The World Heritage Earthen Architecture Programme is a partnership of:
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**Introduction**

Earthen architecture is one of the most original and powerful expressions of our human ability to create a built environment with locally available resources. It includes a great variety of architectural and urban manifestations, ranging from mosques, palaces and granaries to historic city centres, cultural landscapes, and archaeological sites. The evidence of its cultural importance throughout the world has led to its consideration as a common heritage of humankind, therefore deserving protection and conservation by the international community. Earth architecture plays a vital role in defining the identity of local communities: sustainable both in terms of art and building techniques. There is an increased interest for its ability to contribute to communal, ecological and cultural assets.

However, earthen architecture is increasingly threatened by natural and human impacts including those related to floods and earthquakes, industrialization, urbanization, modern building technologies, disappearance of traditional conservation practices, etc. In the case of World Heritage, about ¼ of the cultural sites inscribed on the World Heritage List in Danger are earthen sites.

This has highlighted the need for the international community to focus on the safeguarding of the most outstanding earthen heritage around the world and to inform on its significant role for social improvement as well as its great potential for contributing to poverty alleviation.

In 2008, the World Heritage Programme on Earthen architecture (WHEAP) was launched as an initiative to address pressing concerns through the development of policies for the conservation, revitalisation and valorisation of earthen architecture properties, enhancing capacities at the regional, national and site levels for both management authorities and technical experts.

The following report presents the achievements of the WHEAP since its launching in 2007 through 2011.
Description of the Programme

1. Background

In 2001, the World Heritage Committee approved a Thematic Programme on Earthen Architecture with the aim to develop an Earthen Architecture Conservation Programme.

Since its approval, the Earthen Architecture Conservation Programme has carried out a range of projects in many parts of the world, including preparation of the conservation plans for Timbuktu and the Cliff of Bandiagara (Mali), the safeguarding of the Royal Palaces of Abomey (Benin) and Zabid (Yemen), conservation activities at the archaeological site of Chan Chan (Peru), and training and restoration projects in Central Asia. A comprehensive collection and evaluation of the results and knowledge obtained during the in-situ projects will help to considerably reinforce capacities on all levels implied ranging from communities, to national and international level and will enhance technical and cultural research as well as policy making guidelines.

After its presentation, the programme was supported at the second Board of Trustees meeting of the African World Heritage Fund in March 2007, in Paris, and in particular its implementation in Africa during the first phase.

At its 31st session (New Zealand, 2007), the World Heritage Committee approved the initiation of the integrated World Heritage Programme on Earthen Architecture (2007-2017) (decision 31 COM 21C, working document 31 COM 21C ) and decided to allocate USD 80,000 from the World Heritage fund as seed money for the implementation of the Phase 1 of the programme.

On that basis, also taking into consideration a first series of activities, and the Africa 2009 programme as an example, a preparatory phase (Phase 1, 2007-2008) was launched by the World Heritage Centre, leading to the elaboration of a formal programme designed with the involvement of main technical partners including ICCROM, ICOMOS, CRAterre, EPA, World Monuments Fund and highly experienced experts.

This formal programme was officially launched during the Terra 2008 international conference in Bamako, Mali, in February 2008, and further developed in detail.

The preparatory Phase 1 concluded in 2008 and is followed by three phases focusing on two regions or sub regions, that are still ongoing: Africa and Arab states (Phase 2, 2009-2011), Latin-America and Central Asia (phase 3, 2012-2014) on Latin-America and Central Asia, Europe and Asia (Phase 4, 2015-2017).

2. Programme Objectives

The WHEAP project pursues two main objectives. The first one aims to develop appropriate methods and techniques for improving the sustainability of the conservation and management of
the different types of earthen architectural heritage inscribed on the World Heritage List and/or included in States Parties’ Tentative Lists. The second one endeavours to ensure that best practices are broadly disseminated for practical application at properties protected under the World Heritage Convention.

