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**EUROPEAN UNION**



REPÚBLICA AUTÓNOMA DE CORDOBA  
REPÚBLICA AUTÓNOMA DE CORDOBA



**FruitFlyNet II**

# FruitFlyNet-ii

*Commercialisation of an Automated Monitoring and Control System against the Olive and Med Fruit Flies of the Mediterranean Region*


## Training Seminar

# The OliveFlyNet geodatabase

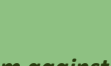
by

*Prof. Dionysios Perdakis and Dr. Costas Pontikakos*


**Athens, Greece, June 15<sup>th</sup>, 2022**




ΕΓΧΕΙΡΙΔΙΟ ΔΙΑΧΕΙΡΙΣΜΟΥ ΑΓΡΟΤΙΚΗΣ  
ΑΓΡΟΙΚΟΝΟΜΙΚΗΣ ΠΑΝΕΠΙΣΤΗΜΙΑΣ ΑΘΗΝΩΝ




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of Agricultural Research  
LARI



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1


2


## Overview


OliveFlyNET ii 


- Presentation of the Maps template (geodatabase visualization)
- Presentation of the OliveFlyNet site
- The maps of the geospatial layers
- The data structure of each geospatial layer

The OliveFlyNet geodatabase  
Meeting June 15-17, 2022






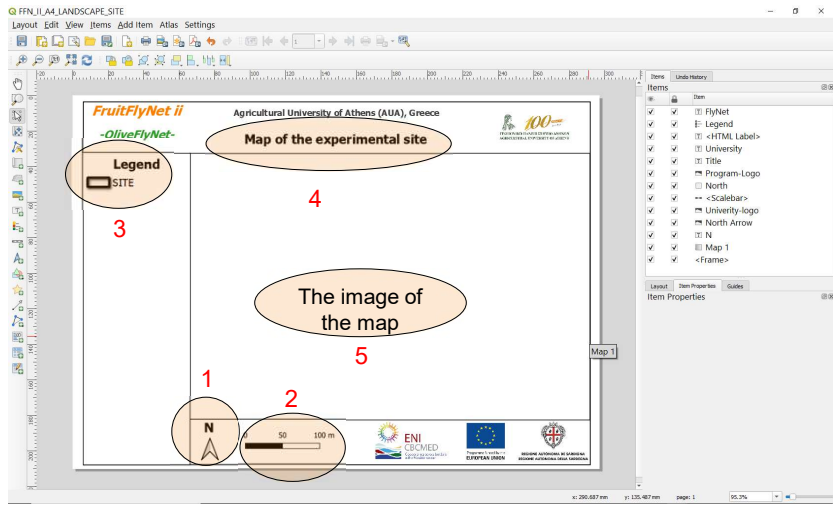





3


## Maps template


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4

## Test site of Arkadiko, Greece (Olive groves)

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**FruitFlyNet ii**  
-OliveFlyNet-

Agricultural University of Athens (AUA), Greece

Map of the location of the experimental site (Arkadiko)

**Legend**  
● SITE LOCATION



0 1000 2000 km

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Cooperating across borders  
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REGIONE AUTONOMA DI SARDEGNA  
REGIONE AUTONOMA DELLA SARDEGNA



Arkadiko village

Arkadiko test site

The site lies in a hilly area, its distance from the sea is about 6 km.  
There are houses and small water reservoirs close to water pumps.  
The surrounding crops are olives, citrus orchards, apricot orchards and small vegetable fields.


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5

## Geospatial layers

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**Main geospatial layers of the olive groves**

- Olive groves
- Olive trees
- Traps
- Sensors
- Protected areas
- Buffer zones
- Road network
- Base maps




The photograph shows an olive grove with a dirt path. A yellow arrow points from the 'Olive groves' layer to the trees. A yellow arrow points from the 'Traps' layer to a yellow square on the path. A yellow arrow points from the 'Sensors' layer to a sensor icon on the path. A yellow arrow points from the 'Protected areas' layer to a red circle on the path. A yellow arrow points from the 'Buffer zones' layer to a green circle on the path. A yellow arrow points from the 'Road network' layer to the dirt path. A yellow arrow points from the 'Base maps' layer to the background of the photograph.

