

# Amorim Wise Inspire 700 HRT carbon footprint

Amorim Cork Flooring

July 2020

## Disclaimer

EY carbon footprint analysis follows a life-cycle approach based on ISO Standard 14040 and is based on Amorim Cork Flooring data and business assumptions. The results presented are not third-party verified.

# Agenda

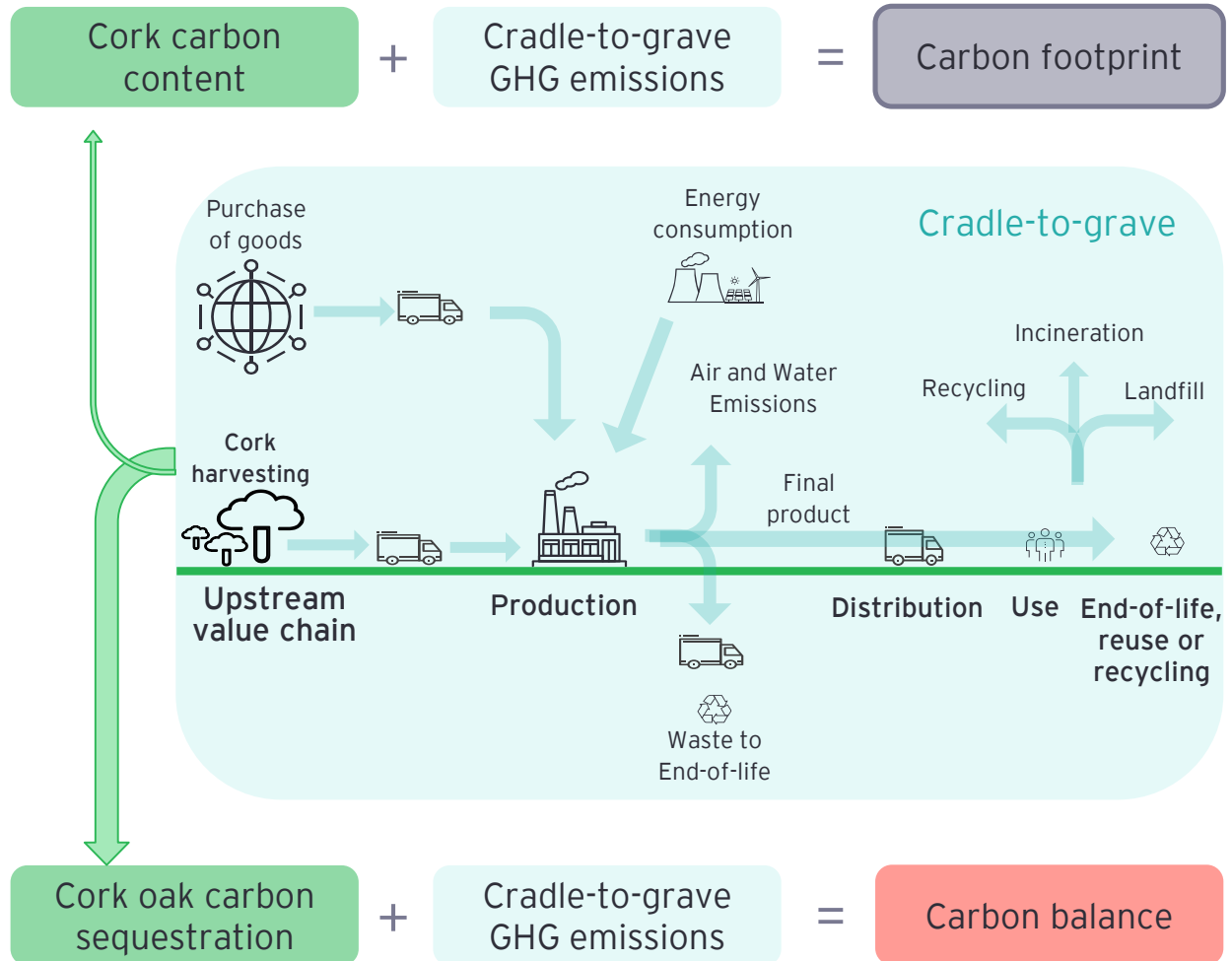
## 1. About the study

## 2. Carbon footprint

Cradle-to-gate  
Cradle-to-grave

## 3. Carbon balance

Scenario analysis with carbon sequestration at the forest stage

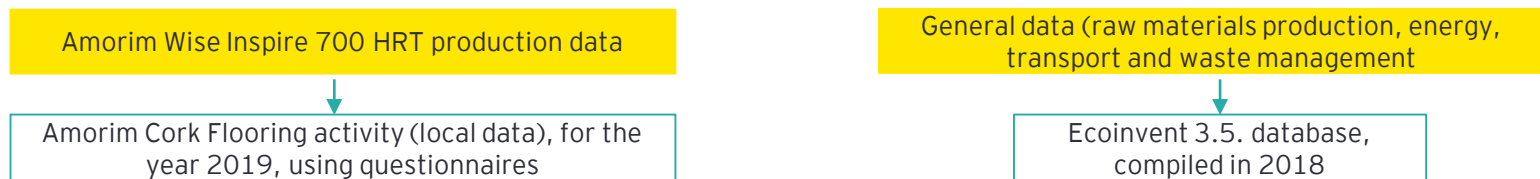


# 1

## About the study

# About the study

- ▶ The **main purpose** is to quantify the potential environmental impacts of Amorim Wise Inspire 700 HRT (average specific weight: 7,67 kg/m<sup>2</sup>; thickness: 7 mm; average composition: 22% cork, 56% recycled HDPE, 6% HDPE, 16% other materials and customization products) produced by Amorim Cork Flooring, through a life cycle approach
