Interreg Mediterranean

EUROPEAN UNION

Project co-financed by the European Regional Development Fund

EduFootprint

School Low Carbon Footprint in Mediterranean cities



Improvement of energy efficiency in interior lighting systems of School Center of Alter do Chão

areanatejo
Agência Regional de Energia e Ambiente do Norte Alentejano e Tejo

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 Alter do Chão is inserted.

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Pilot Area: Alto Alentejo (PORTUGAL)

10 Municipalities:

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

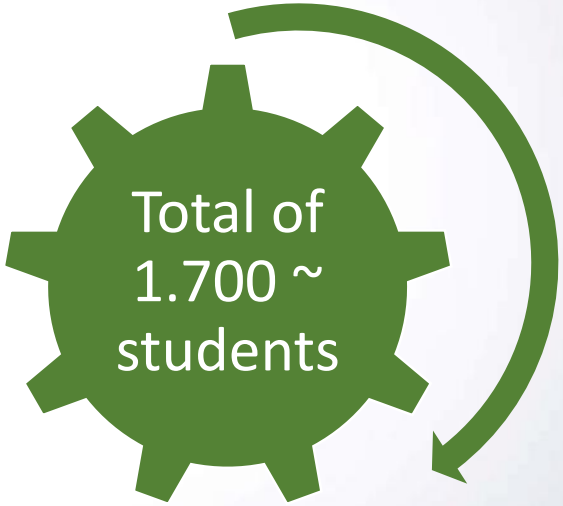


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Pilot Area: Alto Alentejo (PORTUGAL)

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



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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.

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Developed Tasks

2. Implementation of energy efficiency measures

This task considered the replacement of the following lamps:

288 FT5 lamps with 28 W for FT5 LED maps with 16 W

3. Main results

- Total Investment: 4.608,00 Euros funded at 85% by EduFootprint project
- Energy consumption reduction (annual): 4.593 kWh (25,3% of the total consumption of lighting systems)
- Energy cost reduction (annual): 803,52 Euros
- Pay-back: 0,9 years (11 months) – considering 85% financing

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Developed Tasks

4. Photos





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