2.

MAKING THE WORLD HEALTHIER & CLEANER

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Through the corporate program “Eco Together”, created in 2009, the group establishes its commitment to environmentally responsible management and the implementation of environmental conservation efforts together with customers, suppliers, production outsourcing partners, local communities, NGGs, governments and other stakeholders.

This plan sets out the different actions envisaged for the achievement of environmental corporate objectives and monitors their achievement.

The commitments made by 2030 are as follows:

FIELD	INDICATOR	TARGET VALUE	BASE YEAR
DECARBONIZATION	Reduction emissions range 1+2 CO_2, absolute	22%	2017
ENERGY	Purchase renewable electricity	100%	——
	Energy consumption	10%	2020
ZERO WASTE	Amount of non-recyclable waste	0	——
	Ratio to landfill and incineration	<1%	——
WATER CONSERVATION	Water consumption	45%	2005
BIODIVERSITY	Proportion of plants with score greater than 460 points *	>70% **	——

* KCJ internal methodology
** Under revision

The target value is that to be achieved in 2030, taking a specific year as a starting point (base year) set for each indicator, with the exception of some that do not need it.

2.1. MAIN ENVIRONMENTAL RISKS AFFECTING THE ORGANIZATION

The global environmental trend of most concern to KCE is climate change. The possibility of suspending operations due to extreme meteorological phenomena, such as drought, floods and global warming, as well as the increase in costs due to more severe regulations pose risks for the company.

Current lifestyles also contribute to the development of a number of specific environmental problems, including climate change, resource depletion, environmental pollution, water security and biodiversity loss.

Taking all these risks into account, the company has identified five areas on which it aims to focus its environmental efforts:

1. Decarbonization *(Management of CO_2 emissions)*
2. Water use and prevention of water pollution
3. Preventing air pollution
4. Waste management
5. Chemical substances management

KCE dedicates significant financial resources to promote efficiently and effectively its environmental activities.

Investment (thousands of euros)

KCE

2018	2019	2020
2,660	3,676	1,032

2.1.1. DECARBONIZATION

KCE considers the amount of greenhouse gas emissions from fuel and electricity consumption from production activity itself and from sales as the most significant problem. The following are the initiatives developed to reduce such emissions:

IN THE ACQUISITION OF RAW MATERIALS:
green purchasing concepts are incorporated and specific actions are carried out in the different subsidiaries.

INCLUSION IN THE MANUFACTURING PROCESS OF
initiatives to reduce energy consumption, use of cleaner energy, use of more environmentally-friendly coolants and equipment maintenance to prevent coolant leaks and other greenhouse gases.

IN THE DEVELOPMENT PROCESS:
When deciding to launch new and improved products, it is verified that they meet the environmental standards described by the design guidelines for the environment.

IN THE DISTRIBUTION PROCESS:
through the increase of volumes dispatched by shipment, the use of cleaner methods and the improvement of load ratios.

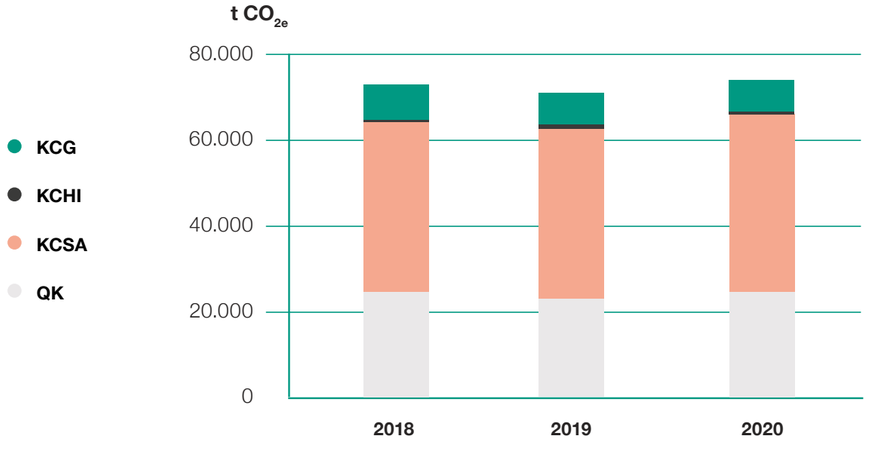
Contribution to the SDGs

In 2013, the group set the 2020 targets for energy consumption and greenhouse gas emissions for all KCE plants, and the goal is to achieve an annual reduction of 1% for both.
The KCE indicators for 2020 are shown in the table, as well as their comparison with the previous year.

