

# SUSTAINABILITY IN BORREGAARD

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## OUR CONTRIBUTION TO SUSTAINABLE LIVING

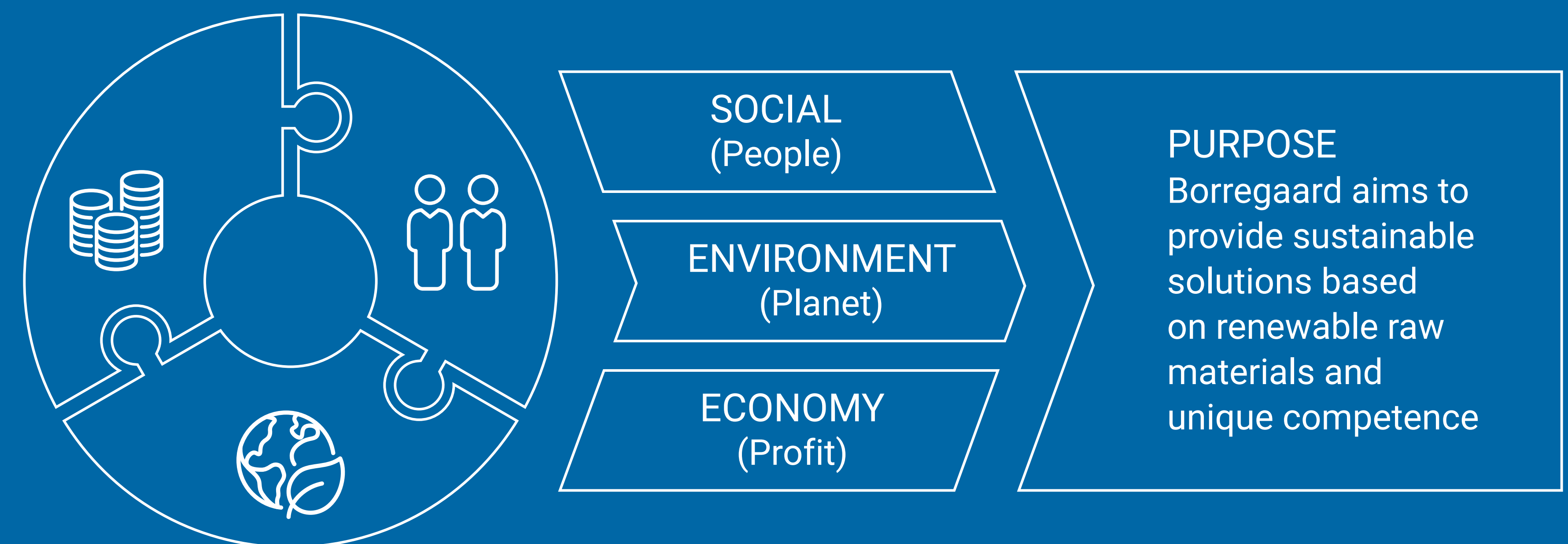
Our sustainable solutions can play an important role in addressing some of the world's greatest challenges: Population growth and climate change.

# BORREGAARD'S SUSTAINABILITY APPROACH

Borregaard's business model centres around sustainability. Sustainability is also one of our core values and therefore, a natural component of our overarching goals.

Our approach to sustainability is based on the UN document "Our Common Future" (1987): *Operations and development that meet the needs of the present without compromising the ability of future generations to meet their own needs.*

Sustainability is composed of three pillars: Social, Environment and Economy.



# SUSTAINABLE SOLUTIONS

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The world faces major challenges related to population growth, climate change and resource access. These challenges will generate an extraordinary demand for climate friendly solutions for food production, infrastructure, transportation, housing, energy and jobs.

Borregaard creates renewable products and solutions to replace oil-based alternatives. Utilising the different components of wood, we produce biopolymers, speciality cellulose, biovanillin, cellulose fibrils and bioethanol for a variety of applications in sectors such as agriculture and aquaculture, construction, pharmaceuticals and cosmetics, foodstuffs, batteries and biofuels.

