

Draft Law
Ministry of Agriculture, Rural Development and Environment Of
Cyprus

Greenhouse Gases (GHG) Monitoring System for Mitigating GHG emissions
in the Agricultural Sector

Chapter A

Purpose- Objective

Article 1

Purpose

The purpose of this draft law is to establish a scientifically robust GHG Monitoring and Management System for the agricultural sector to enable the Ministry of Rural Development to collect actionable data on the emission fluxes of Carbon Dioxide (CO₂), Methane (CH₄) and Nitrous Oxide (N₂O). The goal is to formulate and implement national policies for climate change mitigation based on comprehensive and reliable data.

Article 2

Objective

The objective of this draft law is to adopt the greenhouse gas emission monitoring system, which was developed within the framework of the project LIFE 17 CCM/GR/000087 titled "Innovative Technologies for Climate Change Mitigation in the Mediterranean Agricultural Sector" (LIFE ClimaMED). This system provides

an automated method for monitoring emissions from agricultural areas in real-time, recording the main greenhouse gases such as CO₂, CH₄, and N₂O. It also allows for the calculation of emissions over any required time period, without the need for human intervention.

Chapter B

GHG Monitoring System

Article 3

Establishment and Components

1. The greenhouse gas emission monitoring system, developed within the framework of the LIFE ClimaMED project, is a reliable tool for measuring, recording, calculating, and overall monitoring of greenhouse gas emissions in the agricultural sector.
2. The system will consist of:
 - **Advanced Measurement and Monitoring Devices:** Devices that record in situ and in real time the concentrations of CO₂, CH₄, and N₂O in the atmosphere above an agricultural area. The greenhouse gas concentration measurement devices will be installed by public authorities, as well as by public and private entities, at appropriately selected locations on agricultural lands to record the concentrations of greenhouse gases in the atmosphere above these specific areas.
 - **Operational Center:** The center will be installed in a suitably prepared space under the supervision of the responsible authority and will feature modern hardware and software for processing data from the monitoring units. This ensures the accurate calculation and storage of GHG emission flows, as well as the production of scientifically validated reports. At the operational center, the measurements from the corresponding devices:

- a) are automatically transferred, recording the greenhouse gas emissions,
- b) calculate the quantities of CO₂, CH₄, and N₂O at the level of agricultural plots.

Article 4

Data Utilization

1. Data collected from the GHG Monitoring System shall be:
 - Used by the Ministry of Agriculture to draft and implement evidence-based climate policies for the agricultural sector.
 - Provided to farmers to guide sustainable practices and improve field-level GHG management.
2. Certificates validating GHG emission levels for individual fields will be issued automatically through the digital systems of the operational center.
3. Farmers using these monitoring devices will:
 - Gain access to real-time data on their field's emissions.
 - Share information on farming practices with the Ministry to facilitate recommendations for low-carbon and GHG flux emission strategies.
4. National and EU funds will be allocated to incentivize the adoption of these practices by farmers to achieve the environmental goals of this law.

Chapter C:

Administrative Provisions

Article 5:

Regulatory Framework

1. The Minister of Agriculture and Rural Development shall define, through official decisions:

- Procedures and requirements for installing GHG monitoring devices in agricultural fields (crop and livestock units).
 - Technical specifications and certification processes for validating GHG emissions.
- 2. Joint decisions by the Minister of Agriculture and CAPO shall determine the terms of cooperation between farmers and the Ministry, including financial incentives for adopting practices that were developed during the installation of the devices in the farmers' fields.

ΣΧΕΔΙΟ ΝΟΜΟΥ
ΤΟΥ ΥΠΟΥΡΓΕΙΟ ΓΕΩΡΓΙΑΣ, ΑΓΡΟΤΙΚΗΣ ΑΝΑΠΤΥΞΗΣ ΚΑΙ ΠΕΡΙΒΑΛΛΟΝΤΟΣ
ΚΥΠΡΟΥ

ΣΥΣΤΗΜΑ ΠΑΡΑΚΟΛΟΥΘΗΣΗΣ ΑΕΡΙΩΝ ΘΕΡΜΟΚΗΠΙΟΥ (GHG) ΓΙΑ ΤΟΝ
ΠΕΡΙΟΡΙΣΜΟ ΤΩΝ ΕΚΠΟΜΠΩΝ ΑΕΡΙΩΝ ΘΕΡΜΟΚΗΠΙΟΥ ΣΤΟΝ ΑΓΡΟΤΙΚΟ
ΤΟΜΕΑ

ΚΕΦΑΛΑΙΟ Α΄
ΣΚΟΠΟΣ - ΑΝΤΙΚΕΙΜΕΝΟ

Άρθρο 1
Σκοπός

Ο σκοπός του παρόντος σχεδίου νόμου είναι η δημιουργία ενός επιστημονικά τεκμηριωμένου Συστήματος Παρακολούθησης και Διαχείρισης εκπομπών αερίων θερμοκηπίου για τον αγροτικό τομέα, που θα επιτρέπει στο Υπουργείο Γεωργίας Αγροτικής Ανάπτυξης και Περιβάλλοντος, να συλλέγει αξιόπιστα δεδομένα σχετικά με τις ροές εκπομπών Διοξειδίου του Άνθρακα (CO₂), Μεθανίου (CH₄) και Οξειδίου του Αζώτου (N₂O). Στόχος είναι η διαμόρφωση και εφαρμογή εθνικών πολιτικών για τον μετριασμό της κλιματικής αλλαγής με βάση ολοκληρωμένα και αξιόπιστα δεδομένα.

