

Cities Network for Sustainable Development and Circular Economy

# Strengthening European Funding and Project Management in Greek Municipalities: A Case Study

**March 2022** 

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> Sustainability

Eco-innovation





## **MEMBERS**





**SUSTAINABLE** 

Regional Association of Solid Waste Management Bodies of Peloponnese Region



- ✓ 50+ European Proposals
- ✓ 8 Ongoing European Projects
- ✓ 50+ Programmatic Agreements with Municipalities
- Peloponnese Waste Transfer Stations
- Virtual Net Metering- Energy Communities

### WAYSTUP!





Objective: research on the utilization of municipal biowaste and its conversion into innovative high value products (bioplastics, bioethanol, biochar, biocarbon, bio-solvents, proteins, oils, etc.).

Pilots: Athens, Chania, Valencia, London, Alicante, Prague, Alcudia, Turny.

Role of SUSTAINABLE CITY: dissemination and raising awareness of citizens through our Municipality members & selection of 2 Municipalities in Athens for participating in the research.

- Municipality of Vari-Voula-Vouliagmeni
- Municipality of Elliniko-Argyroupoli

https://waystup.eu/

# LIVING STREETS

**Objective:** 









Federal Ministry for the Environment, Nature Conservation and Nuclear Safety European Climate Initiative EURJ

based on a decision of the German Bunde

Supported b

Reclaiming public space and redefining its use by temporarily closing a street (partially or completely) and prohibiting the passage of vehicles.

Funding: 20.000€ in 2 municipalities - members of the Network



### DECIDO







Use of shared data, tools and cloud services to develop targeted and effective policies for managing emergencies (floods, fires, power outages).

In Greece, a platform that can be used by municipalities to deal with emergency power outages (coordination of competent authorities, information of citizens, prioritization of buildings, etc.) is going to be developed.

Pilot: Municipality of Halki

https://www.decido-project.eu/

### **POWERPOOR**





- Support energy-poor citizens to implement practices to improve energy behaviour and participate in joint energy initiatives.
- Fight energy poverty.
- Encourage the use of alternative sources of finance.
- Policy development.

Municipalities: Corinth, Kalamata, Ierapetra, Messini, Xilokastro, Elassona, Eretria, Thiva, Livadia, Florina, Halki etc.

https://powerpoor.eu/

# PATH2LC



#### PATH2LC LEARNING MUNICIPALITY NETWORKS

Creating networks with stakeholders from Public Authorities to enable mutual learning. "Networks of Municipalities Acquiring Knowledge"

The participating municipalities will benefit from:

- Exchange of knowledge through the interaction of municipal stakeholders.
- Capacity building through various tools, expert input and mutual exchange of experiences.





# **ECO SENSE**













The project aims to support municipal enterprises for the effective implementation of the actions to reduce their carbon footprint and get adapted to climate change.
It focuses on the design of the integrated ECO SENSE platform and label, which include 4 main software and hardware tools to support decisions on:

(a) carbon footprint mitigation actions and
(b) actions for the adaptation to climate change of public sector's enterprises.

These tools will be developed based on existing tools of

participating partners, tailored according to the new needs and appropriate interconnections of the ECOSENSE platform.



Το έργο υλοποιείται στο πλαίσιο της πρόσκλησης «ΕΡΕΥΝΩ / ΔΗΜΙΟΥΡΓΩ / ΚΑΙΝΟΤΟΜΩ» με Κωδικό ΟΠΣ 2076, στο Επιχειρησιακό Πρόγραμμα «Ανταγωνιστικότητα Επιχειρηματικότητα και Καινοτομία», ΕΣΠΑ 2014 - 2020 / ΕΥΔΕ ΕΤΑΚ 5567.



# **CASE STUDY**

# Installation of a Solar - Thermal System at the 1<sup>st</sup> primary school of Messini

To support the main heating system of the school (condensing oil boiler), a solar thermal system is installed to utilize solar energy and heating both for the building and for the building's supply of hot water.

Two inertia tanks of 1,000 and 2,000 litres capacity respectively are installed in the boiler room and are heated by the solar panels through a heat exchanger inside them. A heat exchanger is a device used to transfer heat energy between two fluids with different temperatures.

Within the 1,000 litre inertia tank there is an additional tank (tank in tank) for the buildings hot water supply, which is also heated by solar energy, resulting in significant energy savings.

The whole installation is controlled by a controller which adjusts the boiler water temperature according to the environment temperature. The controller gives priority to heating from the sun and if this is not sufficient, the boiler is switched on for additional heating of the water in the tanks.

#### Installation of a Solar - Thermal System at the 1st primary school of Messini



Heat Exchanger





For the ventilation of the building, a heat recovery exchanger (air-to-air) will be installed in combination with a network of air ducts and vents that achieves great energy savings between the hot air that exits the building and the cold air that enters it (heat recovery >75%).

The exchanger will be able to accommodate medium and high efficiency filtration filters within the unit.

The ventilation unit can be mounted horizontally or vertically for greater flexibility and space saving during installation.

It will work in conjunction with a CO2 sensor and when CO2 levels exceed the permissible limit, it will supply fresh air to the room.

#### **Artificial Ventilation Units - Heat Exchangers : Operation**



• Night discharge of the building

If the building ventilation is switched off and the internal temperature rises above the desired temperature, the exchanger will control the outdoor air temperature and if it is lower, it will allow the outdoor air to flow into the building, thus reducing the indoor temperature (especially during the night) in order to reduce the energy required for air conditioning when the building comes back into operation.

• Overpressure - Under-pressure function

The ventilation unit can select different speeds for the supply and return fans, creating overpressure or under-pressure conditions in the building for the proper operation of the exchanger and its cooperation with other ventilation units installed.

• 24-hour Ventilation

The exchanger offers the possibility of 24-hour ventilation operation by implementing intermittent ventilation operation at regular intervals through scheduling.

Budget for the total Energy Upgrade and Renovation



1st Primary School of Messini

### 585.933,65 €





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