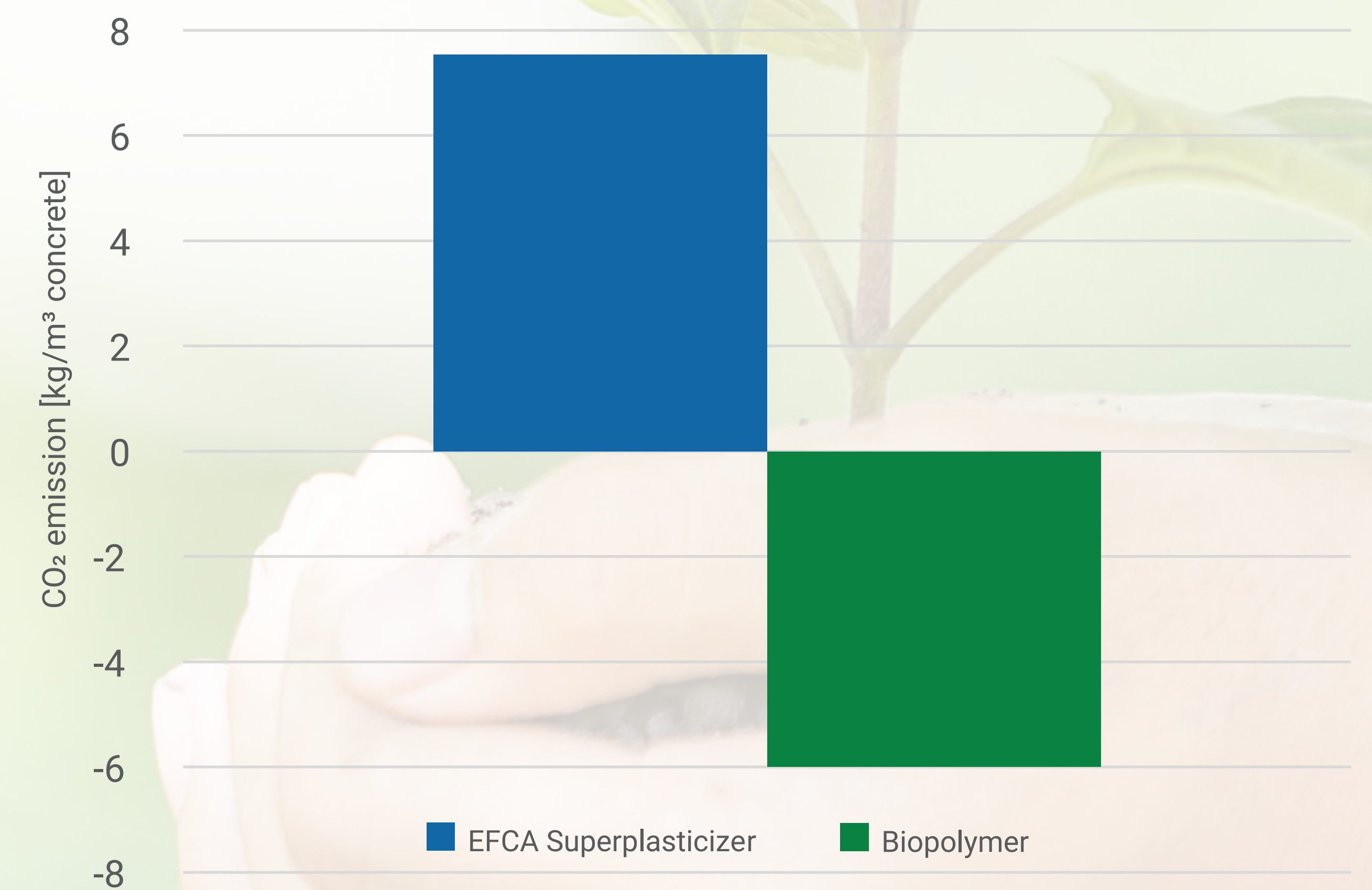
# DOCUMENTED GREEN FOOTPRINTS

Life cycle assessments of our products document favourable GHG footprints, and confirm that the environmental and climate impacts of Borregaard's products and processes have diminished over time.

