

Webinar Connecting Energy, Nature & People  
22 April 2026

# NATURAL CAPITAL VALUATION

## REN - Redes Energéticas Nacionais

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REN  NBI

Natural Business Intelligence



## National Electricity Transport Network

REN is responsible for the transmission of electricity in Portugal and operates the Portuguese National Transmission Grid

**9 895 km**

length of lines 2025



## National Gas Transport Network

REN Gasodutos is the entity responsible for operating the Portuguese National Gas Transmission Network

**1 375 km**

network gas pipelines 2025



**Natural Capital Valuation**



**Ecological Due Diligence**



**Nature Positive Strategies, Regulation & Disclosure**



**Nature Finance & Credits**



**Restoration Programmes**



**Training & Thought Leadership**

# NBI

Natural Business Intelligence



*FROM BUSINESS AS USUAL TO BUSINESS AS NATURAL*

# Overall Approach<sup>1</sup>

## Scoping

*What are the REN's activities where there are likely to be material nature-related dependencies and impacts?  
What are the resource considerations and time allocations required and agreed for undertaking an assessment?*

## Locate

*The interface with nature, biodiversity, and with sensitive locations (remote and in-situ)*

## Evaluate

*Measure the scale and scope of positive impacts on environmental assets and ecosystem services*

## Assess

*Opportunities and risk mitigation for natural capital management*

## Prepare

*Strategy and management plan for natural capital*

<sup>1</sup>Inspired by and adapted from the LEAP approach, from Taskforce on Nature-related Financial Disclosures (TNFD).

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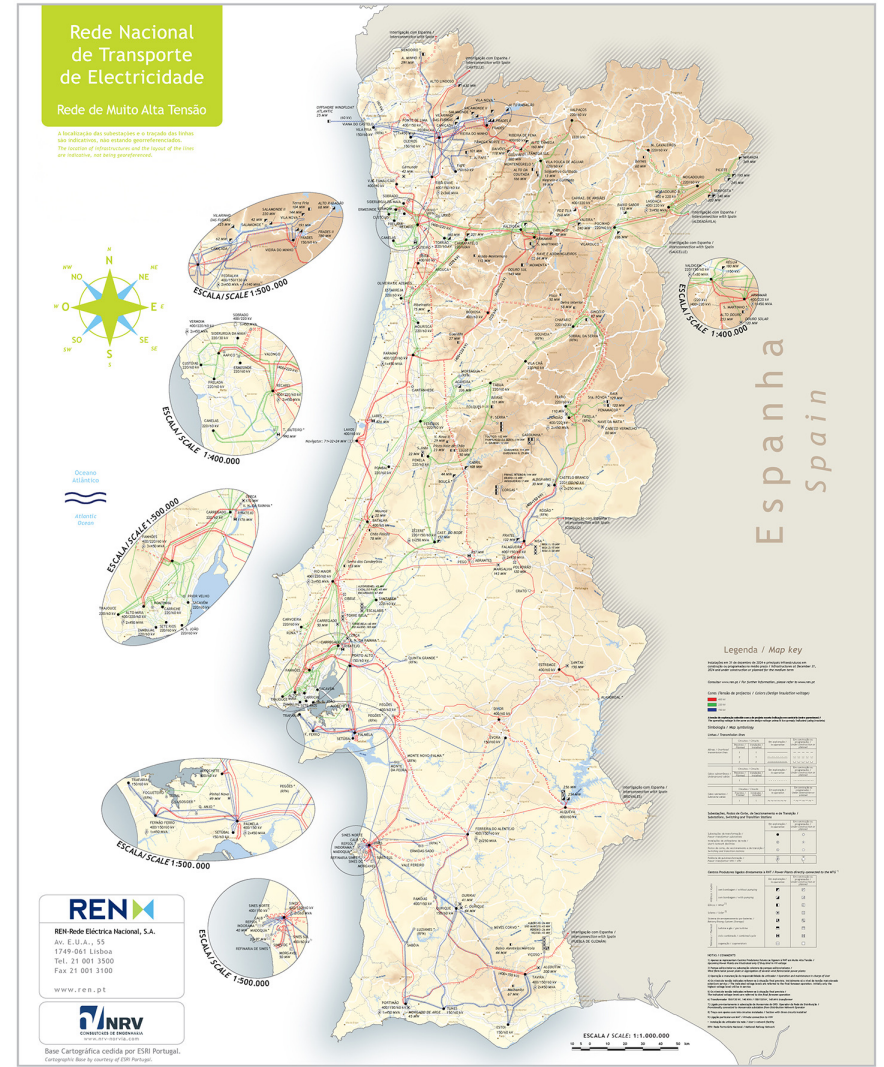
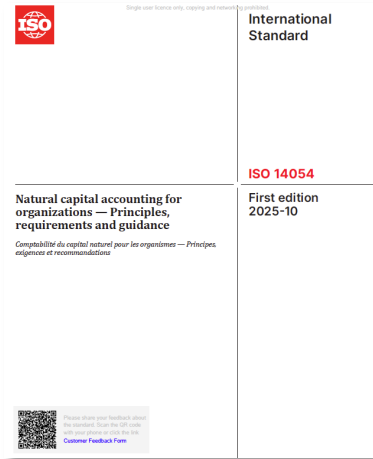
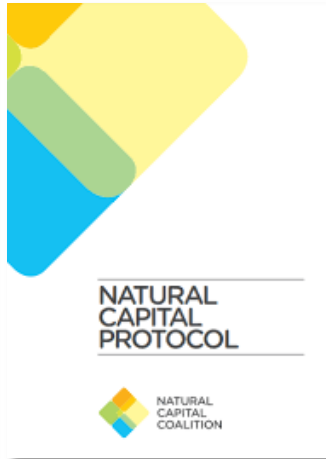
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# (E)valuate REN's Natural Capital