Direct Greenhouse gas emissions (GHGs)

KCE	2018	2019	2020
TOTAL DIRECT GHG EMISSIONS (SCOPE 1) (T CO_2e)	72,545	70,350	73,278
EMISSIONS RANGE 1 / PROD. END (kg/t)	156.65	166.05	170.85
TOTAL INDIRECT GHG EMISSIONS (SCOPE 2) (T CO_2e)	21,684	3,925	4,527
EMISSIONS RANGE 2 / PROD. END (kg/t)	49.39	11.61	12.51
OTHER GHG EMISSIONS (SCOPE 3) (T CO_2e)	22,119	23,754	22,645
EMISSIONS RANGE 3 / PROD. END (kg/t)	82.26	91.56	85.15
TOTAL GHG EMISSIONS (TCO_2e)	116,554	98,207	100,634
TOTAL GHG EMISSIONS / PROD. END (kg/t)	247.17	223.44	225.93

Direct GHG emissions (scope 1) per company



Greenhouse gas (GHG) emissions per ton of final production in KCE have increased versus the previous year despite the green purchase of energy. The increase compared to 2019 for Scope 1 and 2 emissions per ton of final production was 3%.

Compared to 2005, the base year for this indicator, CO_2 emissions have been reduced by 20%.

Energy consumption data

As can be seen, both energy consumption and the consumption rate has shown an increase, mainly due to the product mix.

In relation to electrical energy, the rate of consumption per unit produced in KCE has improved, with an accumulated reduction of 25% compared to 2005, the base year for this indicator.

KCE	2018	2019	2020
TOTAL ENERGY CONSUMPTION (MWh)	418,586	404,305	422,342
TOTAL ENERGY CONSUMPTION / PROD. END (MWh/t)	0.89	0.95	0.96
ELECTRICITY CONSUMPTION (MWh)	81,522	79,197	80,845
CONSUMPTION OF ELECTRICITY OF RENEWABLE ORIGIN (%)	30.25	71.25	80.88
POWER CONSUMPTION / FINAL PRODUCTION (MWh/t)	0.17	0.18	0.16
NATURAL GAS CONSUMPTION (GJ)	1,257,188	1,225,451	1,288,536
NATURAL GAS CONSUMPTION / FINAL PRODUCTION (GJ/T)	3.46	3.68	3.81
THERMAL CONSUMPTION (MWh)	321,814	307,392	323,543
THERMAL CONSUMPTION / FINAL PRODUCTION (MWH/T)	0.54	0.69	0.72
OTHER ENERGY CONSUMPTION (MWH)	2,928	4,645	4,474

During 2020, all electricity consumed by KCG, KCSA and KCHI (except KCHI France) came from renewable sources. For its part, QK is in the process of contracting this type of energy. As a result, renewable electricity consumption has increased from 30% in 2018 to 71% in 2019 and 81% in 2020.

2.1.2. WATER CONSERVATION AND POLLUTION PREVENTION

Currently, KCE is working to reduce water consumption in each production plant and to reduce wastewater through the application of the 3R (reduce, reuse and recycle) technique, the search for new technologies, the optimization of maintenance work and the improvement of wastewater treatment facility management.

Contribution to the SDGs

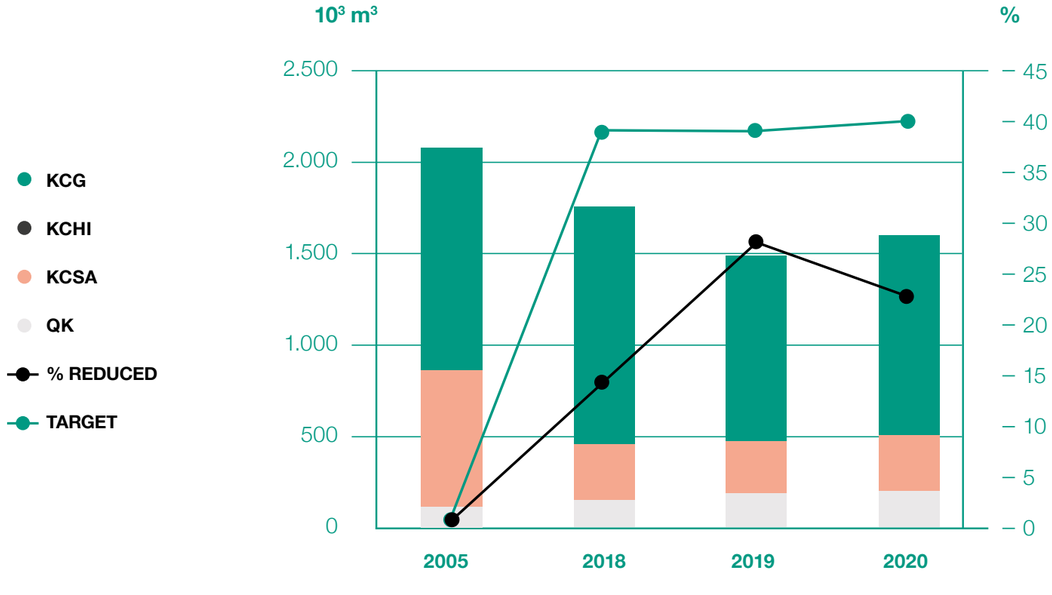
In 2013, the group set targets until 2020 for water consumption for all KCE plants and aims to achieve an annual reduction of 1% by taking 2005 as a baseline.

