

# Replacing traditional materials with more sustainable ones, using Phragmites australis (Cav.)

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## 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.







**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