## Key Challenge!

Identify and measure the societal benefits resulting from REN's positive impacts on natural capital



# Approach to Natural Capital Valuation

## Purpose

*What are the reasons to conduct a natural capital valuation?*

## Scope

*Define the boundaries of the assessment, including: Which interested parties to involve? What value perspective and type of interactions? Which value chain level? Which level of analysis? What geographical context and temporal horizon?*

## Prepare

*Define the causal links between impacts and ecosystem benefits - from impact pathways (actions) and baselines/references, to changes in ecosystems, their services and benefits (outcome) for which beneficiaries. Doing so allows one to understand the necessary data sources and methods and to prioritize*

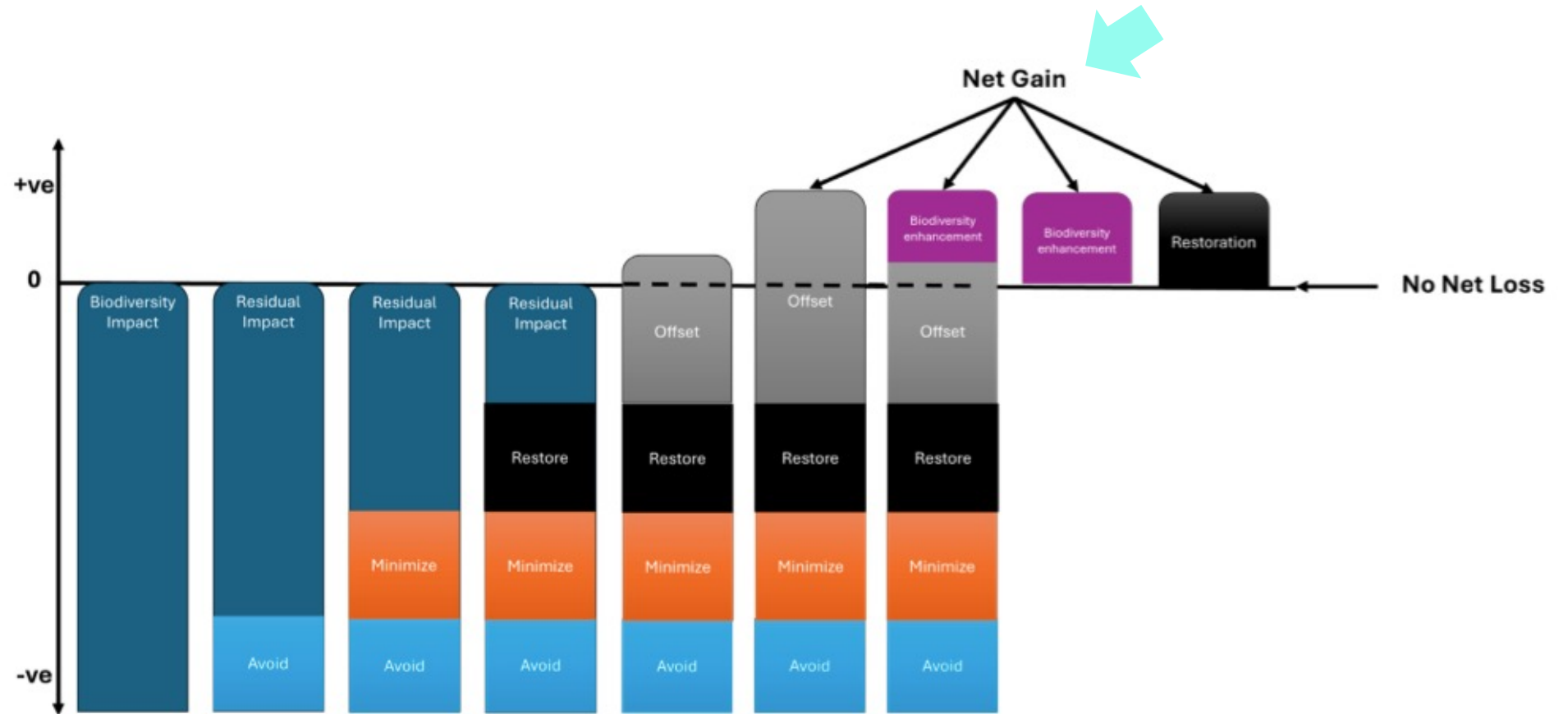