Ultimately, activities under the World Heritage Earthen Architecture Programme should benefit the communities, help improve their living conditions and contribute to poverty alleviation in the short and long-term.

The programme operates at four levels of intervention. Firstly, it is implemented through pilot projects on earthen architecture sites (inscribed on the World Heritage List or included in State Parties’ Tentative List) to show-case and identify best practices for worldwide dissemination, and on-site training. Secondly it also includes scientific research to enhance know-how in the field. Thirdly, it endeavours to increase opportunities for specialized training on earthen architecture conservation throughout the world addressed to artisans and to heritage professionals. Finally the programme includes promotion and awareness raising activities with the idea of ensuring the recognition of earthen architecture, both at international and national levels, with a serious consideration given to local communities who increasingly tend to lose confidence in their local architecture, know-how, skills and practices.

3. Expected Results

By its conclusion in 2017, ten results should be achieved:

1. Identification and understanding of problems earthen architecture heritage is exposed to in the larger context of sustainable development;
2. Definition of appropriate methods and techniques of interventions concerning earthen architecture;
3. Development of guidelines and policies for the conservation, use or revitalisation and valorisation of earthen architecture heritage protected under the Convention;
4. Preparation of land use plans, building regulations and technical specifications for the restoration of historic towns as well as for the inclusion of modern infrastructures;
5. Preparation, and large diffusion of publications to promote earthen architecture and make widely available the results of the programme;
6. Efficient protection and enhancement of at least twelve earthen architecture sites protected under the World Heritage Convention;
7. Elaboration of management and conservation plans for at least twelve earthen architecture World Heritage Sites;
8. Organisation of capacity building activities in earthen architecture conservation and management by regional training institutions (at least six), including development of specific curricula for them;
9. Involvement of trained national professionals and other skilled persons in the conservation and management of earthen architecture in all countries with earthen architecture sites;
10. Setting-up of an active global network for exchange of information and experience.

4. Programme Orientations
The programme follows these guiding principles:

- Contribution to sustainable development and poverty alleviation through enhanced use of earth building materials and valorisation of know-how holders, but also with reinforced and enhanced tourism potential;
- Development of a number of in-depth pilot projects at selected World Heritage and tentative list properties with all necessary long term follow-up and evaluation in all concerned regions of the world;
- Use of opportunities for cooperation agreements with State Parties developing conservation and research activities in the field of earthen architecture preservation;
- Consideration of the diversity of earthen architecture heritage in the programme implementation;
- Reinforcement of the local capacities within the communities with specific focus on valorisation of women and youths;
- Reinforcement of the capacities of the world’s regional institutions to address the conservation problems facing earthen architecture heritage;
- Consideration of the fundamental role of scientific research and of the capacity of the UNESCO Chair;
- Establishment of links with regional initiatives such as Africa 2009, CentralAsianEarth and the ATHAR programmes, and existing formal networks like PROTerra in Latin America as well as with the UNESCO Category II Centres such as the African World Heritage Fund (South Africa), Zacatecas (Mexico), Centro Lúcio Costa (Brazil) and the Arab Regional Centre for World Heritage (Bahrain). Collaboration with these centres is essential to ensure that activities are grounded according the regional characteristics.
- Establishment of links with initiatives developed in the framework of the UNESCO conventions on cultural diversity and intangible heritage.

5. Programme partners and management structure
The WHEAP programme involves the technical support of the main international conservation institutions ICCROM, ICOMOS and the earth conservation institute CRAterre-ENSAG as well as
of the regional institutions EPA (Benin), CHDA (Kenya) and the Centre of Restoration and Conservation of Earthen Architecture CERKAS (Morocco). In 2009, Udine University (Italy) also became a programme partner. In the course of the activities the programme seeks further cooperation and partnerships with other specialized institutions, as well as national and local governmental authorities.