Άρθρο 2
Αντικείμενο

Αντικείμενο του παρόντος σχεδίου νόμου αφορά την υιοθέτηση του συστήματος παρακολούθησης εκπομπών αερίων θερμοκηπίου, το οποίο αναπτύχθηκε στο πλαίσιο του έργου LIFE 17 CCM/GR/000087 με τίτλο «Καινοτόμες Τεχνολογίες για τον Μετριασμό της Κλιματικής Αλλαγής στον Αγροτικό Τομέα της Μεσογείου» (LIFE ClimaMED). Το σύστημα αυτό παρέχει μια αυτοματοποιημένη μέθοδο

παρακολούθησης των εκπομπών από γεωργικές εκτάσεις σε πραγματικό χρόνο, καταγράφοντας τα κύρια αέρια του θερμοκηπίου, όπως το CO₂, CH₄ και το N₂O. Παράλληλα, επιτρέπει τον υπολογισμό των εκπομπών για οποιαδήποτε χρονική περίοδο απαιτηθεί, χωρίς την ανάγκη ανθρώπινης παρέμβασης.

ΚΕΦΑΛΑΙΟ Β΄

ΣΥΣΤΗΜΑ ΚΑΤΑΓΡΑΦΗΣ ΕΚΠΟΜΠΩΝ ΑΕΡΙΩΝ ΘΕΡΜΟΚΗΠΙΟΥ

Άρθρο 3

Σύστημα καταγραφής εκπομπών αερίων θερμοκηπίου

3. Το σύστημα καταγραφής εκπομπών αερίων θερμοκηπίου, που αναπτύχθηκε στο πλαίσιο του έργου LIFE ClimaMED, αποτελεί ένα αξιόπιστο εργαλείο για τη μέτρηση, καταγραφή, υπολογισμό και συνολική παρακολούθηση των εκπομπών αερίων θερμοκηπίου στον αγροτικό τομέα.
4. Το Σύστημα θα αποτελείτε από:
 - **Προηγμένες Συσκευές Μέτρησης και Παρακολούθησης:** Συσκευές μέτρησης που καταγράφουν επιτόπου και σε πραγματικό χρόνο τις συγκεντρώσεις CO₂, CH₄, N₂O στην ατμόσφαιρα πάνω από μια γεωργική περιοχή. Οι συσκευές μέτρησης των συγκεντρώσεων αερίων θερμοκηπίου θα εγκαθίστανται από κρατικούς φορείς, καθώς και από φυσικά ή νομικά πρόσωπα δημοσίου και ιδιωτικού δικαίου, σε κατάλληλα επιλεγμένα σημεία γεωργικών εκτάσεων, με σκοπό την καταγραφή των συγκεντρώσεων αερίων θερμοκηπίου στην ατμόσφαιρα πάνω από τις συγκεκριμένες περιοχές.
 - **Λειτουργικό Κέντρο:** Θα εγκατασταθεί σε κατάλληλα διαμορφωμένο χώρο υπό την επίβλεψη του αρμόδιου φορέα και θα διαθέτει σύγχρονο υλικό και λογισμικό για την επεξεργασία δεδομένων από τις μονάδες παρακολούθησης, διασφαλίζοντας τον ακριβή υπολογισμό και την αποθήκευση των ροών εκπομπών GHG, καθώς και την παραγωγή επιστημονικά επικυρωμένων αναφορών. Στο επιχειρησιακό κέντρο, οι μετρήσεις από τις αντίστοιχες συσκευές:

- α) μεταφέρονται αυτόματα, καταγράφοντας τις εκπομπές αερίων θερμοκηπίου,
- β) υπολογίζονται οι ποσότητες των αερίων CO₂, CH₄ και N₂O σε επίπεδο αγροτεμαχίου.

Άρθρο 4 **Χρήση Δεδομένων**

1. Τα δεδομένα που θα συλλέγονται από το Σύστημα Παρακολούθησης Αερίων Θερμοκηπίου θα αξιοποιούνται με τους ακόλουθους τρόπους:
 - Διαμόρφωση Κλιματικών Πολιτικών: Το Υπουργείο Γεωργίας, Αγροτικής Ανάπτυξης και Περιβάλλοντος θα χρησιμοποιεί τα δεδομένα για την ανάπτυξη και εφαρμογή τεκμηριωμένων πολιτικών μετριασμού της κλιματικής αλλαγής στον αγροτικό τομέα. Οι πολιτικές αυτές θα βασίζονται σε επιστημονικά επεξεργασμένα και αξιόπιστα δεδομένα που καλύπτουν τις ροές και τις εκπομπές CO₂, CH₄ και N₂O.
 - Καθοδήγηση Αγροτών: Τα συλλεγόμενα δεδομένα θα παρέχονται στους αγρότες ως πληροφορίες και αναλύσεις, υποστηρίζοντας την εφαρμογή βιώσιμων πρακτικών και τη βελτίωση της διαχείρισης εκπομπών GHG σε επίπεδο αγρού.
2. Με την επεξεργασία των δεδομένων από το Λειτουργικό Κέντρο, θα εκδίδονται αυτόματα ψηφιακά πιστοποιητικά, τα οποία θα επικυρώνουν τα επίπεδα εκπομπών GHG σε μεμονωμένα αγροτεμάχια.
3. Οι αγρότες που ενσωματώνουν τις συσκευές παρακολούθησης στις καλλιέργειές τους θα επωφελούνται ως εξής:
 - Πρόσβαση σε Δεδομένα σε Πραγματικό Χρόνο: Θα έχουν τη δυνατότητα παρακολούθησης των ροών εκπομπών GHG από τα αγροτεμάχιά τους σε πραγματικό χρόνο, επιτρέποντας την άμεση λήψη μέτρων για τον περιορισμό των εκπομπών.
 - Συνεργασία με το Υπουργείο: Μέσω της κοινοποίησης πληροφοριών σχετικά με τις γεωργικές πρακτικές τους, οι αγρότες θα λαμβάνουν εξατομικευμένες συστάσεις για την υιοθέτηση στρατηγικών χαμηλών εκπομπών και μετριασμού των ροών GHG.

