at fixed product development milestones. At the R&D phase, we only consider and select compliant materials to ensure we act in accordance with requirements, such as RoHS[3] and ELV[4].

Furthermore, we strive to eliminate the use of restricted substances by design. Thanks to new designs, reduced dimensions and the lower energy consumption of our chips, we have had ongoing success in decreasing the use of lead in the assembly process (see our **ECOPACK results**). We also continue to identify new materials with reduced antimony and halogen content.

ST products may be subject to Substances of Concern In Products declarations, based on the presence of Substances of Very High Concern. In 2022, we continued to declare new products in the Europena Chemicals Agency portal to ensure information is available for safe end of life disposal.

Across our sites, we continue to work on hazardous substance process management to identify, control, quantify, and report any hazardous elements in components, according to the IECQ 080000 standard.

Customers

Chemical legislation is evolving globally to reduce environmental impacts during manufacturing. It remains a significant consideration for key customers who closely monitor developments in our products, processes and compliance. Information on materials contained in ST products can be found through the IPC 1752 material declaration which is available on **www.st.com** . Queries relating to chemical substance usage accounted for almost 20% of our EHS enquiries in 2022. Thanks to the measures we have in place, we are well positioned to address them. During the year, our Shenzhen site (China) successfully passed a remote customer audit related to substance management in components.

As a member of the Responsible Business Alliance (RBA), we are working to become aligned with the RBA Industry Focus Process Chemical policy (IFPC). All chemicals listed in the policy have already been eradicated from our own operations. In 2022, we completed an IFPC assessment to locate these chemicals within our supply chain. We are now working on measures to replace them, prioritizing recommendations by the Clean Electronic Program Network.

[3] RoHS: Restriction of Hazardous Substances.
[4] ELV: End of Life of Vehicles.

Suppliers

We require our suppliers to respect our EHS-regulated substances list, which contains more than 7,700 substances and is regularly reviewed. We also require them to confirm their compliance through analytical certificates, safety datasheets and commitments. In 2022, 95% of our key suppliers committed to our substances specification.

Contributing to the Sustainable Development Goals

Our commitments and programs as described above contribute to:

SDG target 3.9 – Substantially reduce the number of deaths and illnesses from hazardous chemicals and air, water and soil pollution and contamination.

SDG target 6.3 – Improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally.

SDG target 12.4 – Achieve the environmentally sound management of chemicals and all wastes throughout their lifecycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment.

2025 sustainability goal	Status	Comments
In line with the WSC statement, remove PFOA and PFOA-related substances in all manufacturing chemicals by 2025.	✓	100%

Annual sustainability goal	Status	Comments
SG19: Follow highest standards for 100% of the materials we use: Hazardous Substances Process Management (IECQ080000) and responsible sourcing initiatives, such as RMI.	◌	HSPM: 95% RMI: 100%

Environmental indicators

This section includes indicators and GRI Standard disclosures.

Our environmental data covers our 11 largest manufacturing sites, representing more than 95% of the overall environmental impact of the Company.

The methodologies used to calculate data are detailed in internal Company procedures, which are regularly reviewed during third-party environmental audits (EMAS, ISO 14001, ISO 50001, ISO 14064).

See **ST site certifications table** in business indicators.

ST follows the Greenhouse Gas (GHG) Protocol for managing its GHG emissions. The resulting CO_2 emissions are reported according to recognized international standards (Reference – World Resources Institute (2004) GHG Protocol – A Corporate Accounting and Reporting Standard).

Scope 1 – Direct emissions resulting from operations

- Combustion emissions: World Resources Institute (2008) – GHG Protocol Calculation tool for stationary combustion v.4.1
- PFC emissions: 2007 IPCC fourth Assessment Report Climate Change. Table 2.14. Lifetimes, radiative efficiencies and direct GWPs relative to CO_2 www.ipcc.ch

Scope 2 – Indirect emissions resulting from purchased electricity

- World Resources Institute (2014). GHG Protocol tool for stationary combustion. Version 4.8, GHG Protocol Scope 2 guidance

Scope 3 – Emissions resulting from travel and transportation

- Mobile Combustion GHG Protocol tool v.2.6
- Supplement to the Corporate Value Chain (Scope 3) accounting and reporting standard

