



 GreenBuilding

Minimising Energy Consumption for Green Buildings respecting present uses and public needs



Dear Readers,

Welcome to our third issue of GreenBuilding Newsletter that we would like to share with you! It is our pleasure to introduce you to our new project, funded by the European Union under the ENI CBC Med Programme that brings together seven organizations from five Mediterranean countries, Greece, Spain, Lebanon, Tunisia and Jordan. Within this issue, the partnership of the project entitled “Minimising Energy Consumption for Green Buildings respecting present uses and public needs (Acronym: GreenBuilding)” would like to inform you about the progress of the aim of the project and its activities implemented so far. We will regularly update you with the latest news on the project. If this project lies within your interests, you are strongly encouraged to visit our website: <http://www.enicbmed.eu/projects/greenbuilding> and follow us on Facebook and Twitter.

Yours Sincerely,
The GreenBuilding Consortium

Start Date: 30 August 2019 – End Date: 29 August 2022 – Duration: 36 Months

For more information, please contact the project coordinator Mr. Nick Fifas, Research Fellow, Region of Peloponnese, email: nikffas@ppel.gov.gr, nikffas@otenet.gr; and Mrs. Marina Kouta, Project Manager, University of Patras, tel: 0030 2610996524, email: marina.kouta@g.upatras.gr.

Introduction

GreenBuilding project is co-funded by the European Union under the European Neighborhood Instrument (ENI), through the ENI CBC Mediterranean Sea Basin Programme (ENI CBC Med Programme) 2014-2020 in the framework of the call for standard projects, priority B.4.3 – Support cost-effective and innovative energy rehabilitations relevant to building types and climatic zones, with a focus on public buildings.

Aim of the Project

The project, started in August 2019, aims at reducing energy consumption and adverse environmental impact, by using Renewable Energy Sources and Energy Efficiency measures in public buildings, since renewable energies represent a natural competitive advantage for MED area. The GreenBuilding Consortium is composed of 7 partners from 2 EU – Mediterranean Countries (EUMCs) (Greece, Spain) and 3 MPC – Mediterranean Partner Countries (MPCs) (Lebanon, Tunisia, Jordan).

Project Goals

The project will:

- ⦿ Plan/support cost-effective energy refurbishment of 3 public buildings (Greece, Tunisia, Jordan).
- ⦿ Promote ecological use of public buildings, abiding by their traditional use and social role.
- ⦿ Identify cost-effective energy refurbishment approaches; and strengthen learning processes.
- ⦿ Provide innovative energy refurbishment plans/measures for buildings.
- ⦿ Enhance knowledge/experience exchange between involved bodies.
- ⦿ Plan/implement sustainable energy policies at high decision levels.

Highlights



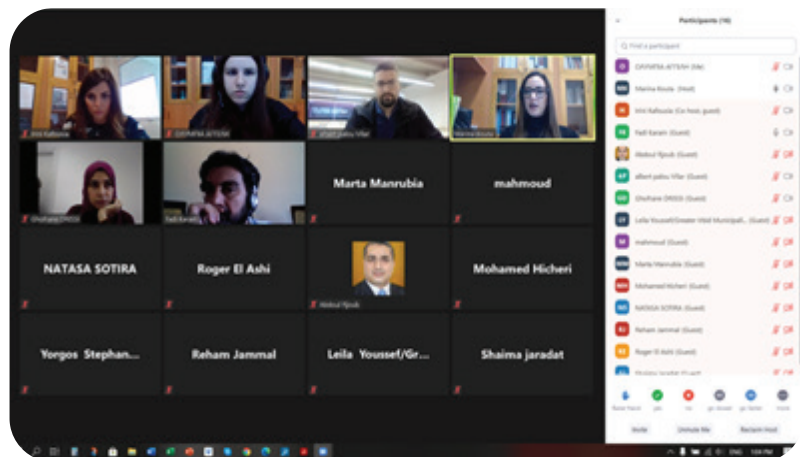
Find out more about the project in this three-minute animation video!

Project Meeting



3rd Project Meeting on Tuesday, 2nd of February 2021 focused on the activities to be held during Semester 3 and Semester 4 of project implementation.