4. Εθνικά και ευρωπαϊκά κονδύλια θα διατίθενται για την ενίσχυση των αγροτών, προκειμένου να υιοθετήσουν τις προτεινόμενες τεχνολογίες και πρακτικές. Αυτά τα κίνητρα στοχεύουν στη διευκόλυνση της μετάβασης σε ένα πιο βιώσιμο γεωργικό μοντέλο, επιτυγχάνοντας τους περιβαλλοντικούς στόχους που προβλέπονται από το παρόν σχέδιο νόμου.

ΚΕΦΑΛΑΙΟ Γ΄

ΔΙΟΙΚΗΤΙΚΕΣ ΔΙΑΤΑΞΕΙΣ

Άρθρο 5

Κανονιστικό Πλαίσιο

1. Ο/Η Υπουργός Γεωργίας, Αγροτικής Ανάπτυξης και Περιβάλλοντος θα καθορίζει, μέσω επίσημων αποφάσεων:
 - Διαδικασίες και απαιτήσεις για την εγκατάσταση συσκευών παρακολούθησης GHG σε γεωργικές εκτάσεις (καλλιέργειες και μονάδες εκτροφής ζώων).
 - Τεχνικές προδιαγραφές και διαδικασίες πιστοποίησης για την επικύρωση των εκπομπών GHG.
2. Με κοινές αποφάσεις του/της Υπουργού Γεωργίας, Αγροτικής Ανάπτυξης και Περιβάλλοντος και του Οργανισμού Γεωργικής Ασφάλισης θα καθορίζονται οι όροι συνεργασίας μεταξύ αγροτών και Υπουργείου, συμπεριλαμβανομένων οικονομικών κινήτρων για την υιοθέτηση πρακτικών που αναπτύχθηκαν κατά την εγκατάσταση των συσκευών στα αγροτεμάχια.

Guide text for the drafting of a law formulated on the basis of ClimaMed LIFE 17 – CCM/GR/000087 project results

(For the use of the administrative body that will be identified as competent for its formulation and promulgation)

Greenhouse gas (GHG) monitoring system aimed at mitigating the effects of climate change in the agricultural sector

Article 1

General purpose

The purpose of this draft law is to provide legislative/regulatory support to a greenhouse gas monitoring system with regards to specific operating conditions in the field so that the Administrative Body subsequently identified as competent in the matter can select, analyse and use information and data on the quantity of carbon dioxide (CO₂) , methane (CH₄) and nitrous oxide (N₂O) emitted by agricultural activities and prepare indications and/or guidelines at policy level for the mitigation of climate change in the agricultural sector.

Article 2

Object

The subject of this draft law is the adoption of the greenhouse gas monitoring system developed as a product of LIFE 17CCM/GR/000087 project entitled "Innovative technologies for climate change mitigation by Mediterranean agricultural sector" (in short "LIFE ClimaMed") as a tool for the automated monitoring and measurement of greenhouse gas emissions from a given area under cultivation without human intervention and in any time interval.

Article 3

Greenhouse Gas Monitoring System

1. The greenhouse gas monitoring system developed by Life ClimaMed project is a tool for measuring, recording, calculating and monitoring greenhouse gas emissions in the agricultural sector.

2. The greenhouse gas monitoring system consists of:

- a. On-site, real-time measuring devices of the concentrations of carbon dioxide (CO₂), methane (CH₄) and nitrous oxide (N₂O) in the atmosphere over a given cultivation area, where such devices are installed pursuant to paragraph 3 of this Article.
- b. An operation centre consisting of hardware and software components which, pursuant to paragraph 4, is located at the premises of the Department of Environment, Spatial Planning and Climate Change of the Ministry of Rural Development and Food of the Hellenic Republic. The said Department is, pursuant to this draft law, identified as the competent authority for the management of data collected by measuring devices. In this centre:
 - Automatic data collection by measuring devices occurs and greenhouse gas emissions are recorded;
 - The precise calculation of the concentrations of carbon dioxide (CO₂), methane (CH₄) and nitrous oxide (N₂O) within a specific cultivation area is carried out.