Environmental investments (%)

	2018	2019	2020	2021	2022
% of total Company investments	0.17	0.35	3.06	2.71	**0.41**

Environmental burden – net values | 305-6 | SDG 3.9 - SDG 6.3

	2018	2019	2020	2021	2022
Emissions to air					
Global warming[1] (MTCE)	428,912	382,277	310,041	284,726	**265,170**
Ozone depletion (kg R11 Eq)	0.00	0.00	0.00	0.00	**0.00**
VOCs (tons)	297	139	148	193	**238**
Atmospheric acidification (Kg SO_2 Eq)	43,856	46,018	51,207	62,178	**60,102**
Photochemical oxidant creation (Kg ethylene Eq)	43,749	35,799	38,295	49,548	**55,801**
Air emission toxicity[2] Kg PH_3 Eq	2,240	1,414	3,192	3,717	**3,311**
Emissions to water[3]					
Eutrophication (Kg (P+N))	164,027	169,575	126,286	184,147	**176,858**
Aquatic oxygen demand (Kg COD[4])	605,100	632,625	656,045	1,213,093	**1,317,922**
Heavy metals to water (Kg heavy metals)	14,222	9,233	6,880	9,162	**9,351**
Aquatic ecotoxicity (Kg Cu Eq)	5,764	5,211	4,290	5,033	**5,446**

(1) Includes direct Greenhouse gas (GHG) emissions from our manufacturing plants and indirect emissions from energy consumption and transport, reported in Metric Tons of Carbon Equivalent (MTCE). Does not include GHG emissions from subcontractors and foundries.

(2) Emissions of substances are considered only if they exceed the minimum threshold of 3ppm, expressed in phosphine equivalent. For Volatile Organic Compounds, Atmospheric acidification, Photochemical Oxidant Creation and Air emission toxicity, the particulate matter is not covered.

(3) Domestic wastewater is included.

(4) Total Chemical Oxygen Demand (COD).

Summary of net CO_2 eq emissions (KTons)[1]

| 305-1 | 305-2 | 305-3 | 305-5 | SDG 13.1

	2018	2019	2020	2021	2022
Direct emissions Scope 1	644	557	486	481	**504**
Indirect emissions (purchased electricity) Scope 2 market-based[2]	791	702	564	473	**358**
Other indirect emissions (transportation[3]) Scope 3	137	143	86	90	**111**
Total emissions	**1,573**	**1,402**	**1,137**	**1,044**	**972**

(1) The sums may not add up due to rounding of the figures.

(2) Market-based calculation method according to GHG Protocol standard.

(3) The transportation emissions value is a global estimate of employee transportation and transportation of goods.

CO_2 emissions equivalent | 305-4 | 305-5 | SDG 13.1
Per unit of production – normalized values

	2018	2019	2020	2021	2022
CO_2 emissions	84	77	70	50	**41**

Baseline 100 in 2016.

Market and location based[1] scope 2 net CO_2 eq emissions (KTons) | 305-2 | 305-5 | SDG 13.1

	2018	2019	2020	2021	2022
Indirect emissions (purchased electricity) Scope 2 market-based	791	702	564	473	**358**
Indirect emissions (purchased electricity) Scope 2 location-based	824	787	782	780	**857**

[1] Market- and location-based calculation method according to GHG Protocol standard.

Direct and indirect energy consumption by primary sources[1] (%) | 302-1 | 302-4 |

	2018	2019	2020	2021	2022
Green electricity purchased	21.2	26.4	39.6	46.5	**56.6**
Photovoltaic and thermal solar electricity produced by ST	0.1	0.1	0.1	0.1	**0.1**
Electricity purchased from nuclear (CO_2 free)	9.2	6.9	6.1	6.2	**5.7**
Electricity purchased from fossil fuel sources	61.8	58.6	46.6	38.7	**29.2**
Natural gas	7.6	7.8	7.5	7.7	**7.6**
Other fuels	0.3	0.3	0.2	0.9	**0.7**

[1] The sums may not add up to 100% due to rounding of the figures.

