



Kindly hosted by
Representation of the Free State of Bavaria
to the European Union



6th Forest Innovation Workshop

NEWTON CREDIT FOR AGROFORESTRY

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Dates: 11-12 February 2025 | Location: Representation of the Free State of Bavaria to the European Union, Rue Wiertz 77, 1000 Brussels



<http://www.forestinnovation.eu/>



(Helgason et al., 1998)



2018 WORKSHOP
AGROFORESTRY Florence

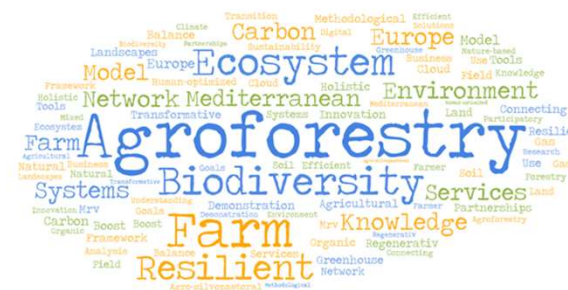
2019



2017 Measure 16.2 NEWTON
Network for agroforestry in Tuscany

2016 Measure 16.1 ISAAC
Agroforestry Systems for Adaptation, Mitigation, and
Combating Climate Change

2015 Measure 16.2 PIF PRO-SMART beef
Sustainable production of beef
in the Tuscan Maremma





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TENUTA DI PAGANICO

IL RINNOVAMENTO AGRICOLO
SOC. COOP. AGRICOLA

Tenuta di Pietratonda
Agriturismo e Attività Sportive
Oasi di Monte Leonini - Tuscany

UNIVERSITÀ DI PISA
Centro di Ricerche Agro-Ambientali
Enrico Avanzi

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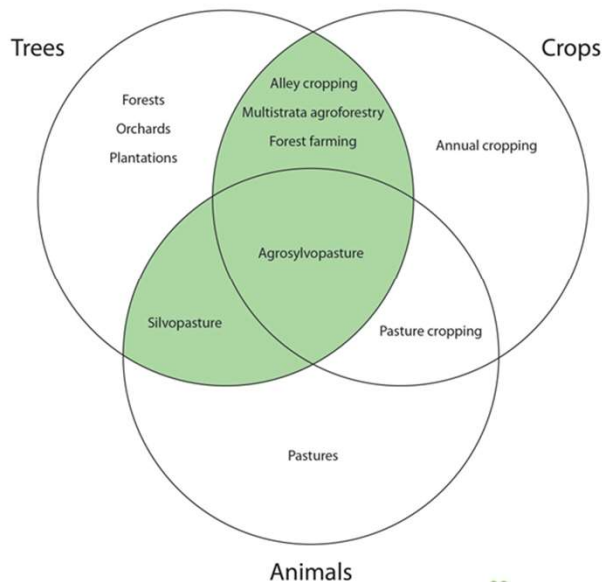
Consiglio Nazionale delle Ricerche

crea
Consiglio per la ricerca in agricoltura e l'analisi dell'economia agraria

NETWork per l'agrosilvicoltura in Toscana

NEWTON

...un progetto con i piedi per terra



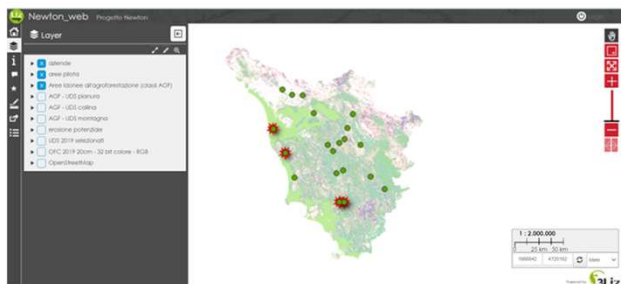
PEFC
PEFC/18-1-1

Promoting Sustainable Forest Management

www.pefc.org




Scuola di Agroforestazione
Sottomisura 1.1 PS GO NEWTON



WP 1 - MANAGEMENT and MONITORING

NETWORK of KNOWLEDGE

NETWORK of INNOVATIONS

WP 2 - Development of regional AF network

WP 5 - Demonstration trial silvoarable system

WP 3 - 1° italian School of AF

WP 5 - Demonstration trial silvopastoral system

WP 4 - Valorization of AF production

WP 5 - Demonstration trial mixed olive farming

WP 6 - Follow-up of demonstration trials

WP 7 - Online platform for knowledge sharing and innovation transfer

WP 8 - Dissemination and outreach



WP 5A
PROVA DIMOSTRATIVA CIRAA
CONFRONTO SISTEMA SILVOARABILE, SRC E PIENO CAMPO - "AGROFORCES"



