



# QUIDO

## *Compact Agrometeorological Station*



### *Software's user manual*

## Short description of Sunflower 2.0

All data incoming from Quido SFL radio sensors, are stored in MySQL Database, over which there is a web engine developed to optimize and to achieve maximum functionality with the fewest clicks possible.

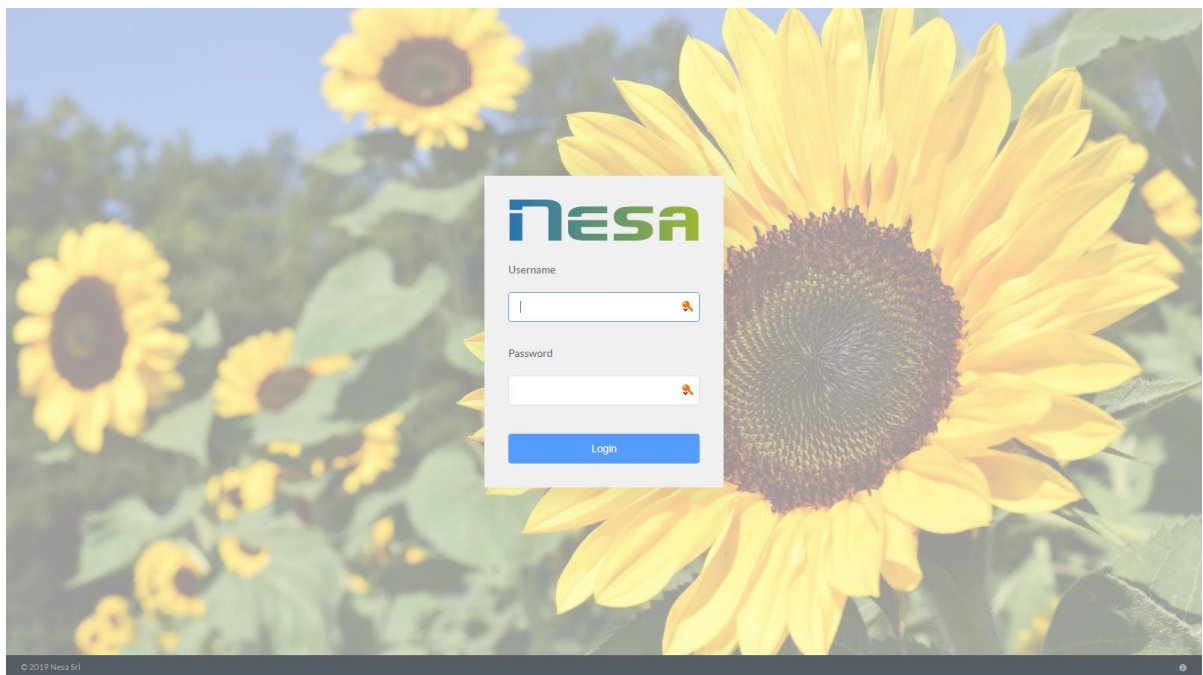
To see data incoming from Quido or SFL radio instrument, please follow these steps:

Type in your browser: [sunflower.nesasrl.eu](http://sunflower.nesasrl.eu)

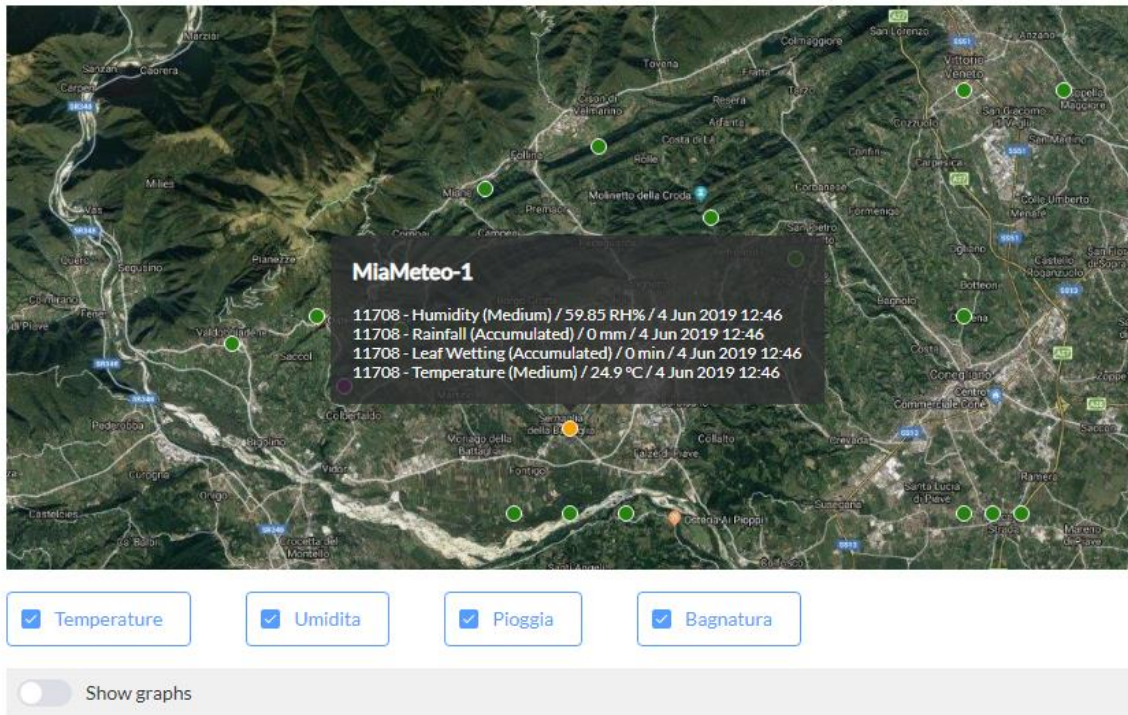
Login is always required, different for each user:

Username: \_\_\_\_\_

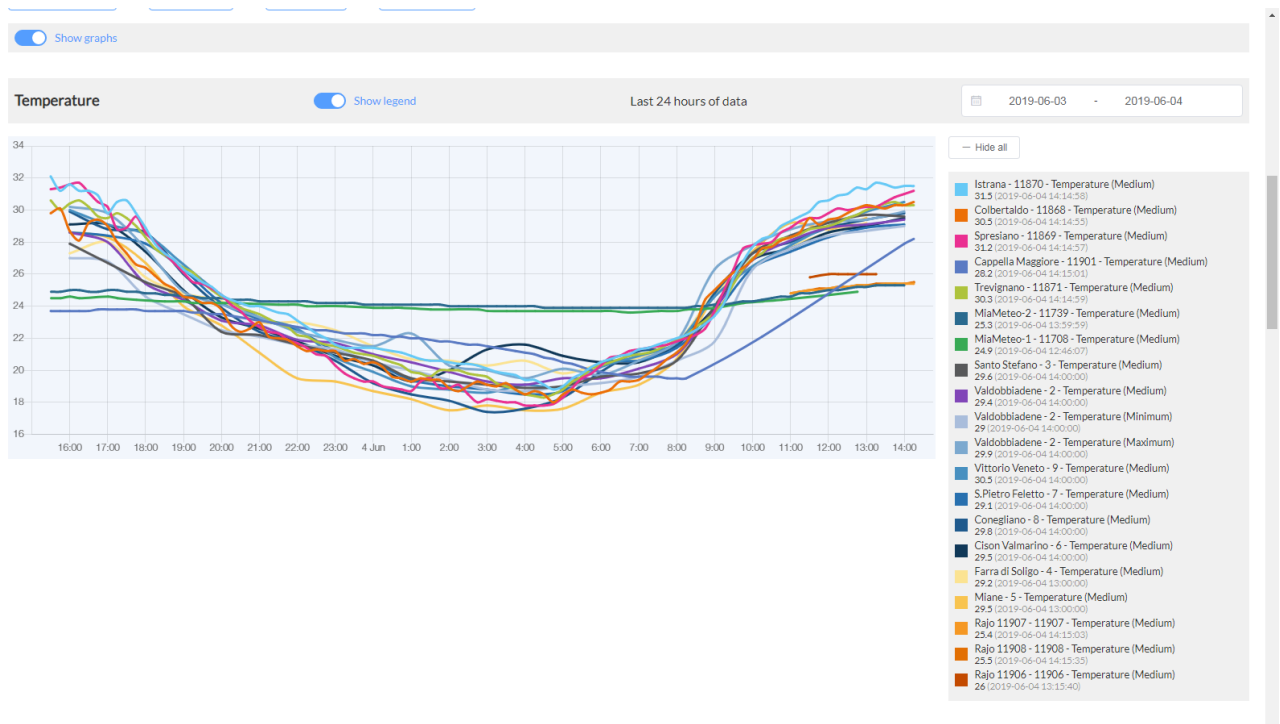
Password: \_\_\_\_\_



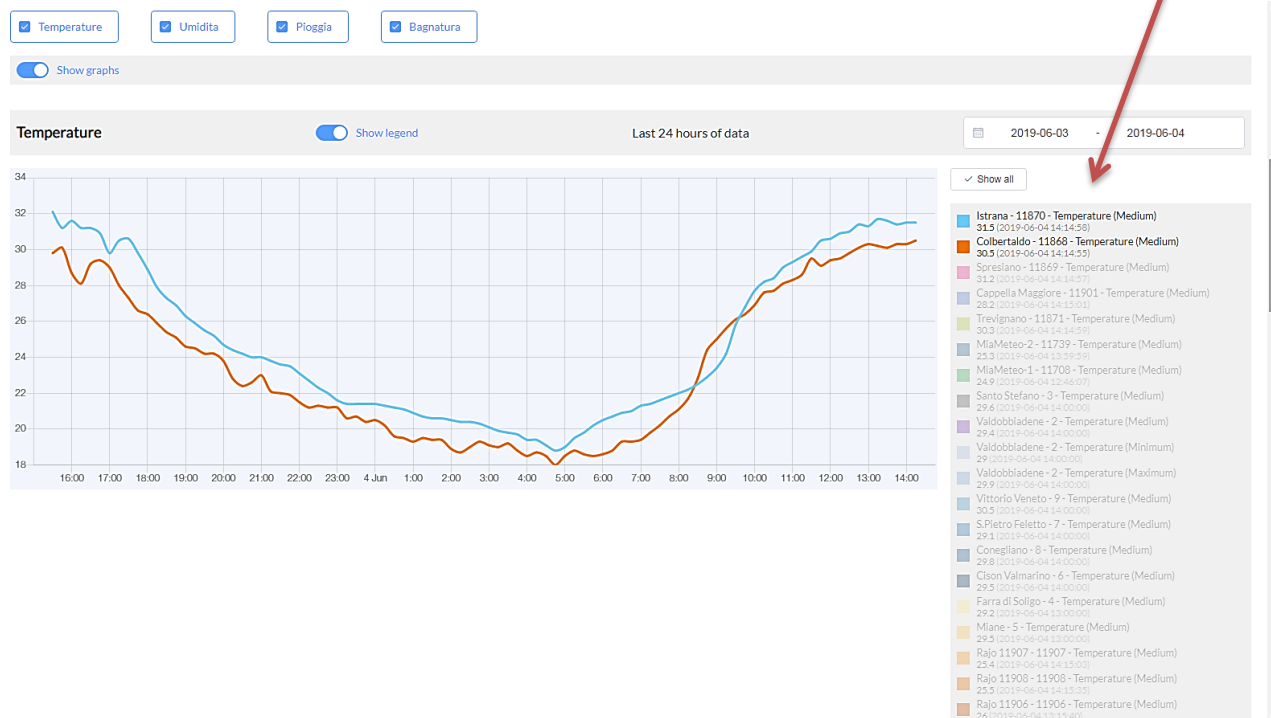
Once you have access, you are directed to the control page (also accessible by clicking on the NESA logo), which allows you to have a quick view of the measurement points, their values (click on the point) and the preset graphics or filters, ( tag below the graph), totally customizable (The map can be changed in any moment).



