

O.T1.1 Network for the promotion of the green buildings

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Project References

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O.T1.1 Network for the promotion of the green buildings

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1 Introduction

The project Agricultural Waste as Sustainable 0 km building MatErial - AWeSOMe is aimed to spread the best practices about the use of agricultural waste for producing bio-based building components with high hygrothermal performances. The goal of the project arises in response to the Energy Performance of Buildings Directive (EPBD 31/2010) which requires an improvement of the building's energy performance in view of being nZEB. The increase in building energy efficiency is strictly associated with the environmental safeguard obtained by the use of agricultural by-products and low environmental impact manufacturing processes.

The specific project objectives are the following:

- Improving the implementation of Sustainable Energy Actions for buildings in the public sector;
- Enhancing skills in low environmental strategies such as the use of agro-waste for efficient buildings;
- Promoting the use of agricultural waste in the building sector.

This document presents an overview of the activities done within WP T1, aimed to disseminate EU energy-saving and green building regulations.



2 WP T1 Cross-border actions to promote sustainability

The main aim of the activities within *WP T1 Cross-border actions to promote sustainability* in buildings was dedicated to the dissemination of knowledge and competencies about energy-saving techniques and sustainable practices to reuse agricultural waste in order to ensure sustainable management of natural resources and a high level of energy efficiency. All activities were focussed on the prescriptions adopted by the EU community.

All activities within WP T1 were divided into three groups, such as are:

1. Activity A.T1.1 Preparatory activities
2. Activity A.T1.2 Promoting the best practices and passive strategies for energy saving
3. Activity A.T1.3 Developing Recommendations for policymakers and Authorities

2.1 Activity A.T1.1 Preparatory activities

The main aim of the activity was to analyze the national and EU regulations on energy saving, in order to reduce the discrepancy of the existing know-how among the project partners and at increasing the knowledge of the project topic by each interested subject.

2.1.1 Deliverable D.T1.1.1 Internal report

As the first activity within the project, the document *Internal report* was created and presents the results deriving from technical online meetings and bilateral discussions about the most important regulations on energy saving within four regions involved in project implementation, as well as some European regulations.

On the European level, there are several Directives that have been introduced, in order to stimulate a sustainable use of resources and to encourage the introduction of environmentally friendly construction technologies, having in mind that the construction industry is responsible for the consumption of 50% of the natural resources and of about 25-40% of the total energy used.

Regarding all territories involved in project implementation, except in Albania, there are some laws, regulations and initiatives in the field of energy efficiency and agro-waste material used.

Annex 1 – Deliverable D.T1.1.1 Internal report



2.2 Activity A.T1.2 Promoting the best practices and passive strategies for energy saving

Within this activity, each project partner organized a workshop within its respective region gathering all relevant stakeholders. The workshops were organized with the aim to raise awareness and exchange knowledge about the energy efficiency of sustainable buildings and to increase the expertise of the participants in order to approach adequately the theme of energy saving.

2.2.1 Deliverable D.T1.2.1 Panel discussions – workshops

During the project implementation, 4 workshops in total were organized.

2.2.1.1 Workshop in Tirana, Albania

The lead partner of the project, Confimi Albania organized a workshop on December 22nd 2022. The topic of the workshop was *The use of agricultural materials for thermal insulation in the construction industry*.

The participants were staff and students from the University of Epoka in the fields of Architecture and Engineering.

During the workshop, LP Confimi was supported by the speakers Mr. Francesco Martellota from POLIBA and Mr. Tiziano Rossi from Rice House company. Mr. Martellota presented the AWeSOMe project to the participants, its objectives and expected outputs. Mr. Tiziano Rossi from Rice House presented the participant's thermal insulation panels from the recycling of rice water and explained the whole process of their products ranging from the origin of the idea to the conditions and ways of implementing it in today's construction.

Annex 2 – Workshop in Tirana, Albania

2.2.1.2 Workshop in Bari, Italy

On December 2nd PP2 Politecnico di Bari organized a workshop with all relevant stakeholders regarding the activities within WP T1. Having in mind the situation with the COVID-19 virus and restrictive measures that were in force at that period of time, the workshop was organized online, via the Microsoft Teams platform.