PFC emissions | 305-4 |
Per unit of production – normalized values

	2018	2019	2020	2021	2022
PFC emissions	90	80	74	56	**54**

Baseline 100 in 2016.

Energy consumption by source | 302-1 | 302-4 |

	2018	2019	2020	2021	2022
Electricity (TJ[1])	8,094	8,208	8,716	8,995	**9,495**
Natural gas (TJ[1])	666	696	706	754	**782**
Others (TJ[1])	22	22	31	96	**87**
Total energy (TJ[1])	8,782	8,926	9,453	9,845	**10,364**
Energy from electricity (%)	92.2%	92.0%	92.2%	91.4%	**91.6%**

[1] Terajoule.

Consumption of energy | 302-3 | SDG 7.3
Per unit of production – normalized values

	2018	2019	2020	2021	2022
Consumption of energy	81	86	99	81	**80**

Baseline 100 in 2016.

Consumption of electricity | 302-3 |
Per unit of production – normalized values

	2018	2019	2020	2021	2022
Consumption of electricity	82	86	99	81	**81**

Baseline 100 in 2016.

Consumption of natural gas | 302-3 |
Per unit of production – normalized values

	2018	2019	2020	2021	2022
Consumption of natural gas	73	80	88	74	**73**

Baseline 100 in 2016.

Consumption of water
Per unit of production – normalized values

	2018	2019	2020	2021	2022
Consumption of water	84	91	106	89	**88**

Baseline 100 in 2016.

Water withdrawal by source (1,000m^3)[1] | 303-3 | SDG 6.4

	2018	2019	2020	2021	2022
Groundwater	4,237	3,029	2,880	2,747	**2,839**
Surface water	0	0	0	0	**0**
Municipal water supplies	13,967	15,814	17,342	18,698	**19,668**
Total withdrawal	**18,204**	**18,843**	**20,223**	**21,445**	**22,507**

[1] The sums may not add up due to rounding of the figures. All water withdrawal is freshwater.

Water withdrawal by source in water stress area (1,000m^3)[1] | 303-3 | SDG 6.4

	2019	2020	2021	2022
Groundwater	0	0	0	**0**
Surface water	0	0	0	**0**
Municipal water supplies	885	767	717	**886**
Total withdrawal	**885**	**767**	**717**	**886**

[1] All water withdrawal is freshwater. Bouskoura site (Morocco) is located in a water stress area.

Recycled and reused total water | 303-5 | SDG 6.3 - SDG 6.4

	2018	2019	2020	2021	2022
Ultrapure water used (1,000m^3)	–	11,243	12,331	13,194	**13,500**
Total water used in water stress area[1] (1,000m^3)	1,329	1,316	1,392	1,512	**1,971**
Total water used in non-water stress area (1,000m^3)	29,325	30,392	32,663	34,375	**36,667**
Total water used	30,654	31,708	34,055	35,888	**38,638**
Total volume of water recycled and reused (1,000m^3)	12,450	12,870	13,833	14,445	**16,131**
Water recycled and reused (%)	40.6%	40.6%	40.6%	40.3%	**41.8%**

[1] Bouskoura site (Morocco) is located in a water stress area.

Total water discharge | 303-4 |

	2018	2019	2020	2021	2022
Water discharge (1,000m^3)	14,926	15,621	15,912	17,878	**18,592**
Treated in ST wastewater treatment plant (%)	68.2%	68.8%	84.8%	85.9%	**86.6%**
Treated in external wastewater treatment plant[1] (%)	57.1%	55.3%	55.7%	59.2%	**59.3%**

[1] Part of this water has already been treated in ST wastewater treatment plants, meaning that 100% of water discharged is treated either internally, externally, or both.

Total water discharge by source (1,000m^3)[1] | 303-4 |

	2018	2019	2020	2021	2022
Groundwater	0	0	0	0	**0**
Surface water	7,410	7,941	8,106	8,389	**8,556**
Municipal water supplies	7,516	7,680	7,806	9,489	**10,035**
Total discharged	**14,926**	**15,621**	**15,912**	**17,878**	**18,592**

[1] The sums may not add up due to rounding of the figures.