The long-term goals for 2030 are aligned with those of the group, as long as they are achievable for each of the organizations that constitute KCE.

Water consumption data

KCE	2018	2019	2020
WATER EXTRACTION (m^3)	1,767,103	1,494,922	1,606,120
EXTRACTION / FINAL PRODUCTION (m^3/t)	1.27	1.44	2.96
NETWORK SUPPLY (%)	19.43	27.22	25.13
TOTAL WATER CONSUMPTION (m^3)	1,314,921	1,082,428	1,137,356
CONSUMPTION / FINAL PRODUCTION (m^3/t)	2.12	1.87	1.96

Water extraction represented more than 1,600,000 m^3, about 111,200 m^3 more than previous year, and approximately half was for consumption. The consumption rate per ton produced increased by 5% over the same period.



KCE's biggest water users are KCG and KCSA. In the case of KCSA, extraction increased in 2020 as a consequence of the fact that the facilities built in 2019 remained operative throughout the year. However, both consumption and the rate of consumption have decreased at KCSA; not so in the case of KCG.

On the part of QK, the increase is due to the consumption of water from the State wastewater treatment plant, the quality of which requires treatment prior to use, which translates into a higher volume to compensate for the rejection due to quality aspects.

In the KCE centres the water consumed comes basically from third-party network water and groundwater; some facilities have their own collection wells which are duly authorized and controlled.

The TOC pollution load dropped by 58 tons compared to the previous year, a per-ton reduction of 23%.

Wastewater in the KCE work centres is discharged in its entirety to the municipal sanitation network.

2.1.3. AIR POLLUTION PREVENTION

The main commitments made in this area are aimed at strict compliance with specific laws and regulations, as well as the development of the principle of pollution prevention. This entails, among other actions, the gradual introduction of better available techniques, the modification of processes in favour of reducing emissions and close monitoring thereof.

The promotion of communication with interested parties is also contemplated. Along these lines, it should be noted that three of the companies that make up KCE (KCG, QK and KCSA) already publish emission data under the PRTR (Pollutant Release and Transfer Registers).

Contribution to the SDGs

Substances emission data

	2018	2019	2020
CO EMISSION (kg)	21,783	21,131	22,310
CO EMISSION / FINAL PRODUCTION (kg CO/t)	0.06	0.05	0.06
NO_x EMISSION (kg)	53,622	54,024	56,751
NO_x EMISSION / FINAL PRODUCTION (kg/t)	0.12	0.12	0.12
CH_4 EMISSION (kg)	1,403	1,547	1,619
CH_4 EMISSION / FINAL PRODUCTION (kg/t)	0.00	0.00	0.00
HFCS EMISSION (kg)	20	173	178
SO_2 EMISSION (kg)	823	492	468
SO_2 EMISSION / FINAL PRODUCTION (kg/t)	0.01	0.00	0.00
PM EMISSION (kg)	1,051	953	1,097
PM EMISSION / FINAL PRODUCTION (kg/t)	0.00	0.00	0.00
VOC_s EMISSION (kg)	113,215	115,428	87,226
VOC_s EMISSION / FINAL PRODUCTION (kg VOC/1000t)	1.54	1.54	1.22

The actions taken to minimize diffuse emissions has made it possible to reduce this type of emissions by 24% and the rate by 19.9% compared to 2019.

