

Sustainable by nature



Cork and Sustainability

Amorim, a commitment to Sustainability

Sustainability: going further

Corkeen: a sustainable solution



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A close-up photograph of cork bark, showing its characteristic layered and textured structure. The bark is light brown with darker, more fibrous layers visible. The lighting creates strong shadows and highlights, emphasizing the rough, uneven surface.

Cork and Sustainability

A faint, stylized geometric pattern in the bottom right corner, consisting of overlapping triangles and polygons in a light gray color, set against a dark green background.

Bringing nature into play

Bringing nature back into play
through Cork

Cork: a gift from nature

Cork is the outer bark of the cork oak tree (*Quercus suber* L.). It's a 100 percent natural, technological raw material, with unique properties that give it unrivaled character and make it valuable in several industries and multiple applications.

No trees are damaged or cut during harvesting and that's a great sustainable beginning.

9 years

The period of time between each cork oak harvesting

25 years

The average time before the cork oak is harvested for the first time

200 years

Average lifespan of cork oak tree



Bringing nature back into play
through Cork



Cork's main features



100% natural, reusable and recyclable



Resistance to fire and high temperatures



Resistance to friction



Lightness and buoyancy



Acoustic insulation



Soft touch



Hypoallergenic



Thermal insulation



Impermeability to liquids and gases



Elasticity and compressibility

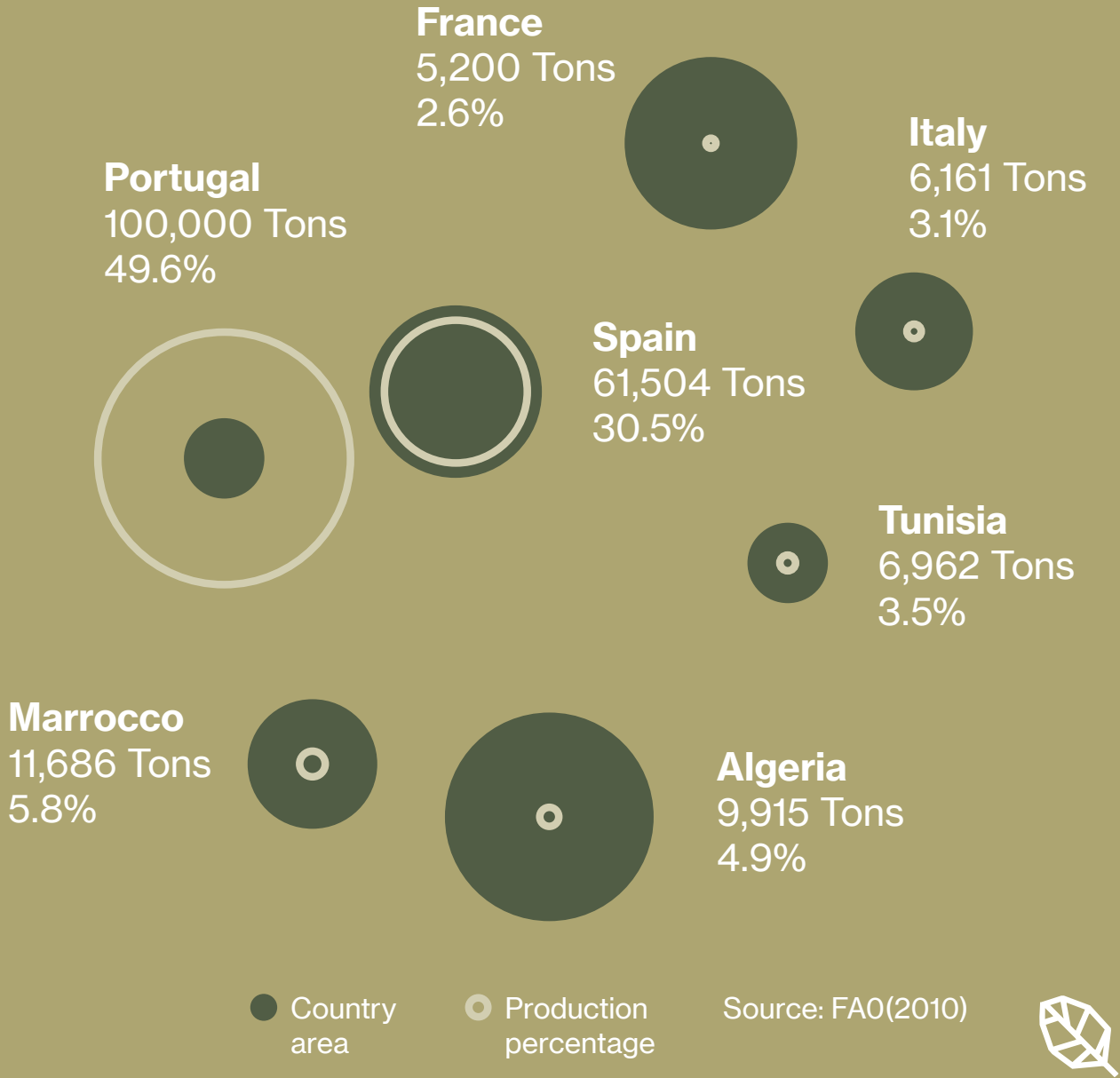
Annual cork production and cork oak forest area