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6

**Borders of the experimental site-Map**



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**FruitFlyNet ii**  
-OliveFlyNet-


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**Map of the experimental site (Arkadiko)**

**Legend**

 SITE









**Name of the site:**  
**Arkadiko, Argolis**

**Total site surface:**  
**About 30 ha**

**Dimensions of the site:**  
**0.8 km x 0.55 km**


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7




**Borders of the experimental site-Data structure**


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Data field	Type name	Comment
fid	Integer64	Feature ID: Auto increment.
ID	Integer	Unique polygon ID: Manual.
Label	String	The label of the polygon.
Notes	String	Free text field about the polygon.
Area	Real	Area in m <sup>2</sup>

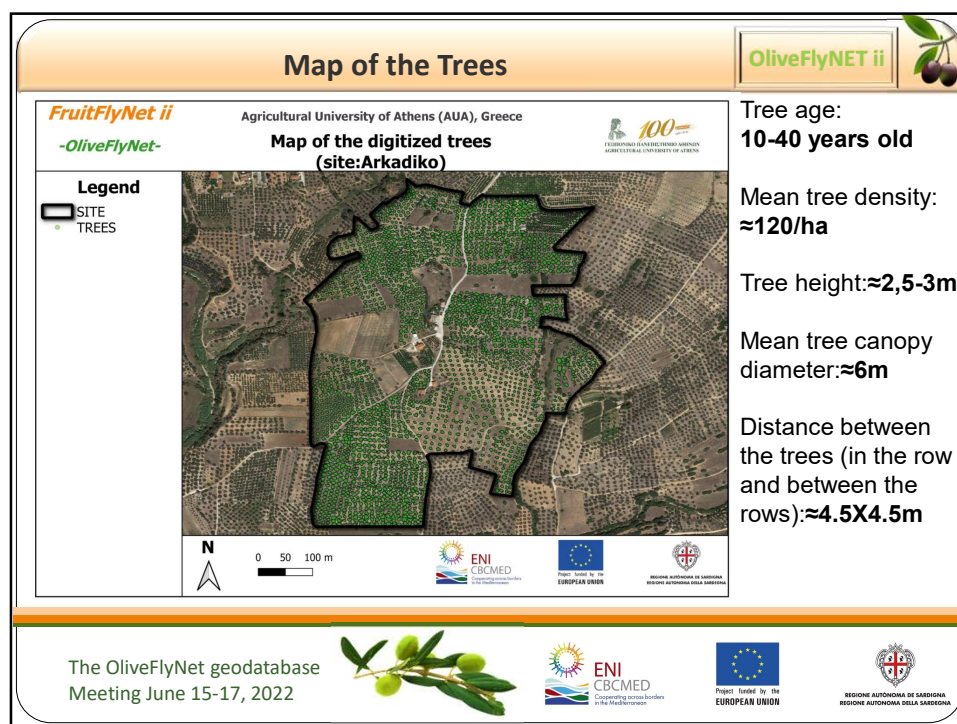
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8