As regards emissions from fuel gases (CO, NOx and SO_2), there are no significant variations compared to 2019.

On the other hand, regarding particulate emissions, KCSA is the KCE company reporting the highest emissions. In 2019 and 2020, improvements have been made to emission bulbs, which have been structurally modified and absolute filters have been placed. However, the results do not reflect this situation and the measurements of these spotlights have been postponed due to the pandemic.

Lastly, there is an improvement in VOC emissions. The KCE company with the highest VOC emissions is KCHI, as the activity itself involves the handling of volatile solvents (the emissions of the rest are negligible in comparison).

KCSA has also contributed to reducing VOC emissions as the regenerative thermal oxidizer installed in the second half of 2019 continued to be operative throughout the year.

2.1.4. WASTE MANAGEMENT

KCE dedicates efforts to reduce waste generation in its plants and offices, encouraging the application of the 4R technique (reduce, reuse, recycle and replace).

Among many other actions, work is being done to improve the performance of production processes to reduce the generation, reuse of packaging and revaluation of waste. Adequate waste management is also carried out, so that its impact is the most environmentally friendly.

Waste management data

KCE	2018	2019	2020
TOTAL WASTE (kg)	13,862	15,284	15,494
TOTAL WASTE / FINAL PRODUCTION (kg/t)	33.89	38.93	37.74
TOTAL HAZARDOUS WASTE (kg)	10,396	12,545	12,533
TOTAL HAZARDOUS WASTE / FINAL PRODUCTION (kg/t)	23.07	29.15	27.15
VALUATION OF TOTAL WASTE GENERATED (%)	61.25	59.60	48.84

Contribution to the SDGs

In 2013, the group set the 2020 reduction targets for waste at all KCE plants and set a target of achieving an annual reduction of 0.5% on a baseline in 2005.

The amount of waste generated has increased by approximately 200 tons compared to the previous year; however,

the rate of waste generation per ton produced has decreased, improving by 3%.

Although improvement actions are carried out, the indicator does not fully reflect them, since there are various circumstances that influence the result:

The expansion of activity as a result of new facilities, processes or products, such as the new AKYPO manufacturing line in KCG, the nitrilation plant in QK and the new aroma chemical plant in KCSA.

Changes in the production mix. This indicator is representative, but not very sensitive to variations in current products, which, either due to quality, use or the business area itself, have a more unfavourable ratio.

Despite this, taking into account the group's objective in this area, the reduction achieved was 22% compared to 2005.

Of the waste generated, approximately 12,533 tons are classified as dangerous; 12 less versus the previous exercise. The operations of the new facilities are under study in order to optimize productivity and adjust the conditions that allow less waste generation.

The pandemic has contributed to greater waste generation resulting mainly from disposable self-protection products.

Raw materials usage data

KCE	2018	2019	2020
RAW MATERIALS (t)	336,055	304,109	307,491
RAW MATERIALS / FINAL PRODUCTION (t/t)	0.79	0.80	0.80

As mentioned above, KCE works on improving the performance of production processes, directly impacting waste reduction and therefore lower raw material consumption.

2.1.5. CHEMICAL SUBSTANCES MANAGEMENT

Kao is actively involved in the rational management of chemicals through the use of scientifically based risk assessment and management procedures that have the function of minimizing their adverse effects on human health and the environment.

The group uses its own procedure, called the Comprehensive Chemical Management System, which since 2017 has been implemented in all Kao's affiliates worldwide. The company continuously strengthens the functionality of the Comprehensive Chemical Management System, in response to increasingly stringent regulatory requirements, increasing diversity in manipulated chemicals, and planned commercial expansion in new countries and commercial areas.

Taking this objective into account, the series of initiatives that set KCE's course in the field of chemicals management is summarized in the following measures:

CHEMICAL RISK ASSESSMENT:

On the one hand, carry out risk assessments of priority substances for Kao, in accordance with the medium-term plan, and implement the global deployment of the Comprehensive Chemical Management System to ensure product safety and its use in the applications and countries for which it is being designed. On the other hand, carry out detailed studies of all products or new raw materials used in KCE. During 2020, 51 raw materials have been studied and 15 products analysed.

CHEMICALS LIFECYCLE MANAGEMENT:

Plan and implement hazard reduction and hazardous labelling measures based on the United Nations-defined Global Harmonized System (GHS) to standardize classification and labelling criteria worldwide, using the appropriate language for each country.

