

Newsletter #5

LIFE GAIA Sense project

Smart Farming in 4 Dimensions



The smart farming journey

How can smart farming contribute to the conservation of natural resources and inputs in agriculture?

Is smart farming an approach that can lead to the reduction of the environmental impact of agriculture?

Can Circular Economy models be supported by a smart farming-based production management approach?

These are some of the questions that the LIFE GAIA Sense project aims to address during the three years of its implementation. The answers will come from the **18 demonstrators** that the project will launch across **Greece, Spain and Portugal** covering **9 crops (olives, peaches, cotton, pistachio, potatoes, table tomatoes, industrial tomatoes, walnuts, kiwi)** in various terrain and microclimatic conditions.

The project's results will be applied on the field in order to measure the input reduction rate on selected crops. A correlation between the gaiasense results and the **Circular Economy** targets set at EU policy level will also take place, in order to highlight the contribution of

smart farming in complying with these policies.
Here are the latest news on LIFE GAIA Sense. Stay tuned for further updates!

Highlights

Presentation of the LIFE GAIA Sense project at the Global Food Forum

Presentation of LIFE GAIA Sense project as Best Practice in the two-day online event "Athens Circular Forum II"

Project meetings/events

7th Meeting of the project implementation team, September 9, 2021

LIFE GAIA Sense in events and media around Europe

PORTUGAL - LIFE GAIA Sense in the 8th National Meeting of Technicians

GREECE - Presentation of the utilization of smart farming in olive groves in the context of LIFE GAIA Sense at the LIVINGAGRO event

Spain - Description of how LIFE GAIA Sense can enhance the cultivation of Spanish vineyards

PORTUGAL - Presentation of the LIFE GAIA Sense project in the technical magazine Espaço Rural

GREECE - Presentation of the effectiveness of the CropSyst model used in the context of LIFE GAIA Sense at the 12th International Agricultural Conference AGROSYM 2021

PORTUGAL - Presentation of the LIFE GAIA Sense project at the Innovation and Precision Agriculture Seminar

PORTUGAL - Highlighting the smart farming strategy of the LIFE GAIA Sense project to improve the implementation of farming practices at the event entitled "The new CAP and Innovation in the Agricultural Sector"

PORTUGAL - The progress of LIFE GAIA Sense was presented at the event "The application of the new CAP and Innovation in the agricultural sector"

PORTUGAL - Presentation of the goals and results of LIFE GAIA Sense at the event entitled SFCOLAB International Wednesday

GREECE - Presentation at the Harmo20 conference, the atmospheric effects of the application of gaiasense, on which the LIFE GAIA Sense is based

PORTUGAL - Presentation of the LIFE GAIA Sense objectives at the National Agricultural Fair (FNA 21)

CYPRUS - Presentation of the contribution of the LIFE GAIA Sense project in the protection of the environment and in the support of the of Circular Economy models in the Two-day Conference entitled "LIFE and SMEs"

GREECE - The role of gaiasense smart farming services was presented at the conference " The LIFE Programme and SMEs: Challenges for sustainable business solutions focusing on the environmental conservation"

GREECE - Presentation of LIFE GAIA Sense in the Main newscast of the Peloponnese Regional Television Station, Mesogeios Tv

GREECE - Important results of LIFE GAIA Sense project on air quality presented at the 6th International Symposium on Green Chemistry, Sustainable Development and the Circular Economy

GREECE - Presentation of LIFE GAIA Sense applications that have contributed to the Modeling of Atmospheric Emissions at the 12th International Air Quality Conference

Highlights

Presentation of the LIFE GAIA Sense project at the Global Food Forum

GLOBAL FOOD FORUM

HOW CAN THE GREEN DEAL?

BE A GOOD DEAL

15&16 NOV. 2021

FARM EUROPE

At the 5th edition of the Global Food Forum, held on 15-16 November 2021, the European think tank Farm Europe attracted prominent representative figures from the European institutions, the Ministries of Agriculture of the EU Member States, the business community, as well as media & Civil Society. The main topic of the event was "The Green Deal: how to make it a good deal?", in which participants expressed their opinions on the possibilities and ways of green transition of the agri-food sector in the EU.

In the context of the event, taking advantage of the fact that GAIA EPICHEIREIN is a partner of FARM EUROPE since 2016, the General Manager of GAIA EPICHEIREIN Ms. Elli Tsiforou, participated in the workshop " Farm-to-fork strategy: how to make it work" presenting, through the experience of LIFE GAIA Sense, the contribution of smart farming to the goals of European Green Deal and specifically to the "Farm to fork" strategy.