Cork oak forest area

Portugal	720,000 ha	34%
Spain	574,000 ha	27%
Morocco	383,000 ha	18%
Algeria	230,000 ha	11%
Tunisia	86,000 ha	4%
France	65,000 ha	3%
Italy	65,000 ha	3%

Source: Portugal: IFN6, 2019; Spain: MARM, 2012; Italy: FAO, 2005; France: IM Liège, 2014; Morocco: HCEF Maroc, 2011; Algeria: EFI, 2009; Tunisia: Ben Jamaa, 2011.

2.1 million hectares in the West Mediterranean Basin, with ideal growing conditions for this species: soil composition, temperature, water and altitude.



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Cork oak forest, a positive contribution for climate regulation

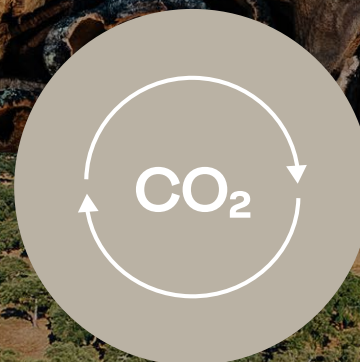
The cork oak forest provides an essential contribution to the air that we breathe, by absorbing carbon dioxide.

It is estimated that per each ton of cork produced, the cork oak forest can sequester up to 73 tons of CO₂.*

* Source: https://www.apcor.pt/wp-content/uploads/2015/10/Brochura_Ambiente__EN.pdf

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1 ton of cork
produced



Up to 73 tons of CO₂
sequestered by the
cork oak forest



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Cork oak tree CO₂ capture

3,000 to 4,000 kg of CO₂*
Forest carbon uptake



40 to 60 kg of cork
80 to 120 kg of carbon uptake

* Annual values based on a Instituto de Agronomia Superior's scientific study (2016) | 1 ton of cork = 73 Ton CO₂

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Did you know that...

A cork stopper can reach a carbon balance* of up to 562 g of CO₂eq?



* Carbon balance considering sequestration in the cork oak forest
(<https://www.amorim.com/en/sustainability/studies/>)

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Amorim, a commitment to Sustainability

Bringing nature into play



Bringing nature back into play
through Leadership

About Amorim

Corticeira Amorim is a global market leader, contributing like no other player in the market to the sustainability and innovation of the cork industry.

Amorim holds a consolidated worldwide leadership position and operates in five main areas: raw materials, cork stoppers, composites, flooring and wall coverings and insulation.



AMORIM



Bringing nature back into play
through Cork

Nature as the starting point for a sustainable future

Amorim's industry core raw material is 100 percent natural, which allows us to promote a circular, sustainable economy at all stages of the industrial process.

Amorim's mission: To add value to cork, in a competitive, distinctive and innovative way that is in perfect harmony with Nature.



Bringing nature back into play
through Leadership

Sustainability at the heart of Amorim's business

Amorim is committed to ensuring that its business activity has a positive impact on ecosystems, throughout its value chain, with an activity based on the bioeconomy, a commitment to renewable materials and the search for zero waste.

The constant concern with choosing, adopting and reinforcing sustainable development practices is at the heart of Amorim's business.