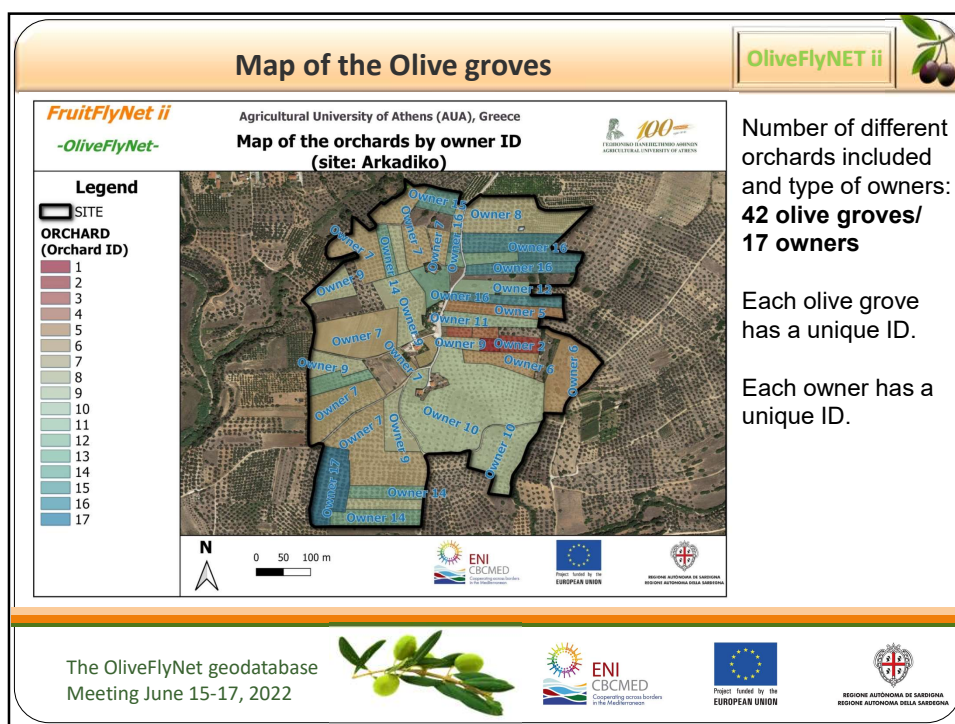
9

### Data structure of the Trees

Data field	Type name	Comment
fid	Integer64	Feature ID: Auto increment.
TreeID	Integer	Unique tree ID. Manual.
SpeciesID	Integer	Species/Variety ID.
Date	Date	First digitization date or date of plantation.
Label	String	A label that can differentiate this tree from others.
Height	Real	The height of each tree (m).
Diameter	Real	The diameter of the canopy of each tree (m).
Longitude	Real	The Longitude of the location of the tree.
Latitude	Real	The Latitude of the location of the tree.
Altitude	Real	The Altitude of the location of the tree.
Notes	String	Free text field about the specific tree.
InTheRow	Integer	The position of each tree in the row.
Row	Integer	The row the tree belongs to.

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10



11

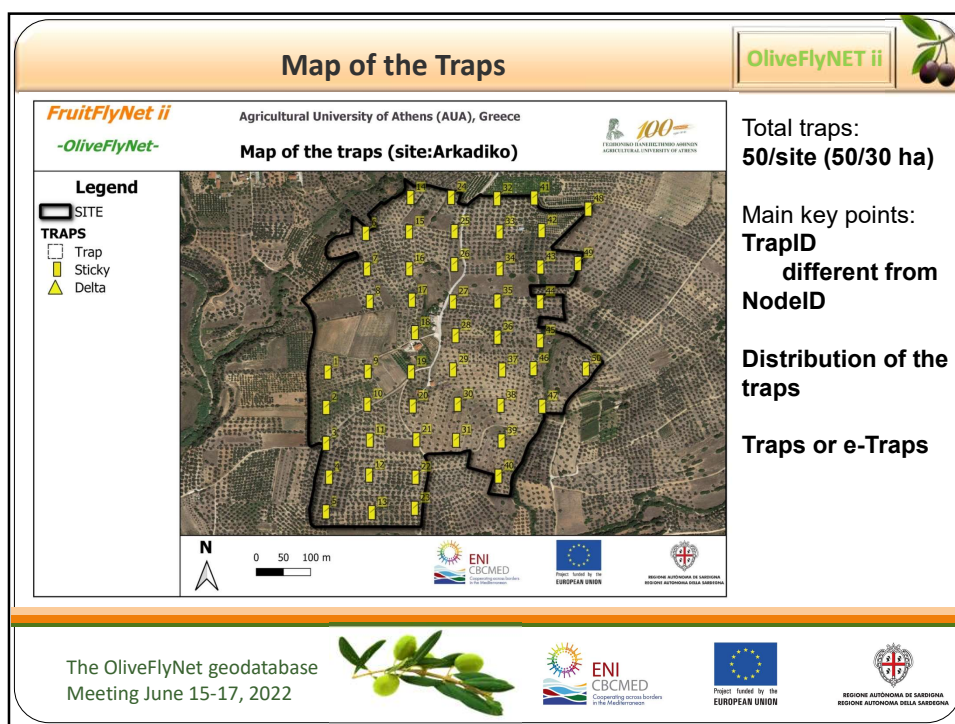
### Data structure of the Olive groves

**OliveFlyNET ii**

Data field	Type name	Comment
<b>fid</b>	Integer64	Feature ID: Auto increment.
<b>ID</b>	Integer	Unique polygon ID. Manual.
<b>Label</b>	String	The label of the polygon.
<b>OwnerID</b>	Integer	The ID of the owner of the polygon
<b>Notes</b>	String	Free text field about the polygon.
<b>Area</b>	Real	Area in m <sup>2</sup>

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12



13

### Data structure of the Traps

**OliveFlyNET ii**


Data field	Type name	Comment
fid	Integer64	Feature ID: auto increment.
TrapID	Integer	Unique trap ID: Manual.
NodeID	Integer	Node ID: Manual.
TrapTypeID	String	Unique text ID of the trap type. Use values: Sticky or Delta.
Label	String	Label of the trap.
Longitude	Real	Longitude of the node that the trap belongs to.
Latitude	Real	Latitude of the node that the trap belongs to.
Altitude	Real	Altitude of the node that the trap belongs to.
Notes	String	Free text field about the trap.