PROVA DIMOSTRATIVA TDPA
Caratterizzazione di un sistema agro-silvo-pastorale per la produzione di carne bovina di razza maremmana



WP 5D
PROVA DIMOSTRATIVA RINN
Valutazione dell'effetto della presenza dell'olivo sulla produttività di colture leguminose da granella e sulla qualità del sulo (confronto con pieno campo e boschetto 2010)

SOIL

- Grazed forest: animal loads and persistence affect biodiversity support service
- Grazed forest can maintain comparable & higher levels of biological quality and biodiversity than ungrazed forest if properly managed, avoiding excessive compaction
- Long-term agroforestry, based on a proper animal rotation, can support biodiversity and soil ecological equilibrium

FOREST

- Differences in stand vegetation only in the dominated and shrub layers and in natural regeneration, inversely related to grazing intensity
- Dominant tree layer dendrometric and structural parameters showed homogeneous distribution
- Grazing management does not seem to affect tree structure, but it influences consistence and development of regeneration, shrub and dominated layers

ANIMAL

- SP** - Animals exhibit reduced stress levels during summer; - Forest presence decreases pasture depletion; - Forests increase forage availability, (good ADG)
- PA** - Rotational grazing enhances ADG; - Open pastures improve ADG
- System diversification improves microclimate conditions, reducing heat stress, while proper pasture and forest management enhance productivity (ADG)



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Who we are (Programme for the Endorsement of Forest Certification)

PEFC international is a «not-for-profit» NGO, established in 1999; PEFC Italy is one of the 57 members. Forest certification provides a mechanism to promote the sustainable management of our forests and ensures that forest-based products reaching the marketplace have been sourced from sustainably managed forests.

What is PEFC?

PEFC, is a leading global alliance of national forest certification systems. As an international non-profit, non-governmental organization, we are dedicated to promoting sustainable forest management through independent third-party certification.

