

## **Small industries and their importance in sustainable development in Libya. (Small ceramic industries as a model)**

**Prof. Ayman Ali Gouda**

Professor of the Department of Ceramics - Faculty of Applied Arts - Helwan University

[aymanalyalgouda@gmail.com](mailto:aymanalyalgouda@gmail.com)

**Prof. Fathy Abd-Elwahab**

Professor of the Department of Ceramics - Faculty of Applied Arts - Helwan University

[dr.fathy.a.wahab@gmail.com](mailto:dr.fathy.a.wahab@gmail.com)

**Assist. Lect. Ibrahim Salem Ismail**

Assistant Lecturer at the Faculty of Arts and Architecture - Omar Al-Mukhtar

University (Durna)

[ibrahim.s.r.ismail@gmail.com](mailto:ibrahim.s.r.ismail@gmail.com)

### **Abstract:**

This study was carried out to show the role of small industries, especially small ceramic industries that depend on local raw materials, in achieving the goals of economic and social development in Libya, in addition to being one of the industries with functional use, such as home ceramics and traditional craft industries (pieces that express the culture and identity of the place). A direct contribution to spatial development, as it accommodates large numbers of workers, with different age groups of both genders. It is not limited to young people only, but includes the skilled elderly category with distinguished experience. This is why it is considered one of the most important elements of family social solidarity, and this in turn limits migration to large cities Or external migration, also one of the obvious influences that contributes to transforming the place as a tourist destination (examples are the village of Garagos in the city of Qena, the village of Tunis in the city of Fayoum, and Fustat in the city of Cairo), which in turn enhances the foundations of sustainable development in the various Libyan villages and cities, which depend On the elements of the spatial environment and the local expertise of the craftsmen, who contribute to the transmission of their experiences from current generations to future generations.

The locations of the raw materials in southern Libya were determined after referring to the reports of the Industrial Research Center in Libya, and after the ores were transported, milled and prepared, they were tested by different forming methods represented in (forming by casting method, forming using the cuff (the pressing arm), forming by manual plastic pressing, free forming by the wheel. The results were promising, and they are suitable for different ceramic forming methods used in small ceramic industries, and the results of the plasticity labs also showed that the clays have very superior plasticity, and the success of the clays used in molding by slip casting.

### **Keywords:**

small industries, traditional handicrafts, sustainable development, classification of ceramic industries