## Measure

*Measure changes in ecosystem services caused by one's actions; measure changes in the benefits generated by these services; recognise the strengths and limitations of the measurement in relation to the purpose.*

## Communicate

*All data, models, uncertainties and assumptions are clearly documented to allow for proper interpretation of the results.*

# Approach to REN's Natural Capital Valuation



Environmental Impact Assessment (EIA)

Mitigation hierarchy scheme from GINGR White Paper: Road Map for Biodiversity Net Gain in the Offshore Renewables Sector (by Aonghais Cook & Ben Jobson, March 2026).

# Case Study: REN's Ermelo Plantations



REN Commitment

Axis 2 – Promotion and Restoration of Biodiversity  
Promoting the value of biodiversity in company infrastructure

Mitigation Hierarchy

Biodiversity enhancement

Initial Situation

Vegetation removal, tendency to bare land

Action (impact driver)

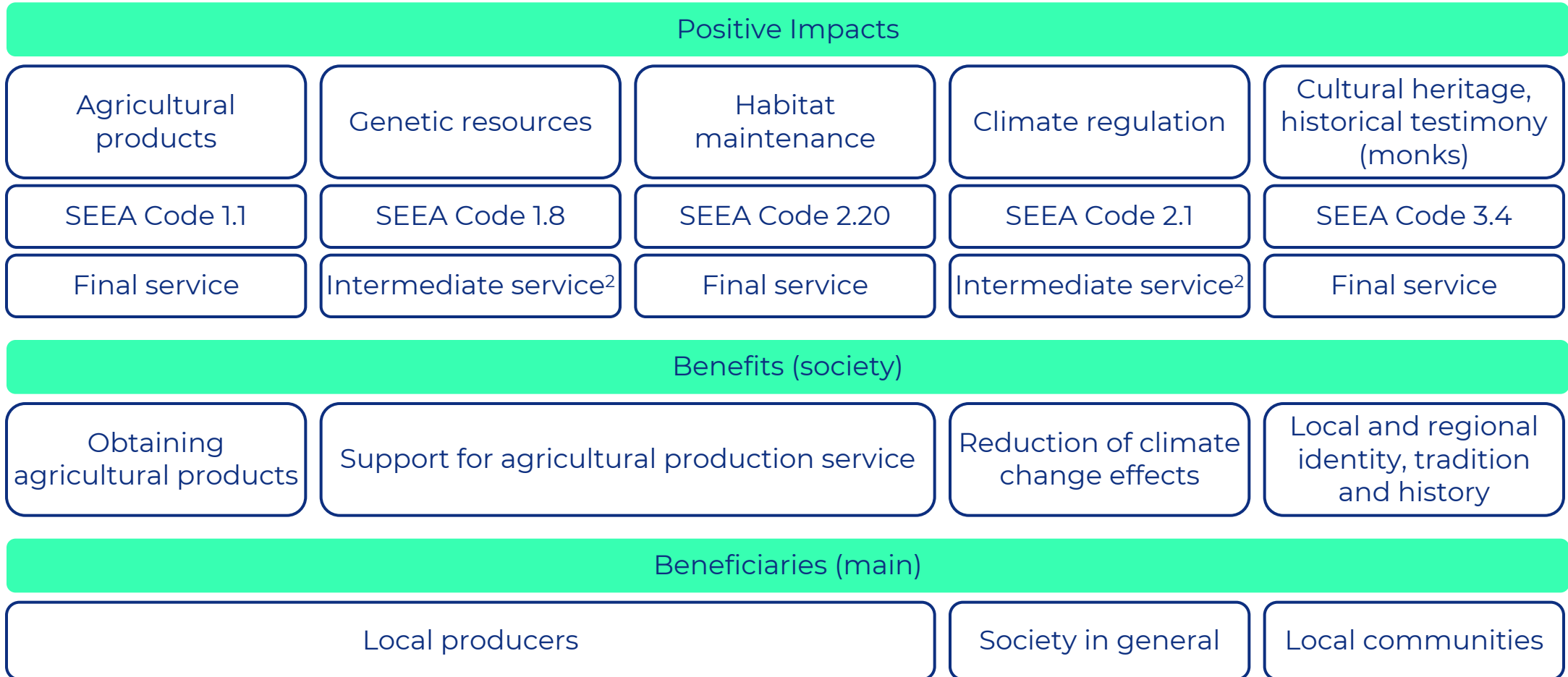
Planting of Ermelo Orange Trees along the Energy Transmission Line corridor in Arcos de Valdevez