3. The measuring devices are installed under the supervision of the Department in charge referred to in paragraph 2a and of the "Centro di Sperimentazione e Assistenza Agricola" (Special Agency of the Chamber of Commerce, Industry, Handicraft and Agriculture "Riviera di Liguria" as the entity that took part as a partner in LIFE ClimaMed project) within the cultivation sites that will be identified on the territory of the Italian Republic. Also under the supervision of the Department in charge referred to in paragraph 2a, the appropriate position will be identified within each cultivation area in order to correctly measure the concentration of greenhouse gases present in the air layer above the plant species being cultivated.

4. The Department in charge referred to in paragraph 2a will undertake the transmission to the administrative body of the Italian Republic identified as competent the data collected and processed relating to the sites subject to monitoring in Italy for the purposes referred to in Article 4.

Article 4

Exploitation of the greenhouse gas monitoring system

1. The data and conclusions resulting from their processing by the monitoring system are valid for use by the competent administrative body of the Italian Republic which may use them to plan a national strategy for the mitigation of climate change in the agricultural sector.
2. Based on the data collected and processed, a certificate will be issued by the competent administrative body identified in Italy in order to certify the greenhouse gas emissions from the specific cultivation area within which the measuring device has been installed. The certificate will be issued completely automatically and will take place thanks to the digital structures of the operation center located in Greece referred to in Article 3 paragraph 3 in connection with similar structures present on Italian territory at the competent administrative body.
3. Each farmer who joins the greenhouse gas monitoring system through the measuring device installed within his own cultivation site will have the possibility to:
 - Monitor in real time the variation in greenhouse gas emissions within the cultivation site, variation on the basis of which the certificate referred to in paragraph 2 of this article will be issued.
 - Provide data to the competent administrative body identified in Italy regarding the agronomic practices adopted within the cultivation site so that the competent administrative body can draw conclusions on the effect that these practices have on greenhouse gas emissions and consequently provide indications to farmers on how to possibly modify them in order to reduce the related emissions.
4. The competent administrative body identified in Italy may set up national and/or regional and/or CAP funds to incentivize farmers to install these devices within their cultivation sites in order to meet the objectives of this draft law, i.e. the reduction of greenhouse gas emissions in the agricultural sector.

Article 5

Empowering provisions

1. Based on the decisions of the Department of Environment, Spatial Planning and Climate Change of the Ministry of Rural Development and Food of the Hellenic Republic in agreement with the competent administrative body identified in Italy, the following are established:

- a. The procedure, terms and prerequisites for installing a greenhouse gas monitoring device within a specific cultivation site on Italian territory and any technical details with reference to paragraph 3 of Article 3;
- b. The terms, prerequisites, type, content, validity date and procedure for issuing a certificate relating to greenhouse gas emissions relating to a specific cultivation site and any relevant matters for the application of paragraph 2 of Article 4.

2. A decision by the administrative body that will be identified as competent will establish the terms of collaboration between the farmers involved in the emission monitoring program and the body itself.

DISCLAIMER

This text represents a basis for the possible drafting of a regulatory document that could encourage the implementation of technical solutions aimed at reducing greenhouse gas emissions in the agricultural sector. The same arises from the considerations and reflections that emerged during the meeting promoted within the LIFE ClimaMed project and held on 22/10/2024 in Genoa at the headquarters of the Liguria Region in the presence of managers and officials of the General Directorate of Tourism, Agriculture and Protected Areas (Sector of Services to Agricultural Businesses and Horticulture), officials of ISPRA (Higher Institute for Environmental Protection and Research) and the partners of the LIFE ClimaMed project. This document is not to be considered binding in any way and may be adopted in full freedom and will be subject to any type of modification based on the specific needs and the regulatory framework in environmental matters in force at the time in which the administrative body of the Italian Republic responsible for the matter may decide to use it.

**Testo indicativo per la stesura di una bozza di legge
formulata sulla base delle risultanze del progetto
ClimaMed LIFE 17 – CCM/GR/000087**

*(Ad uso dell'ente/organo amministrativo che verrà individuato come competente per la sua
formulazione e promulgazione)*

***Sistema di monitoraggio dei gas serra (GHGs) volto alla mitigazione degli
effetti del cambiamento climatico nel settore agricolo***

Articolo 1

Scopo generale

Lo scopo della presente bozza di legge è fornire un supporto normativo/regolatorio ad un sistema di monitoraggio dei gas serra con riferimento a specifiche condizioni operative in campo affinché l'Organo Amministrativo in seguito individuato come competente in materia possa selezionare, analizzare ed utilizzare informazioni e dati sulla quantità di anidride carbonica (CO₂), metano (CH₄) e protossido di azoto (N₂O) emessi dalle attività agricole e predisporre indicazioni e/o linee guida a livello di politica nazionale per la mitigazione del cambiamento climatico nel settore agricolo.

Articolo 2

Oggetto

Oggetto della presente bozza di legge è l'adozione del sistema di monitoraggio dei gas serra sviluppato come prodotto del progetto LIFE 17CCM/GR/000087 intitolato "Tecnologie innovative per la mitigazione del cambiamento climatico nel settore agricolo mediterraneo" (in breve "LIFE ClimaMed") quale strumento di monitoraggio e di misurazione automatizzato delle emissioni di gas serra provenienti da una determinata area oggetto di coltivazione senza intervento umano ed in qualunque intervallo temporale.

Articolo 3

Sistema di monitoraggio dei gas serra

1. Il sistema di monitoraggio dei gas serra sviluppato dal progetto Life ClimaMed è uno strumento per misurare, registrare, calcolare e monitorare le emissioni di gas serra nel settore agricolo.

