



## **LIFE14 CCA/GR/000389 - AgroClimaWater Promoting water efficiency and supporting the shift towards a climate resilient agriculture in Mediterranean countries**

### **Deliverable C1.1: Final web-based platform**

Action C1: LIFE AgroClimaWater Geodatabase  
development, update and maintenance

Action: C1  
Release: Final Version  
Action Responsible: HYETOS  
Contribution to action's implementation: IOTSP, LRI, KEDHP, MIRABELLO, UNIBAS

**JUNE 2016**



Project LIFE14 ENV/GR/000389–AgroClimaWater is implemented with the contribution of the LIFE Programme of the European Union and project's partner scheme

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## Terminology / Abbreviations

<b>Term</b>	<b>Description</b>
AWMS	Agricultural Water Management System
etc.	et cetera
Fig.	Figure
GIS	Geographic Information Systems

# CONTENTS

- 1. INTRODUCTION ..... 6
- 2. ACCESS TO THE WEB-BASED PLATFORM ..... 6
- 3. TYPES OF USERS ..... 7
- 4. MAIN OPERATIONS ..... 8
  - 4.1 SUBMIT..... 8
  - 4.2 EDIT .....10
  - 4.3 DELETE .....11
  - 4.4 DISPLAY.....11
  - 4.5 PREVIEW & EXPORT.....12

## List of Figures

Fig. 1: "Login" page .....	6
Fig. 2: Agriculturalist's interface .....	7
Fig. 3: Researcher's interface .....	8
Fig. 4: "Submit farmer" page.....	8
Fig. 5: "Submit parcel" page.....	9
Fig. 6: Submit "Water Management" information .....	10
Fig. 7: "Edit forms" page.....	10
Fig. 8: "Delete Parcel" page.....	11
Fig. 9: "Display" page.....	11
Fig. 10: Preview excel in the web browser.....	12

## 1. INTRODUCTION

The main scope of Action C1 is the handling of the extensive range of data collected and generated during the project. To this end, two IT tools were developed, the project's Geodatabase and the project's web based platform.

The 1<sup>st</sup> IT tool, the project's Geodatabase, Geographic Information Systems (GIS), aiming at the storage, process and query of the spatial information and their elaboration and utilization so as to analyse and assess the current situation and the project's results. The Geodatabase is presented in the deliverable C.1.2 "Fully functional Geodatabase". The 2<sup>nd</sup> IT tool, the project's web-based platform, is an online tool through which the certified project's beneficiaries and agronomists can import, edit, view and export various information, per registered farmer and parcel, collected through the 1<sup>st</sup> Agricultural Water Management System (AWMS) form in reference to:

- the farmer's info
- the parcel's info
- the soil cultivation / weed management
- the applied fertilizers, herbicides and plant protection products
- the harvesting of the crops
- the pruning
- the respective consumption of water

In the following chapters the main operations of the web-based platform is briefly presented.

## 2. ACCESS TO THE WEB-BASED PLATFORM

The web-based platform for LIFE AgroClimaWater project is available at <http://life-agro-1.dyndns.biz:2016/Logon.asp>. As this tool was developed only for the scopes of AgroClimaWater project and in order to avoid accidental entries that would compromise the reliability of the data, the platform is accessible only to certified users who can use a personal username and password to login into the platform (Fig. 1).



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Life

LIFE AgroClimaWater

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Login Page

Username:

Password:

Login

Fig. 1: "Login" page

The web-based platform will be available throughout the project's lifespan and five years after the end of the project in order the project's scientific team to insert all the related data that will be collected through the 1<sup>st</sup> AWMS form during and after the project's lifespan.

### 3. TYPES OF USERS

Two different types of users were defined for the scope of LIFE AgroClimaWater project depending on their needs and their permissions on the web-based platform:

- Agriculturalists of the three F.ORs which are responsible for the collection and the insertion of the related data, and
- Researchers which are the members of the project's beneficiaries and consist the scientific team of the project.

Agriculturalists can submit, view, edit and delete information on the platform (Fig. 2), while researchers can only view the information of the database (Fig. 3).