Results (of the action)

Nº of orange trees planted: 1,350 (3 ha, in 2024)  
Survival rate = 100% (in 2025)

# Case Study: REN's Ermelo Plantations

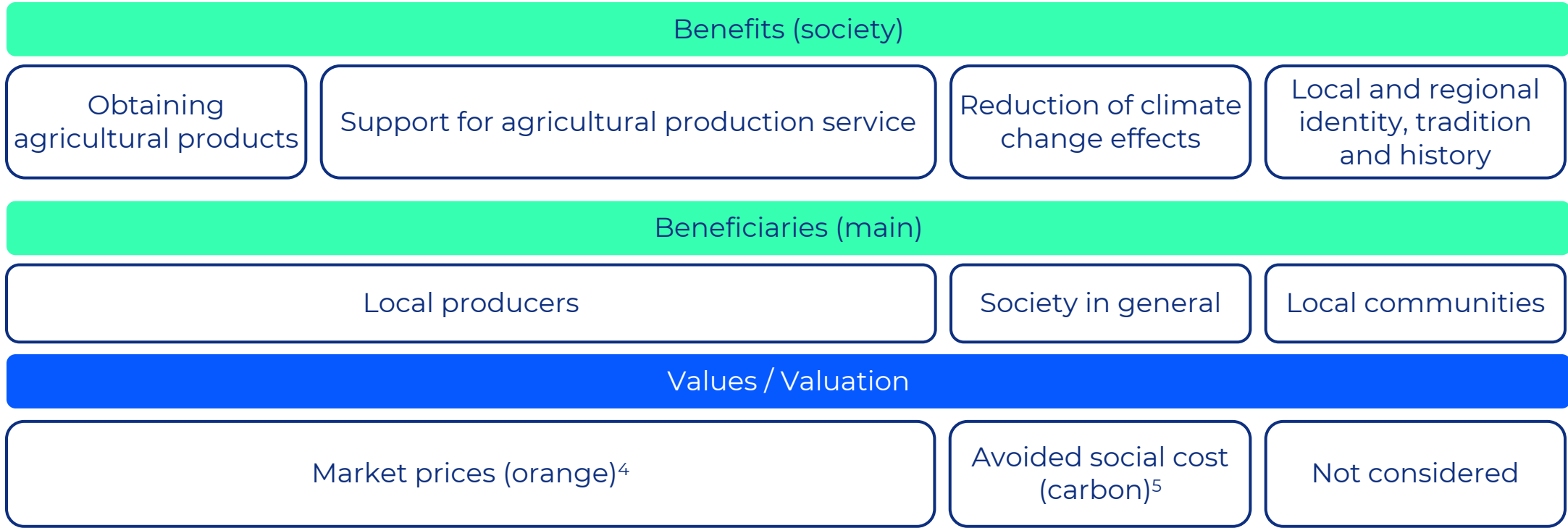
*Figures shown are prone to change and should not be interpreted as final*



<sup>2</sup>Following SEEA-EA.

# Case Study: REN's Ermelo Plantations

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Potential revenue generated:  
**40 500 EUR/year**

Average social value of sequestered carbon:  
**691 Eur/year (NPV)**

**Robustness level:  
MEDIUM - HIGH**

Main assumptions:  
<sup>4</sup>production per tree of 100 kg/year; 50% of production assumed to reach market; producer selling price 0.6 EUR/kg (net result); longevity of a tree between 40-100 years (exceptionally beyond)  
<sup>5</sup>carbon sequestration per hectare of orchard 0.79 ton/CO<sub>2</sub>/year (year 1) and 0.01 ton/CO<sub>2</sub>/year (year 20); assumes a total of 3 ha planted persist for at least 20 years; shadow cost of carbon ranges from 165 EUR/ton (2025) to 614 EUR/ton (2044, NPV 2025, 3% discount rate); carbon sequestration tends to zero after 20 years longevity



# Thank you

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