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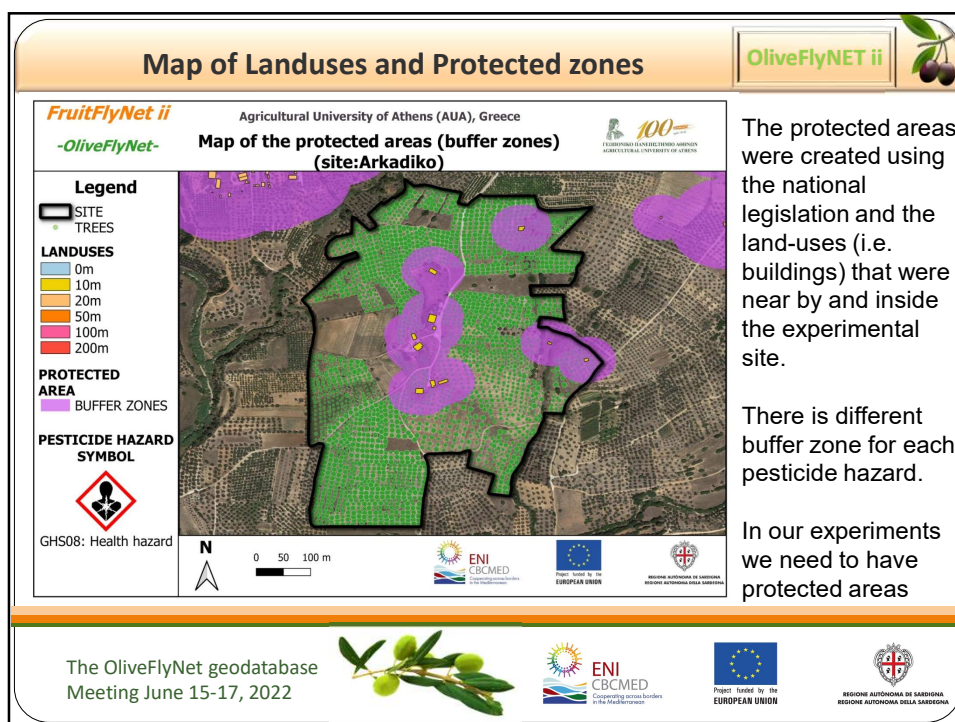
14

Data structure of the Traps' captures			OliveFlyNET ii
Data field	Type name	Comment	
fid	Integer64	Feature ID: auto increment.	
TrappingID	Integer64	Feature ID: auto increment.	
TrapID	Integer	Unique trap ID	
NodeID	Integer	Node ID	
Date	DateTime	The moment of entering the captures	
Changed	Boolean	If the trap changed	
Males	Integer	The males	
Females	Integer	The females	
Adults	Integer	The adults (males or females)	
Similar	Integer	Similar insects	
Other	Integer	Other insects	
Complex	Integer	Complex parts of insects	
Photo	String	Photo of the trap	
Longitude	Real	Longitude of the node that the trap belongs to.	
Latitude	Real	Latitude of the node that the trap belongs to.	
Altitude	Real	Altitude of the node that the trap belongs to.	
Notes	String	Free text field about the trap.	

