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Education in Afghanistan**

Slovak University of Technology in Bratislava, Slovakia
Vienna University of Technology, Austria
Asian Institute of Technology, Thailand
Kabul Polytechnic University, Afghanistan
Herat University, Afghanistan

Current Trends in Civil Engineering and Architecture

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ASHMAT-KHALIL FROZ'S CONTRIBUTION

**Ashmat -Khalil Froz, architect,
Professor at Kabul Polytechnic University**

Ashmat-Khalil Froz, 52, is an architect who studied in a high school in Kabul and then graduated from a French university : Ecole Nationale Supérieure de Bretagne.

For 25 years, he hasn't stopped working both for French and Afghan people, designing houses, bank buildings and also shelters for Afghan refugees. Since 2001, he has actively participated in the reconstruction of Estalef, a town located in the Shamali area, north of Kabul.

Sharing his time between Afghanistan and France, Mr Froz has set up in Kabul a Research Center about Clay Building. According to him, mud architecture is indeed the only way of meeting the huge need of reconstruction Afghanistan is faced with after 30 years of wars.

The model buildings he implemented can be seen at the Research Center about Clay Building located at Kabul Polytechnic University (KPU).

He is in charge of a training center for Afghan architects in the department of architecture of KPU and he teaches mud architecture both in Farsi and in French. Several of his students are currently following a master course in France.

CLAY BUILDING, A Simple Solution to the Reconstruction of Schools and Urban as well as Rural Habitat

Our goal is to promote the use of clay in the reconstruction of Afghanistan

CLAY, THE SOURCE OF LIFE

This lecture, I hope, will inspire the use of clay so as to build, restore, decorate and above all give a home to thousands of Afghans who are returning to their country.

At the origin of all living things, this clay that feeds us, enables us to grow up and welcomes us for eternity is also able to accommodate us.

A lifetime is not enough to get acquainted with all the qualities of clay. We are now focusing upon the earth, the sun and water, the three elements which are essential to life and which also constitute 90 percent of renewable energy worldwide.

This lecture emphasizes the qualities of clay for building and its adaptability to passive sun-power, which is inexhaustible. Its building materials are environmentally friendly and thus will help save our planet.

We do hope this country will rebuild itself with this natural, plentiful and cheap material, and with Afghan people's knowledge.

Clay is enjoying a rebirth among builders and architects world-wide. This is because it is environment-friendly and readily available. It also saves energy, while affording thermal and phonic comfort. The research that has been carried out in order to stabilize clay and bring it up to modern standards is finally bearing fruit.

After 25 years of wars, Afghanistan is rebuilding itself. However, with the return of thousands of refugees, the shortage of houses and schools is being acutely felt. A lot of Afghans are still living in squalid conditions, many of them in tents, even in Kabul.



*Model-house at the Research Center about Clay Building, Kabul Polytechnic University
Earthquake-resistant house built with raw clay. It combines thermal and phonic comfort and costs 60 % less than a comparable house made of concrete or brick.*

The Afghans are experts in the use of clay to provide low-cost housing. PROMOTING THE USE OF CLAY IN RECONSTRUCTION IS THEREFORE THE BEST ALTERNATIVE. It allows for a building process that is fast, cheap, environment-friendly and in compliance with appropriate sanitation standards.

Building with clay is a traditional technique that incorporates modern technologies. In order to make the Afghan people aware of its advantages, it is time to bring together construction professionals, officials and international organizations. The goal is to put in a place a reconstruction policy that will be suited to the specific conditions of Afghanistan, while receiving local and international financial backing.

COME AND SEE FOR YOURSELF

Since 2004, a research centre showcasing model clay buildings has been operating at Kabul Polytechnic University. The goals of the centre are to

- PROMOTE clay as a basic construction material
- ENSURE that the techniques of clay building are well understood as well as mastered and taught at the most advanced level
- BUILD with clay

We offer

- An academic program in clay building at Kabul Polytechnic University
- Professional training for construction workers
- A permanent exhibition “Clay building in the world”

A laboratory within the research centre

- Earthquake-resistant model buildings using various techniques
- Sampling of clay mixed with natural fibers
- An 81m² model house built with clay bricks and using passive solar energy
- Techniques used to stabilize clay buildings
- Processing of clay coating for decorative and stabilizing purposes

LOOKING TO THE FUTURE

If the reconstruction of Afghanistan is to proceed rapidly and expediently, there is an urgent need to build model schools, houses, farm buildings, etc, all over the country.

PARTNERSHIPS

- French Embassy in Kabul / French Ministry of Foreign Affairs
- School of Architecture in Grenoble / Craterre Association
- French Cultural Centre in Kabul
- Emergency Architects, an association based in Amiens, France
- Globetrottere, a firm based in Mélesse, France
- Afghan Ministry of Higher Education
- Afghan Ministry of Town-Planning and Housing
- Kabul Polytechnic University
- Afghan Architects Union