2. Il sistema di monitoraggio dei gas serra è costituito da:

- a. Dispositivi di misurazione in loco e in tempo reale delle concentrazioni di anidride carbonica (CO₂), metano (CH₄) e protossido di azoto (N₂O) nell'atmosfera su una determinata area oggetto di coltivazione, in cui tali dispositivi sono installati ai sensi del paragrafo 3 del presente articolo.
- b. Un centro operativo costituito da componenti hardware e software che, ai sensi del paragrafo 4, è situato presso le strutture del Dipartimento dell'Ambiente, della Pianificazione Territoriale e dei Cambiamenti Climatici del Ministero dello Sviluppo Rurale e dell'Alimentazione della Repubblica Ellenica. Il suddetto Dipartimento è, ai sensi della presente bozza di legge, individuato quale autorità competente per la gestione dei dati raccolti dai dispositivi di misurazione. In questo centro:
 - Si verifica la raccolta automatica dei dati da parte dei dispositivi di misurazione e si registrano le emissioni di gas serra;
 - Si effettua conseguentemente il calcolo preciso delle concentrazioni di anidride carbonica (CO₂), metano (CH₄) e protossido di azoto (N₂O) all'interno di una determinata area oggetto di coltivazione.

3. I dispositivi di misurazione sono installati sotto la supervisione del Dipartimento incaricato di cui al paragrafo 2a e dell'ente "Centro di Sperimentazione e Assistenza Agricola" (Azienda Speciale della Camera di Commercio, Industria, Artigianato e Agricoltura "Riviera di Liguria" in qualità di soggetto che ha preso parte come partner al progetto LIFE ClimaMed) all'interno dei siti oggetto di coltivazione che verranno individuati sul territorio della Repubblica Italiana. Sempre sotto la supervisione del Dipartimento incaricato di cui al paragrafo 2a verrà individuata la posizione appropriata all'interno di ciascuna area oggetto di coltivazione al fine di misurare correttamente le concentrazioni di gas serra presenti nello strato di aria al di sopra della specie vegetale oggetto di coltivazione.

4. Il Dipartimento incaricato di cui al paragrafo 2a si impegnerà a trasmettere all'ente/organo amministrativo della Repubblica Italiana individuato come competente i dati raccolti ed elaborati relativi ai siti oggetto di monitoraggio in Italia con le finalità di cui all'articolo 4.

Articolo 4

Sfruttamento del sistema di monitoraggio dei gas serra

1. I dati e le conclusioni derivanti dalla loro elaborazione da parte del sistema di monitoraggio sono valide per l'uso da parte dell'ente/organo amministrativo della Repubblica Italiana competente che potrà utilizzarle per pianificare una strategia nazionale per la mitigazione dei cambiamenti climatici nel settore agricolo.
2. In funzione dei dati raccolti e della loro elaborazione verrà rilasciato un certificato da parte dell'ente/organo amministrativo competente individuato in Italia al fine di attestare le emissioni di gas serra provenienti dalla specifica area oggetto di coltivazione all'interno della quale è stato installato il dispositivo di misurazione. La modalità di rilascio del certificato sarà completamente automatica ed avverrà grazie alle strutture digitali del centro operativo sito in Grecia di cui all'articolo 3 paragrafo 3 in connessione con strutture analoghe presenti sul territorio italiano presso l'ente/organo amministrativo competente.
3. Ogni agricoltore che aderisce al sistema di monitoraggio dei gas serra attraverso il dispositivo di misurazione installato all'interno di un proprio sito di coltivazione avrà la possibilità di:
 - Monitorare in tempo reale la variazione nelle emissioni di gas serra all'interno del sito di coltivazione, variazione in funzione della quale verrà rilasciato il certificato di cui al paragrafo 2 del presente articolo.
 - Fornire dati all'ente/organo amministrativo competente individuato in Italia riguardanti le pratiche agronomiche adottate all'interno del sito di coltivazione affinché l'ente/organo amministrativo competente possa trarre conclusioni sull'effetto che queste pratiche hanno sulle emissioni di gas serra e conseguentemente fornire indicazioni agli agricoltori su come eventualmente modificarle così da ridurre le relative emissioni.
4. L'ente/organo amministrativo competente individuato in Italia potrà predisporre fondi nazionali e/o regionali e/o PAC per incentivare gli agricoltori ad installare questi dispositivi all'interno dei loro siti di coltivazione al fine di soddisfare gli obiettivi di questa bozza di legge, ovvero la riduzione delle emissioni di gas serra nel settore agricolo.

Articolo 5

Disposizioni di attuazione/attuative

1. In base alle decisioni del Dipartimento dell'Ambiente, della Pianificazione Territoriale e dei Cambiamenti Climatici del Ministero dello Sviluppo Rurale e dell'Alimentazione della Repubblica Ellenica in accordo con l'ente/organo amministrativo competente individuato in Italia, vengono stabiliti:

- a. La procedura, i termini e i prerequisiti per installare un dispositivo di monitoraggio dei gas serra all'interno di uno specifico sito di coltivazione sul territorio italiano e ogni dettaglio tecnico con riferimento al paragrafo 3 dell'articolo 3;
- b. I termini, i prerequisiti, il tipo, il contenuto, la data di validità e la procedura per l'emissione di un certificato inerente le emissioni di gas serra relative ad uno specifico sito di coltivazione e qualsiasi questione rilevante volta all'applicazione del paragrafo 2 dell'articolo 4.

