

## Outline

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## Abstract

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The building sector has a strong impact on the environment in terms of pollution, through its carbon footprint and waste generation. In this context, raw earth construction is experiencing a revival of interest in its ability to use a local, reusable, and low environmental impact material. Vernacular architecture reflects the evolution of particular know-how, which has been able to adapt to specific factors linked to a nearby environment. Champagne area is one of the last uninvestigated earth heritage territories in France, whereas it presents an original and rich rural, urban, and industrial earth architecture. To cartography raw earth heritage in the studied area and its surroundings, the various buildings and construction practices observed in the field were geolocated on a digital tablet using QGIS software. This work completes the partial inventory that had been started on Champagne territory and reveals local variations and other uses of raw earth never described in the national survey maps of earthen construction techniques.

The presence of the adobe heritage corresponds quite well to the area of the chalky Champagne. We notice two different types of boundaries. A first type where adobe architectures are directly replaced by other building materials, and a second type where adobes are combined with and then replaced by other earth construction techniques (cob, wattle and daub). This reveals a dialogue between different constructive cultures. This survey seems to show a certain coherence as to the presence of adobes in the constructions regarding the geological substratum. Our work will allow to characterize the earth used, to valorize the excavated earth in this territory, as well as to raise awareness and promote local raw earth architecture. In addition, the discovery of the use of cob in the Seine valley reveals the richness of this heritage in this geographical sector.