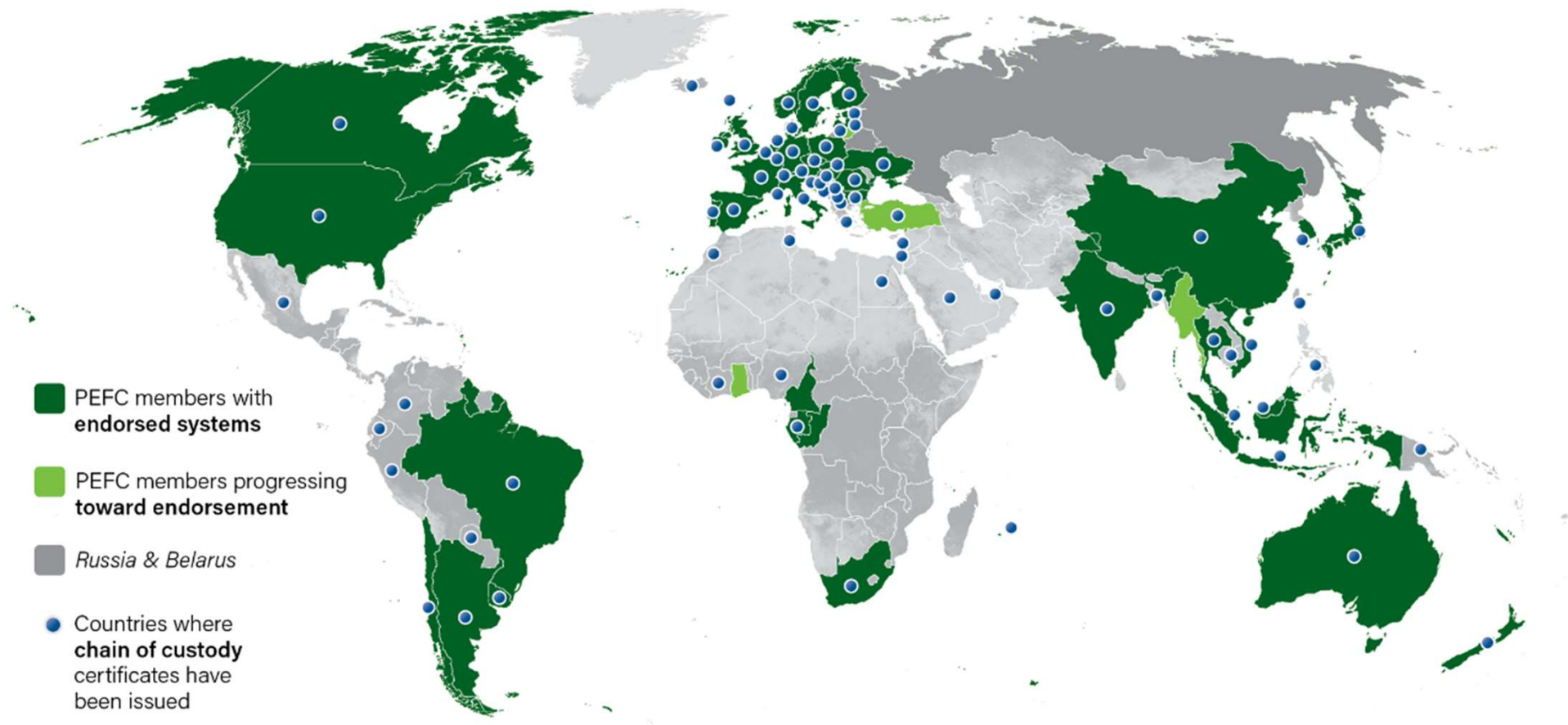
What PEFC Italy do

We promote national certification schemes for forests and “Trees Outside Forests” environment developed through a participatory process that involves various stakeholders and adapted to local priorities and conditions