2. Con una decisione dell'ente/organo amministrativo che verrà individuato come competente verranno stabiliti i termini di collaborazione tra gli agricoltori coinvolti nel programma di monitoraggio delle emissioni e l'ente stesso.

DICHIARAZIONE DI LIMITAZIONE DI RESPONSABILITÀ

Il presente testo rappresenta una base per l'eventuale redazione di un documento di natura regolatoria atto ad incentivare la messa in opera di soluzioni tecniche volte alla riduzione delle emissioni di gas serra in ambito agricolo. Lo stesso scaturisce dalle considerazioni e riflessioni emerse in occasione dell'incontro promosso all'interno del progetto LIFE ClimaMed e tenutosi in data 22/10/2024 a Genova presso la sede di Regione Liguria alla presenza di dirigenti e funzionari dell'Ufficio Direzione Generale Turismo, Agricoltura e Aree Protette (Settore Servizi alle Imprese Agricole e Florovivaismo), di funzionari dell'ISPRA (Istituto Superiore per la Protezione e la Ricerca Ambientale) e dei partner del progetto LIFE ClimaMed. Tale documento non è da considerarsi in alcun modo vincolante e potrà essere adottato in piena libertà e sarà passibile di qualunque tipo di modifica in funzione delle specifiche esigenze e del quadro normativo in materia ambientale vigente nel momento in cui l'ente/organo amministrativo della Repubblica Italiana preposto in materia decidesse di utilizzarlo.



Propuesta impulsada por el Ministerio de Desarrollo Rural y Alimentación de Grecia.

Presentada a las autoridades regionales de la Comunidad Valenciana del proyecto LIFE CLIMAMED en España

Elche, 19/Noviembre/2024

Propuesta basada en:

Sistema de Monitoreo de Gases de Efecto Invernadero (GEI) para el Tratamiento de los Efectos del Cambio Climático en el Sector Agrícola

Procedente del:

Ministerio de Desarrollo Rural y Alimentación de Grecia

Presentada en:

19 de Noviembre de 2024 en la Comunidad de Regantes de Riegos de Levante, margen izquierda, Elche, Comunidad Valenciana, España.

Capítulo A

Propósito - Objetivo

Artículo 1

Propósito

El propósito de la presente propuesta es establecer un Sistema de Monitoreo de Gases de Efecto Invernadero (GEI) en un campo específico, de manera que las autoridades competentes puedan seleccionar información y datos sobre la cantidad de Dióxido de Carbono (CO₂), Metano (CH₄) y Óxido Nitroso (N₂O) emitidos por las actividades agrícolas y elaborar una política para la mitigación del cambio climático en el sector agrícola.

Artículo 2

Objetivo

El objetivo del presente proyecto de ley es adoptar el sistema de monitoreo de GEI desarrollado como resultado del proyecto LIFE 17CCM/GR/000087 titulado "Tecnologías innovadoras para la mitigación del cambio climático en el sector mediterráneo" abreviado LIFE ClimaMed, como una herramienta de monitoreo automatizado de las emisiones de GEI de un campo específico y medirlas en cualquier período de tiempo sin intervención humana.

Capítulo B

Sistema de Monitoreo de GEI

Artículo 3

Sistema de Monitoreo de GEI

El Sistema de Monitoreo de GEI desarrollado a partir del proyecto Life ClimaMed es una herramienta válida y confiable para medir, registrar, calcular y monitorear las emisiones de GEI en el sector agrícola.

El sistema de monitoreo de GEI consta de:

a. Dispositivos de medición in situ y en tiempo real de las concentraciones de Dióxido de Carbono (CO₂), Metano (CH₄) y Óxido Nitroso (N₂O) en la atmósfera sobre un determinado campo, en los que se instalan de acuerdo con el párrafo 3 de este artículo.

b. Un centro operativo compuesto por hardware y software que, según el párrafo 4, está situado en el Departamento de Medio Ambiente, Ordenación del Territorio y Cambio Climático de las instalaciones del Ministerio de Desarrollo Rural y Alimentación. El Departamento antes mencionado es por esta ley la autoridad competente para hacer cumplir las disposiciones de esta ley. En este centro:

i) Se produce una entrada automatizada de datos desde los dispositivos, mencionados en 2a, y a través de estos datos se realiza el registro de las emisiones de GEI.

ii) Se realiza un cálculo preciso de las concentraciones de Dióxido de Carbono (CO₂), Metano (CH₄) y Óxido Nitroso (N₂O) en un campo particular.

Los dispositivos (2ª) se instalan bajo la supervisión de entidades públicas y privadas en un lugar apropiado en un campo para medir las concentraciones de GEI en la atmósfera sobre el campo.

El centro operativo (2b), ya funcional en el Instituto de Investigación y Tecnología heleno, será trasladado al Ministerio de Desarrollo Rural a partir del 1 de enero de 2030 y aquellas administraciones de otros países que asuman esta tecnología. Hasta entonces, el Ministerio heleno responsable de esta acción, utilizará este centro, para cumplir con las disposiciones de esta ley, con el asesoramiento técnico proporcionado por el Instituto de Investigación y Tecnología.

