

# Environmental Report 2019

April 2020



**Lucta**

# 1 Introduction and Context

The information in this report covers the production facility and headquarters of the **LUCTA, S.A. Group in Montornès del Vallès** – Barcelona, from 1st January to 31st December, 2019.

The information on the environmental, social and economic development of the Lucta Group, in all of its production and distribution centres, is disclosed in the Statement of Non-Financial Information published on the same website. However, this document, which is addressed to all stakeholders, provides more detailed information of the environmental level of LUCTA, S.A. with the most outstanding indicators and initiatives.

Our policy sets out the essential features of the organisation's activity and its sustainability strategy in a global context, which includes our impact at global and local levels, together with the actions that we can carry out at both levels.

We have an environmental management system certified with **ISO 14001:2015** and since 1993 we formalized the strategy of our Corporate Social Responsibility and Sustainable Development by joining the **Responsible Care** Programme, a global and voluntary initiative of the chemical sector for the continuous improvement of Safety, Health and Environmental Protection for all operations.

2019 has been a year of growth with important projects, challenges and changes in organisational systems. This has meant allocating efforts to minimise environmental impact through maximum savings in the consumption of resources (materials, water and energy) and the maximum reduction in the generation of waste throughout the production cycle, together with the involvement of suppliers to achieve a lower carbon footprint.

**+ 10%**  
of flavors, fragrances and feed  
additives produced vs 2018

**€115.7 million**  
turnover

**321 people**  
on staff

**16,000 m<sup>2</sup>**  
of production surface



The UN approved the **2030 Agenda for Sustainable Development** in 2015. The Agenda has **17 Sustainable Development Goals (SDGs)**, ranging from eliminating poverty to fighting climate change, education, equality for women, environmental protection or the design of our cities.

LUCTA is committed to the Sustainable Development Goals; each section of the Report shows our commitment and collaboration with the SDGs.

## 2 Sustainability in Design

### Environmental Criteria in the Design Phase

Some of our customers demand more and more natural and ecological compounds to use in their products. We are proactively addressing this need by incorporating raw materials with such certifications.

**46% of the new raw materials incorporated in 2019 are environmentally friendly.** These include organic, natural (extracts, distillates, concentrates, dehydrates and defined chemicals) as well as palm-oil-free or RSPO-certified materials.

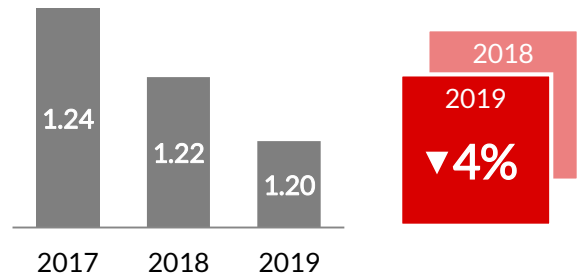


Palm oil is an ingredient of social and environmental concern; its production is linked to deforestation, destruction of biodiversity and human rights abuses in particularly vulnerable areas. It is used minimally in our products, but we work to ensure that it is RSPO certified or replace it with analogues without palm derivatives.

We have to highlight the technology of LuctaCaps® fragrance microcapsules, which are widely used to perfume fabric softeners and additives for clothing as they contain a certain amount of micro-plastics that affect the aquatic environment. Therefore, LuctaCaps® MF Free melamine-formaldehyde-free capsules have been developed in 2019... In order to continue adapting this technology to future challenges and the requirements of environmental protection. We also have a project to develop Biodegradable LuctaCaps®.

### Raw Material Optimization

Raw material per production unit



### Supply Chain

40% of raw material suppliers have sustainability and social responsibility strategies in place.

20% of suppliers with a purchase volume above 40% are ISO 4001 or EMAS certified.

### Packaging and Distribution

Returnable containers are available for our customers. Currently, we have implemented this system with 6 customers, which has allowed saving over 4.7 tonnes of packaging wastes.

In 2019 10% more product has been distributed in returnable packaging, vs. 2018.

(Our kilo of waste/kilo of product ratio = 0.0718)

More than 25% of product distribution is done with a fleet of Euro5 or Euro6 trucks.