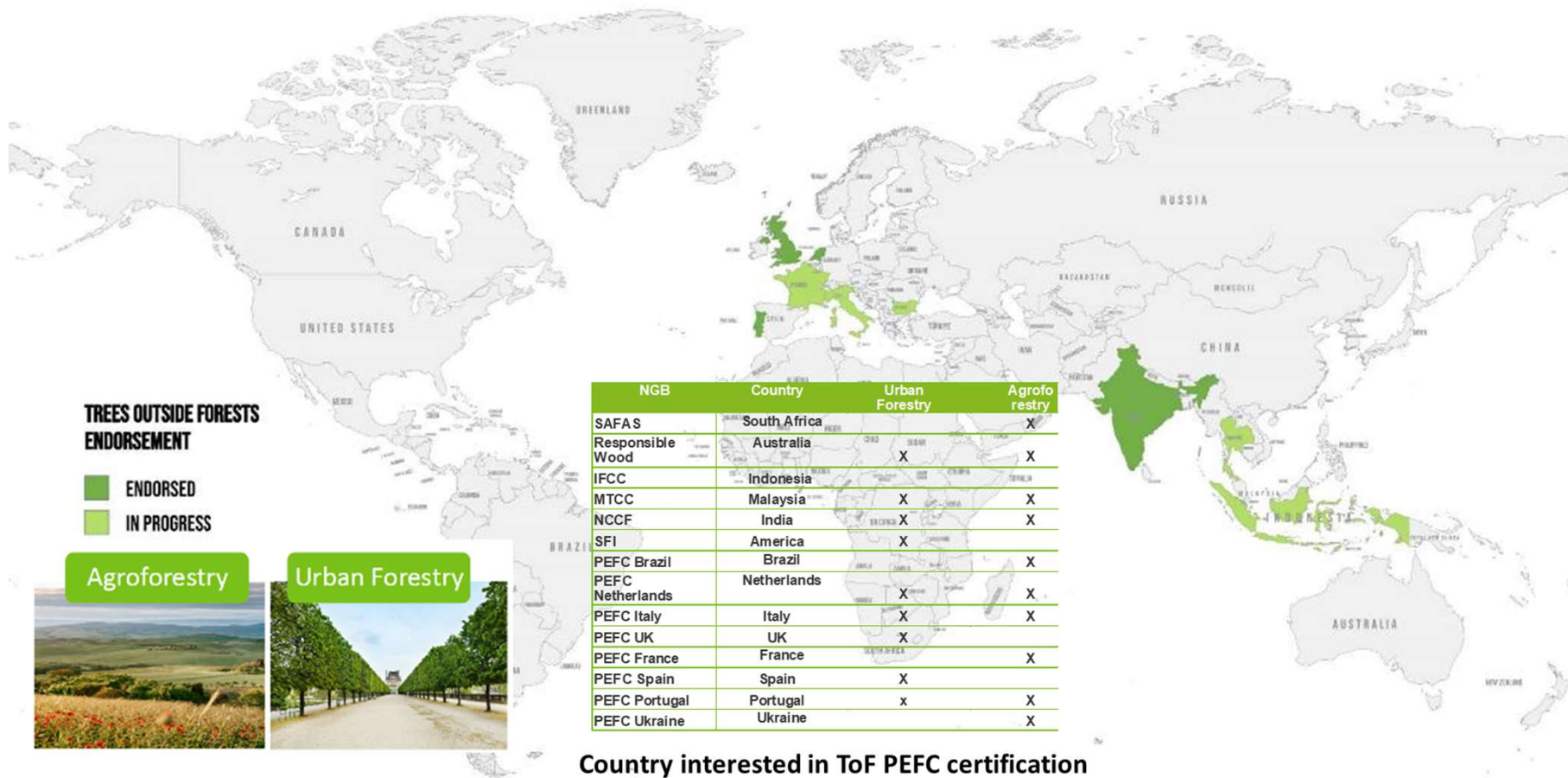
Recently, we develop a specific certification
We are working on TOF Standards regarding standard for Ecosystem Services the sustainable management of:
Urban Green areas and Agroforestry systems



PEFC is the world's largest certification system



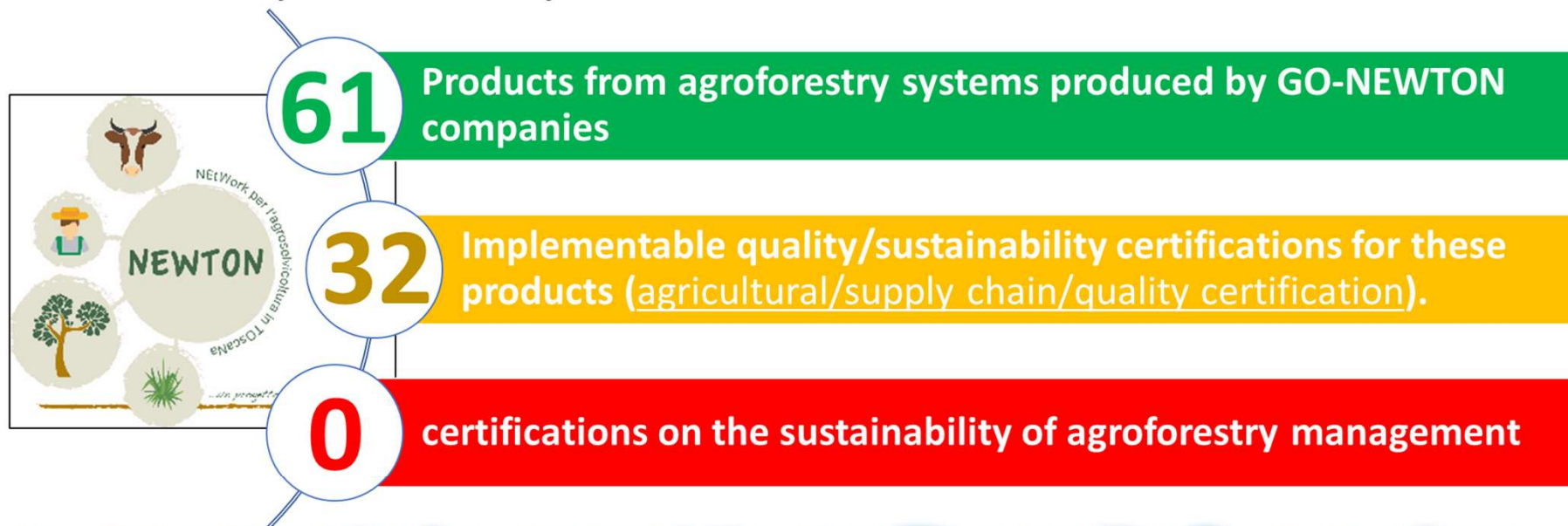
PEFC «TREES Outside FORESTS» CERTIFICATION - PATHWAYS



