

Project co-financed by the European Regional Development Fund



School Low Carbon Footprint in Mediterranean cities



Improvement of thermal comfort – installation of biomass boilers in Cano Elementary School (Sousel)



Background

The mission of AREANATejo is:

- To contribute to energy efficiency and to the best use of endogenous energy resources;
- Developing projects and methods taking into account the need of improvement energy efficiency;
- Disseminating best techniques and procedures for the rational use of energy and resources and for preserving the environment;
- Promotion of a sustainable local development, concretely, to obtain a greater energy efficiency and better environmental performance of the Associated Municipalities, where the Municipality of Sousel is inserted.

Pilot Area: Alto Alentejo (PORTUGAL)

10 Municipalities:

- Alter do Chão
- Arronches
- Avis
- Castelo de Vide
- Crato
- Elvas
- Marvão
- Monforte
- Ponte de Sor
- Sousel





Pilot Area: Alto Alentejo (PORTUGAL)

10 Schools:

- 1. School Center of Alter do Chão 142 students
- 2. School Center of Arronches 242 students
- 3. Elementary School and kindergarten of Avis 79 students
- 4. Primary School and kindergarten of Castelo de Vide 111 students
- 5. Elementary School and Kindergarten Ana Maria Ferreira Gordo (Crato) 236 students
- 6. Santa Luzia Elementary School (Elvas) 497 studens
- 7. Kindergarten of Portagem (Marvão) 20 students
- 8. Primary School of Monforte 67 students
- 9. Ponte de Sor Elementary School 288 students
- 10. Cano Elementary School (Sousel) 24 students

EduFootprint





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Developed Tasks

1. Energy diagnosis

- Planning and gathering information:
 - Invoices of the different types of energy;
 - Plants and descriptive memories of facilities;
- Fieldwork:
 - Visits to the building;
 - Interviews with the responsibles;
 - Survey of the characteristics of installed equipment;
- Analysis and processing of information:
 - Characterization of energy consumption by sector;
 - Characterization of energy consumption by type of use;
 - Identification of opportunities/measures to rationalize energy consumption;
- Elaboration of the Energy Efficiency Diagnosis Report.



Developed Tasks

2. <u>Implementation of energy efficiency measures</u>

This task considered the installation of the following equipments:

 Replacement of the existing diesel fuel boiler for one biomass boiler with 24 kW, for central heating that will be responsible for heating the space.

3. Main results

- <u>Total Investment</u>: 4.170 Euros funded at 85% by EduFootprint project
- Energy cost reduction (annual): 1.042,50 Euros
- Pay-back: 0,6 years (7 months) considering 85% financing



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Developed Tasks

4. Photos





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