Sustainability: going further

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Bringing nature into play



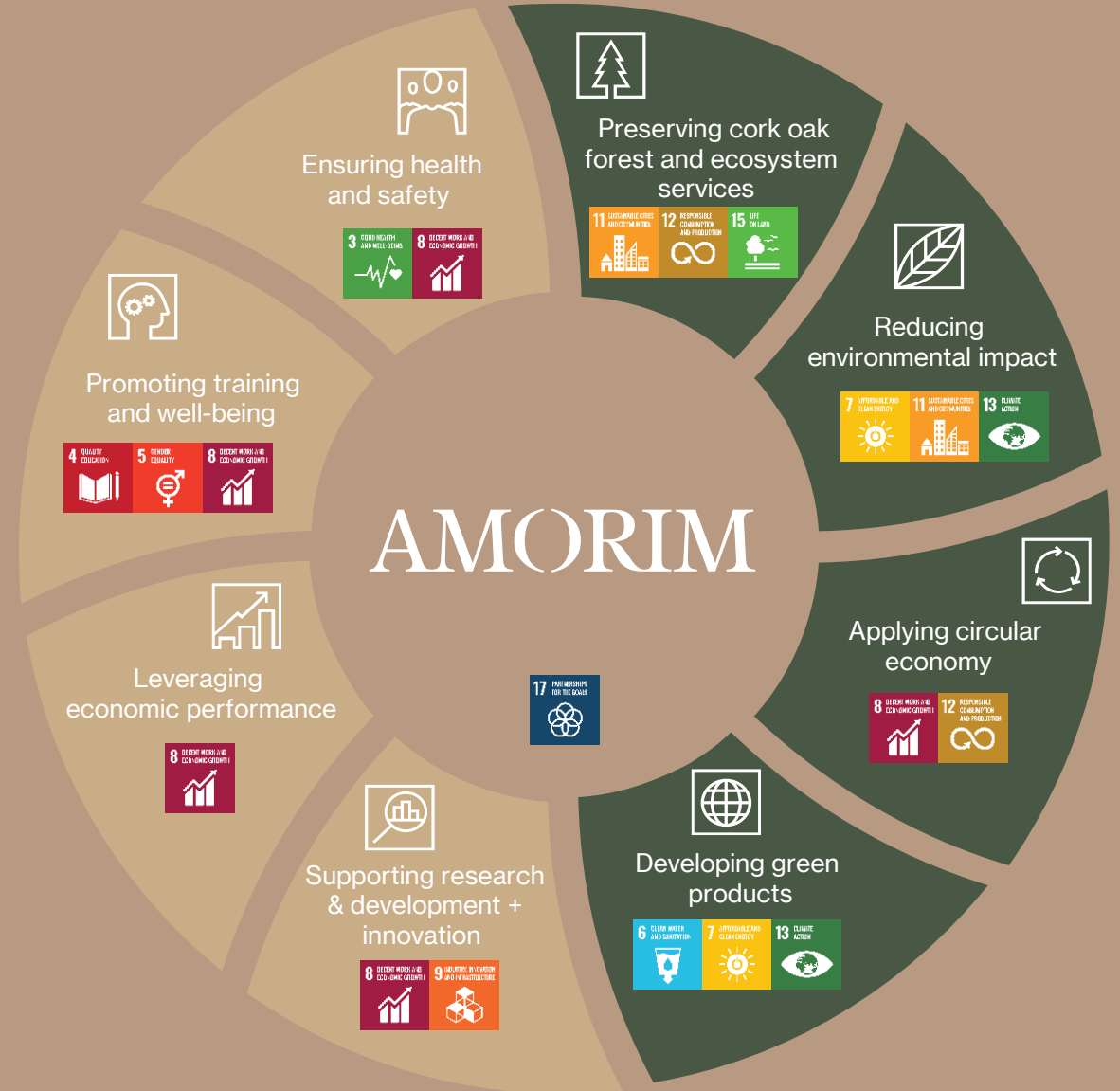
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through Sustainability

Alignment with United Nations' SDG

Committed to a solid and dynamic future with sustainability as the main reference, Amorim's Sustainability Strategy is aligned with 12 Sustainable Development Goals.