Artículo 4

Explotación del Sistema de Monitoreo de GEI

Las mediciones y conclusiones del sistema de monitoreo son válidas para su uso por las autoridades gubernamentales competentes para planificar una estrategia nacional para la mitigación del cambio climático en el sector agrícola.

Para verificar las emisiones de GEI de un campo en particular, se emitirá automáticamente un certificado desde la autoridad competente del subpárrafo 2b del artículo 3 a través de las instalaciones digitales del centro operativo.

Todo agricultor que haya instalado dicho dispositivo en su campo podrá:

i) Monitorear en tiempo real la fluctuación de las emisiones de GEI de su campo y para lo cual se emitirá el certificado del párrafo 2 del presente artículo.

ii) Proporcionar datos a la autoridad competente sobre sus prácticas diarias en el campo para sacar conclusiones sobre el efecto que estas prácticas tienen en las emisiones de GEI del campo

en particular y, en consecuencia, asesorar a los agricultores para que reemplacen estas prácticas con otras que creen una menor huella de GEI.

4. La autoridad competente podrá utilizar fondos nacionales y de la PAC para incentivar a los agricultores a instalar estos dispositivos en sus campos para cumplir con los objetivos de esta ley, que es la disminución de las emisiones de GEI en el sector agrícola.

Capítulo C

Artículo 5

Disposiciones de Habilitación

Por decisión del Ministro de Desarrollo Rural y Alimentación heleno y de común acuerdo con la autoridad competente en la Comunidad Valenciana, se establece lo siguiente:

- a) El procedimiento, los términos y los requisitos previos para instalar un dispositivo del sistema de monitoreo de GEI en un campo determinado, y cada detalle técnico del párrafo 3 del artículo 3.
- b) Los términos, los requisitos previos, el tipo, el contenido, la fecha de expiración y el procedimiento para emitir un certificado para estas emisiones de GEI de un campo determinado y cualquier asunto relevante para aplicar el párrafo 2 del artículo 4.

Mediante una decisión de las autoridades competentes, se establecerán los términos en los que cualquier agricultor involucrado colaborará con dicha autoridad.



RESUMEN

El 19 de noviembre de 2024, la Comunidad de Regantes Riegos de Levante, en Elche, fue escenario de un importante evento en el marco del proyecto LIFE CLIMAMED. Se presentó a las autoridades regionales de la Comunidad Valenciana y a las partes interesadas una propuesta innovadora impulsada por el Ministerio griego de Desarrollo Rural y Alimentación.

La propuesta se centra en la implementación de un Sistema de Monitoreo de Gases de Efecto Invernadero (GEI) diseñado específicamente para abordar los efectos del cambio climático en el sector agrícola. Este sistema, desarrollado por el ministerio griego, busca proporcionar herramientas y estrategias para reducir las emisiones de GEI y promover prácticas agrícolas sostenibles y resilientes.

La presentación de esta propuesta en la Comunidad Valenciana pone de relieve el interés y la preocupación compartidos por los retos que plantea el cambio climático en la agricultura mediterránea. La región, conocida por su rica tradición agrícola y su importante papel en la producción de alimentos, enfrenta riesgos cada vez mayores relacionados con el cambio climático, como la escasez de agua, el aumento de las temperaturas y la mayor incidencia de fenómenos meteorológicos extremos.

La iniciativa griega ofrece una valiosa oportunidad para fortalecer la colaboración entre países y regiones en la búsqueda de soluciones para mitigar el cambio climático en la agricultura. El intercambio de conocimientos y experiencias, así como la transferencia de tecnologías y herramientas innovadoras, son esenciales para construir un sector agrícola más sostenible y resiliente.

Se espera que la propuesta griega sea estudiada y evaluada por las autoridades de la Comunidad Valenciana, y que se establezcan mecanismos de colaboración para su posible implementación en la región. La adopción de medidas para reducir las emisiones de GEI en la agricultura es fundamental para proteger el medio ambiente, garantizar la seguridad alimentaria y promover el desarrollo sostenible del sector agrícola.

DESCARGO DE RESPONSABILIDAD

Este texto representa una base para la posible redacción de un documento reglamentario que podría fomentar la implementación de soluciones técnicas destinadas a reducir las emisiones de gases de efecto invernadero en el sector agrícola.

Este documento no se considera vinculante en modo alguno y puede adoptarse con plena libertad y estará sujeto a cualquier tipo de modificación en función de las necesidades específicas y del marco normativo en materia medioambiental vigente en el momento en que el órgano administrativo de la Comunidad Valenciana responsable de la materia decida utilizarlo.



SUMMARY

On November 19, 2024, the Riegos de Levante Irrigation Community, in Elche, was the setting for an important event within the framework of the LIFE CLIMAMED project. An innovative proposal driven by the Greek Ministry of Rural Development and Food was presented to the regional authorities of the Valencian Community and stakeholders.

The proposal focuses on the implementation of a Greenhouse Gas (GHG) Monitoring System specifically designed to address the effects of climate change in the agricultural sector. This system, developed by the Greek Ministry, seeks to provide tools and strategies to reduce GHG emissions and promote sustainable and resilient agricultural practices.

The presentation of this proposal in the Valencian Community highlights the shared interest and concern for the challenges posed by climate change in Mediterranean agriculture. The region, known for its rich agricultural tradition and its important role in food production, faces increasing risks related to climate change, such as water scarcity, rising temperatures and the increased incidence of extreme weather events.