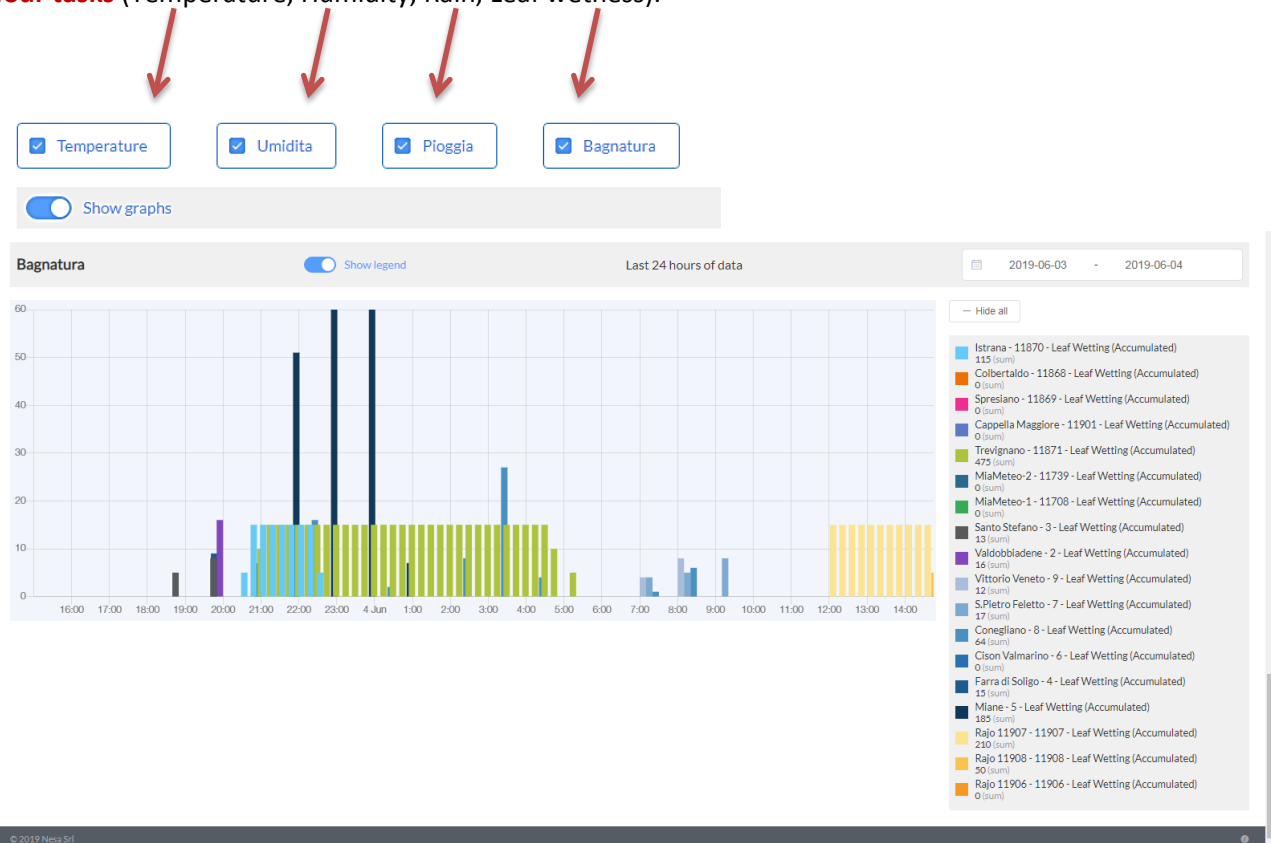
Moving downwards, if the **show graphs** switch is active, you can see the graphs of the selected period or the default of the last 24 hours of the measurements for which the user task was programmed



It is possible to delete or add a graphic-line simply by clicking on the name and/or color in the **legend** on the right