The Environmental pillar is focused on:

- Preserving the cork oak forest and Ecosystem services
- Reducing Environmental Impact
- Applying Circular Economy
- Developing Green Products



Bringing nature back into play
through Sustainability

Cork oak forest: a hotspot of life

The cork oak forest is part of one of the 36 hotspots of biodiversity - on par with the Amazon, the African Savanna and Borneo.

It supports a unique and fragile ecology which constitutes a habitat for rare and endangered species.

Over 200 animal species and 135 plant species find ideal conditions for survival in the cork oak forest.

Black kite (*Milvus migrans*)



Iberian Lynx



Triturus Marmoratus



Deer



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through Sustainability

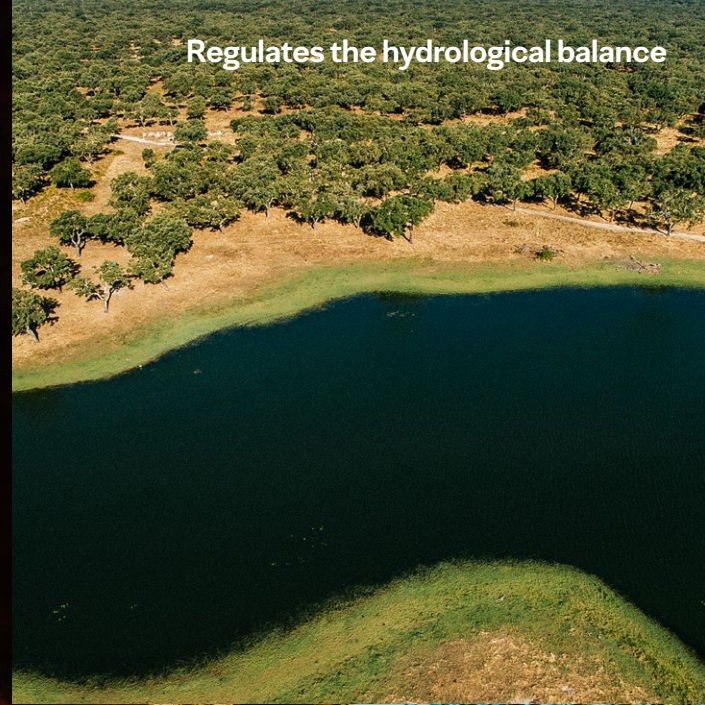
Cork oak forest, a driving force of sustainability

The cork oak forest has a recognized protection status, contributes to climate regulation, is a driving force for sustainable development and plays a crucial role in the world's ecological balance.

Acts as a barrier against fires



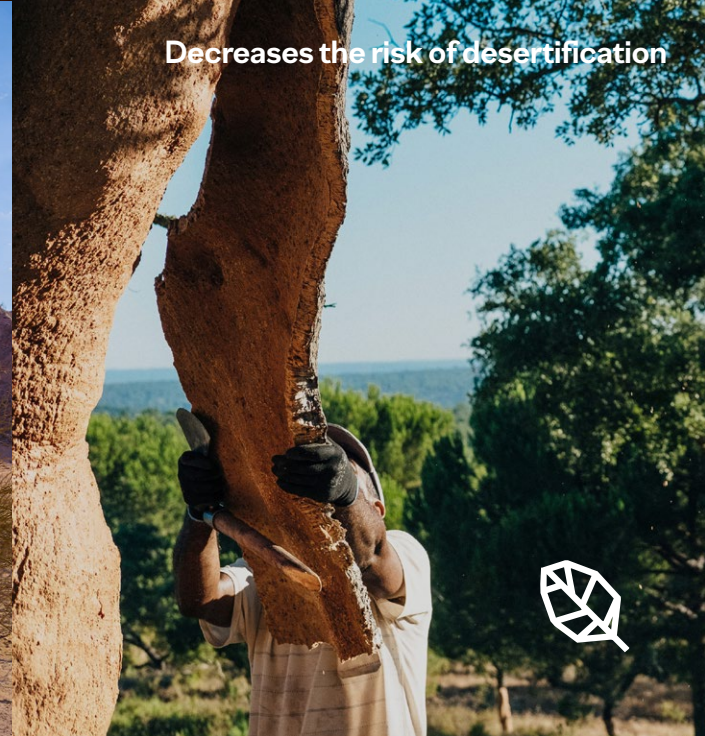
Regulates the hydrological balance



Protects against soil erosion



Decreases the risk of desertification



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through Sustainability

The ecosystem services of the cork oak forest

Amorim commissioned an independent study on the ecosystem services of the cork oak forest. Considering four case studies, EY was able to identify three main ecosystem services provided:



Climate regulation

estimated by “putting a price on carbon”, taking into account that different ecological conditions of montado have different carbon sink capacities



Fire prevention

estimated by comparing average costs with fire defense, fire damage and recovery for the montado Ecosystem vs typical rural land use in Portugal



Avoids soil erosion

service of regulating water flows and soil protection provided by the montado (the amount of soil not lost to water erosion is estimated and valued)



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Average value estimated of the ecosystem services

€1,300/ha/year average value estimated of the ecosystem services associated with a properly managed cork oak forest.



Climate regulation

Avoided costs range from
€424/ha/year to €768/ha/year

€596



Fire prevention

Avoided costs range from
€211/ha/year to €751/ha/year

€546



Avoided soil loss

Costs range from
€56/ha/year to €500/ha/year

€220



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Environmental, social and economical impact

The quantified indirect and induced impacts show that impact goes way beyond the financial statements



**Cork oak forest
ecosystem services**
+€828.2 M



Environmental impact
-€15 M



**Economical and
social impact**
+€362.2 M



Total Value
+€1,175.3 M

Total net value contributions to society is over 1 billion euros per year
Over 7x the estimated direct gross value added

* Environmental, social and economical impact study, EY 2019

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Amorim's forest intervention project

Since 2013, Amorim has organised and coordinated a Forestry Intervention Programme, developed in close partnership with forestry producers, research institutions and local authorities that aims to ensure the maintenance, preservation and enhancement of cork oak forests and guarantee the continuous production of high-quality cork.

This Programme is based on the following guidelines:

- Development of irrigation systems
- Development of a Forestry Intervention Project
- Support of new plantations
- Promotion of the FSC® Certification
- Purchase of cork from controlled sources
- Commission of independent studies on the ecosystem services of the Montado

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- 15 years

reduction of the first extraction
cycle of cork from the current
25 to 10/12 years

+ 350/ha

number of cork oaks planted
per hectare

100,000

trees

251/ha

of forest

29

establishments with FSC®
chain of custody certification

94%

cork and cork products
purchased from controlled
sources



Bringing nature back into play
through Sustainability

Reducing the carbon footprint

We want to play our part in tackling climate change and work continuously on reducing our carbon footprint.