Both of them can use the "export operation" in order to preview or download the gathered information so they can have a more integrated view of the data and the ability to elaborate and assess the data for the project's needs.



**Fig. 2: Agriculturalist's interface**

In order to cover the project's needs the project team defined different users for each beneficiary and created the relevant users' accounts. More specific, four accounts for agriculturalists (one for KEDHP, one for AFI and two for Mirabello) and nine accounts for researchers (3 for UNIBAS, 1 for RodaxAgro, 2 for LRI, 2 for IOTSP and 1 for HYETOS) were created and used by the project team.



**Fig. 3: Researcher's interface**

## 4. MAIN OPERATIONS

### 4.1 Submit

The main operation that agriculturalists can perform is the submission of information related to the farmers and their parcels, from the menu "Submit", using three different online forms:

- "Submit Farmer" (Fig. 4) through which the user can enter to the platform data that are related to the farmer such as:

- ✓ Name
- ✓ Code
- ✓ City
- ✓ Address

**Fig. 4: "Submit farmer" page**

- "Submit Parcel" (Fig. 5) where the user can select the owner of the parcel and the pilot area within its boundaries it is located and add data regarding:

- ✓ the crop that is cultivated,
- ✓ the parcel's code,
- ✓ the location, the coordinates and the area of the parcel,
- ✓ the mean yield of last 5 years,
- ✓ the name and the address of the responsible person,
- ✓ the number of the trees that there are in the parcel,
- ✓ the date of the first planting,
- ✓ whether the parcel is organic or not, and
- ✓ comments that would be useful.

**Fig. 5: "Submit parcel" page**

- "Submit Parcel" (Fig. 6). In order to add data in this form the user should select first of all the farmer of the parcel from the drop-down list and the parcel code for which he will add the data.

Then, selecting any of the available forms he can submit specific information in reference to:

- ✓ Water management,
- ✓ Soil cultivation,
- ✓ Fertilizers,
- ✓ Harvesting,
- ✓ Plant Protection Products,
- ✓ Herbicides,
- ✓ Pruning,
- ✓ Submit date

Submitted parcels are connected to farmers and each parcel contains the above forms as information about cultivation. Each of these forms are submitted according to the year of cultivation.

**Fig. 6: Submit "Water Management" information**

## 4.2 Edit

Users with privileges to use this operation can edit the inserted data on the database by selecting the "Edit" menu (Fig. 7). The user can edit only the information that is related with the parcel and the agricultural practices that are applied per parcel and not the farmer's information.

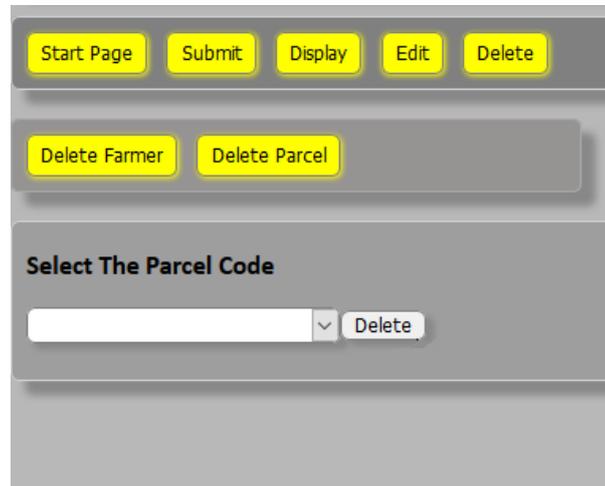
The steps for editing information are the following:

1. Choose a Farmer
2. Choose one of his parcels. In this step if the user wants to edit the parcel's info he can edit the fields and press the yellow "Edit Parcel" button.
3. Next the user has to choose one of the following information categories such as "Soil".
4. Then he has to choose the year of the inserted information he wants to edit
5. The final step is to edit the fields and press the "Submit button"

**Fig. 7: "Edit forms" page**

### 4.3 Delete

Also the system supports deletion of Farmer or a Parcel. Deleting one of these the system deletes all the information that is connected with the farmer or parcel respectively.