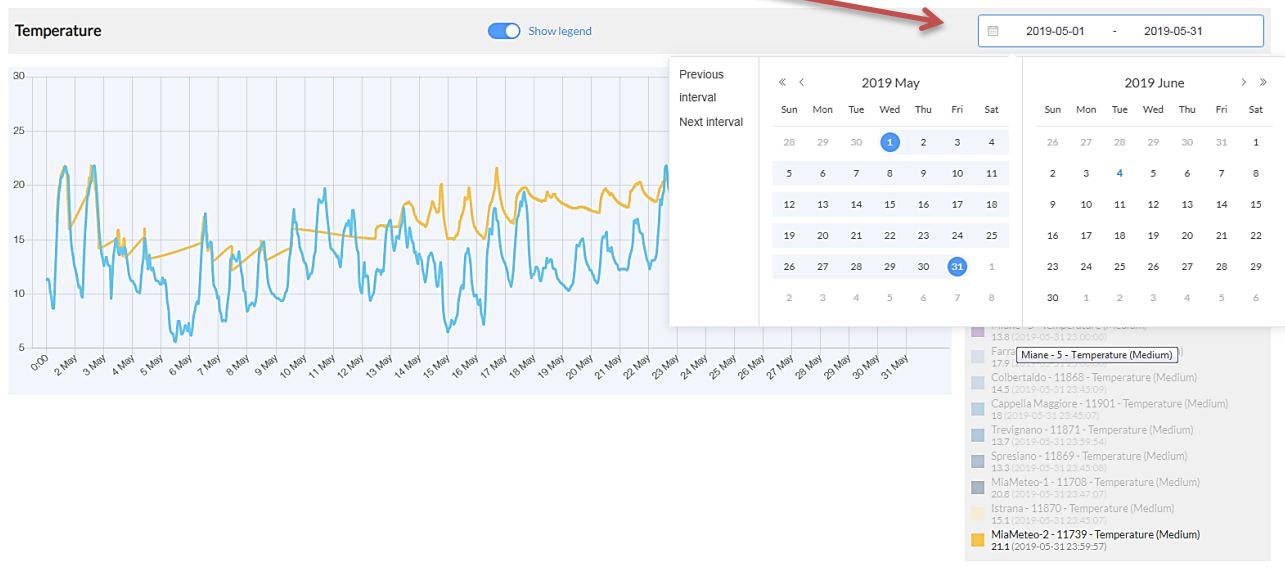


Going down, you can find other graphs based on the number of tasks programmed for the user, in this case **four tasks** (Temperature, Humidity, Rain, Leaf wetness).