- ▶ **Guidelines:** The study was based on ISO 14040/44 series of standards, complemented with the guidelines from the International Reference Life Cycle Data System (ILCD) Handbook - General guide for Life Cycle Assessment - Detailed guidance
- ▶ **Approach:** *cradle-to-grave* (from raw material extraction to the product end of life)
- ▶ **Functional unit :** 1 m<sup>2</sup> of product
- ▶ **Modelling software and database :** SimaPro 9 with ecoinvent 3.5 database
- ▶ **Method :** Midpoint characterization factors recommended by the International Reference Life Cycle Data System (ILCD)
- ▶ **Data collection procedure**

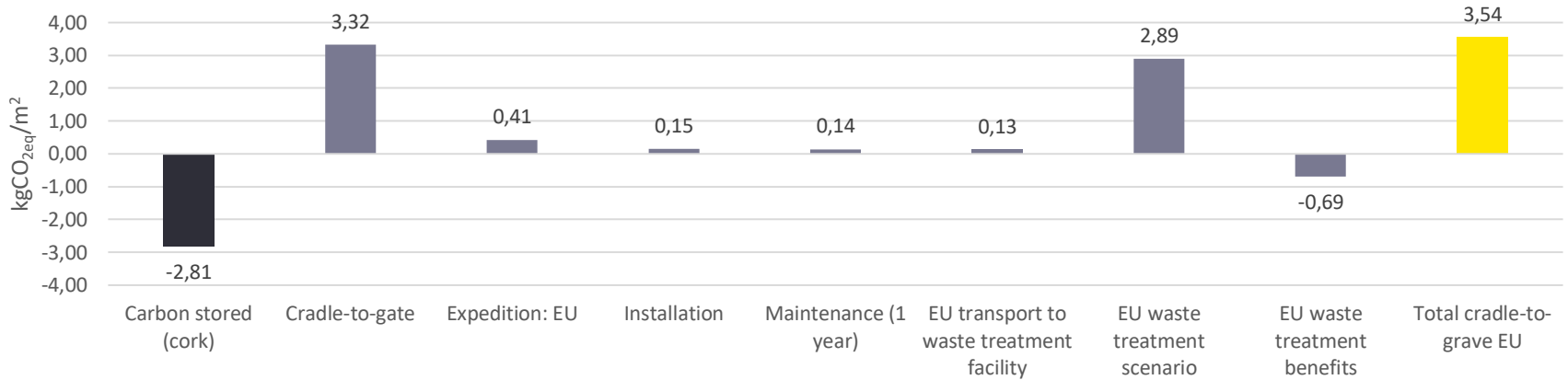


- ▶ Carbon stored in the final product is included
- ▶ Additional scenario analysis of the potential carbon sequestration at the forest stage