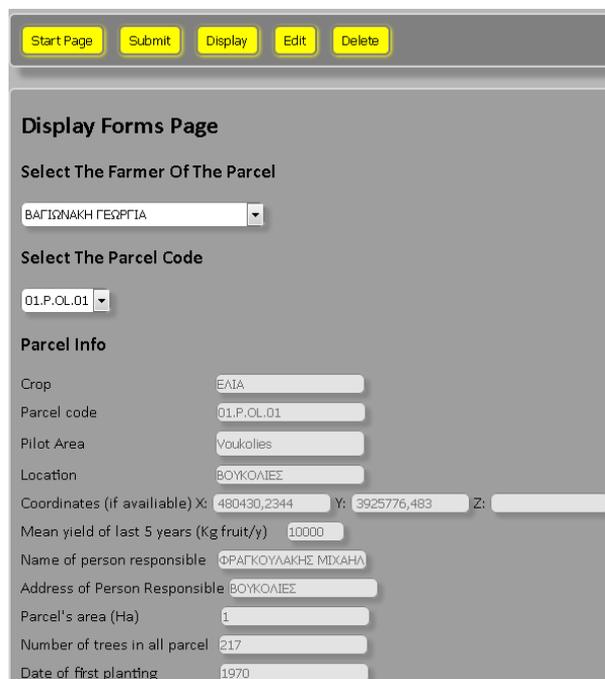


The screenshot shows a web interface for deleting a parcel. At the top, there is a navigation bar with five buttons: 'Start Page', 'Submit', 'Display', 'Edit', and 'Delete'. Below this, there is a section with two buttons: 'Delete Farmer' and 'Delete Parcel'. The main content area is titled 'Select The Parcel Code' and features a dropdown menu with a downward arrow and a 'Delete' button.

Fig. 8: "Delete Parcel" page

### 4.4 Display

The display operation is accessible from every user has access to the system. By selecting the farmer and one of his parcels the user can see every information about a specific year. In this function of the platform the information that is presented is not editable from the user and for this reason the fields are gray (Fig. 9).



The screenshot shows a web interface for displaying parcel information. At the top, there is a navigation bar with five buttons: 'Start Page', 'Submit', 'Display', 'Edit', and 'Delete'. Below this, the page is titled 'Display Forms Page'. It features two dropdown menus: 'Select The Farmer Of The Parcel' with 'ΒΑΓΙΩΝΑΚΗ ΓΕΩΡΓΙΑ' selected, and 'Select The Parcel Code' with '01.P.OL.01' selected. Below these is a 'Parcel Info' section with various fields: Crop (ΕΛΙΑ), Parcel code (01.P.OL.01), Pilot Area (Voukolies), Location (ΒΟΥΚΟΛΙΕΣ), Coordinates (if available) X: 480430,2344 Y: 3925776,483 Z: [empty], Mean yield of last 5 years (Kg fruit/y) (10000), Name of person responsible (ΦΡΑΓΚΟΥΛΑΚΗΣ ΜΙΧΑΗΛ), Address of Person Responsible (ΒΟΥΚΟΛΙΕΣ), Parcel's area (Ha) (1), Number of trees in all parcel (217), and Date of first planting (1970).

Fig. 9: "Display" page

### 4.5 Preview & Export

The excel preview and export functions give the users and especially the researchers the ability to have a more completed view of all the inserted data of the system. The system supports two different functions that can be applied on two different datasets of the database. These two functions are:

- Preview the data in the web browser, where the displayed data are presented in excel format and they are read-only.
- Download the data, where the user can download and save the exported data in editable excel format in his own computer

And the two datasets are:

- Information inserted from all agriculturalists for a specific year
- Information inserted from a specific agriculturist for a specific year

In the first dataset the user can select a specific year and then "Preview" or "Export" all data from all agriculturalists and parcels that have been inserted in the database for this year.