Total water discharge by source in water stress area (1,000m^3)[1] | 303-4 |

	2018	2019	2020	2021	2022
Groundwater	0	0	0	0	**0**
Surface water	601	568	456	259	**305**
Municipal water supplies	0	0	0	0	**0**
Total discharged	**601**	**568**	**456**	**259**	**305**

Waste in tons[1] | 306-3 | SDG 12.4

	2018	2019	2020	2021	2022
Total hazardous waste	16,483	16,877	19,605	22,568	**24,604**
Total non-hazardous waste	28,345	26,716	29,406	33,104	**34,330**
Total waste	**44,828**	**43,593**	**49,012**	**55,672**	**58,934**

[1] The sums may not add up due to rounding of the figures.

Waste split in tons[1] | 306-4 | 306-5 |

	2018	2019	2020	2021	2022
Reuse	2,097	1,614	3,628	3,825	**1,460**
Sent for recycling	34,434	33,607	33,653	38,952	**44,842**
Recovery[2]	4,642	5,224	5,944	7,559	**9,653**
Incineration	1,671	1,497	2,809	1,538	**818**
Landfill	1,983	1,651	2,977	3,798	**2,161**
Total waste	**44,828**	**43,593**	**49,012**	**55,672**	**58,934**

[1] All waste is diverted offsite. The sums may not add up due to rounding of the figures.
[2] Waste burnt with recovery of energy (combustion).

Non-hazardous waste split[1] (%) | 306-4 | 306-5 |

	2018	2019	2020	2021	2022
Reuse	5.0	3.5	10.0	9.7	**1.9**
Sent for recycling	83.9	86.1	69.1	72.6	**86.0**
Recovery[2]	3.3	3.6	4.4	4.1	**7.2**
Incineration	2.4	2.4	7.8	3.2	**0.6**
Landfill	5.4	4.4	8.8	10.3	**4.3**

[1] The sums may not add up to 100% due to rounding of the figures. All waste is diverted offsite.
[2] Waste burnt with recovery of energy (combustion).

Hazardous waste split[1] (%) | 306-4 | 306-5 | SDG 12.4

	2018	2019	2020	2021	2022
Reuse	3.1	3.1	3.5	2.7	**3.2**
Sent for recycling	71.8	70.9	68.0	66.1	**62.3**
Recovery[2]	18.3	20.0	23.8	27.5	**29.2**
Incineration	4.8	3.9	2.7	2.1	**2.6**
Landfill	2.0	2.1	2.0	1.7	**2.7**

[1] The sums may not add up to 100% due to rounding of the figures. All waste is diverted offsite.
[2] Waste burnt with recovery of energy (combustion).

WEEE

As a supplier of components to the electronics industry (and not a manufacturer of electronic equipment), our silicon products are not directly affected by the European Directive 2012/19/ EU Waste of Electrical and Electronic Equipment (WEEE). However, since 2018, demonstration and evaluation boards supplied by ST are subject to the Directive.

Consumption of chemicals in tons

	2018	2019	2020	2021	2022
Chemicals	23,127	21,780	20,641	24,881	**26,013**

Consumption of chemicals SDG 12.4
Per unit of production – normalized values

	2018	2019	2020	2021	2022
Consumption of chemicals	100	98	101	96	**95**

Baseline 100 in 2016.

Elimination of Substances of Very High Concern (SVHC) SDG 12.4

	2018	2019	2020	2021	2022
Total number of action plans[1] completed since 2008	23	23	23	24	**25**

[1] One substance can be subject to several action plans to be eliminated from different ST processes.

ST exposure to Substances of Very High Concern (SVHC)

	2018	2019	2020	2021	2022
SVHC total list	191	201	209	219	**224**
SVHC used in ST	26	27	30	34	**41**
SVHC Annex XIV used in ST	1	3	4	4	**4**
Total SVHC used in ST replaced since 2008	7	7	7	7	**7**

Deployment of ST substances specification to key suppliers and subcontractors (%)

	2018	2019	2020	2021	2022
Response rate from key partners	100	97	100	99	**100**
Commitment from key partners to ST substances specification	89	72	91	91	**95**

Spills in 2022

None

Fines and non-monetary sanctions in 2022 | 2-27 |

None