You can find more information about the event [here](#)

Presentation of LIFE GAIA Sense project as Best Practice in the two-day online event "Athens Circular Forum II"



[LIFE GAIA Sense](#) was presented as Best Practice to reduce environmental pollution during the two-day online event «[Athens Circular Forum II](#)», which took place on Tuesday, June 1, 2021 within the framework of [#EUGreenWeek](#). The event brought together representatives from both the scientific and business sectors as well as from the national and international political sector and is a continuation of the successful event "Athens Circular Forum I" which took place in 2019.

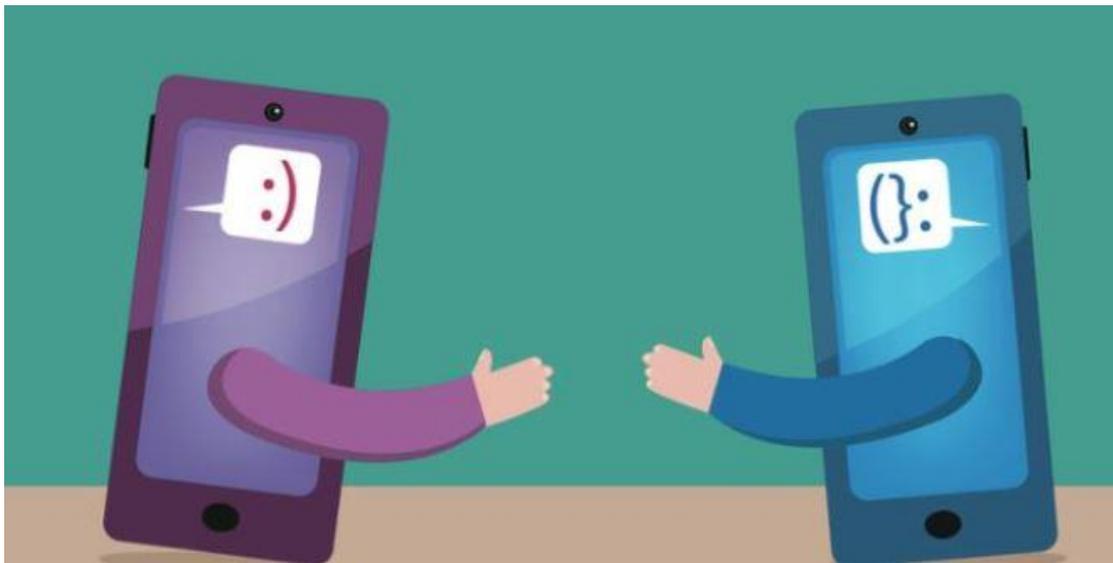
Among the 38 distinguished speakers, who focused on the future of the European environment, climate action and plans to achieve carbon neutrality, Mr. Vassilis Pyrgiotis, Senior Project Manager of [NEUROPUBLIC](#), presented in the 4th panel entitled "Circular and Bio as Business Practice" the [gaiasense](#) tool of the LIFE GAIA Sense project, as it is an innovative solution of smart farming which contributes significantly to the reduction of the consumption of natural resources and the realization of the goals set by the EU for the mitigation of the phenomenon of climate change.

The interventions of all speakers were extremely interesting, referring both to the importance of the [LIFE Programme](#) and to the need of digitalization and adaptation of smart farming services through the utilization and processing of satellite images for agriculture.

The article and the video are available [here](#)

Project meetings/events

7th Project Meeting on the 9th of September 2021



The 7th project meeting of the LIFE GAIA Sense project took place at 9th of September, 2021 online, due to imposed restrictions as a result of outbreak of coronavirus (COVID-19).

The objectives of the meeting were:

1. to discuss the impact of the Coronavirus Outbreak on the project;
2. to discuss the progress of the project during M33 (March 2021) – M38 (August 2021)
3. to discuss with the partners about the work that has to be accomplished for M39 (September 2021) – M44 (February 2022)
4. to work in detail on the Financial Aspects of the project.

The partner organizations that participated in the meeting were [NEUROPUBLIC](#), [GAIA EPICHEREIN](#), [Aristotle University of Thessaloniki \(AUTH\)](#), [Vina COSTEIRA](#), [CONFAGRI](#), [\(ASEPOP\) Velventou](#) and [Mirabello](#).

LIFE GAIA Sense in events and media around Europe

PORTUGAL – LIFE GAIA Sense in the 8th National Meeting of Technicians



On February 3, 2022, CONFAGRI, project partner LIFE GAIA Sense, presented project's goals and results so far at the 8th National Meeting of Technicians.

In particular, Mr. Antonio Baião presented the LIFE GAIA Sense project as one of the best smart farming practices that can be utilized, emphasizing the importance of the role of farmers' cooperatives in the implementation of smart farming solutions on farms. The event was attended by 400 people online due to the restrictive measures of the COVID-19 pandemic.