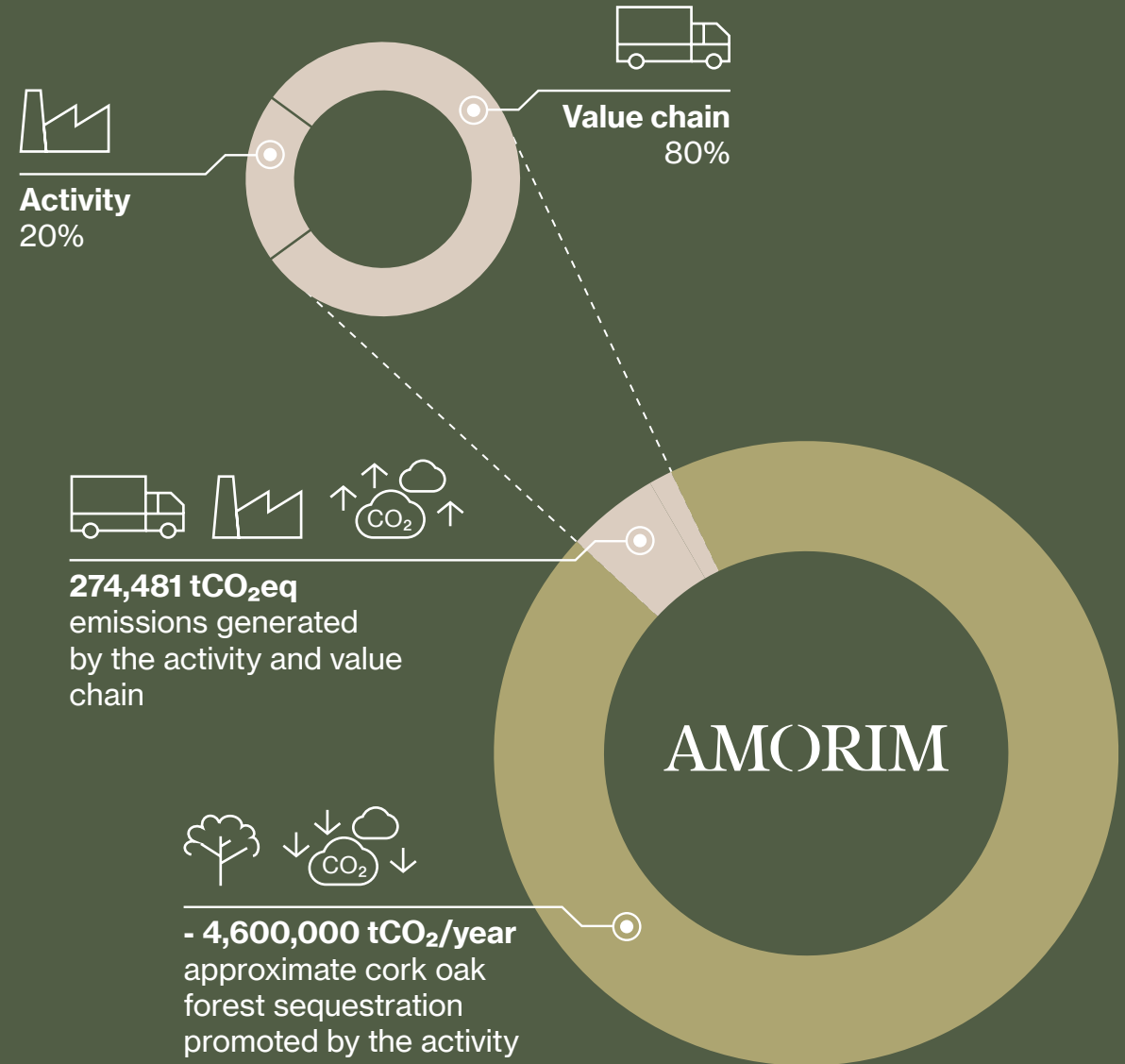
80%
emissions associated with the value chain

Scope 3 of GHG Protocol All Other Indirect Emissions from activities of the organisation, occurring from sources that they do not own or control, both upstream and downstream. These are usually the greatest share of the carbon footprint, covering emissions associated with business travel, procurement.

20%
emissions generated by the activity

Scope 1 of GHG Protocol All Direct Emissions from the activities of an organisation. Including fuel combustion on site such as gas boilers, fleet vehicles and air-conditioning leaks.

Scope 2 of GHG Protocol Indirect Emissions from electricity purchased and used by the organisation. Emissions are created during energy production and eventually used by the organisation.



Bringing nature back into play
through Circular Economy

Applying Circular Economy

Amorim is committed to in applying the principles of circular economy and implement an integrated production process that allows and promotes the reuse of all byproducts associated with cork processing. Our commitment with sustainability goes a long way. So, using a natural and renewable material is only the beginning.

- Valuing byproducts from production of cork stoppers
- Integrated production process that promotes the reuse of all sub-products associated with cork processing
- Extending the life of materials through industrial symbiosis
- Reducing the generation of waste and increasing valorization (non-cork)
- Giving a new life to cork stoppers at the end of the life-cycle



Bringing nature back into play
through Circular Economy

100% use of cork

Based in the driving motto “Nothing is wasted, everything is transformed”, we value 100% of our raw material.



736

tons of recycled cork



90%

non-cork waste recovery
rate



>85%

consumed materials from
renewable sources



>60%

of energy from biomass
(cork dust)



Bringing nature back into play
through Circular Economy

Corkeen adopts the principles of circular economy

We give materials a new life by creating new products while taking care of the planet.

To produce Corkeen, we guarantee full use of all raw materials, ensuring that, just as in Nature, nothing is lost and everything is transformed.

Even the smallest cork granules are used as a valuable energy source.