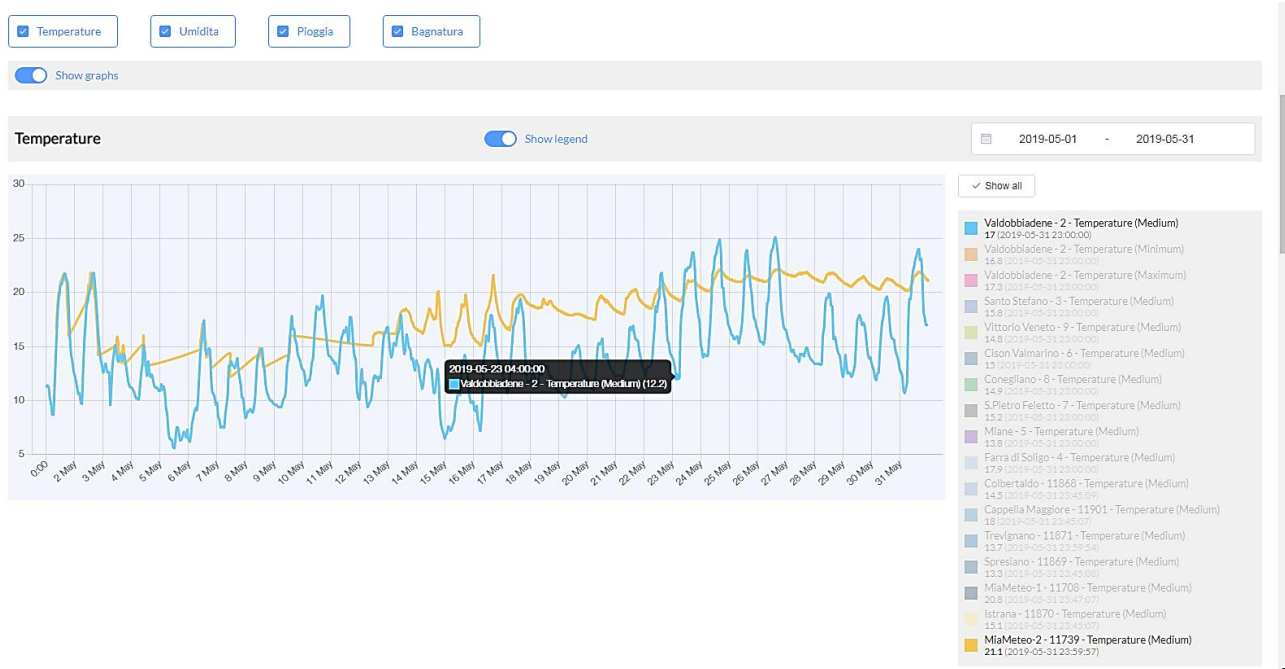




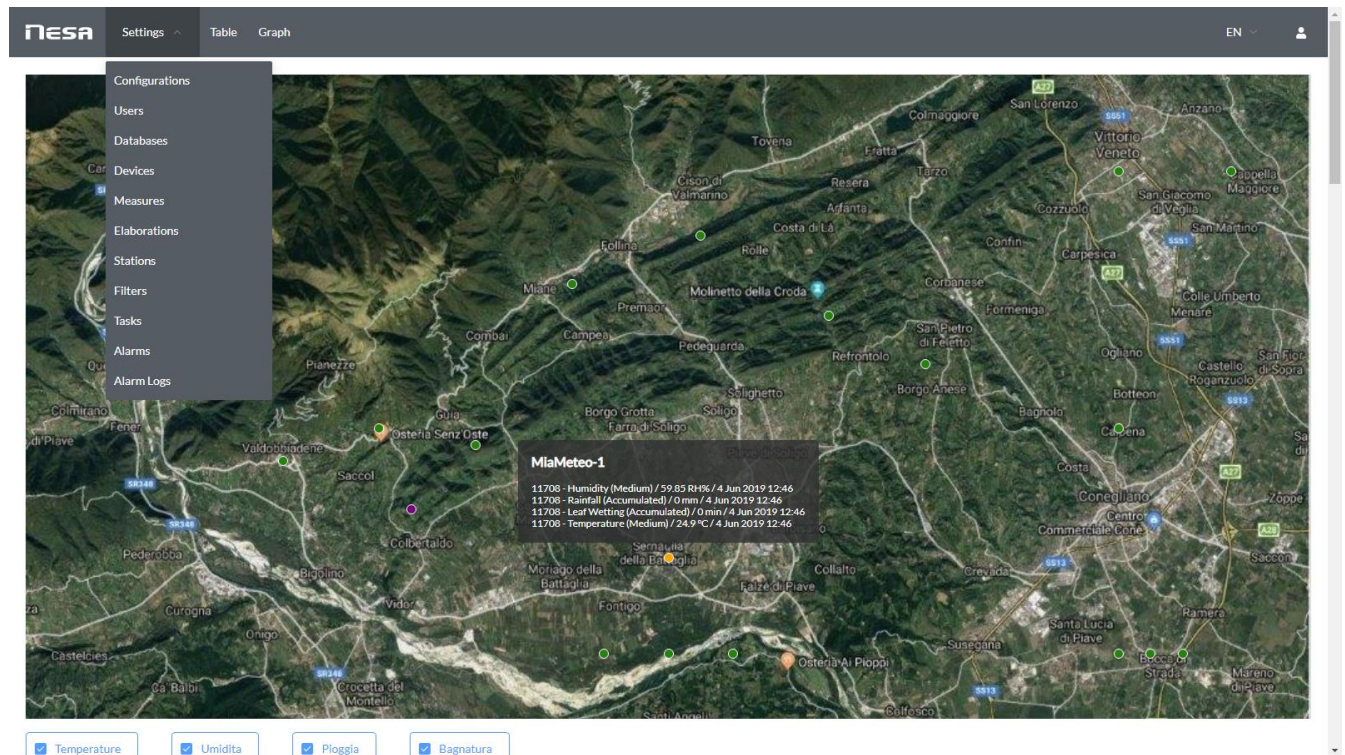
By clicking on the **calendar** you can freely choose the analysis period of the data graph



Moving the mouse over the graph, the measurement points, values and references are highlighted



At the top menu there are the main navigation tags. From the settings menu you can configure the entire software.



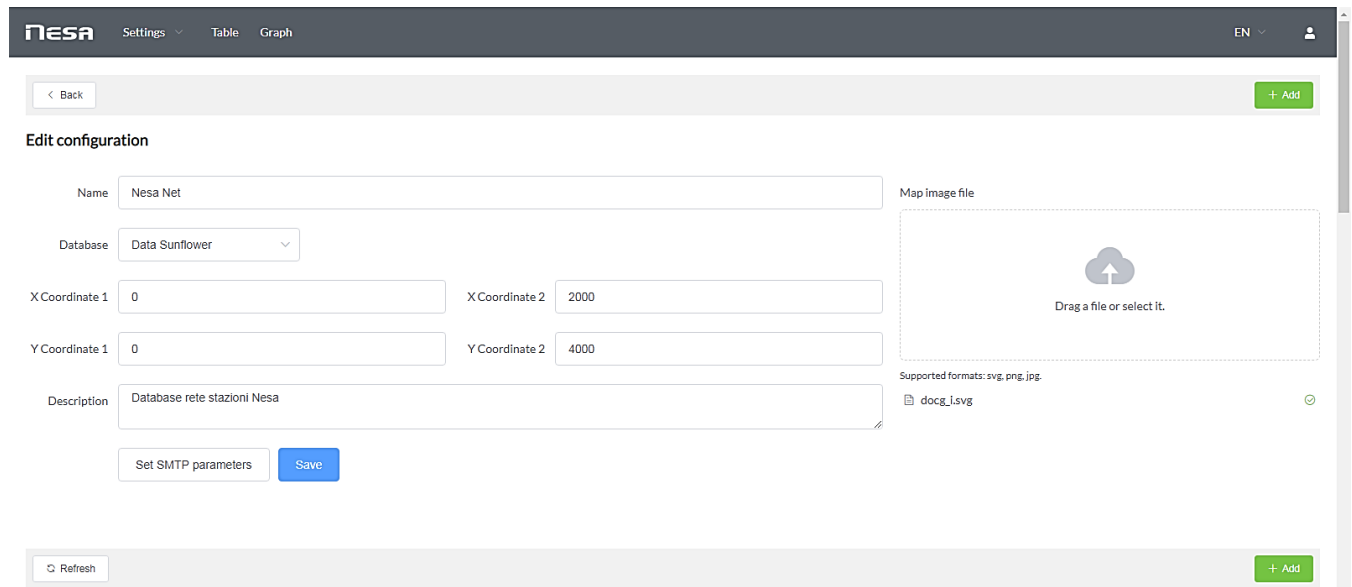
## CONFIGURATION:

A single page for the customized configuration, divided into 5 sections

- **EDIT CONFIGURATION**
- **EDIT STATION**
- **FILTERS**
- **TASKS**
- **ALARMS**
- **EDIT CONFIGURATION**

## EDIT CONFIGURATION

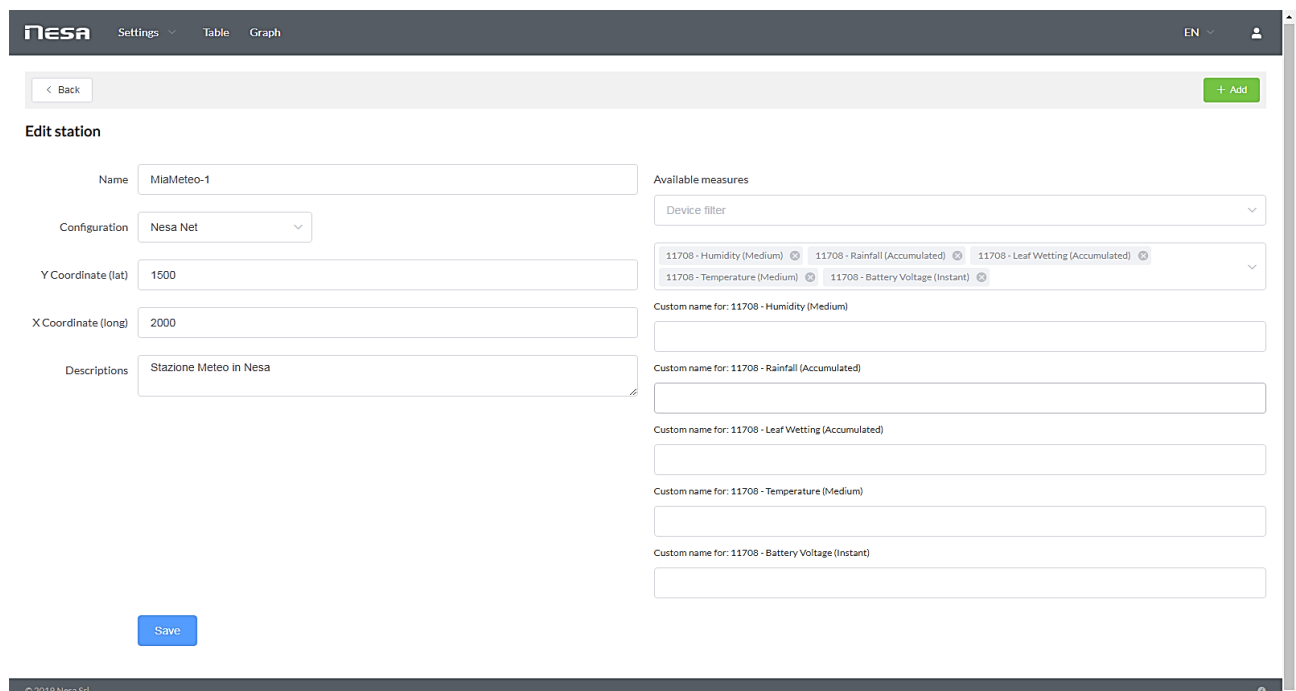
- allows you to create your own monitoring network, you can associate multiple networks to the same user.
- name the network or subnet
- associate a map or multiple maps
- insert metadata (position name, etc.)



The screenshot shows the 'Edit configuration' page in the NESA web application. The interface includes a top navigation bar with the NESA logo, 'Settings', 'Table', and 'Graph' tabs, and a user profile icon. Below the navigation bar is a breadcrumb trail with a '< Back' button and a '+ Add' button. The main content area is titled 'Edit configuration' and contains several input fields: 'Name' (set to 'Nesa Net'), 'Database' (a dropdown menu showing 'Data Sunflower'), 'X Coordinate 1' (0), 'X Coordinate 2' (2000), 'Y Coordinate 1' (0), and 'Y Coordinate 2' (4000). There is also a 'Description' field with the text 'Database rete stazioni Nesa'. To the right of these fields is a 'Map image file' section with a dashed box containing a cloud icon and the text 'Drag a file or select it.' Below this, it lists 'Supported formats: svg, png, jpg' and shows a file named 'docg\_1.svg' with a green checkmark. At the bottom of the form are two buttons: 'Set SMTP parameters' and 'Save'. A footer bar at the very bottom contains a 'Refresh' button and another '+ Add' button.

## EDIT STATIONS

- Allows you to select which stations or measurement points belonging to the created network, which you want to manage with this software
- Associate the name with each point
- Associate the coordinates to each point
- It allows to associate a custom name to each available measure



The screenshot shows the 'Edit station' page in the NESA web application. The interface is similar to the previous one, with a top navigation bar and a breadcrumb trail. The main content area is titled 'Edit station' and contains several input fields: 'Name' (set to 'MialMeteo-1'), 'Configuration' (a dropdown menu showing 'Nesa Net'), 'Y Coordinate (lat)' (1500), 'X Coordinate (long)' (2000), and 'Descriptions' (set to 'Stazione Meteo in Nesa'). To the right of these fields is an 'Available measures' section with a 'Device filter' dropdown menu. Below this, there are two rows of measure names: '11708 - Humidity (Medium)', '11708 - Rainfall (Accumulated)', '11708 - Leaf Wetting (Accumulated)', '11708 - Temperature (Medium)', and '11708 - Battery Voltage (Instant)'. Each measure name has a corresponding 'Custom name for:' input field. At the bottom of the form is a 'Save' button. A footer bar at the very bottom contains the copyright notice '© 2019 Nesa Srl'.

## FILTERS

- Create filters or extractions from databases that will appear below the map at login to speed up access to the most frequent information.
- Associate a name to the filter
- Select the network to which the measurements belong
- Associate the desired measurements

The screenshot shows the 'Edit filter' interface. At the top, there is a navigation bar with a '< Back' button and a '+ Add' button. Below this, the 'Edit filter' section contains the following fields:

- Name:** A text input field containing 'Temperature'.
- Configuration:** A dropdown menu set to 'Nesa Net'.
- Active:** A toggle switch that is currently turned on (blue).
- Description:** A text input field containing 'Solo temperature'.
- Measure ID:** Two panels are shown:
  - Available (0/145):** A list of available measurements with checkboxes:
    - ☐ 2 - Humidity (RH%)
    - ☐ 3 - Global Solar Radiation (W/m²)
    - ☐ 4 - Wind Direction (GN)
    - ☐ 5 - Evaporation (mm)
    - ☐ 6 - Hydrometric Level (cm)
    - ☐ 7 - Phreatic Level (cm)
  - Selected (0/2):** A list of selected measurements with checkboxes:
    - ☐ 1 - Temperature (°C)
    - ☐ 51 - Temperature (°C)

At the bottom left, there is a blue 'Save' button.