GREECE - Presentation of the utilization of smart farming in olive groves in the context of LIFE GAIA Sense at the LIVINGAGRO event

In the context of implementing [LIVINGAGRO – Cross Border Living Laboratories for Agroforestry](#) project funded by the program [ENI CBC Med Programme 2014-2020](#), on December 16 and 17, 2021, in order 19 innovations aiming to solve common problems in the olive, olive oil and livestock sectors in Greece to be introduced, a special event was held.

The event was attended by participants both online and with physical presence at [Mediterranean Agronomic Institute in Chania](#) (MAICh), while the coordination was operated by Dr. Panagiotis Kalaitzis, Director of the [Department of Horticultural Genetics and Biotechnology at MAICh](#).

More than 130 individuals registered to participate in this second Greek LIVINGAGRO B2B event, with the majority tuning in online.

The 19 innovations presented are related to the following 5 main categories:

1. Re-Using Traditional Practices in Agroforestry
2. Intercropping and Preparing for Climate Change in Olive Groves
3. Precision Agriculture
4. Olive Mill Machinery and Health Benefits
5. Olive Tree and Olive Oil Authentication

NEUROPUBLIC's gaisense smart farming system and the **LIFE GAIA Sense project** were presented during the event by Vasilis Pyrgiotis, Senior Project manager of [NEUROPUBLIC](#).



Specifically, he outlined the LIFE GAIA Sense project and its achievements so far regarding its applications in the field of olive cultivation in Greece and abroad. He also answered relevant questions so that the innovative results that can be achieved through the use of smart farming to be understood.

Descriptions of all 19 innovations are available in a Catalogue of Innovations in both a [Greek](#) version and an [English edition](#), while you can find more details about the LIFE GAIA Sense project on pages 29 and 26 respectively.

More information about the event can be found [here](#).

Spain - Description of how LIFE GAIA Sense can enhance the cultivation of Spanish vineyards

On December 16, 2021, the project partner Vina Costeira organized at the University of Burgos - Higher Polytechnic School in Campus Rio Vena, Burgos, Spain, the workshop "Sustainable experiences in the vineyard: NOVATERRA Project and LIFE GAIA Sense Project".

The main objective of this event was to inform the university community on how European projects can enhance the cultivation of Spanish vineyards. In particular, the need to establish good cooperation between EU countries was stressed, as the transfer of their acquired knowledge can help increase the efficiency and sustainability of the implementation of the circular economy. The event attended mainly by students, teachers and PhD candidates of the Department of Agriculture and Food Science and Technology.





PORTUGAL - Presentation of the LIFE GAIA Sense project in the technical magazine Espaço Rural

SMART FARMING
O PROJECTO LIFE GAIA SENSE
A INOVAÇÃO NAS EXPLORAÇÕES
AGRÍCOLAS PODE SER INDUZIDA
PELAS COOPERATIVAS

Mr. António Baião, representing project partner CONFAGRI, presented the objectives and results of the LIFE GAIA Sense project so far in an article published in the technical magazine Espaço Rural for the time period November / December 2021.

The title of the article is "Smart Farming, the project LIFE GAIA Sense - Innovation in the field can be guided by cooperatives" and is related to the importance of cooperatives in the use of innovative smart farming systems in agriculture, such as the giasense system of the LIFE GAIA Sense project, which was presented as best practice.

GREECE - Presentation of the effectiveness of the CropSyst model used in the context of LIFE GAIA Sense at the 12th International Agricultural Conference AGROSYM 2021



The Aristotle University of Thessaloniki (AUTH), partner of the LIFE GAIA Sense project, participated with a presentation and a poster, in the [International Agriculture Symposium "AGROSYM 2021"](#). AGROSYM is an annual International Conference that provides the opportunity for the exchange of ideas, the strengthening of existing ones and the creation of new academic networks, as well as the promotion of linkages between academia, public institutions, private sector and civil society organizations with the latest global and regional trends in the agri-food sector.

This year's Conference took place from 7 to 10 October 2021 at the Termag Hotel Jahorina, East Sarajevo, Bosnia and Herzegovina and attracted 700 people (250 in-person and 450 virtually via the ZOOM application). The 12th International Scientific Conference "Agrosym 2021" contributed to the dissemination of important agricultural practice issues in various fields, e.g. crop production, animal husbandry, environmental protection, organic farming, forestry and agro-economy.

During the conference, the Aristotle University of Thessaloniki (AUTH) presented a poster (see below) entitled "Soil inorganic nitrogen and cotton yield simulation with the [CropSyst](#) Model: a preliminary case study in Greece". This poster demonstrated the effectiveness of the CropSyst model, used by the Aristotle University of Thessaloniki, to assess the environmental impact and agronomic benefits of applying nitrogen fertilizers in two monitored areas, within the context of the LIFE GAIA Sense project.