4th Steering Committee Meeting and 3rd Technical Committee Meeting on Tuesday, 2nd of February 2021.



GreenBuilding Online Meeting Agenda
 Tuesday 06 March 2021, Start at 11.00 CET



Steering Committee Meeting

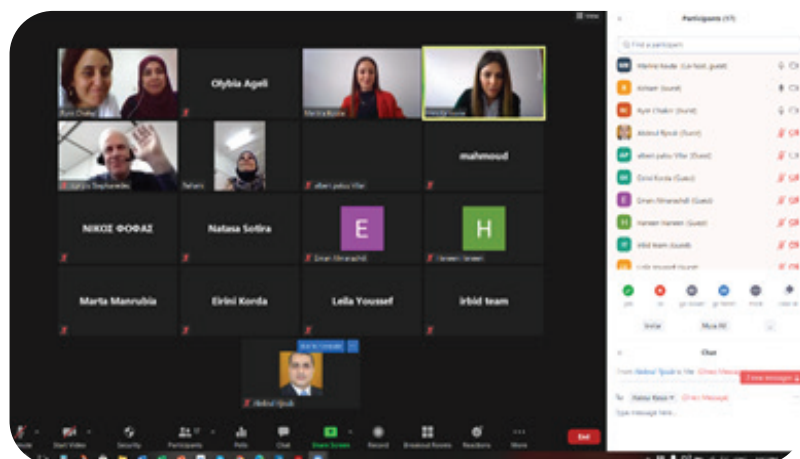
- 11.00-11.05 □ Next SC & TC Meeting (Tuesday, June 1, 2021, at 11:00 am CET)
- 11.05-11.35 □ Results on the assessment of the 1st Interim Report
- 11.35-11.45 □ Submission of the 2nd Progress Report
- 11.45-11.55 □ Modification request

Technical Committee Meeting

Discussion on

- 11.55-12.00 □ Output 3.3 Study for the energy refurbishment of the Building in Tunisia, Output 3.4 Study for the energy refurbishment of the Building in Jordan
- O 3.5 Evaluation reports

Together, we can make it



5th Steering Committee Meeting and 4th Technical Committee Meeting on Tuesday, 6th of April 2021.

Creating synergies with other projects

University of Patras, representing the GreenBuilding project, participated in the Greek Living Lab, entitled “Designing Energy Renovations Projects for Public Buildings” which is an initiative of the Efficient Building Interreg Med Horizontal project which took place on May 13-14, 2020. The Centre for



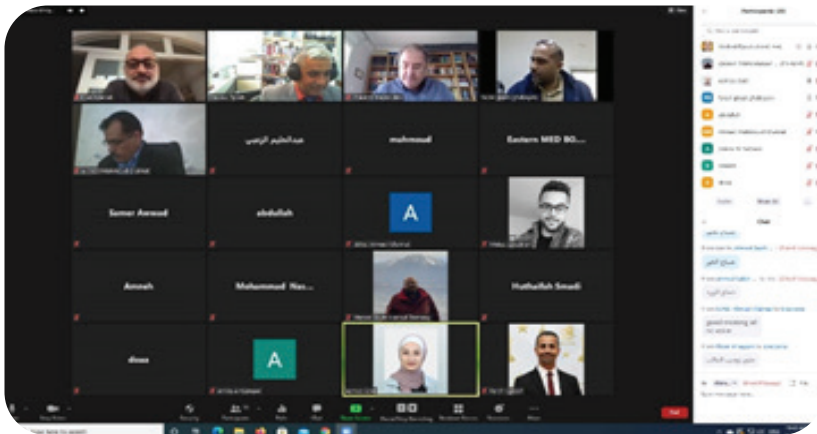
Renewable Energy Sources and Saving (CRES) of Greece presented the tools of two Interreg MED projects (IMPULSE & SHERPA). Mrs. Kouta Marina, presented the GreenBuilding project, the specific objectives and expected results, the three pilot buildings, some tips on what to include in Building Renovation within the scope of supporting sustainable energy-policies in public buildings. Moreover, the GreenBuilding e-tool concept for monitoring energy consumption of public buildings was presented.