In the second dataset the user can choose a specific year and agriculturalist and then to "Preview" or "Export" all the data that have been inserted in the database by this agriculturalist for the specific year.

AGRO-CLIMA-WATER Questionnaire																
Year	2015	2015	2015	2015	2015	2015	2015	2015	2015	2015	2015	2015	2015	2015	2015	2015
ATTENTION: Data below refer to ALL the parcel																
Όνομα Ερευνητή/Researcher's Name																
Ημερομηνία Συμπλήρωσης Date of Data Collection																
Όνομα Οικογένειας																
Παραγωγός - Farmer	ΒΑΓΔΟΝΑΚΗ ΓΕΩΡΓΙΑ	ΒΑΓΔΟΝΑΚΗ ΓΕΩΡΓΙΑ	ΒΑΓΔΟΝΑΚΗ ΓΕΩΡΓΙΑ	ΑΛΕΞΑΝΔΡΗΣ ΣΤΕΦΑΝΟΣ	ΑΛΕΞΑΝΔΡΗΣ ΣΤΕΦΑΝΟΣ	ΠΕΡΚΑΚΗΣ ΔΑΝΗΣ	ΑΝΑΣΤΑΣΑΚΗΣ ΧΟΥΡΛΑΚΗΣ ΙΩΑΝΝΗΣ	ΑΝΑΣΤΑΣΑΚΗΣ ΧΟΥΡΛΑΚΗΣ ΙΩΑΝΝΗΣ	ΑΝΑΣΤΑΣΑΚΗΣ ΧΟΥΡΛΑΚΗΣ ΙΩΑΝΝΗΣ	ΧΡΗΣΤΟΦΑΚΗΣ ΙΩΑΝΝΗΣ	ΧΡΗΣΤΟΦΑΚΗΣ ΙΩΑΝΝΗΣ	ΜΑΥΡΟΚΑΚΗ ΡΩΔ	ΜΑΣΤΟΡΑΚΗ ΣΑΥΤΑ ΙΩΑΝΝΑ	ΜΑΣΤΟΡΑΚΗ ΣΑΥΤΑ ΙΩΑΝΝΑ		
Καθεστώς - Crop	ΕΛΙΑ	ΕΛΙΑ	ΕΛΙΑ	ΕΛΙΑ	ΕΛΙΑ	ΕΛΙΑ	ΕΛΙΑ	ΕΛΙΑ	ΕΛΙΑ	ΕΛΙΑ	ΕΛΙΑ	ΕΛΙΑ	ΕΛΙΑ	ΕΛΙΑ	ΕΛΙΑ	ΕΛΙΑ
Κωδικός οροπέδιου - parcel code	01.POL.01	01.POL.02	01.POL.03	1.01	1.02	28.02	2.01	2.02	2.03	38.02	38.01	18.02	17.01	17.02		
Ποσιών - Area	Youkolies	Youkolies	Youkolies	Havgas Mitatos	Havgas Mitatos	Havgas Mitatos	Havgas Mitatos	Havgas Mitatos	Havgas Mitatos	Havgas Mitatos	Havgas Mitatos	Havgas Mitatos	Havgas Mitatos	Havgas Mitatos		
Τοποθεσία - Location	ΒΟΥΚΟΝΙΕΣ	ΒΟΥΚΟΝΙΕΣ	ΒΟΥΚΟΝΙΕΣ	ΚΟΥΤΟΥΛΗΡΙ	ΑΡΚΑΔΑ ΚΑΛΗ	ΝΟΤΙΚΑ	ΦΡΑΜΑΤΑ	ΚΑΤΟ ΛΑΚΚΟΙ	ΜΑΖΙ	ΑΡΧΟΝΤΙΣΤΑ	ΓΙΣΕΡΟΥ	ΔΙΚΑΕΤΑ	ΦΡΑΠΟ 1	ΦΡΑΠΟ 2		