## EDIT TASKS

For tasks we mean programmed and periodic operations, such as sending a report or extracting a data aggregation

- It is possible to create and customize a task by instructing the software when to extract and how to process the data
- Send them via email in PDF or Excel format
- Decide the sending time and associate users
- Select the measures to be included in the report or task

The screenshot shows the 'Edit task' interface. At the top, there is a navigation bar with 'Settings', 'Table', and 'Graph' tabs, and a user profile icon. Below this, the 'Edit task' section contains the following fields:

- Name:** A text input field containing 'Stazione di Colbertaldo'.
- Description:** A text input field containing 'Invio mail giornaliera'.
- Configuration:** A dropdown menu set to 'Nesa Net'.
- Process:** A dropdown menu set to '1'.
- Send every:** A dropdown menu set to '1'.
- At:** A time input field set to '07:00'.
- Emails:** A text input field containing 'adami@nesa.it' and a '+ Add' button.
- Export format:** A dropdown menu set to 'Excel'.
- Enabled:** A toggle switch that is currently turned on (blue).
- Available measures (0/205):** A list of available measures with checkboxes:
  - ☐ 11708 - Temperature (Medium)
  - ☐ 11708 - Humidity (Medium)
  - ☐ 11708 - Wind Speed (Medium)
  - ☐ 11708 - Rainfall (Accumulated)
  - ☐ 11708 - Leaf Wetting (Accumulated)
  - ☐ 11708 - Digital counter (Instant)
- Selected (0/4):** A list of selected measures with checkboxes:
  - ☐ 11868 - Humidity (Medium)
  - ☐ 11868 - Rainfall (Accumulated)
  - ☐ 11868 - Leaf Wetting (Accumulated)
  - ☐ 11868 - Temperature (Medium)

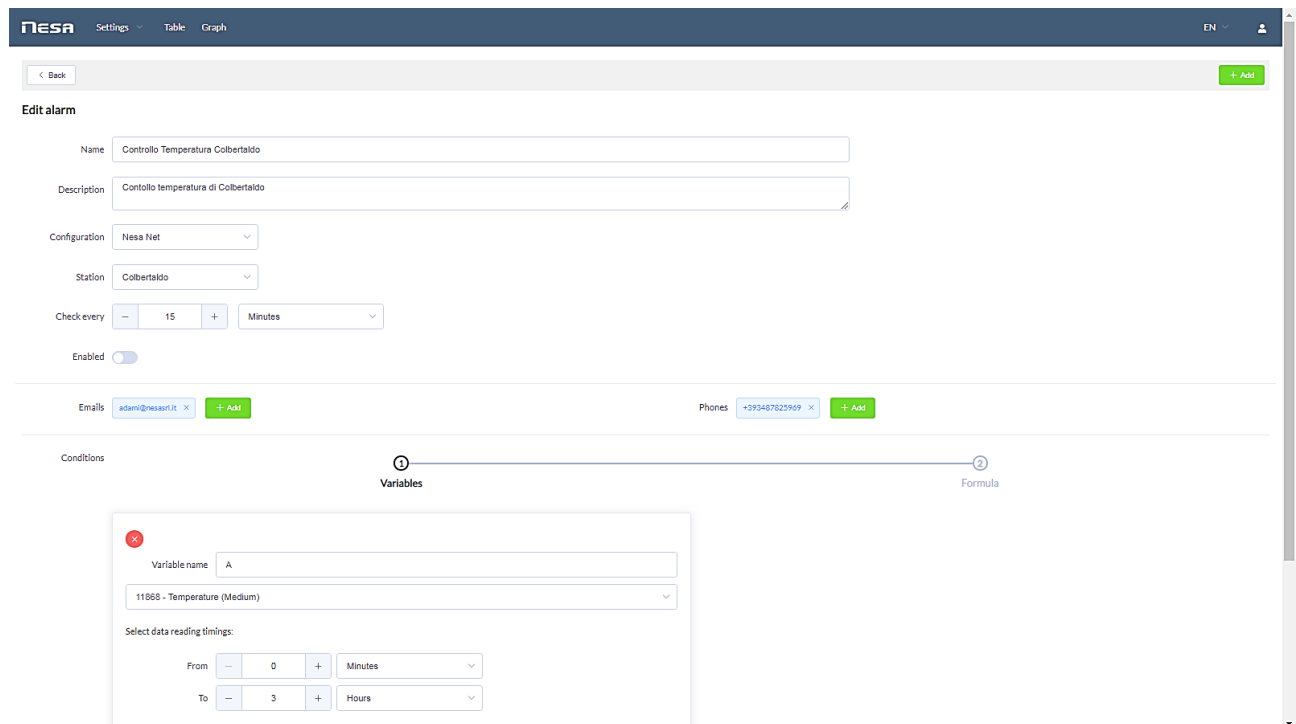
At the bottom left, there is a blue 'Save' button. At the top right, there is a blue 'Execute test' button.