The term ToF refers to all trees that are grown outside the nationally “designated forestland” (FAO definitions); and includes both intensive and extensive, agriculture or settlement production systems. The application field of the Agroforestry PEFC standard is the **tree component of an agroforestry system and the elements connected to it**



PEFC Italy results by GO-NEWTON



Important to value the role played by forests, but more generally by trees, in mitigating climate change, and adding value to products deriving from sustainably managed agroforestry systems and certified for sustainability, so that the environmental impacts of products from growing and farming in these systems can also be estimated.

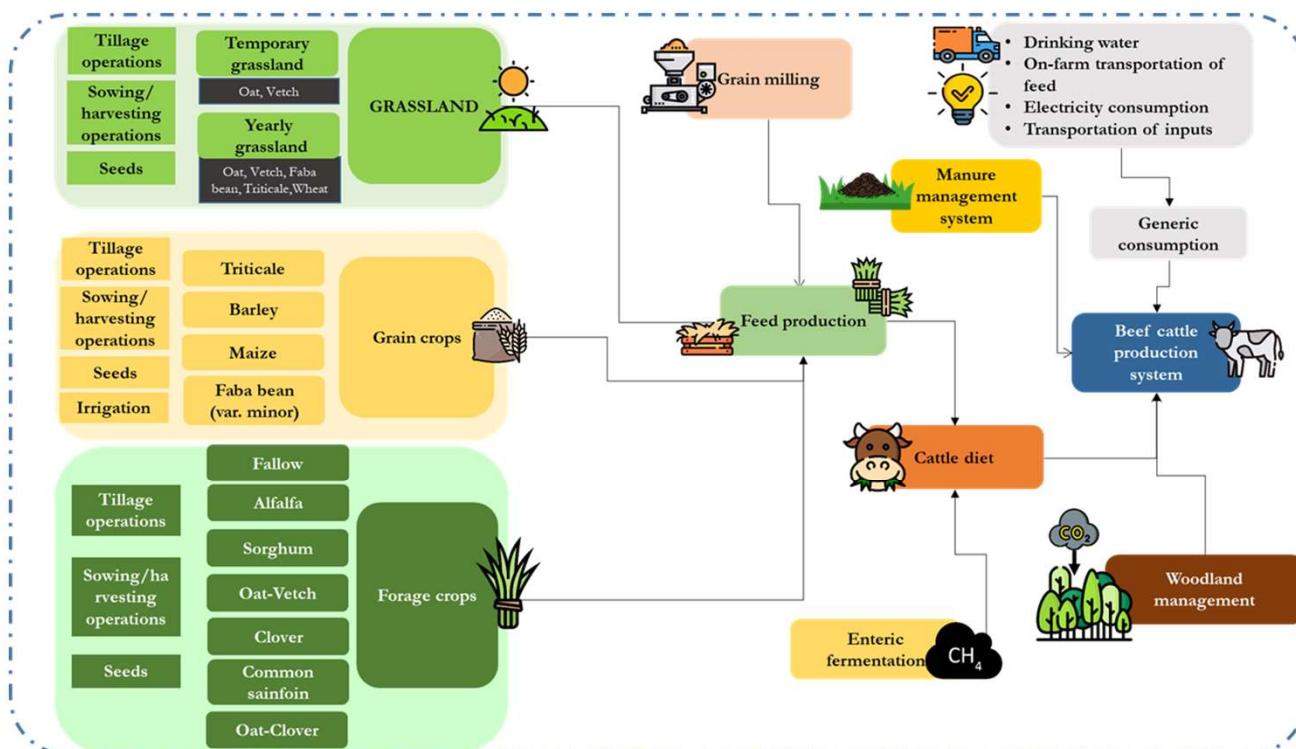
Life Cycle Assessment



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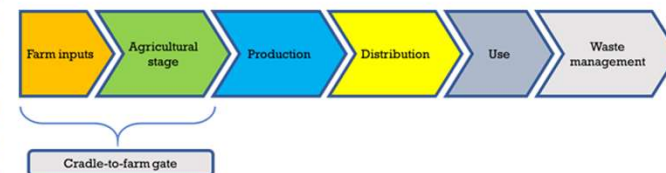