# 2

## Carbon footprint

# Carbon footprint : results



- ▶ Product destination: European market
- ▶ End-of-life mix scenario (70% landfill; 10% incineration; 20% recycling)
- ▶ ILCD accounts for GHG emissions and removals from Fossil, Biogenic and Land Transformation sources.

## Amorim Wise Inspire 700 HRT carbon footprint:

- ▶ Cradle to gate: **+0,51** kg CO<sub>2eq</sub> /m<sup>2</sup>
- ▶ Cradle to grave: **+3,54** kg CO<sub>2eq</sub> /m<sup>2</sup>

# 3

## Carbon balance



# Carbon balance: results

## Scenario analysis with carbon sequestration in the cork oak montado

For Amorim Wise Inspire 700 HRT when considering carbon sequestration in the cork oak\* montado:

There is a forest storage up to:

**- 108**  
kg CO<sub>2</sub>/m<sup>2</sup>

Therefore, the carbon balance reaches up to

**-101**  
kg CO<sub>2</sub>/m<sup>2</sup>



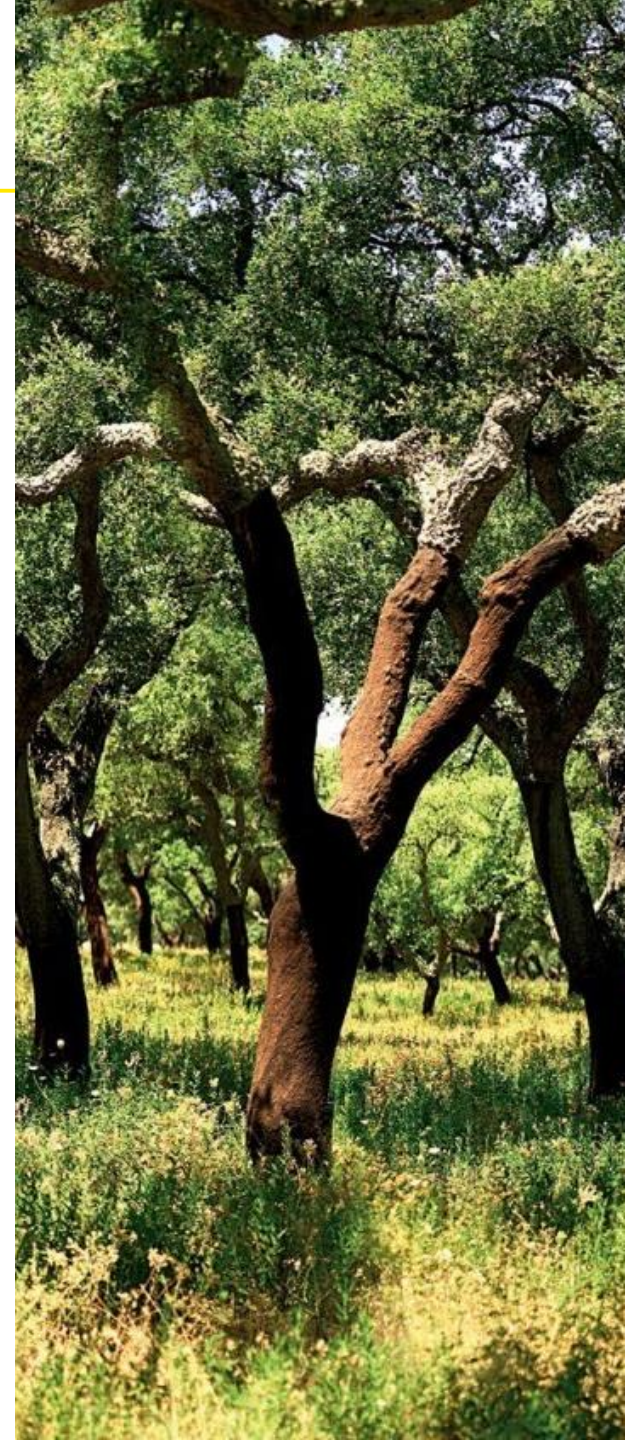
### scenario analysis based on well-managed cork oak montado