### Product Certification

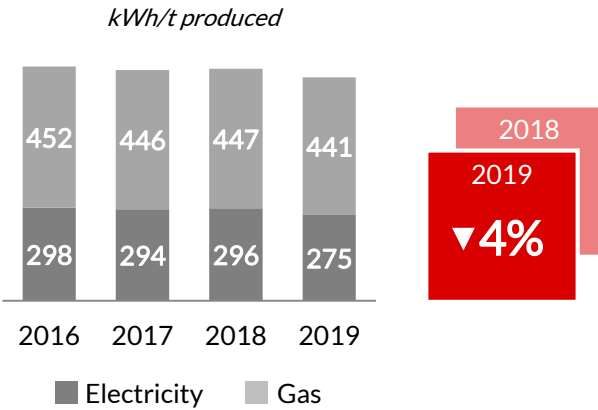


**10 fragrances** are available with ECOCERT NATURAL certification.



### 3 Energy Consumption and Emissions

#### Energy



**100% of the electricity consumed comes from renewable sources** with Guarantee of Origin (GoO) certified by the CNMC.

Lucta has a **photovoltaic solar roof that generates a 2.5% self-supply** of the electricity consumed annually.

Replacement of our own diesel-powered forklifts with a rental service for **electric forklifts** and hoists.

100% of the new equipment incorporates durability and **efficiency criteria for engines** with minimum IE3 standard and variable speed drives.

Renovation of air conditioning systems with high efficiency and free cooling..

#### Greenhouse Gas Emissions



**1.494 tonnes of CO<sub>2</sub>-eq** per year

**87,8 kg CO<sub>2</sub>-eq** per tonne of product

**12,9 tonnes CO<sub>2</sub>-eq** per €M

The organisation's **carbon footprint** is calculated based on international Greenhouse Gas Protocol (GHG Protocol) and ISO 14064 standards. Scope 1 and 2 emissions are included.

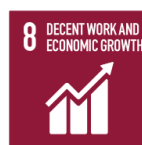
Tons of CO <sub>2</sub> equivalent per year		
Scope 1	Diesel oil	14.43
	Natural gas	1,367.44
	Fugitive emissions of fluorinated gases	112.70
Scope 2	Electricity consumption with renewable GoO	0.0
<b>Total</b>		<b>1,494.5</b>

#### Emission of Other Pollutants



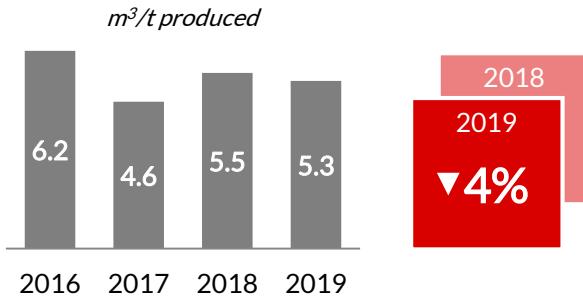
▶ **400g** of Volatile Organic Components

▶ **10g** of Total Suspended Particles



## 4 Water and Waste Cycle

### Water Consumption



The water consumption of around 89,000 m<sup>3</sup> per year is mainly self-collected and is treated by an osmosis process, which accounts for 30% of water consumption.

Savings measures have focused on actions to reuse water from the cooling circuit in 2019.

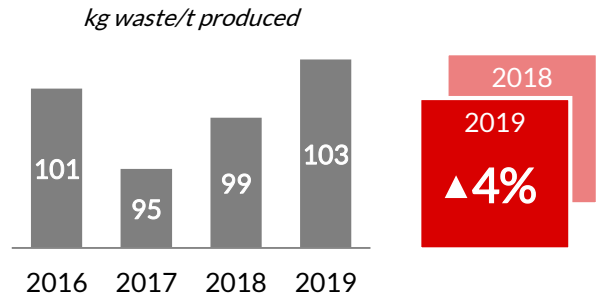
### Wastewater

Around 62,000 m<sup>3</sup> of wastewater has been treated at the water treatment plant itself, with 87% treatment efficiency in terms of the COD load in wastewater.

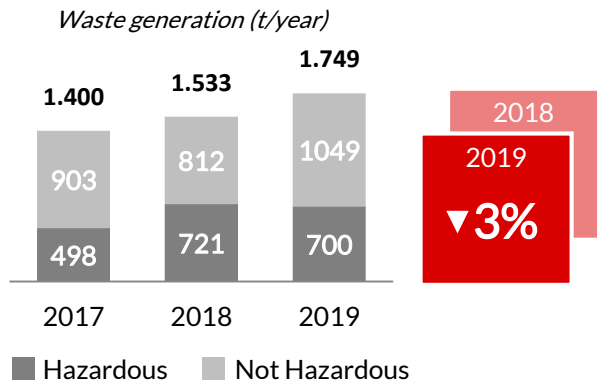


- ▶ 3,7 m<sup>3</sup> generated wastewater
- ▶ 2,1 Kg COD (Chemical Oxygen Demand) in treated water

### Waste



### Hazardous Wastes



Main wastes: Contaminated packaging, sewage sludge, contaminated water, pallets and solid flavouring waste.