## EDIT ALARMS

The software identifies alarm conditions on incoming data according to a user-programmable logic

- It is possible to create a personalized alarm for each measurement even from different networks
- It is possible to create a personalized alarm for aggregations of measurements on a station
- It is possible to enter every time the check is made
- Alarms can be sent via SMS or email to one or more users
- For each alarm the logical relationship (threshold or event) is programmable
- Select the measures to be included in the report or task



**Edit alarm**

Name:

Description:

Configuration:

Station:

Check every:

Enabled: ☐

Emails:

Phones:

Conditions: 1 Variables 2 Formula

Variable name:

Select data reading timings:

From:

To:

## USERS:

- The administrator can generate as many users as he wishes by associating to each the access level and the network (s) on which he can operate

**Edit user**

Username: Test

Password:

\*Leave the field empty if you wish to keep the current password

User category: Utente base

Configuration: Superuser, Amministratore, Utente base

First name:

Last name: Test user

Email: pier\_b@hotmail.it

Enabled: ☒

**Save**

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## DATABASE:

- It allows to select the data reference database

## DEVICES:

- Sunflower considers each measure as a single instrument, therefore it realizes when a measure is added to a station and can work even for a single sensor

Select a measurements database: Data Sunflower

**Devices**

Serial / ID	Available measures	
11708	8	Delete View
2	9	Delete View
3	9	Delete View
4	9	Delete View
5	9	Delete View
6	9	Delete View
7	9	Delete View
8	9	Delete View
9	9	Delete View
11739	8	Delete View

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## MEASURES:

- It allows you to customize the measurements such as unit of measure name etc.

## ELABORATIONS:

- It allows you to customize the type of processing, maximum average minimum, etc.

## STATIONS:

- In this section it is possible to create stations from each measuring instrument or to create virtual stations taking measurements from other stations. For example it is possible to create a virtual station called Temperature which shows all the temperatures of N stations chosen from those available in the selected network

The screenshot displays the 'Edit station' interface in the NESA application. The top navigation bar includes the NESA logo, 'Settings', 'Table', and 'Graph' tabs, along with a language selector set to 'EN' and a user profile icon. The main content area has a 'Back' button and an 'Add' button. The 'Edit station' section contains the following fields:

- Name:** MiaMeteo-1
- Configuration:** Nesa Net (dropdown)
- Y Coordinate (lat):** 1500
- X Coordinate (long):** 2000
- Description:** Stazione Meteo in Nesa

On the right side, the 'Available measures' section features a 'Device filter' dropdown and a list of selected measures with edit icons:

- 11708 - Humidity (Medium)
- 11708 - Rainfall (Accumulated)
- 11708 - Leaf Wetting (Accumulated)
- 11708 - Temperature (Medium)
- 11708 - Battery Voltage (Instant)

Below the list, there are input fields for custom names for each measure:


- Custom name for: 11708 - Humidity (Medium)
- Custom name for: 11708 - Rainfall (Accumulated)
- Custom name for: 11708 - Leaf Wetting (Accumulated)
- Custom name for: 11708 - Temperature (Medium)
- Custom name for: 11708 - Battery Voltage (Instant)

A 'Save' button is located at the bottom left of the form.

**Filter, Tasks, Alarms,** : they are just a direct link to the related section otherwise accessible from "configuration"

## ALARM LOGS:

- It allows to have the log of all the not yet acknowledged alarms, to recognize them or simply delete them.



[Settings](#)
[Table](#)
[Graph](#)

EN

### Alarm Logs

Station	Status	Viewed at	Created at	
Colbertaldo	4		31 May 2019 18:49	<a href="#">Edit</a> <a href="#">Delete</a>
Colbertaldo	4		31 May 2019 18:49	<a href="#">Edit</a> <a href="#">Delete</a>
Colbertaldo	4		31 May 2019 18:48	<a href="#">Edit</a> <a href="#">Delete</a>
Colbertaldo	4		31 May 2019 18:47	<a href="#">Edit</a> <a href="#">Delete</a>
Colbertaldo	4		31 May 2019 18:47	<a href="#">Edit</a> <a href="#">Delete</a>
Colbertaldo	4		31 May 2019 18:47	<a href="#">Edit</a> <a href="#">Delete</a>
Colbertaldo	4		31 May 2019 18:46	<a href="#">Edit</a> <a href="#">Delete</a>
Colbertaldo	4		31 May 2019 17:51	<a href="#">Edit</a> <a href="#">Delete</a>
Colbertaldo	4		31 May 2019 17:50	<a href="#">Edit</a> <a href="#">Delete</a>
Colbertaldo	4		31 May 2019 17:50	<a href="#">Edit</a> <a href="#">Delete</a>

[1](#)
[2](#)
[3](#)
[4](#)

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## TABLES

In this section it is possible to extract and share data in table form

- It is possible to select the extraction period
- You can select the stations / measures to be extracted
- It is possible to select the aggregation period
- Display at the bottom, the summations the average and maximum minima of the extraction done

Date	MiaMeteo-1 - Humidity (Medium)	MiaMeteo-1 - Rain fall (Accumulated)	MiaMeteo-1 - Leaf Wetting (Accumulated)	MiaMeteo-1 - Temperature (Medium)	MiaMeteo-1 - Battery Voltage (Instant)
17:00 3-06-19 / 2 0:00 3-06-19	60.11	0.00	0.00	24.40	3.58
20:00 3-06-19 / 2 3:00 3-06-19	60.44	0.00	0.00	24.19	3.58
23:00 3-06-19 / 0 2:00 4-06-19	60.85	0.00	0.00	23.96	3.58
02:00 4-06-19 / 0 5:00 4-06-19	61.21	0.00	0.00	23.75	3.58
05:00 4-06-19 / 0 8:00 4-06-19	61.18	0.00	0.00	23.68	3.58
08:00 4-06-19 / 1 1:00 4-06-19	61.97	0.00	0.00	23.89	3.58
11:00 4-06-19 / 1 4:00 4-06-19	60.34	0.00	0.00	24.58	3.58
14:00 4-06-19 / 1 7:00 4-06-19	57.98	0.00	0.00	24.90	3.58
Sums		0.00	0.00		

## GRAPHS

In this section it is possible to generate graphs of your choice for each measurement

- It is possible to select the extraction period
- You can select the stations / measures to be extracted
- It is possible to drag and zoom on the graph