The BRITISH UNIVERSITY IN EGYPT

Project Summary

Project title **"Development of sugarcane bagasse insulation board and investigation of its architectural applications"**

Project No. **46956**

Different Developed Prototypes

Summary:

This project was awarded to Assoc. Prof. Marianne Nabil as the PI under the COP27 call, an international initiative hosted in Egypt. It addressed climate change by introducing resilience in the construction industry, thereby aligning with the Sustainable Development Goals (SDGs).

Objectives:

The aim of the research was to develop a composite board made from local green fibers of sugarcane bagasse and to explore its potential architectural applications through the following objectives:

- Investigating existing green composite boards;
- Determining the mechanism for incorporating sugarcane bagasse into the board;
- Identifying the appropriate matrix to be used as a binding material; and
- Fabricating the composite board that has thermal insulation qualities.

Funding agency:

The Science and Technology Development Fund (STDF).

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Results:

The project successfully developed a cladding material with thermal insulation properties and a wide range of architectural applications, while also examining its fabrication techniques. In addition, two research articles were published in Scopus-indexed journals to document the progress and results, thereby achieving the project's objectives.