



Intensive course on earth construction
LOW-COST HOUSING AND SUSTAINABLE DEVELOPMENT
 Grenoble, 16 - 31 October 2006

The idea that resolving housing problems in many developing countries required - amongst other things - using local resources, emerged nearly three decades ago now. One such local resource, earth, seemed particularly promising, provided its use could be mastered. Over these thirty years or so, there have been numerous studies, researches, experiments, and thoroughly physical projects have also been implemented. These various activities have enabled the capacities and constraints of building with earth to be better understood. Moreover, there is now a better understanding of how to approach different contexts and to draw up intervention strategies. This training programme assesses the current state of knowledge and formulates recommendations for the set up and the implementation of a low-cost building construction project.

AIM OF THE COURSE

To develop a methodological approach to the low-cost building construction project, both on the level of its development and of its implementation, in a context of sustainable development.

COURSE METHODOLOGY

The course methodology is based upon a progressive involvement of the participants in the course subject, aiming to gradually focus on their own specific context or project, through two main steps: the presentation of the global scientific and theoretical framework, illustrated by a variety of case studies, followed by a reflection on the participants' context. Course activities include lectures, demonstrations, exercises, case studies, field visits and individual meetings.

FACULTY

Courses are taught by lecturers and researchers from the laboratory CRATerre-ENSAG.

CONTENTS

Part one: the global scientific and theoretical framework. After the presentation of earth as a building material and the main construction techniques (adobe, rammed earth, cob, compressed earth blocks), the course will focus on the low-cost building construction project, including preliminary studies, design and planning, implementation, evaluation. A visit to the local earthen heritage and to recent construction projects will be organised. The different aspects of the development and the implementation of a low-cost building construction project will be illustrated through different case studies.

Part two: reflection on the participants' context.

After a presentation by the participants of the project(s) in which they are currently involved, a needs analysis will be done for each specific project. The participants will then have the possibility to develop one or more identified issues during different working sessions, with the technical assistance of the course staff.

PARTICIPANTS

The course is designed for architects, engineers, higher technicians, economists and social workers, having experience in one of the following positions: administrator or programme manager at national and regional levels, expert or technical advisor of international agencies, governments and voluntary organisations, project manager, development worker, researcher.

The participants will be invited to give a presentation on their professional activities in the field of low-cost housing. In this respect, they are expected to come prepared with relevant information (printed material, slides, videos, project reports, etc.).



CRATerre-ENSAG, the International Centre for Earth Construction, is a scientific organisation within the National Superior School of Architecture of Grenoble (ENSAG).

OBJECTIVES

Since its creation in 1979, CRATerre-ENSAG is actively contributing to the development of scientific and technical knowledge on earthen architecture. Its activities are a result of the will to modernise the use of this ancient and modest building material in order to propose an alternative to recently developed, too expensive and energy consuming building methods. This objective has always been associated to an ardent desire to re-establish a dialogue between the architect and the user, who has slowly been deprived of its participation in the development and the construction of its own environment, through the settlement of sophisticated and almost inaccessible construction techniques. This problem was stressed by the Global Strategy for Shelter to the Year 2000, proclaimed by the United Nations General Assembly in December 1988, as well as by the Agenda 21 for a sustainable development, adopted during the Conference of Rio de Janeiro in 1992. National decision makers, as well as the international community, are almost powerless in front of the crucial need for adequate low-cost shelter that still exist today; they will need to mobilise a maximum of human and material resources, as the only use of industrialised materials will not be enough to guarantee an access to shelter for all in a reasonable time. The material earth, with its numerous potentialities, both on technical and architectural levels, offers many possibilities in this respect. The activities of CRATerre-ENSAG are in line with the above reflections.

ACTIVITIES

The competence of CRATerre-ENSAG covers all different aspects of earthen architecture. Three main working programmes, i.e. :

- conservation and management of the earthen architectural heritage,
- environment,
- human settlements,

are developed through four interrelated fields of activity : education, research, implementation and dissemination, in the framework of specific projects :

- **the UNESCO Chair on Earthen Architecture/Terra Consortium**, aiming to accelerate the dissemination of scientific and technical know-how on earthen architecture amongst the higher education institutions and in scientific-technical centres;
- **basin**, the building advisory service and information network, aiming to provide information and advice on appropriate building technology and to create links with know-how resources in the world for all those in need of relevant information;
- **Africa 2009**, a programme for the conservation of immovable cultural heritage in Africa South of the Sahara, based on an agreement between the World Heritage Centre of UNESCO, CRATerre and ICCROM;
- **Central Asian Earth 2012**, a cooperation programme between the States of Central Asia, the Unesco World Heritage Centre and CRATerre-ENSAG, aiming the development of resources for the conservation and the preservation of cultural immovable heritage in Central Asia.

EDUCATION

Besides its specialised training programme, CRATerre-ENSAG offers a post-graduate course of a total duration of 18 months, the DSA-Terre, delivering a diploma recognised by the French Ministry of Culture. The course is accessible to holders of a university degree (architects, engineers, and equivalent), and aims to develop a scientific approach on earth construction in the framework of low-cost housing and/or conservation projects, at the level of decision-making, production, design and construction. The programme is part of the integrated activities of the UNESCO Chair on Earthen Architecture. CRATerre-ENSAG can organise in-country training upon request of national or international organisations. The costs depend upon the duration and the nature of the programme required, in terms of its demands on faculty time and other resources.

Practical details

APPLICATION

Application forms may be obtained from the course secretariat. Completed forms must be received at the latest by **August 31, 2006**. Upon admission, the course fee must be paid in full by cheque or credit transfer. No refunds will be made for non-attendance or for cancellation received after the deadline for application. CRATerre-ENSAG reserves the right to amend the programme or to cancel, in case the minimum number of participants required is not reached; if so, the applicants will be informed and reimbursed as soon as possible.

COURSE FEE

The course fee amounts to 2.000 €; it covers the course-attendance and a basic documentation.

TRAVEL AND ACCOMMODATION

Participants should cover their own travel expenses. In addition, they should allow at least 50 €/day for accommodation and other living expenses (estimation based upon accommodation at the university residence). The course secretariat may, on request, handle the room bookings.

ORGANIZATION

The course is conducted at the National Superior School of Architecture of Grenoble, where facilities include a lecture room, a laboratory and a workshop with a broad offer of production equipment. The course language is English: a good knowledge of the language is required.

INSURANCE

The course fee does not include any insurance. Participants should effect an insurance covering the following: civil liability, accident, health.

CONTACT

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