SOIL INORGANIC NITROGEN AND COTTON YIELD SIMULATION USING THE CropSyst MODEL: A PRELIMINARY CASE STUDY IN GREECE

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Introduction

During the last few decades, cropping systems modeling for simulating crop growth and development has been evolving along with the progress of computer technology aiming to provide tools for understanding and analyzing the main processes characterizing the agroecosystems behavior. Nitrogen (N) is a critical resource for the development of the best management practices in agriculture and cannot be analyzed independently of weather, soil characteristics, hydrology, crop characteristics, management practices and other factors of the complex soil-plant-atmosphere system.

CropSyst is a multi-year, multi-crop simulation model developed to evaluate the effects of soil, weather and management on crop growth and environmental impact. For this study, CropSyst was used to simulate the soil inorganic N and cotton production in two experimental fields in central and northern Greece.

Materials and methods

Two cotton producing fields were selected to evaluate CropSyst model's ability to simulate crop yield and soil inorganic N through the crop growing season. The first field was located in Larissa, central Greece, whereas the second field in Orestiada, northern Greece (Figure 1a). Climate parameters of the two areas are also presented in Figure 1b. The field in Larissa was classified as clay soil throughout its soil profile, whereas the field in Orestiada as a clay loam.

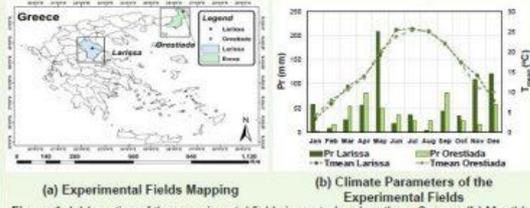


Figure 1. (a) Location of the experimental fields in central and northern Greece; (b) Monthly precipitation (Pr, mm) and mean temperature (T_{mean} , °C) of the experimental fields.

Cotton production and soil inorganic N fluctuations were simulated in Larissa for the 2019 and in Orestiada for the 2020 growing season. Cotton seeding was on the 4th of May 2019 and on the 30th of April 2020 for Larissa and Orestiada, respectively. The total amount of fertilizer N applied was 149.7 kg ha⁻¹ for Larissa and 201.0 kg ha⁻¹ for Orestiada (Table 2). In both cases, soil inorganic N was calculated as the sum of NH₄-N and NO₃-N. Cotton seed fresh yield was determined at harvest.

Table 2. Fertilizer N application to cotton fields (dates, rates and methods of application): in Larissa (growing season 2019) and Orestiada (growing season 2020).

Larissa			Orestiada		
Date	Rate (kg N ha ⁻¹)	Method	Date	Rate (kg N ha ⁻¹)	Method
30-Apr-19	45	Surface broadcasting	23-Apr-20	86	Surface broadcasting
14-Jun-19	31.3	Fertigation	25-Jun-20	115	Surface broadcasting
14-Jul-19	44.4	Fertigation			
22-Jul-19	19	Fertigation			
29-Jul-19	10	Fertigation			

Results and discussion

In both cases, cotton yield simulated values were slightly underestimated (by less than 1%), compared to the observed ones (Figure 2).

As far as the soil inorganic N fluctuations through the soil profile during the crop growing season in Larissa 2019 (Figure 3a), the model simulated well the soil inorganic N within the top 30 cm depths. In lower depths (30-90 cm), however, model simulation overestimated, in comparison to the measured value, soil inorganic N towards the end of the growing season indicating higher potential for N losses over time.

Results and discussion (cont.)



Figure 2. Cotton yield in Larissa, 2019 (left) and Orestiada, 2020 (right): observed and simulated values by the CropSyst model.

Model simulation of soil inorganic N fluctuations through the soil profile during the cotton growing season in Orestiada 2020 (Figure 3b) showed a tendency to overestimate the soil inorganic N content within the topsoil (0-30 cm) during the period of high cotton N requirements. In lower depths (30-90 cm) soil inorganic N simulation showed higher values, towards the end of the growing season indicating higher potential for N losses over time.

