

An integrated toolbox for improved verification and prevention of adulterations and non-compliances in organic and geographical indications food supply chain

At a glance

Full Title: An integrated toolbox for improved verification and prevention of adulterations and non-compliances in organic and geographical indications food supply chain

Project ID: 101083579

Funded under: Horizon Europe

Funding scheme: IA –Innovation Action

Duration: 36 months
01 January 2023 – 31 December 2025

Total cost: EUR 4 739 281,75

EU contribution: EUR 3 999 691

Call: HORIZON-CL6-2022-FARM2FORK-01

Topic: HORIZON-CL6-2022-FARM2FORK-01-04

Coordinated by: Institute of Communication & Computer Systems (ICCS)

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Consortium



SINERGISE



Description

THEROS is a Horizon Europe project that brings together a complementary consortium of 17 partners within 6 EU Member States, with the view to implement an integrated toolbox being capable to modernise the process of verifying organic and geographical indications food products and preventing adulterations and non-compliances, through the use of various technological innovations and data sources, while demonstrating enhanced security, transparency and interoperability in the quality labelled food supply chain.

THEROS approach consists of the following elements:

- Low-cost, digital and scalable solutions that rely on Earth Observation, photonics, Internet of Things and DNA authenticity methods being coupled with advanced analytics, machine learning and artificial intelligence in order to ensure efficient detection of fraudulent cases as well as monitoring of associated quality and sustainability elements;
- Blockchain enhanced traceability system and dynamic digital product passport for improved traceability, security and transparent data governance;
- Platforms and algorithms allowing management and harmonisation of heterogenous data as well as their consolidation for the verification and validation of transactions across the supply chain;
- Interfaces to facilitate monitoring and inspections by competent authorities, informed decision making by supply chain actors and policy makers as well as business model driven approaches to support short supply chains of quality labelled food products.

THEROS toolbox components will be extensively evaluated in real life settings through four pilot demonstrations in four different countries (Serbia, Greece, Spain and Czech Republic), while covering diverse requirements, involvement of all relevant actors and different organic/geographical indication food products and fraud/adulteration cases.