**73 t CO<sub>2</sub>/t cork**

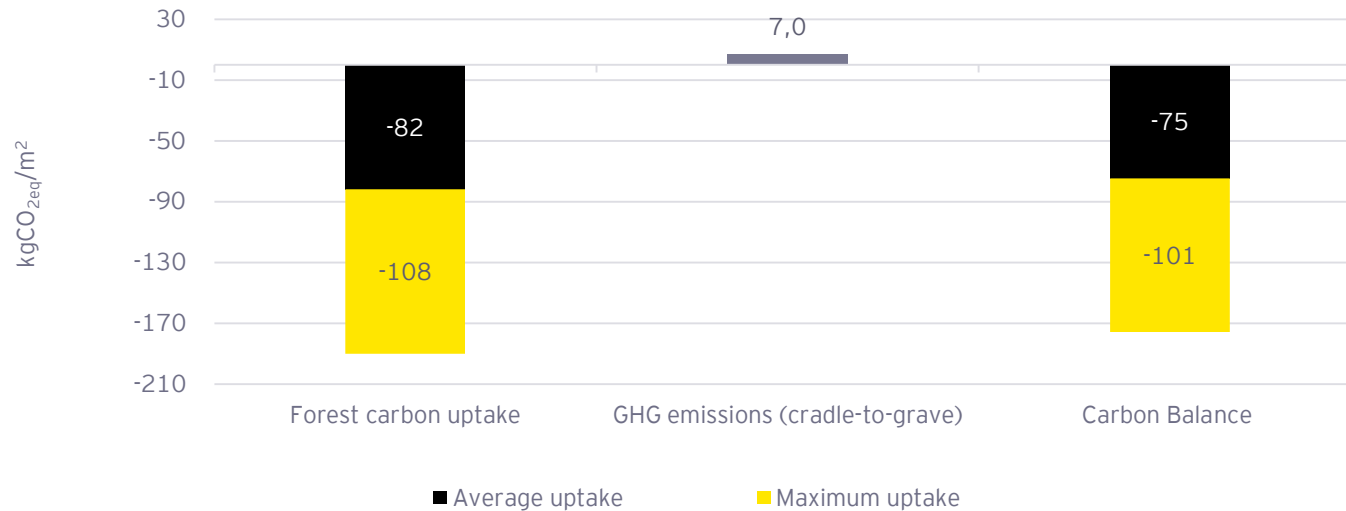
Maximum ecosystem CO<sub>2</sub> uptake registered (14,7 tCO<sub>2</sub>/ha) (Costa-e-Silva et al., 2015).

with the average ecosystem CO<sub>2</sub> uptake being - 55 t CO<sub>2</sub>/t cork, considering wet and dry years in well managed forests (11 t CO<sub>2</sub>/ha).<sup>1</sup>

<sup>1</sup> figures used in "The value of cork oak montado ecosystem services, EY 2019"



# Carbon balance: results



Carbon balance reaches up to:

**-101** kg CO<sub>2eq</sub>/m<sup>2</sup>

## Considering:

- ▶ Maximum ecosystem CO<sub>2</sub> uptake capacity registered in a well managed cork oak montado in weight-based perspective
- ▶ Cradle-to-grave GHG emissions, thus excluding carbon stored and potential future benefits beyond the system boundary.
- ▶ Destination: EU scenario
- ▶ End-of-life mix scenario (70% landfill; 10% incineration; 20% recycling)
- ▶ 1-year maintenance (for 20 year reference service life adds approx. +2 kgCO<sub>2</sub>/m<sup>2</sup> in GHG emissions)

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