

5154 Evolution carbon footprint

Amorim Cork Composites

July 2020

Disclaimer

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

Agenda

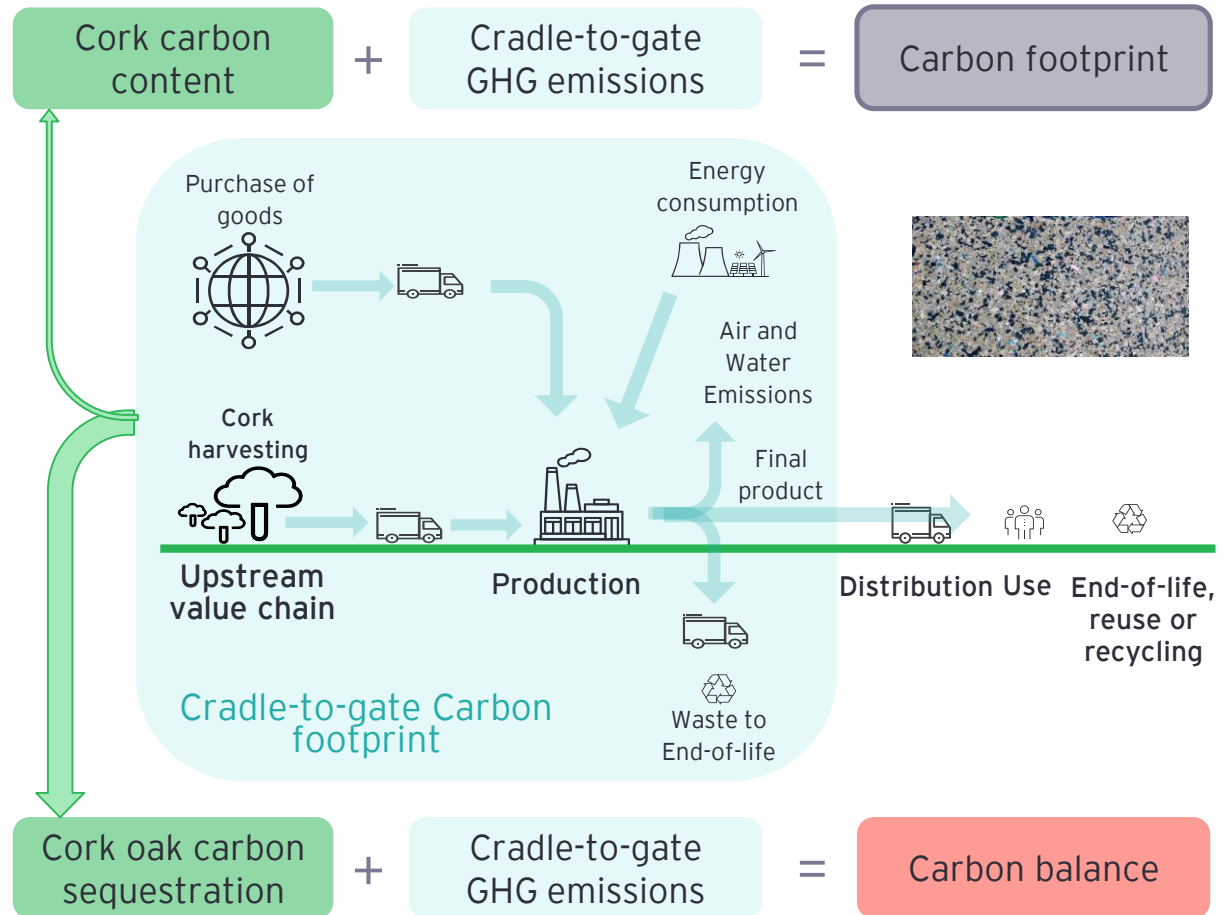
1. About the study

2. Carbon footprint

Cradle-to-gate

3. Carbon balance

Scenario analysis with carbon sequestration at the forest stage



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About the study

About the study

- ▶ The **main purpose** is to quantify the potential environmental impacts of 5154 Evolution, produced by Amorim Cork Composites, 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-gate* (from raw material extraction to the finished product at the factory gate)
- ▶ **Functional unit** : 1 m² 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**