At the beginning of the workshop, the POLIBA project team introduced the project, its objective and targets, but also the activities already done within the project, with a special focus on a report regarding available agro waste. All participants were invited to express their comments, ideas and concerns about the project with reference to the opportunity of creating a “Network for sustainable reuse of agro-waste”.

The final discussion briefly summarized the importance of having clear data about waste availability, the importance of coordination and networking to promote public policies that may stimulate, and the definition



of product specifications and processes that could be shared with agricultural workers to be involved in the production.

Annex 3 – Workshop in Bari, Italy

2.2.1.3 Workshop in Niksic, Montenegro

On December 27th 2022, PP3 IEC Tehnopolis organized a workshop: *The use of agricultural waste for the production of sustainable building materials with high energy efficiency.*

After a short presentation of the project, legal regulations related to the energy efficiency system in Montenegro were presented to the participants by Ms. Natasa Kopitovic Vukovic, professor at the Faculty of Civil Engineering in Podgorica. Speaking about NZEB buildings - near-zero energy buildings, Mrs. Kopitovic Vukovic explained that they represent buildings with very favorable energy characteristics, high efficiency, which are determined in accordance with the Directive. The insignificant required amount of energy, which is close to zero, should be covered to the greatest extent from renewable sources, including energy produced on-site or in the immediate vicinity.

The second part of the workshop was dedicated to the use of agricultural waste for the production of sustainable construction material with high energy efficiency, which was discussed by Dr. Radomir Zejak, professor at the Faculty of Civil Engineering in Podgorica. Mr. Zejak referred to the types of construction materials that exist, as well as use of agricultural waste in the construction industry and its advantages. Mr. Zejak presented proposals for the use of agricultural waste in Montenegro for products in the construction industry, clay products, composite materials - mortar and concrete, fiber briquettes, replacement of part of coarse aggregate with shell waste (mussels, mussels, oysters, etc.) into composites of the type of mortar and concrete with inorganic binders and multi-layered (lamellar) packets.

In the final part of the presentation, the attendees were also presented with examples of good practices in the use of agricultural waste for the production of sustainable building materials with high energy efficiency.

Annex 4 – Workshop in Niksic, Montenegro

2.2.1.4 Workshop in Campobasso, Italy

PP4 MOLISE VERSO IL 2000 organized the workshop on April 22nd 2022. The topic of the workshop was: *Agricultural waste: from waste to a resource for the building sector.* During the workshop, the following topics were covered:

- The project AWeSOMe: objectives and perspectives;
- Agriculture as a source of sustainability where participants discussed opportunities of reusing agricultural waste with an analysis of the local Molise data and analysis of the characteristics of agricultural farming;



- Neo-building where the focus on the situation of building materials available on the market and on the Italian building stock and on current state incentives;
- The combination of eco-friendly materials and construction: Houses made of straw, rice and hemp. 3 speeches made by 3 companies representatives involved in the circular economy and agricultural waste reuse sector: projects made of bamboo, hemp, rice and straw;
- The future of agricultural building materials: presentation of the tests carried out in the laboratory;
- Round-Table with local stakeholders.

The total number of participants was 149, such as different experts, architects, engineers, agronomists and forestry doctors and representatives of the Universities and agricultural sector.

Annex 5 – Workshop in Campobasso, Italy

2.3 Activity A.T1.3 Developing recommendations for policy makers and authorities


Within this activity, recommendations for improving sustainable construction policies at the local and national level were produced through the cooperation between project stakeholders and policymakers. The aim of the activity was to improve policies on the conscious use of sustainable passive strategies by focusing on the use of bio-based materials for high-energy performance buildings. These recommendations have been produced in the form of common protocol.

2.3.1 Deliverable D.T1.3.1 Cross Border protocol and common plan


Cross border protocol and common plan presents an overview of recommendations for improving sustainable construction policies on different levels from the aspect of Nearly Zero Energy Based standards, in accordance with the previous activities that were implemented by project partners based on analysis of existing policies on European and cross-border levels, possibilities when it comes to the application of agro-waste as a component of building materials in all four regions involved in the project implementation.

Annex 6 - D.T1.3.1 Cross Border protocol and common plan



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