At Amorim, more than 60% of the energy used in the production of its products derives from using biomass (cork dust), which is a CO₂ neutral source of energy.

Raw materials / Industrial symbiosis



Bringing nature back into play
through Sustainability

Amorim's Sustainability Initiatives

A key concern throughout Amorim's history has been to achieve an impact on society in general and foster a balanced society through active long-term participation.

Amorim encourages the recycling of cork stoppers through the implementation of various programmes and voluntary initiatives in local communities and contributes to reforestation initiatives in Portugal by planting native trees.



> 1,200,000

native trees planted in
partnership since 2008

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1,828

students involved in environment
education actions



> 97,000,000

collected cork stoppers



Bringing nature back into play through Sustainability

Amorim adopts sustainable development practices. Amorim Cork Composites (ACC) is certified both by the Forest Stewardship Council® (FSC) chain of custody certification and certification issued by the Programme for the Endorsement of Forest Certification Schemes (PEFC).

ACC holds a range of system management certificates, including NP EN ISO 9001 (Quality Management System), NP EN ISO 14001 (Environmental Management System), NP EN ISO 45001 (Occupational Health and Safety Management System) and NP EN ISO 50001 (Energy Management System).



The mark of
responsible forestry





Corkeen: a sustainable solution

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Bringing nature into play

Bringing nature back into play
through Sustainability

Corkeen, a playground with a Purpose

Children deserve a better, safer and healthier planet. This starts with a better, safer and healthier way to play.

In tune with nature, creating communities and respecting the planet.

Corkeen is the revolutionary surfacing system for playgrounds that brings nature into contemporary playgrounds and a breath of fresh air to the way we play.

A new sense of communion, positivity and hope for the future.