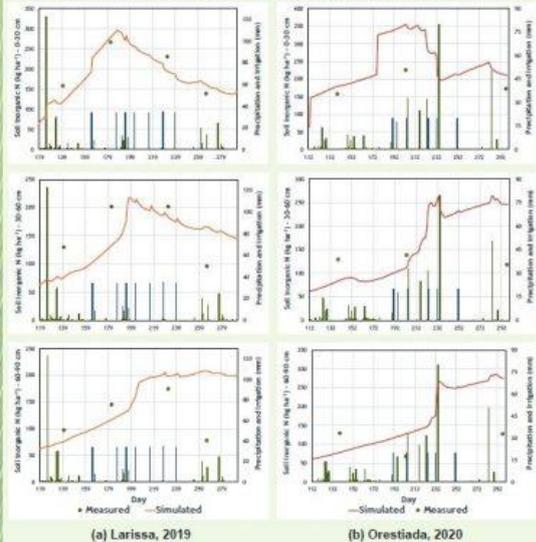


Figure 3. Soil inorganic N (sum of NH₄-N and NO₃-N) within the 0-30 cm depths (top), 30-60 cm depths (middle) and 60-90 cm depths (bottom), during cotton growing season in (a) Larissa, 2019 and in (b) Orestiada, 2020; measured and simulated values by the CropSyst model. The green bars show precipitation, whereas the blue bars irrigation water applied.

Conclusions

CropSyst model can be considered as an important tool to assess the environmental impact and agronomic benefit of fertilizer N applications to irrigated areas under Mediterranean conditions as:

- Cotton yield was well simulated in both locations
- Soil inorganic N distribution during the crop growing season was generally satisfactorily simulated in both locations



Acknowledgement: This work is part of the project with contract number LIFE17 ENV/GR/000220 entitled "LIFE GAIA Sense: Innovative Smart Farming services supporting Circular Economy in Agriculture" which is co-funded by the LIFE Programme of the European Union.
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PORTUGAL - Presentation of the LIFE GAIA Sense project at the Innovation and Precision Agriculture Seminar



CONFAGRI, the Portuguese partner of the LIFE GAIA Sense project, presented the project during the “Technological Workshop on Innovation and Precision Agriculture” on September 16, 2021 in Braga, Portugal, at the [53th AGRO International Trade Fair for Agriculture, Cattle Breeding and Food](#). The event was organized in physical presence by [Agriterro](#) magazine and [InovTechAgro](#) - National Competence Center for Technological Innovation in the Agroforestry Sector, with the support of CONFAGRI.

PORTUGAL - Highlighting the smart farming strategy of the LIFE GAIA Sense project to improve the implementation of farming practices at the event entitled "The new CAP and Innovation in the Agricultural Sector"



The workshop entitled "The new CAP – Common Agricultural Policy – and Innovation in the Agricultural Sector" held on August 9, 2021 in Pinhel, Portugal, highlighted the goals and strategy of smart farming of the LIFE GAIA Sense project. The event was co-organized by Pinhel City Council, [CONFAGRI](#) project partner, [INOVA +](#) and the [Greenlight](#) project. More specifically, CONFAGRI presented the LIFE GAIA Sense project as an innovative agricultural solution aims to improve the implementation of cultivation practices.



PORTUGAL - The progress of LIFE GAIA Sense was presented at the event "The application of the new CAP and Innovation in the agricultural sector"



On July 30, 2021 Mr. António Baião, representative of the [CONFAGRI](#) project partner, presented the objectives and results of the LIFE GAIA Sense project so far at the event "The application of the new CAP and Innovation in the agricultural sector" held at the Professional School and Rural Development of the city of Serpa, Portugal.

The event was co - organized by CONFAGRI, the [Agricultural Cooperative of Beja e Brinches](#), the [Mutual Agricultural Credit Bank of Guadiana Interior](#), [INOVA+](#) and the project [Greenlight](#),



PORTUGAL - Presentation of the goals and results of LIFE GAIA Sense at the event entitled SFCOLAB International Wednesday

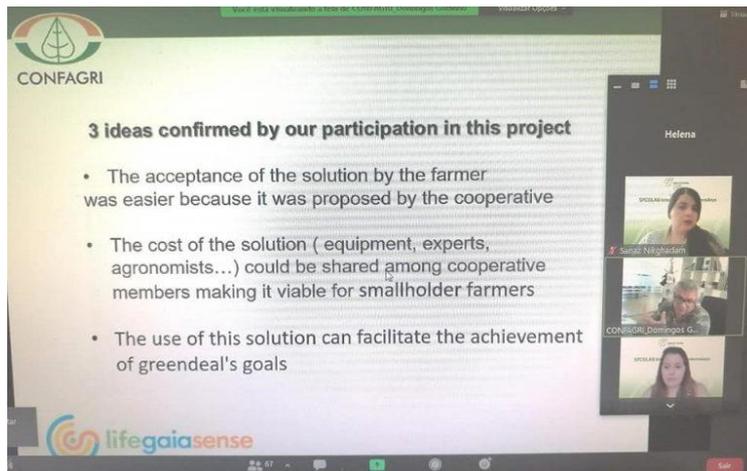


SFCOLAB International Wednesdays



On June 30, 2021, the goals and results so far of the LIFE GAIA Sense project were presented at the monthly event "SFCOLAB International Wednesday" by Mr. Domingos Godinho, representative of CONFAGRI, partner of the project. The theme of the event was "Smart Farming a Luxury or a Must; User perspective", while renowned speakers were present and had the opportunity to discuss and analyze the new challenges of Smart Agriculture, as well as the possibilities for collaboration and global funding.