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15







16

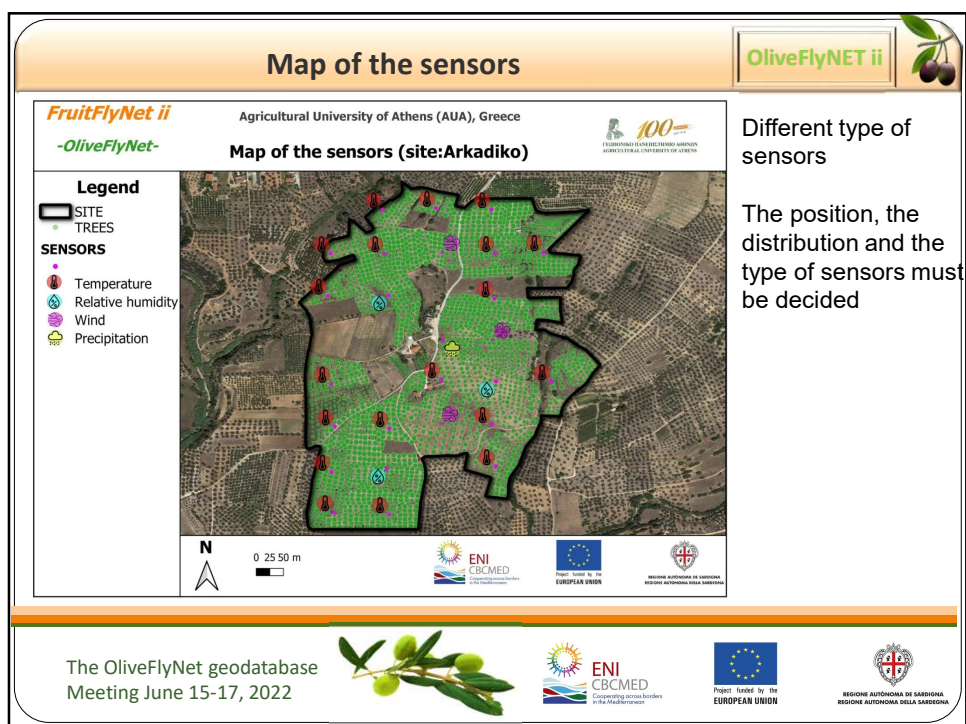


Data structure of Landuses and Protected zones			OliveFlyNET ii
Data field	Type name	Comment	
fid	Integer64	Feature ID: Auto-increment.	
ID	Integer	Unique polygon ID: Manual.	
Label	String	The label of the polygon.	
Type	String	i.e. Organic crop, Uncultivated area, Protected area, Water reservoirs, Building, Object, Obstacle, Road.	
Notes	String	Free text field about the polygon.	
Area	Real	Area in m <sup>2</sup>	
Buffer	Real	The buffer zone size for protected areas in meters. The buffer zone size for protected areas in m. The area is considered non protected if buffer is equal to zero (0).	
Data field	Type name	Comment	
fid	Integer64	Feature ID: auto increment.	
ID	Integer	Unique polygon ID: Manual.	
Label	String	The label of the polygon.	
Notes	String	Free text field about the polygon.	
Area	Real	Area in m <sup>2</sup>	

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17



18

Data structure of the sensors			OliveFlyNET ii
Data field	Type	Comment	
fid	Integer64	Feature ID: Auto increment.	
SensorID	Integer	Unique sensor ID: Manual.	
NodeID	Integer	Node ID: Manual.	
SensorTypeID	Integer	Unique sensor type ID (No sensor: 0, Temperature sensor: 1, Humidity: sensor:2, Wind speed sensor: 3, Precipitation sensor: 4)	
Label	String	Label of the sensor.	
Longitude	Real	Longitude of the node that the sensor belongs to.	
Latitude	Real	Latitude of the node that the sensor belongs to.	
Altitude	Real	Altitude of the node that the sensor belongs to.	
Notes	String	Free text field about the sensor	





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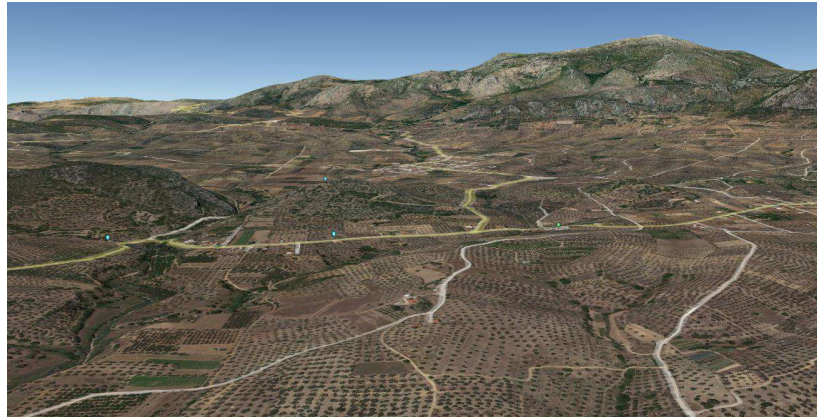
19

Additional uses of the geodatabase		OliveFlyNET ii
<ul style="list-style-type: none"> <li>• Create maps</li> <li>• Assist the methodology of the traps' distribution</li> <li>• Assist the system automation (i.e. risk maps creation)</li> <li>• Support the spraying decisions</li> <li>• Web site data source</li> </ul>		

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20



*Thank you!!!*

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