



LIFE FROSTDEFEND

Newsletter #9

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LIFE20 CCA/GR/001747



As LIFE FROSTDEFEND reaches completion, this final newsletter looks back at the project that brought together partners from different disciplines to address one of the most persistent climate-related risks to fruit production: frost damage.

At the heart of the project is the LIFE FROSTDEFEND Tool: a forecasting and warning approach that combines environmental monitoring, weather information, microbiological data, and assessments of crop cold hardiness and frost vulnerability.

Over its lifetime, the project moved from scientific research to field implementation, stakeholder training and a practical digital application.

Access LIFE FROSTDEFEND reports, deliverables and dissemination materials on the project website: <https://frostdefend.eu/en/>



LIFE FROSTDEFEND:

- ✓ developed and tested a monitoring and forecasting system
- ✓ collected atmospheric, meteorological, biological and agronomic data
- ✓ implemented field demonstrations in Greece and France
- ✓ investigated frost vulnerability and mitigation strategies in fruit trees
- ✓ developed the LIFE FROSTDEFEND application
- ✓ engaged and trained farmers, agronomists and other stakeholders
- ✓ shared results through scientific dissemination and international networking
- ✓ provided knowledge and tools for climate-resilient agriculture



The LIFE FROSTDEFEND Tool is one of the project's main results. It supports the assessment and forecasting of frost-damage risk by combining information that is often considered separately.

The approach brings together:

- meteorological conditions and forecasts
- real-time environmental monitoring
- fruit-tree phenology and frost vulnerability
- information on ice-nucleation-active bacterial populations
- data from field sensors and experimental plots
- a digital interface designed for practical use



By translating complex data into clear risk information, the system helps farmers and agronomists make earlier, better-informed frost-management decisions.



During implementation, LIFE FROSTDEFEND team worked in agricultural areas in Greece and France, connecting field data with forecasts and practical advice.

Monitoring → Forecasting → Early warning → Preventive action

This pathway is central to the FROSTDEFEND concept and to its potential use beyond the project's lifetime.

Access the LIFE FROSTDEFEND Tool at:

Web application: app.frostdefend.eu

Mobile application: available for Android and iOS through the LIFE FROSTDEFEND website.





One of the key activities of the final phase was the LIFE FROSTDEFEND Special Session “Climate Change Adaptation in Agriculture”, organized as part of CEMEPE 2026 in Thessaloniki.

The session brought together researchers, agricultural-sector representatives and stakeholders to exchange knowledge and present practical approaches for adapting agriculture to climate change.

Contributions from Greece, France, Italy and South Africa showed how scientific results and technological solutions can support more resilient agricultural systems.



A round-table discussion focused on how climate-adaptation solutions can move from research into everyday agricultural practice. The successful completion of the session was an important milestone for the dissemination of LIFE FROSTDEFEND results.



- ❑ As LIFE FROSTDEFEND comes to an end, the consortium warmly thanks everyone who contributed to the project.
- ❑ We are especially grateful to the farmers and agricultural producers who opened their orchards to research and monitoring activities, shared their experience and helped evaluate the project's solutions.
- ❑ We also thank the Advisory Board members and all project stakeholders for sharing their knowledge, questions, and feedback.

Better forecasting. Earlier action. More resilient crops.



LIFE FROSTDEFEND

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