COMMUNICATION OF CHEMICAL RISKS WITH STAKEHOLDERS:

through public disclosure of the results of activities promoting international chemicals management and stakeholder communication.

In 2020, customers were informed of changes in product classification, new information available and the substitution of some raw materials, either through a change in classification or their inclusion in replacement lists of the European Chemicals Agency (ECHA). The process began in 2020 and will end in 2021.

Another important point in substance management, which in turn is key for our customer is the Notification to European Toxicology Centres of all hazardous mixtures. In 2020, the corresponding reports were submitted to ECHA's global authority and to the following countries: Spain, Italy, France and Sweden.

KCE ensures regulatory compliance of its chemicals products in all countries where the company supplies. In addition, constant changes in international chemical regulations are monitored, applying notifications and/ or registrations in China, Korea, Turkey, the United Kingdom, Canada, the United States and Eurasia, as well as monitoring the Sanction Party List, among others, to ensure global compliance.

Specifically, throughout 2020, all required international requests for Embargoes, Sanctions and Inventories have been analysed. All customer needs have also been studied and the substances that needed a special registration by country have been identified, according to commercial needs.

KCE promotes the conduct of risk assessments of the priority chemicals for the company, with the vocation of continuing this activity later.

During 2020, several substance registries have been carried out at ECHA and more have been updated, while volumes, applications and requirements for the rest of the substances registered by the company have been monitored. Some of them have been reviewed in depth, together with ECHA, the dossiers that had been delivered, obtaining a satisfactory result.

Likewise, several registered substances that meet the definition of nanoparticles have been identified and the update of their registration has begun, which will culminate in 2021.

Furthermore the compositions of the fragrances have been revised in order to adapt to the new regulations and structure of the 49th standard of IFRA (International Fragrance Association) and several products have also been registered in ECOCERT.

Finally, the department of PSR (Product Safety and Regulations) has organized various seminars and discussions of chemical product safety at KCE level for the Sales and R&D departments. The company has been actively involved in national and European events related to the registration of chemicals (European Notification Panel), biocidal regulation, REACH regulation (Registration, evaluation, authorization and restriction of chemicals) and green systems among others.

Contribution to the SDGs

RESPONSIBLE CONSUMPTION AND PRODUCTION OF MATERIALS

Kao has made a public commitment to support the reduction of forest destruction and achieve zero deforestation by implementing two projects related to the consumption of sustainable materials (palm oil, and wood, paper and pulp derivatives).

Likewise, KCE has done the same with its customers, through the supply of sustainable products, in particular, using sustainable palm oil. All KCE subsidiaries have obtained RSPO certification –the most complete for the palm oil sector, with the exception of KCHI, which does not use palm oil in its processes. KCE's commitment is to supply all products based on sustainable palm oil if the customer requires so. As for 2020, KCE has sold 34% RSPO certified products from the total sales volume

The collaboration with customers and Kao subsidiaries, which have incorporated in their policies objectives of reducing deforestation, has allowed to increase the percentage of RSPO certified products and thus be able to contribute to the transformation of the market to more sustainable supply chains.

2.2. BIODIVERSITY MANAGEMENT

The company defines biodiversity conservation as an area of environmental intervention within its “Responsible Care” activities. Greater knowledge, awareness and sensitivity in environmental aspects entails expanding the scope of KCE’s actions, among which the conservation and promotion of biodiversity stands out.

KCE carries out a series of actions in order to improve year after year. Although this exercise has been somewhat atypical due to the emergence of COVID-19 - it has led to the cancellation of some of the planned actions and the modification of the approach of others - initiatives to improve biodiversity have continued.

Invasive species control actions have been maintained. In this sense, the elimination of a nest of Asian wasps in the KCSA Barberà del Vallès centre is worth mentioning. In this same centre, nest boxes have been placed to promote the reproduction of different species and an insect hotel.

On the other hand, the planting of different species has been carried out in the centres.

KCHI, which was in a more incipient state to date, has carried out the study of the trees, shrubs and plants of its work centres, as well as the identification of invasive and indigenous species, ending with the preparation of a catalogue describing their qualities, origin, quantity, location, appearance, etc.

Contribution to the SDGs

As far as possible, all activities related to biodiversity are carried out in collaboration with city councils or other non-governmental organizations. However, due to the exceptional conditions caused by the pandemic, in 2020 collaborations have been limited.

Placement of nest boxes

For Otus scops

For Passer domesticus

For Parus major, Cyanistes caeruleus

Insect hotel construction

Elimination of invasive species