University of Patras (Greece), participated also in webinar entitled "Energy Renovation and Management of Public Buildings: Strategy and Planning" which is an initiative of the ‘Efficient Buildings’ Interreg Med Horizontal project and will take place on June 2, 2021. During the webinar methodologies and tools that

can be used to support public authorities in developing, implementing and monitoring energy renovation plans for their public building stock, were discussed. In the above context, the webinar brought together experts from Mediterranean countries who will share their knowledge concerning strategies and tools to support and speed-up strategic planning of public buildings energy renovation.

Project Events



Jordan University of Science and Technology (Project Partner 5, PP05 of the GreenBuilding project) organized an online workshop entitled "GreenBuilding, Challenges and Opportunities" on March 24, 2021, which brought together specialists from Spain, Italy, Greece, Jordan, and Egypt. The participants from Jordan were mainly the SME's who have

strong experience in Green Energy. More than 35 were invited persons and 33 participants attended this workshop. PP05 also initiated "a round table" to discuss the "Green Building Code and Certificate at Jordan" along with the members of the "Jordan Green Building Council". The round table will take place in June 15, 2021. PP05 participated in international workshop in "ONE YEAR OF SME AND ENTREPRENEURSHIP POLICY RESPONSES TO COVID-19: LESSONS LEARNED TO BUILD BACK BETTER (JOINT WITH INTERNATIONAL NETWORK OF SMES - INSME)" which was held on May 25, 2021 to see how SMEs could recover from COVID-19.

The training on the MIS (Management Information System) organized by the JTS Officers of the ENI CBC MED Program for GreenBuilding partners was successfully conducted on April 26, 2021! The training was attended by representatives from all partners and by some of the partners' auditors.



Energy studies of the pilot buildings !



Key results of the two pilot buildings of the GreenBuilding project are presented. Responsible partners collected all available data for the building, then identified the requirements of the building and of the local community, and finally they developed the study for the energy refurbishment of the building. The Identification of the requirements for the energy refurbishment of the pilot buildings includes personal

interviews with all stakeholders in the buildings and the participation in the questionnaire survey, thus recording the specific needs of the buildings' users.

Mohamed Kassab of Orthopedics main building

Energy data for the main building of Greater Irbid Municipality

The energy audit showed that the total energy consumption of the Mohamed Kassab Orthopaedic Institute was estimated to 600 TOE/year, divided into 473 TOE/year for electrical energy (79 %) and 127 TOE/year for thermal energy (21 %), which costs 668,359 TND/year including 86.4 % of electrical energy expenses. This high consumption is mainly due to the lighting system, the HVAC systems and to medical equipment. The development of the study for the energy refurbishment of the building has led to an action plan aiming to minimise the energy consumption and focusing on the implementation of an appropriate energy management system. This action plan will allow an energy gain of about 236 TOE/year, i.e. 39.4 % of the total annual consumption and an estimated financial benefit of 281,070 TND, i.e. 42.1 % of the annual expenditures, while it needs a total investment of about 657,095 TND HT, of which 92.3 % is material investment.

Building users of the Institute Mohamed Kassab of Orthopedics



In order to prepare the implementation of the survey with the different stakeholders in the Mohamed Kassab Orthopaedic Institute, a meeting was held in the pilot building on March 08, 2021, with the representatives of the Institute and EMROHD Consulting. Management Company of Borj Cedria shared the common questionnaire with all stakeholders. The target group of this survey was divided into groups: the permanent users and the temporary users. 492 people participated in the survey!



According to the survey that was carried out with the different stakeholders in the pilot building in Tunisia, the interviewees proved a real willingness to reduce energy consumption (83.9 % of the interviewees) and a sincere desire to participate in an energy-saving programme. This programme will start with the scheduling of training sessions for users on the importance of minimising the building's energy consumption.