The programme activities are made possible thanks to the financial support granted by the World Heritage Committee through the World Heritage Fund. In addition, partners gave their financial support including the Italian Government, the Spanish Government, the French Government and the Shaikh Ebrahim Mohammad Al-Kalifa Centre for Culture and Research/ARCAPITA Bank B.S.C from Bahrain. The Italian Government has allocated an amount of 500,000 USD. The French Government, through the France-UNESCO Cooperation Agreement funded the analysis of the World Heritage List.

The programme is managed by a steering committee composed of representatives of the main programme partners. The steering committee comprises 11 members: WHC (2 representatives); CRAterre-ENSAG (2 representatives); ICCROM (1 representative); ICOMOS (1 representative); representatives from regional institutions; site managers. The next meeting is planned for 2012 at the Centre of Restoration and Conservation of Earthen Architecture (CERKAS) in Morocco.

6. A programme implemented in four phases

The programme is structured in 4 phases:

- **Preparatory Phase** (Phase 1, 2007-2008): (completed)

The preparatory phase completed in 2008, aimed at determining the global programme strategy for Africa, Arab States, Latin America, Asia and Europe and formalizing it in a detailed project document with a realistic work plan ensuring coherence in the development of the various components of the earthen architecture programme. The document was distributed to the potential donors and partners as a reference.

This phase foresaw also the preparation of a fundraising and marketing document on the programme. Finally, the objective was to prepare the analysis of the World Heritage List: inventory of sites with earth material assets, identification of typologies, state of conservation and threats, indicators for measuring speed of decay.

- **Three regional phases (ongoing):**

- **Pilot Phase with focus on Africa and Arab States** (Phase 2, 2009-2011)

The focus of the first implementation phase, the focus is on Sub-Saharan Africa and the Arab States region. It aims at undertaking regional studies on the conservation conditions for a selection of World Heritage properties. A range of conferences, seminars and training
workshops were implemented, including: a conference gathering World Heritage site managers; a thematic seminar on issues related to the conservation of a specific type of earthen architecture (conservation of historic cities); a training workshop organized for site managers and decision-makers from Africa and Arab States, on earthen architecture preservation. The phase includes also in-situ conservation projects in Africa and Arab States addressing specific typologies and focusing on rehabilitation and management. Another issue is the preparation of nomination dossiers for inscription on the World Heritage List and the organization of laboratory research for restoration techniques as well as Promotion and advocacy activities (books and technical guides).

**Consolidation Phase, with focus on Latin America and Central Asia** (Phase 3, 2012-2014)

As for phase 2, it entails the development of regional studies on the conservation conditions for a selection of World Heritage properties in Latin America and Central Asia. It consists also in the organization of several conferences, seminars and training workshops, including: three technical/thematic seminars to study issues related to the conservation of a specific type of earthen architecture; two training workshops for site managers and decision-makers on earthen architecture preservation. This phase involves the development of in-situ conservation projects addressing a specific typology and focusing on applied research and experimentation on restoration as well as the preparation of studies for setting-up of monitoring mechanisms and of curricula for training and educational activities in earthen architecture. It will also encourage the elaboration of best practices guides for earthen architecture conservation and sustainable management as well as the publication of a series of technical books.

**Final Phase with focus on Europe and Asia** (Phase 4, 2015-2017)

The final phase will focus on Europe and Asia. Under this phase, regional studies on the conservation conditions for a selection of World Heritage properties will be undertaken. Two technical/thematic seminars for sites managers and decision-makers on the results achieved will also be organized. This phase involves also the organization of two training workshops for site managers and decision-makers on earthen architecture preservation (Europe, Asia). In addition, this phase will include in-situ conservation projects addressing a specific typology and focusing on applied research and experimentation on restoration. It will also encourage the transfer of earthen architecture conservation curricula to Universities and Regional training
institutions, the synthesis of the results achieved, evaluation, conclusions, recommendations as well as the finalization of the set of publications.

