

Transformation of reeds in panels, roofs and pellets

Using **bio-based materials** (*Phragmites australis* (Cav.)) for insulating panels and thatched roofs, with less impacts and better performances than traditional ones.

Reducing the **processing waste**, reusing them for pellets production.

SDGs (Sustainable Development Goals):

- Nr. 7 – Affordable and clean energy
- Nr. 9 – Industry, innovation and infrastructure
- Nr. 12 – Responsible consumption and production.



Common reeds



Thatched roofs



SDGs (Sustainable Development Goals)



Insulating Panels

Background

This part of the study is the preparatory phase for the performance of a Life Cycle Assessment, but there are already two aspects that make **bio-based materials** preferable to the traditional ones:

- Drastic reduction of **non-renewable resources** use.
- Avoiding the loss of **biodiversity**.

Objective of the work

The goal of the study is to assess whether reeds products can reduce the environmental impacts compared to the traditional ones.

- **Reed insulating panels** VS Polystyrene panels
- **Thatched roofs** VS Roof tiles
- **Reed pellets** VS Wood-pellets

Visual conclusion