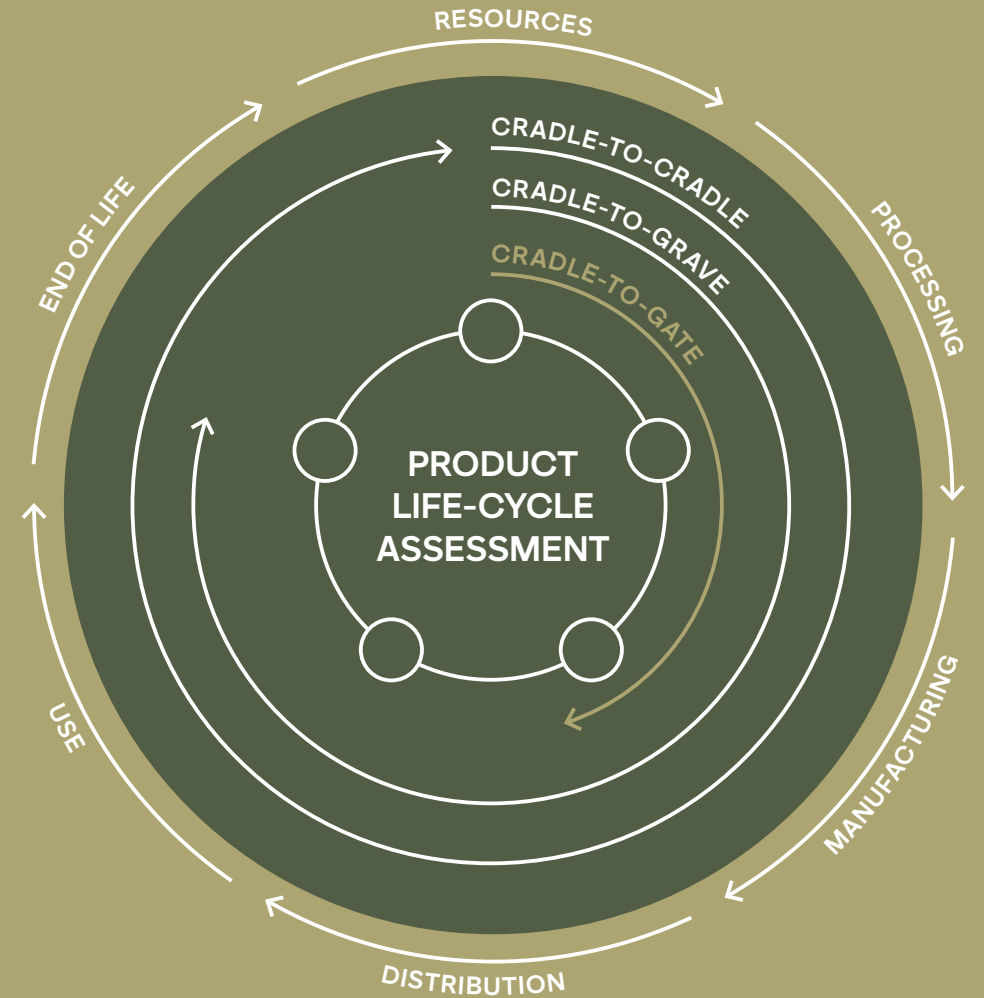


Life Cycle Assessment: measuring Corkeen's environmental impact

A Life Cycle Assessment (LCA) was conducted by EY to quantify the potential environmental impacts of the Corkeen system.

Corkeen's LCA study used a cradle-to-gate approach, which considers all activities, from extraction of the raw material to the finished product at the factory gate. It also included the distribution and installation stages, since Corkeen is an *in situ* system and its layers are only assembled during installation.

This Life Cycle Assessment was based on the ISO 14040/44 set of standards, complemented with the guidelines from the International Reference Life Cycle Data System (ILCD).



Bringing nature back into play
through Sustainability

The Corkeen system has a negative carbon balance

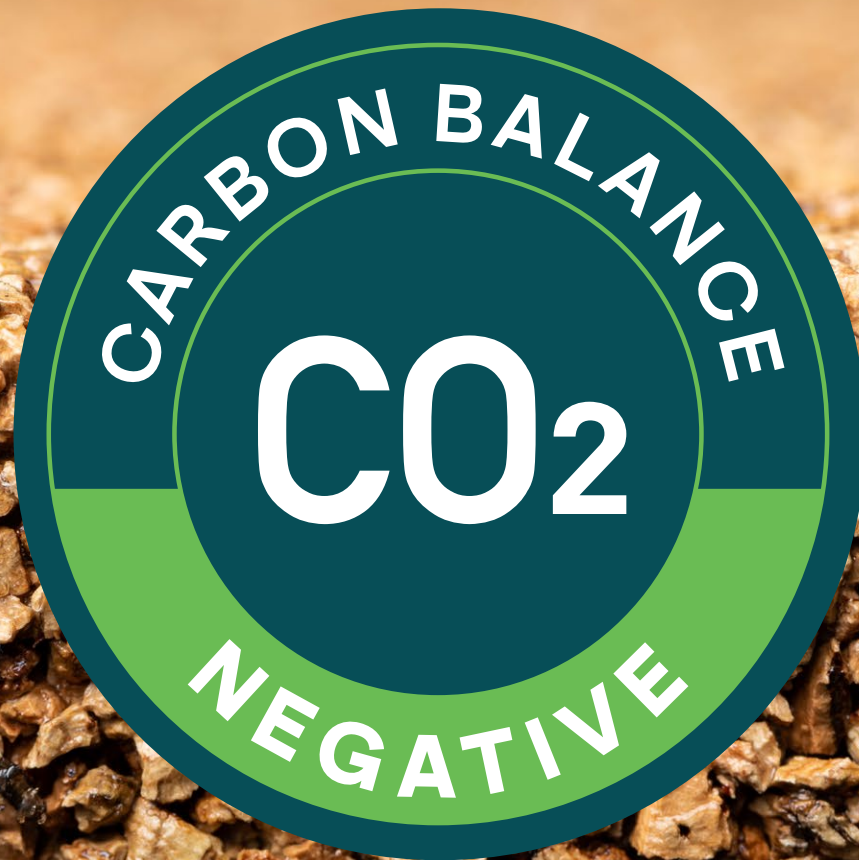
Corkeen has a negative carbon balance when considering the carbon sequestration of cork oak forests and production-related emissions.

The Corkeen system fosters carbon sequestration in the cork oak forest that exceeds the CO₂ emissions from its production process.

Corkeen's carbon balance reaches up to -102 kg CO₂eq/m²*.

*In a 40 mm thickness, 25 mm base layer and 15 mm top layer

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-102 kg CO₂eq/m²



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Thank you!