Note that 200 more tonnes of sewage sludge were generated and managed at a composting plant in 2019.

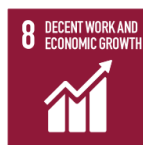
### Waste Recovery

2019

76%

76% of the waste is treated in recycling and energy recovery plants.

During 2019 we improve the segregation system of wastes, specially contaminated absorbent material and light packaging.



## 5 Other Relevant Issues

### Odours

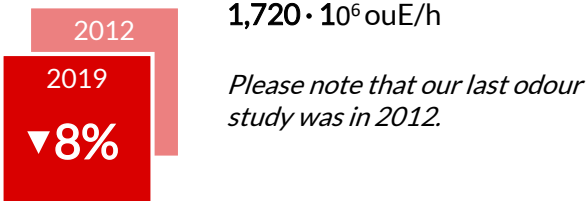
A new **odour study** based on the UNE-EN 13725 standard was carried out in 2019, where more or less favourable production scenarios for odour emission were considered. The results presented give the most unfavourable scenario:

#### Odour Concentration



The odour concentration 7.0 ouE/m<sup>3</sup> (European Odour Unit) 98<sup>th</sup> percentile affects the environment near the plant without reaching any populated nucleus or isolated house.

#### Odour Emission Rate



### Environmental Effects

An updated **Self-Protection Plan** is available for 2019, which includes protocols in the event of various cases with environmental implications.

There have been 3 relevant incidents in 2019, 2 of which were accidental spills that affected the biological system of the treatment plant and another in the raw material unloading drum operations that generated a considerable spill without any environmental impact.

As a result of these incidents, throughout 2019 the monitoring system and operational controls of the water treatment plant have been reinforced, together with a contingency plan including the analysis and reinforcement of critical equipment.

### Investment and Expenses

	Investment (€)	Expenses (€)
Waste management	81,736	328,096
Atmospheric emissions	33,098	179,513
Water cycle	24,237	173,675
Other	-	65,833
<b>Total</b>	<b>139,072</b>	<b>747,118</b>

Investment in environmental assets reached €139,000 in 2019 (+ 4%). Expenses amounted to €747,000, very similar to the 2018 figure.





## 6 Objectives and Action Plan

Vector	Objective	Actions	Status
Atmosphere	Reduce CO emissions from thermal oil boiler Source 1 in Distillers	Replacement with a new boiler	100% <span style="color: green;">● ● ●</span>
	Reduce VOC emissions (< 15 mg/m <sup>3</sup> ) and odours from Liquid Flavourings Plant	Replace scrubber with an active carbon filter	80% <span style="color: green;">● ● ●</span> 2020 Plan
	Odour reduction in Solid Flavouring Plant	Operational study of the scrubbers to set quantity of drainage, TPM tasks and operational parameters (Redox and pH)	50% <span style="color: green;">● ● ●</span> 2020 Plan
Waste	5% reduction in the generation of waste <i>LER 070701 Aqueous washing liquids and mother liquors</i>	Optimise waste management logistics and wastewater generation – reduce costs	100% <span style="color: orange;">● ● ●</span>
		Internal management of less polluted water from FMP in the water treatment plant	50% <span style="color: gray;">● ● ●</span>
	5% reduction in the generation of waste <i>LER 150110 Contaminated empty packaging</i>	Set up environmental criteria for the packaging of raw materials. Agreements with the supplier. Define a Packaging Manual	0% <span style="color: orange;">● ● ●</span> 2020 Plan
Legal	Substantial Change in Environmental Authorisation	Initiate legal process. Preliminary studies and stakeholders involvement.	80% <span style="color: gray;">● ● ●</span> 2020 Plan
Water	Increase water treatment capacity at wastewater treatment plant	Assess the project for wastewater treatment plant revamping	50% <span style="color: gray;">● ● ●</span>
		Set out TPM for treatment plant and management system of critical spare parts	90% <span style="color: green;">● ● ●</span> 2020 Plan
	Operation Procedure of Wastewater Treatment Plant to improve its monitoring system and performance in case of incidents	100% <span style="color: gray;">● ● ●</span>	
	Reduce impact of aquifer depletion	Connection to the municipal water network. Request permit and adaptation of the facilities.	80% <span style="color: green;">● ● ●</span> 2020 Plan