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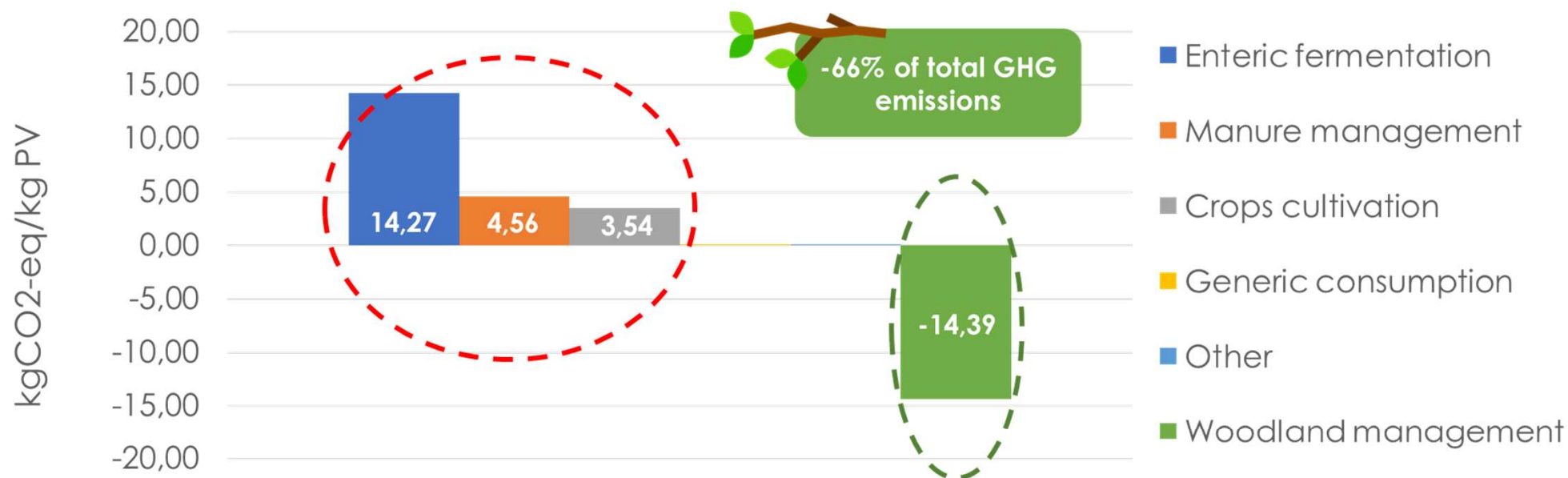
(Tranchina et al., 2020)

Quantitative analytical tool → estimates the environmental impact of a product by considering all steps of the life cycle



- Primary data, gathered through questionnaires and meetings with farmers
- Functional unit: 1 kg of live body weight sold
- The cattle (n= 120) graze on 55 ha of temporary grassland and 570 ha of woodlands
- Almost all feed is produced on-farm using minimal external inputs

Global warming potential (kg CO₂-eq/kg live weight)



2,09 forest / agricultural land and pasture ratio

(Tranchina et al., 2020)

0,15	LSU / ha forest	0,32	LSU / ha UAA	0,95	LSU / ha forage crops	0,10	LSU / ha total
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THANK YOU FOR YOUR ATTENTION

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