More information about the event can be found [here](#).

GREECE - Presentation at the Harmo20 conference, the atmospheric effects of the application of gaiasense, on which the LIFE GAIA Sense is based



On June 16, 2021, the LIFE GAIA Sense project was presented at the 20th International Conference on Harmonisation within Atmospheric Dispersion Modelling for Regulatory Purposes ([Harmo20](#)) with the presentation "Modelling methodology for assessing atmospheric impacts from smart farming application" by Dr. Fotios Barmpas, Professor and Senior Researcher Engineer – CFD in the Laboratory of Heat Transfer and Environmental Engineering of Aristotle University of Thessaloniki. The conference, was part of a series of international conferences on Harmonisation within Atmospheric Dispersion Modelling for Regulatory Purposes (www.harmo.org) and aimed towards the improvement of "modelling culture" both in Europe and at an international level.

For more details, you can check [here](#)

PORTUGAL - Presentation of the LIFE GAIA Sense objectives at the National Agricultural Fair (FNA 21)

The National Agricultural Fair (FNA 21) for 2021, which is considered to be the most important agricultural fair in Portugal, took place from 9 to 13 June 2021 in the capital of the rural province of Ribatejo, Santarém. CONFAGRI as a partner of the LIFE GAIA Sense project participated with a stand at a central point in the fair venue and informed the attendees about the project through the distribution of project's leaflets and by answering relevant questions.

The event, which took place at the National Center for Agricultural Exhibitions and Markets (CNEMA), was attended by both the President of the Republic, Marcelo Rebelo de Sousa, and the Ministers of Agriculture and Economy.

For more details, you can check [here](#)





CYPRUS - Presentation of the contribution of the LIFE GAIA Sense project in the protection of the environment and in the support of the of Circular Economy models in the Two-day Conference entitled "LIFE and SMEs"



The project [LIFE Cyclamen](#) & the Cyprus Employers & Industrialists Federation ([OEB](#)) organized on 13 to 26 of May 2021 an online two-day event titled "LIFE and SMEs".

The purpose of the event was to inform SMEs- members of OEB - about the [LIFE Programme](#) and the benefits that can arise from this financial instrument.

Among the invited speakers - representatives of SMEs based outside Cyprus, participated Vasilis Pyrgiotis, senior project manager, and Vassilis Protonotarios, outreach & networking manager, representing [NEUROPUBLIC](#) the coordinator of LIFE GAIA Sense project. Both shared their firsthand experience with the LIFE GAIA Sense project ([lifegaiasense.eu](#)) and explained how the innovative Smart Farming solution can be used as a way to protect the environment and support Circular Economy (CE).

Οφέλη των υπηρεσιών ευφυούς γεωργίας

life gaiasense

κώστος παραγωγής λίπασμα νιτρό-ενέργεια φυτοφάρμακα	ποιότητα προϊόντος υπολειμματικότητα οργανοληπτικά μέγεθος καρπού διατηρησιμότητα	κίνδυνοι περιβάλλοντος κρηματοποίηση λεπιφθία βιολογική ανθεκτικότητα
κίνδυνοι παραγωγής παρυσιακές ασθένειες μη παρυσιακές μετασυλλεκτηοί	αξία προϊόντος αρχλαστικότητα περιβαλλοντικό αποτέλεσμα	παραγόμενη ποσότητα

οικονομικό κέρδος + περιβαλλοντικό + κοινωνικό όφελος

Το LIFE GAIA Sense συγχρηματοδοτείται από το Πρόγραμμα LIFE της Ευρωπαϊκής Ένωσης με τον κωδικό προγράμματος LIFE17-EN-010002020. [www.lifegaiasense.eu/](#)

CHARA MAVRONICOLA is presenting

Mic Camera Screen Leave

Προσδοκώμενα αποτελέσματα

life gaiasense

- **Μείωση των εκπομπών ρύπων από γεωργικές εργασίες κατά 32%**
- **Αξιοποίηση των αποτελεσμάτων του έργου από**
 - ✓ Αγροτικούς συνεταιρισμούς αλλά και μεμονωμένους αγρότες
 - ✓ Γεωργικούς συμβούλους
 - ✓ Επιστήμονες
 - ✓ Φορείς χάραξης πολιτικής
- **Επικυρωμένο επιχειρηματικό σχέδιο για την ανάπτυξη του gaiasense σε 3 χώρες**