The life cycle assessments lay the foundation for an environmental declaration of our products and help our customers choose the most sustainable solutions.

Competitor analyses compare greenhouse gas emissions linked to Borregaard's products with competing products. The analyses confirm that Borregaard's products perform better than the alternatives in almost all environmental impact categories.

By replacing oil-based alternatives with biopolymer by Borregaard in concrete, CO<sub>2</sub> emissions are reduced by 178%\*



\* Concrete producers can include uptake of biogenic CO<sub>2</sub> from lignin in their concrete products if it is calculated according to the EN-15804+A1+prA2(2017) and EN 16449(2014) standard

# WE **SOLVE** DIFFERENT CHALLENGES FOR DIFFERENT CUSTOMERS

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Most customers purchase products primarily for their performance. However, end-users are becoming increasingly concerned with which products they buy, favouring natural ingredients and low carbon footprints. This trend is expected to continue, and is likely to be reinforced in parallel with the world's growing sustainability focus.

With wood-based solutions that replace petrochemical-based products, Borregaard moves the world from black carbon from oil to utilising green carbon from plants. Some of our customers buy our products because of their low carbon footprint. Other customers, especially those who operate in consumer markets, prefer using natural ingredients or ingredients made from natural raw materials in their products. Health and safety aspects also influence customers' purchasing behaviour. Borregaard's wood-based products represent a non-toxic substitute for chemicals with negative health impact.