Συντεταγμένες (ou coordinates) - Coordinates (if available)	480430.2344 - 3925778.483	480552.8908 - 3925998.918	481995.4829 - 3925555.969	645747.1326786 - 3901888.9562120	645301.23448956 - 3902873.07	643717.14959008 - 3904117.1741882	644536.591088083 - 3904584.2996999	644778.95201141 - 3904198.6961062	643510.398 - 3902491.8952355	644846.25991234 - 3904177.747661	643530.88018041 - 3904272.8356552	645625.87222575 - 3902245.7737597	644815.468871 - 3902598.9881	644817.1 - 3902533		
Μέση απόδοση ποικυδίου ποικυδίου (σε τόνους) - Mean yield of last 5 years (kg flour)	10000	5000	4000	2500	1800	600	1200	200	300	1200	3000	800	2000	2000		
Διεύθυνση - Address	ΦΡΑΓΚΟΛΥΜΕΝΗΣ ΜΕΧΑΛΗ	ΦΡΑΓΚΟΛΥΜΕΝΗΣ ΜΕΧΑΛΗ	ΦΡΑΓΚΟΛΥΜΕΝΗΣ ΜΕΧΑΛΗ	ΑΛΕΞΑΝΔΡΗΣ ΣΤΕΦΑΝΟΣ	ΑΛΕΞΑΝΔΡΗΣ ΣΤΕΦΑΝΟΣ	ΠΕΡΚΑΚΗΣ ΔΑΝΗΣ	ΑΝΑΣΤΑΣΑΚΗΣ ΧΟΥΡΛΑΚΗΣ ΙΩΑΝΝΗΣ	ΑΝΑΣΤΑΣΑΚΗΣ ΧΟΥΡΛΑΚΗΣ ΙΩΑΝΝΗΣ	ΑΝΑΣΤΑΣΑΚΗΣ ΧΟΥΡΛΑΚΗΣ ΙΩΑΝΝΗΣ	ΧΡΗΣΤΟΦΑΚΗΣ ΙΩΑΝΝΗΣ	ΧΡΗΣΤΟΦΑΚΗΣ ΙΩΑΝΝΗΣ	ΑΛΕΞΑΝΔΡΗΣ ΚΑΡΑΜΑΤΟΣ	ΜΑΣΤΟΡΑΚΗ ΣΑΥΤΑ ΙΩΑΝΝΑ	ΜΑΣΤΟΡΑΚΗ ΣΑΥΤΑ ΙΩΑΝΝΑ		
Όνομα υπεύθυνου - Name of person responsible	ΒΟΥΚΟΝΙΕΣ	ΒΟΥΚΟΝΙΕΣ	ΒΟΥΚΟΝΙΕΣ	ΝΕΑΠΟΛΗ	ΝΕΑΠΟΛΗ	ΗΡΑΚΛΕΙΟ	ΒΟΥΛΙΜΕΝΗ	ΒΟΥΛΙΜΕΝΗ	ΒΟΥΛΙΜΕΝΗ	ΛΑΤΣΙΑ	ΛΑΤΣΙΑ	ΝΕΑΠΟΛΗ	ΝΕΑΠΟΛΗ	ΝΕΑΠΟΛΗ		
Επιφάνεια οροπέδιου σε στρέμματα & Parcel's area (Ha)	1	0.7	0.5	0.15	0.13	0.21	1.2	0.19	0.16	0.5	0.5	0.1	0.31	0.46		
Αριθμός δένδρων σε όλο το οροπέδιο - Number of trees in all parcel	217	150	110	40	36	40	200	33	50	100	125	20	130	130		
Έτος φύτευσης - Date of first planting	1970	1990	1995	1990	1990	1990	1950	1950	1950	1900	1900, 1995	1900	1972	1980		
Βιολογική καλλιέργεια (Yes/No) - Organic farming (Yes/No)	yes	yes	yes	no	no	no	no	no	no	no	no	no	no	no		
Σημειώσεις - Comments																
Πηγή νερού - Water source																
Βιολογική ή μη βιολογική πηγή νερού (Yes/No) - Ownership of irrigation water source (Yes/No)		no	no	no	no	no	no	no	no	no	no	no	no	no		

Fig. 10: Preview excel in the web browser