The Greek initiative offers a valuable opportunity to strengthen collaboration between countries and regions in the search for solutions to mitigate climate change in agriculture. The exchange of knowledge and experiences, as well as the transfer of innovative technologies and tools, are essential to build a more sustainable and resilient agricultural sector.

It is expected that the Greek proposal will be studied and evaluated by the authorities of the Valencian Community, and that collaboration mechanisms will be established for its possible implementation in the region. The adoption of measures to reduce GHG emissions in agriculture is essential to protect the environment, ensure food security and promote the sustainable development of the agricultural sector.

DISCLAIMER

This text represents a basis for the possible drafting of a regulatory document that could encourage the implementation of technical solutions aimed at reducing greenhouse gas emissions in the agricultural sector.

This document is not to be considered binding in any way and may be adopted in full freedom and will be subject to any type of modification based on the specific needs and the regulatory framework in environmental matters in force at the time in which the administrative body of the Valencian Community responsible for the matter may decide to use it.



Proposal promoted by the Ministry of Rural Development and Food of Greece.

Presented to the regional authorities of the Valencian Community of the LIFE CLIMAMED project in Spain.

Elche, November 19, 2024.

Proposal based on:

Greenhouse Gas (GHG) Monitoring System for Addressing the Effects of Climate Change in the Agricultural Sector.

Originating from:

Ministry of Rural Development and Food of Greece.

Presented on:

November 19, 2024, at the Irrigation Community of Riegos de Levante, left bank, Elche, Valencian Community, Spain.

Chapter A

Purpose - Objective

Article 1

Purpose

The purpose of this proposal is to establish a Greenhouse Gas (GHG) Monitoring System in a specific field, so that the competent authorities can select information and data on the amount of Carbon Dioxide (CO₂), Methane (CH₄), and Nitrous Oxide (N₂O) emitted by agricultural activities and develop a policy for climate change mitigation in the agricultural sector.

Article 2

Objective

The objective of this bill is to adopt the GHG monitoring system developed as a result of the LIFE 17CCM/GR/000087 project titled "Innovative technologies for climate change mitigation in the Mediterranean sector" abbreviated LIFE ClimaMed, as an automated monitoring tool for GHG emissions from a specific field and measure them at any period of time without human intervention.

Chapter B

GHG Monitoring System

Article 3

GHG Monitoring System

The GHG Monitoring System developed from the Life ClimaMed project is a valid and reliable tool for measuring, recording, calculating, and monitoring GHG emissions in the agricultural sector.

The GHG monitoring system consists of:

a. In-situ and real-time measurement devices for the concentrations of Carbon Dioxide (CO₂), Methane (CH₄), and Nitrous Oxide (N₂O) in the atmosphere over a given field, in which they are installed in accordance with paragraph 3 of this article.

b. An operations center composed of hardware and software that, according to paragraph 4, is located in the Department of Environment, Territorial Planning and Climate Change of the facilities of the Ministry of Rural Development and Food. The aforementioned Department is by this law the competent authority to enforce the provisions of this law. In this center:

i) An automated data entry is produced from the devices, mentioned in 2a, and through these data, the registration of GHG emissions is carried out.

ii) An accurate calculation of the concentrations of Carbon Dioxide (CO₂), Methane (CH₄), and Nitrous Oxide (N₂O) in a particular field is performed.

The devices (2a) are installed under the supervision of public and private entities in an appropriate place in a field to measure GHG concentrations in the atmosphere over the field.

The operations center (2b), already functional at the Hellenic Research and Technology Institute, will be transferred to the Ministry of Rural Development as of January 1, 2030, and those administrations of other countries that adopt this technology. Until then, the Hellenic Ministry responsible for this action will use this center, to comply with the provisions of this law, with the technical advice provided by the Research and Technology Institute.

Article 4

Exploitation of the GHG Monitoring System

The measurements and conclusions of the monitoring system are valid for use by the competent government authorities to plan a national strategy for climate change mitigation in the agricultural sector.

To verify the GHG emissions of a particular field, a certificate will be automatically issued from the competent authority of subparagraph 2b of article 3 through the digital facilities of the operations center.

Any farmer who has installed such a device in their field may:

i) Monitor in real-time the fluctuation of GHG emissions from their field and for which the certificate of paragraph 2 of this article will be issued.

ii) Provide data to the competent authority on their daily practices in the field to draw conclusions about the effect that these practices have on the GHG emissions of the particular

field and, consequently, advise farmers to replace these practices with others that create a lower GHG footprint.

4. The competent authority may use national and CAP funds to incentivize farmers to install these devices in their fields to comply with the objectives of this law, which is the decrease of GHG emissions in the agricultural sector.

Chapter C

Article 5

Enabling Provisions

By decision of the Hellenic Minister of Rural Development and Food and by common agreement with the competent authority in the Valencian Community, the following is established:

- a) The procedure, terms, and prerequisites for installing a GHG monitoring system device in a given field, and every technical detail of paragraph 3 of article 3.
- b) The terms, prerequisites, type, content, expiration date, and procedure for issuing a certificate for these GHG emissions from a given field and any matter relevant to applying paragraph 2 of article 4.

By decision of the competent authorities, the terms under which any involved farmer will collaborate with said authority will be established.



RESUMEN

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