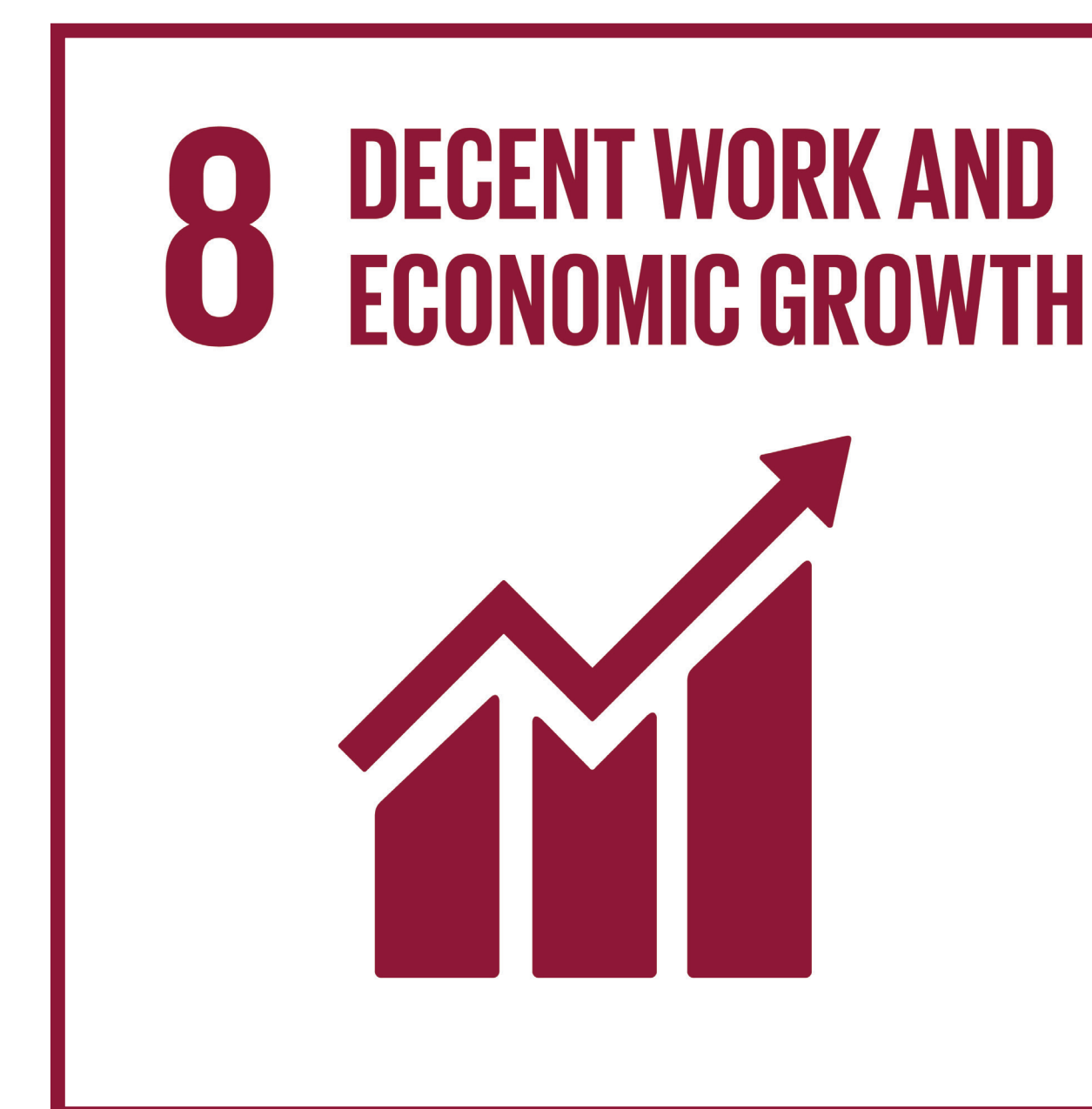


# OUR CONTRIBUTION TO THE UN'S 2030 AGENDA

Borregaard has prioritised six of the seventeen Sustainable Development Goals based on the global challenges the world faces, and the solutions we can contribute.

These goals are closely linked to Borregaard's core operations and are in line with our business strategy.

THE SIX PRIORITISED GOALS ARE:



# SUSTAINABLE RAW MATERIALS

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Our most important raw material is wood. Trees reduce emissions in more than one way.

While trees are growing, they capture and store CO<sub>2</sub> from the atmosphere. As trees grow old, they capture less CO<sub>2</sub> and are ready to be harvested to become biomass for production of sustainable solutions that can replace oil-based alternatives.

*If forests are managed in a sustainable way,  
the world sits on a huge, everlasting resource.*

Borregaard attaches great importance to sourcing wood from forests that are certified and managed in a proper, sustainable and eco-friendly manner. 98% of the wood purchased in 2020 was certified. The rest of the purchased wood was controlled in accordance with PEFC/FSC®. Borregaard's production units outside Norway receive lignin raw material from adjacent pulp mills which purchase wood from FSC® and/or PEFC certified sources or controlled wood. Borregaard is Chain of Custody (CoC) certified in accordance with the FSC® and PEFC forest certification standards.

NORWAY'S FORESTRY INDUSTRY IS AMONG THE WORLD'S MOST SUSTAINABLE. FOR EVERY TREE THAT IS HARVESTED, MULTIPLE NEW ONES ARE PLANTED. TODAY, NORWAY HAS THREE TIMES AS MUCH FOREST AS IT DID A HUNDRED YEARS AGO.

# COMMITTED TO REDUCE GREENHOUSE GAS EMISSIONS

We are committed to major greenhouse gas reductions in the years to come.

The Science Based Targets Initiative has approved Borregaard's target of reducing greenhouse gas emissions by 53% by 2030 and 100% by 2050, from a 2009 base year. The targets are in line with the ambitions in the Paris Agreement and well below the level required to limit the global temperature increase to 2°C.



THE BORREGAARD GROUP HAS REDUCED ITS DIRECT CO<sub>2</sub> EMISSIONS BY 42% SINCE 2009.