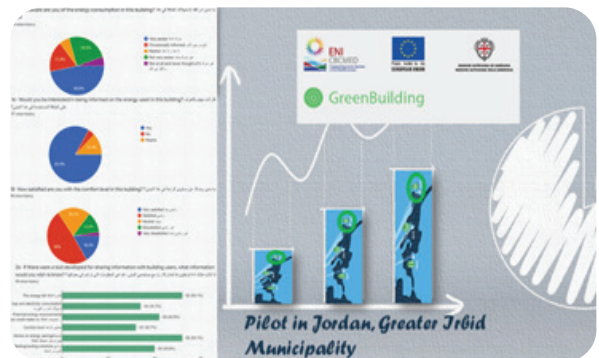
Greater Irbid Municipality main building

Energy data for the main building of Greater Irbid Municipality

The energy audit showed that the total cost for energy consumption of the Greater Irbid Municipality Building was 177,568 JD over the year 2019, divided into 592,150 kwh/year for electrical energy which costs 156,644 JD/year, and 25,000 Liter/year for fuel consumption which costs 14,700 JD/year, and 2,608 m3/year for water consumption which costs 6,224 JD/year. The development of the study for the energy refurbishment of the building has led to an action plan aiming to minimise the energy consumption (Electric, Water and Fuel) and focusing on the implementation of an appropriate energy management system (Thermal Solar System, Electrical Solar PV System, and Electrical Car Charging).

Building users of the main building of Greater Irbid Municipality

A comprehensive questionnaire survey was conducted with municipality employees, citizens, people who live around the municipality building, commercial market owners' contractors and the visitors of the municipality (100 persons participated in the survey!). The questionnaire survey showed that 55.7 % of the building users are permanent and temporary staff, 22.7 % are visitors, on the other hand the analysis showed that 77.3% of the municipality staff realize that saving energy is a very important matter, 83.5% of visitors are interested in learning about renewable energy in the municipality building. Greater Irbid Municipality will conduct a programme with action plan for "Energy Efficiency Awareness Committee".



Project Website & Social Networking

Learn more about us! <http://www.enicbmed.eu/projects/greenbuilding>

Through our Newsletter you can gain an overall perspective on the progress of GreenBuilding project. You can also be informed on the GreenBuilding progress and news via its Twitter and Facebook accounts.

Project Partners



Hellenic Republic
Region of Peloponnese

Region of Peloponnese (PPEL)

<https://www.ppel.gov.gr/>

Peloponnese, a region in southern Greece, includes the prefectures of Arcadia, Argolida, Korinthia, Lakonia, and Messinia.

Contact person: Nick Fifas, nikfifas@ppel.gov.gr, nikfifas@otenet.gr



University of Patras, Special Account for Research Grants (UPAT)

<https://www.upatras.gr/en/research>

One of the main objectives of the University of Patras is the creation of knowledge through the promotion of international scientific research.

Contact person: Yorgos Stephanedes, ystephanedes@upatras.gr



Technological Center on Biodiversity, Ecology and Environmental Technology, BETA (UVIC-UCC)

<http://www.betatechcenter.com>

The UVIC-UCC has become a driver of knowledge and innovation for the territory, with international reach.

Contact person: Albert Palou Vilar, albert.palou@uvic.cat



Moukhtara Municipality (M.M.)

<http://www.moukhtara.org/>

Moukhtara is a small town in the Chouf District of the Mount Lebanon Governorate of Lebanon.

Contact person: Roger G. El Ashi, ashiro@terra.net.lb



Management Company of the technopole of borj cedria (SGTBC)

<https://ecopark.tn/>

The Borj-Cédria Technopole has a strong research, development, R&D, training and technical education in Renewable Energies, Sustainable Development and Materials.

Contact person: Zakaria Hamad, z.hamad@tbc.tn



Jordan University of Science and Technology (JUST)

www.just.edu.jo

An internationally renowned university for quality education, community development, and creation and dissemination of knowledge.

Contact person: Abdoul Rjoub, abdoul@just.edu.jo



Greater Irbid Municipality (GIM)

<https://irbid.gov.jo/>

Greater Irbid Municipality is the second largest metropolitan population after Amman in Jordan and the highest population density in the kingdom

Contact person: Reham Jammal, rjammal@gmail.com