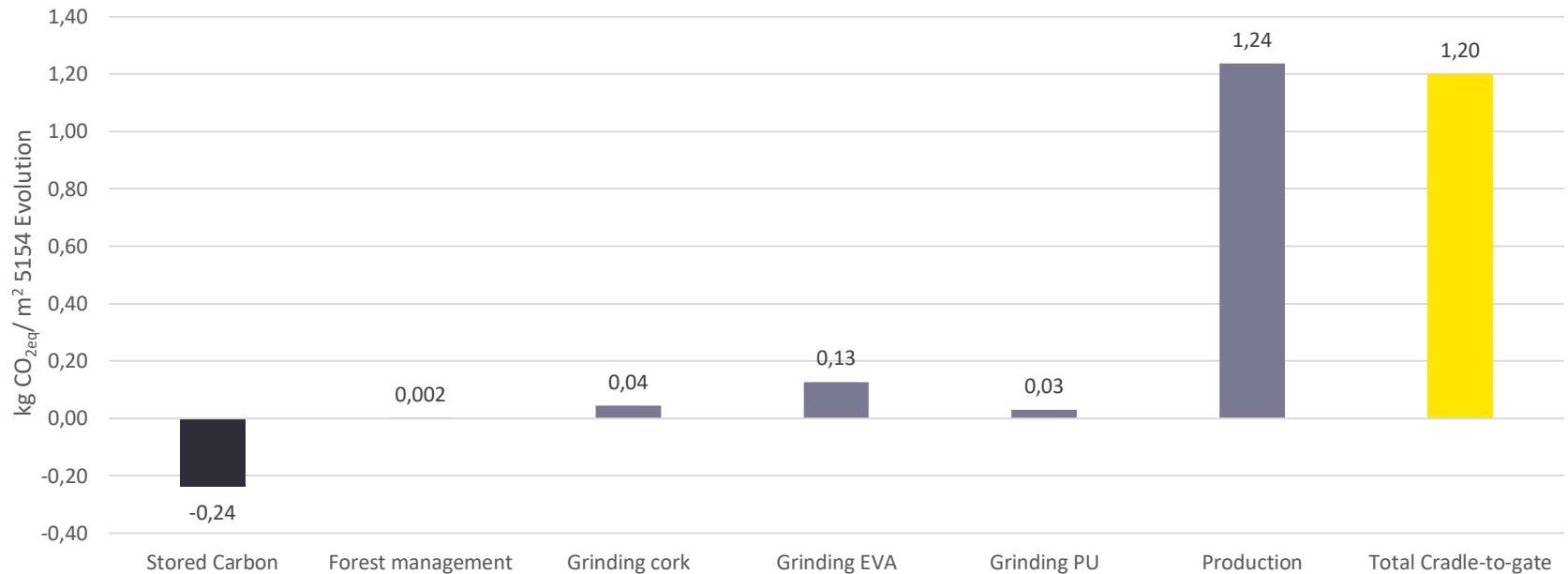


- ▶ Carbon stored in the final product is included
- ▶ Additional scenario analysis of the potential carbon sequestration at the forest stage

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Carbon footprint

Carbon footprint: results



5154 Evolution carbon footprint:

- ▶ Cradle to gate: **+1,20** kg CO_{2eq}/m²
- ▶ Carbon stored in cork : **-0,24** kg CO₂/m²
- ▶ GHG emissions: **+ 1,44** kg CO_{2eq}/m²

3

Carbon balance

Carbon balance: results

Scenario analysis with carbon sequestration in the cork oak montado

For 5154 Evolution when considering carbon sequestration in the cork oak* montado:

There is a forest storage up to:

- **9,6** kg CO₂/m²

Therefore, the carbon balance reaches up to

-**8,2**
kg CO₂/m²



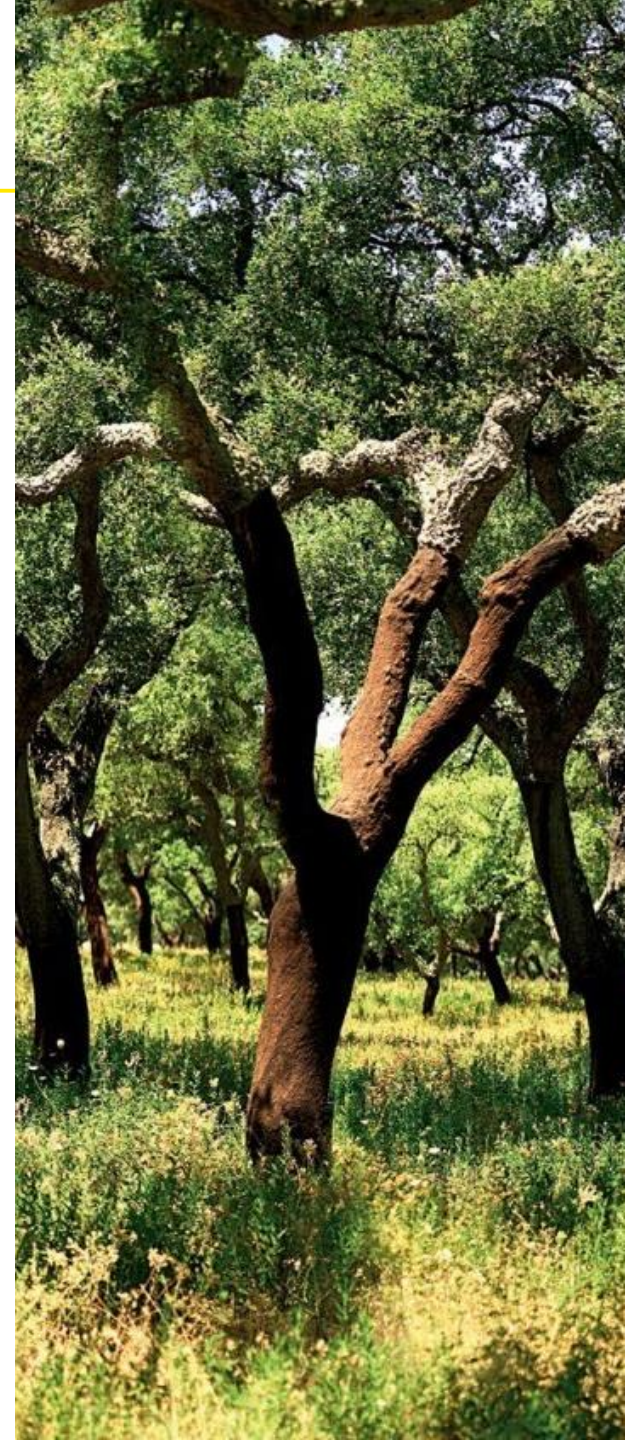
scenario analysis based on well-managed cork oak montado

- **73 t CO₂/t cork**

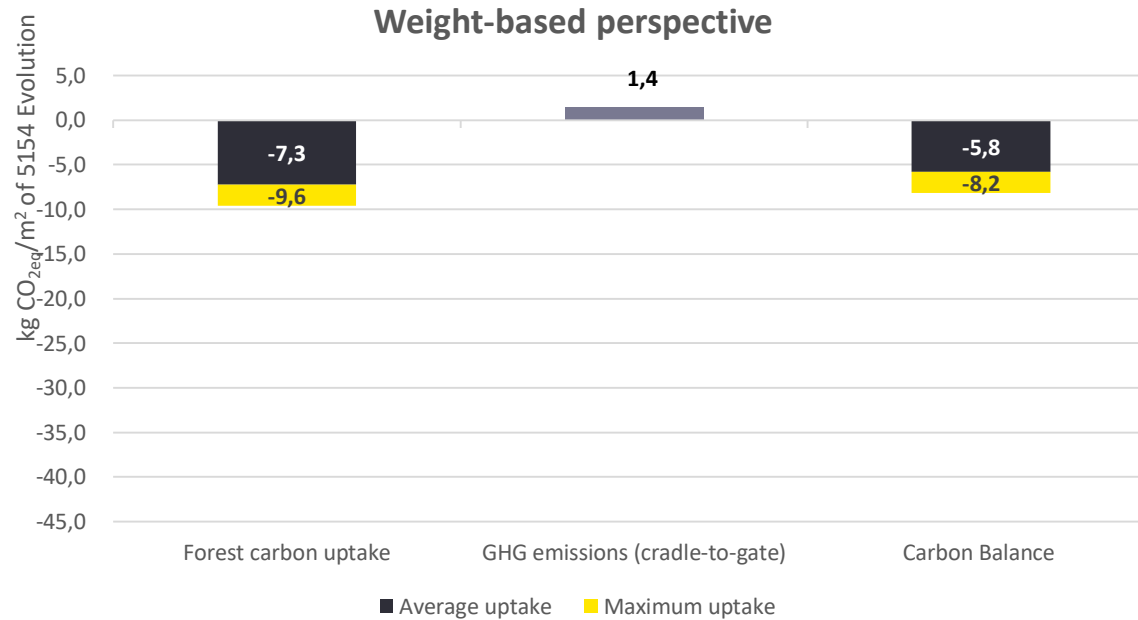
Maximum ecosystem CO₂ uptake registered (14,7 tCO₂/ha) (Costa-e-Silva et al., 2015).

with the average ecosystem CO₂ uptake being - 55 t CO₂/t cork, considering wet and dry years in well managed forests (11 t CO₂/ha).¹

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



Carbon balance: results



Carbon balance reaches up to:

-8,2 kg CO_{2eq}/m²

considering maximum ecosystem CO₂ uptake registered in a well managed cork oak montado **-73 t CO₂/t cork**

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