Το LIFE GAIA Sense συγχρηματοδοτείται από το Πρόγραμμα LIFE της Ευρωπαϊκής Ένωσης με τον κωδικό προγράμματος LIFE17-EN-010002020. [www.lifegaiasense.eu](#)

CHARA MAVRONICOLA is presenting

Mic Camera Screen Leave

GREECE - The role of gaiasense smart farming services was presented at the conference " The LIFE Programme and SMEs: Challenges for sustainable business solutions focusing on the

environmental conservation"

The banner features the following elements:

- Logos for **Life GREEK TASK FORCE**, the **European Union**, and **ε-bossible** (with the tagline "νεοφυής επιχειρηματικότητα").
- A central graphic of a glowing green lightbulb with a tree inside, and a Facebook LIVE icon below it.
- Text: **Life και Μικρομεσαίες Επιχειρήσεις:** Προκλήσεις για βιώσιμες επιχειρηματικές λύσεις με έμφαση στην προστασία του περιβάλλοντος.
- Date and time: **Τρίτη 23/03/2021 9:45**.
- Logos for partners: **Διαμόρφωση**, **Εξυπηρέτηση με skywalker**, and **Για την Αγρό** (with the **ΓΣΕΒΕΕ** logo).
- Vertical text on the left: **ONLINE ΗΜΕΡΙΑ**.
- Vertical text on the right: **Greek LIFE Task Force - LIFE14 GR/GF/000003**.

The online workshop: “The LIFE Programme and SMEs: Challenges for sustainable business solutions focusing on the environmental conservation”, was organized on 23 of March, 2021 by the [Hellenic Ministry of Environment and Energy](#), [the Green Fund](#), the Greek LIFE Task Force and [Skywalker.gr](#), under the auspices of the Hellenic Confederation of Professionals, Craftsmen & Merchants (GSEVEE), to strengthen start-up entrepreneurship. The online event was part of an initiative, focusing on the possibility of utilizing the European LIFE Financing Program for SMEs, in order to meet current challenges and develop workflows focused on environmental protection.

During the meeting, the Senior Project Manager of NEUROPUBLIC Vassilis Pyrgiotis presented the LIFE GAIA Sense project and specifically the role of gaisense smart farming services, which are developed during the implementation of the LIFE GAIA Sense project, in order to minimize environmental impact of agriculture.



Οφέλη των υπηρεσιών ευφυούς γεωργίας

life gaia sense

κόστος παραγωγής	ποιότητα προϊόντος	κίνδυνοι περιβάλλοντος
λίπασμα	υπολειμματικότητα	επιμολύση
νερό-ενέργεια	οργανοληπτικά	λειψυδρία
φυτοφάρμακα	μέγεθος καρπού	βιολογική αντοχή
	διατηρησιμότητα	

οικονομικό κέρδος

=

παραγόμενη ποσότητα

+ περιβαλλοντικό κοινωνικό όφελος

κίνδυνοι παραγωγής	αξία προϊόντος	παραγόμενη ποσότητα
παρασιτικές ασθένειες	ξηθλασιμότητα	
μη παρασιτικές μετασυσλευκτικοί	περιβαλλοντικό αποτύπωμα	

Το LIFE GAIA Sense συγχρηματοδοτείται από το Πρόγραμμα LIFE της Ευρωπαϊκής Ένωσης με αριθμό σύμβασης: LIFE17 ENV/1 GR/000229 www.life-gaia-sense.eu/

GREECE - Presentation of LIFE GAIA Sense in the Main newscast of the Peloponnese Regional Television Station, Mesogeios Tv



In the Main newscast of the Regional Television Station of Peloponnese, [Mesogeios Tv](http://Mesogeios.Tv) were presented by Mr. Giannis Pazios, General Manager of the [Agricultural Cooperative "Union of Messinia"](http://Agricultural Cooperative Union of Messinia), both the objectives and the provided solutions of the LIFE GAIA Sense project. The video entitled "The Union of Agricultural Cooperatives of Messinia participates in the LIFE GAIA Sense smart farming program" describes the smart farming services that the project can offer to producers of the primary sector to enhance agricultural production and sustainability.