BORREGAARD HAS BEEN HIGHLIGHTED AS A GLOBAL LEADER IN CORPORATE CLIMATE ACTION, ACHIEVING A PLACE ON THE CDP CLIMATE CHANGE "A LIST" FOR OUR SUSTAINABILITY REPORTING.



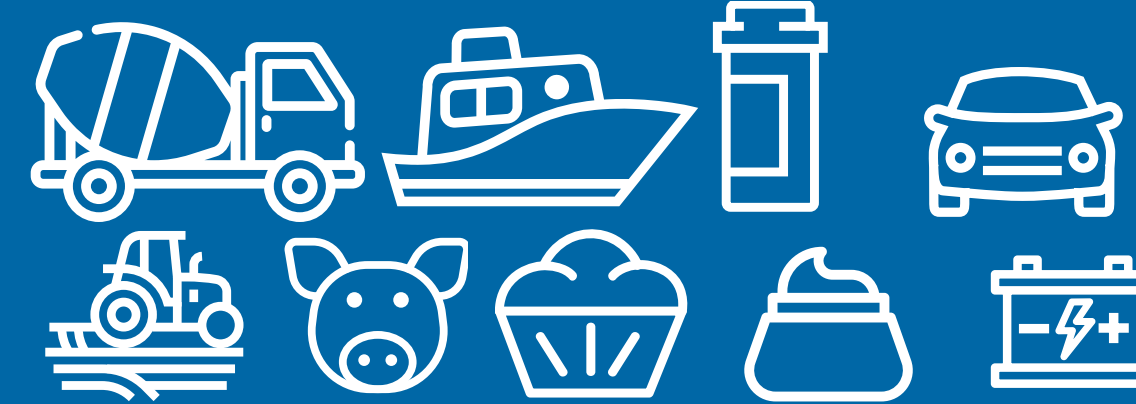
# FACTS ABOUT BORREGAARD

## EMPLOYEES



**1090**

## PRODUCTION



Biopolymers  
Biovanillin  
Speciality cellulose  
Cellulose fibrils  
Bioethanol  
Pharma intermediates

**700**  
PRODUCTS

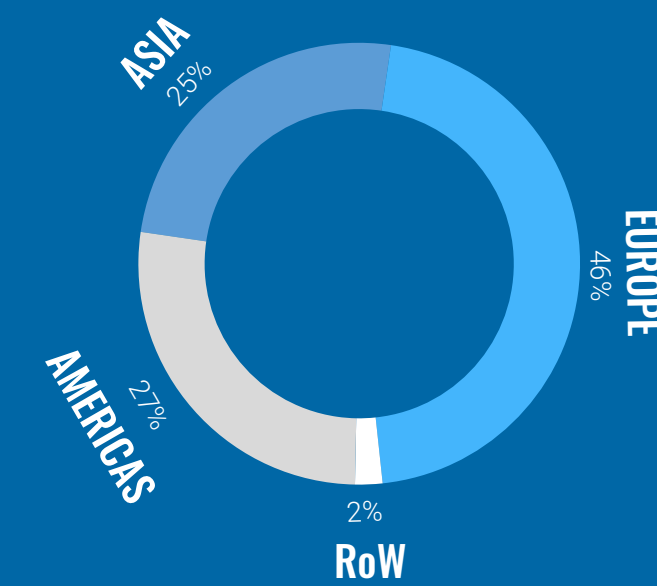
## RAW MATERIAL



**1 MILL.**

m<sup>3</sup> Norwegian Spruce  
375.000 tonnes lignin raw material

## BORREGAARD IN THE WORLD



Business in

**13**

countries

Sales to

**110**

countries

Sales outside Norway

**95**

percent

## ECONOMY



Turnover

**5.3**

billion NOK

Result EBITDA

**1.1**

billion NOK

Investments

**500**

million NOK

High utilisation of renewable raw materials, and products that replace oil-based alternatives result in low carbon footprints and make Borregaard a sustainable and innovative company with solutions the world needs.

