

EUROPEAN GREEN DIGITAL COALITION

Supported by the European Commission and Parliament at the EU Council’s request, the EGDC unites companies to use digital solutions for reducing emissions across key sectors.



Funded by
the European Union





QUHOMA is a Smart farming solution which uses IoT sensors and (open-source) software to mitigate the impact of changing weather conditions on crops.
By remotely understanding the agri-environmental conditions of the microclimate in various parcels, the farmer can treat plots differently and optimise according to the current and forecasted weather conditions.

This case study is an ex-post assessment carried out in Sparta, Greece, collecting data for different periods based on the different crop harvesting seasons.

The innovative farm business that adopted this ICT solution is Olea Estates in Sparta Greece, and it voluntarily provided its aggregated farming data as in-kind contribution to this study. The solution delivered a 65% reduction in emissions.

Organisational contribution: Future Intelligence worked to innovate, develop, and deploy the solution. This aligns with A-level classification as defined by ITU-T L.1480 (contribution of the integrated solution or the innovation of the solution).

Quantified impacts:

1 cultivation cycle	-1.05 to -2.52 tCO2e	-484 kgCO2e/cultivation cycle
Assessment period	Net carbon impact range	Net carbon impact per ha

Other identified impacts:

Economic: Cost savings – Reduction in water, electricity and fuel results in cost savings for the farmer, which if invested into typical business carbon intensive activities, could result in an estimated ~5% reduction of the total net carbon impact. This is considered as low risk and Future Intelligence are actively exploring measures to ensure that cost savings are reinvested in ways that further reduce emissions rather than increase them.

[Website](#)

[Contact Future Intelligence](#)

Relevant links: [Contact the EGDC](#) | [Methodology](#) | [Calculator](#)

Disclaimer: While reasonable steps have been taken to ensure that the information contained within the case studies is correct, the EGDC and Future Intelligence give no warranty and make no representation as to its accuracy. EGDC and Future Intelligence accept no liability for any errors or omissions that may be present in the case studies methodology, or related information. Users and readers are advised to exercise their judgment and seek further clarification if needed, as the information provided may evolve over time and depend on external factors beyond EGDC’s and Future Intelligence’s control.