You can watch the video in Greek [here](#)

GREECE - Important results of LIFE GAIA Sense project on air quality presented at the 6th International Symposium on Green Chemistry, Sustainable Development and the Circular Economy

**Environmental aspects of smart farming:
assessment of air quality and climatic impacts**

Nicolas Moussiopoulos, Fotios Barmpas, George Tsegas and
Evangelia Fragkou

*Laboratory of Heat Transfer and Environmental Engineering, Aristotle University University Campus,
P.O. Box 483, 541 24 Thessaloniki, Greece.*

www.lifegaiasense.eu NEUROPUBLIC gaia APOTETHEPIO (ANAFETIKIMO) BEZAKIONIKIS VIÑA COSTEIRA BODEGA CONFAGRI CONFEDERATION OF AGRICULTURAL COOPERATIVES OF GREECE (ANAFETIKIMO) BEZAKIONIKIS CONFEDERATION OF AGRICULTURAL COOPERATIVES OF GREECE (ANAFETIKIMO) BEZAKIONIKIS

The project LIFE GAIA Sense is co-funded by the LIFE Programme of the European Union under contract number LIFE17 ENV/GR/000220

In September 2020, the project partner [Aristotle University of Thessaloniki \(AUTH\)](#), and specifically Dr. George Tsegas, Senior Researcher in the [Laboratory of Heat Transfer and Environmental Engineering \(LHTEE\)](#), presented the project as a speaker on the 6th International Symposium on Green Chemistry, Sustainable Development and the Circular Economy that was held online. In this scientific symposium, Dr. Giorgos Tsegas with the presentation entitled "Environmental aspects of smart farming: assessment of air quality and climatic effects" presented the evaluation of the results that have occurred during the implementation of the LIFE GAIA Sense project.

GREECE - Presentation of LIFE GAIA Sense applications that have contributed to the Modeling of Atmospheric Emissions at the 12th

International Air Quality Conference



Innovative Atmospheric Dispersion Modelling in support of Smart Farming Applications within the frame of the EU LIFE+ GAIA Sense Project

Evangelia Frangkou, George Tsegas, Fotios Barmpas, Eleftherios Chourdakis and Nicolas Moussiopoulos

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The Laboratory of Heat Transfer and Environmental Engineering (LHTEE) of the Department of Mechanical Engineering of the Aristotle University of Thessaloniki (AUTH) Polytechnic School, organized from 9 to 13 March 2020, in collaboration with the [University of Hertfordshire](#), England, the “12th International Conference on Air Quality”

Dr. Evangelia Frangou, Research Associate at LHTEE, participated as a speaker at the Conference with the presentation "Innovative Atmospheric Dispersion Modeling in support of Smart Farming Applications within the frame of the EU LIFE+ GAIA Sense Project"

It is worth to be mentioned that there were also special sessions on various current issues related to air pollution sources and emissions, air quality management, implementation and evaluation of models locally and globally, air quality and meteorological forecasts; and Climate interactions, with sensors and simulations of air quality models and more.

Πληροφορίες σχετικά με το έργο



The main objective of the LIFE GAIA Sense project is to demonstrate GAIA Sense, an innovative Smart Farming solution that aims at reducing the consumption of natural resources, as a way to protect the environment and support Circular Economy (CE) models.

This project will demonstrate a method on how farmers will be able to decide either to use or avoid inputs (irrigation, fertilizers, pesticides etc.) in a most efficient way, without risking their annual production.

The focus is on the resource consumption reduction side of CE, and the results will be both qualitatively and quantitatively, considering the resources' efficiency in agricultural sector.

The Project Consortium

 NEUROPUBLIC <small>NEUROTECHNOLOGICAL RESEARCH CENTER</small>	NEUROPUBLIC AE PLIROFORIKIS & EPIKOINONION
 ΑΡΙΣΤΟΤΕΛΕΙΟ ΠΑΝΕΠΙΣΤΗΜΙΟ ΘΕΣΣΑΛΟΝΙΚΗΣ	Aristotle University of Thessaloniki - Special Account of Research Funds - AUTH
 CONFAGRI <small>CONFEDERAÇÃO NACIONAL DAS COOPERATIVAS AGRÍCOLAS E DO CRÉDITO AGRÍCOLA DE PORTUGAL</small>	Confederação Nacional das Cooperativas Agrícolas e do Crédito Agrícola de Portugal CCRL
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 ΕΝΩΣΗ ΜΕΡΑΒΕΛΛΟΥ	Agricultural Cooperative Partnership Mirabello Union S.A.
 ΟΑΣΗΤΟΤ ΒΕΛΒΕΝΤΟΥ <small>ΟΑΣΗΤΟΤ ΒΕΛΒΕΝΤΟΥ</small>	Agrotikos Synetairismos Epexergasias kai Poliseos Oporokipeftikon Proionton (ASEPOP) Velventou SYN.PE

Brief Project Info

Project acronym: LIFE GAIA Sense

Project full title: Innovative Smart Farming services supporting Circular Economy in Agriculture

Start date: 01/07/2018

End date: 30/06/2022

Project Coordinator: NEUROPUBLIC S.A. PLIROFORIKIS & EPIKOINONION



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