Throughout all phases experts from other regions are invited to contribute, and share knowledge and experience.

**Implemented activities 2007-2011**

1. **Activities implemented under Phase 1 (2007-2008)**

1.1. **Expert meeting on global programming strategy**

A consultation meeting with ten renowned international experts in earthen architecture conservation was held in November 2007 at UNESCO Headquarters in Paris. The meeting centred on defining orientations for the operational framework and the programme strategy. A detailed programme document containing the development of the various components of the earthen architecture programme was produced as well as a promotional leaflet in English and French to introduce and present the WHEAP to a wider public.

*Promotional leaflet on the WHEAP*
1.2. Elaboration of project document and summary leaflet

On the basis of the results of the above meeting, a detailed programme document containing the development of the various components of the earthen architecture programme was produced in English and French by CRAterre-ENSAG in close collaboration with UNESCO World Heritage Centre and consultation with the participants of the Paris meeting. The document was accompanied by a promotional leaflet presenting the WHEAP to a wider public.

1.3. Official Launching of the WHEAP at Terra 2008 (Bamako, Mali)

The World Heritage Earthen Architecture Programme (WHEAP) was officially launched on the occasion of Terra 2008, the 10th International Conference on the Study and Conservation of Earthen Architecture (1-5 February 2008, Bamako, Mali), organized by the Getty Conservation Institute and the Ministry of Culture of Mali, with assistance provided by CRAterre-ENSAG, ICOMOS ISCEAH and UNESCO-WHC. A panel was set up during the Conference and brochures with information about the Programme were widely distributed among participants. The event also served as an opportunity to hold several meetings with attendees regarding potential partnerships for the implementation of the programme’s components.

1.4. Inventory project on earthen architecture sites supported by the France UNESCO Cooperation Agreement (in progress)

The inventory project aiming at assessing all earthen sites inscribed in the World Heritage List started in 2008 thanks to the support from the French Government through the France-UNESCO Cooperation Agreement. This first assessment phase has contributed to the production of a draft of the inventory. The final phase is underway. The inventory which will be published and available on line in 2012, it, should be distributed at Terra 2012 to be held in April 2012 in Lima Peru.
2. Activities implemented under Phase 2 (Africa and Arab States)

2.1 Africa

2.1.1 Conservation Project for Africa (supported by the Italian Government)

Thanks to the financial support of the Italian Government, UNESCO has launched in 2008 the Conservation Project for Africa. This project has supported a series of activities in Ethiopia (Lalibela), and Mali (Timbuktu, Old Towns of Djenné) as well as the development of a didactic programme tool for the regional training institutions CHDA (Centre for Heritage Development in Africa) and EPA (School of African Heritage, Porto Novo, Benin).

The programme tackled a series of challenges concerning earthen architecture conservation using the prime earthen site of the Old Towns of Djenné in order to concentrate and showcase the WHEAP achievements in one place for a stronger promotional effect and visibility of best practices, Djenné was thus attributed a core role as an activity hub for the whole programme, at this initial state of the WHEAP.

2.1.2 Rock-Hewn Churches of Lalibela, Ethiopia

Study on the traditional earthen buildings for the sustainable conservation of the Rock-Hewn Churches of Lalibela, Ethiopia

View of a traditional dwelling (Tukul) in Lalibela, July 2010
UNESCO, in cooperation with the Ethiopian Authority for Research and Conservation of Cultural Heritage (ARCCH), organized a mission to the World Heritage property of Lalibela (Ethiopia) to study the potential of earth architecture for the effective conservation and urban management of the traditional housing surrounding the prominent Rock Churches.

The mission emphasized the intrinsic link between the churches and the community living around it, the connection between an efficient conservation of the churches to the wellbeing of the people. Even though traditional building skills still exist in “abundance”, continuity is threatened to disappear quickly if earth is not promoted as an advantageous building material allowing for modern living comfort and sustainable buildings.

The mission provided recommendations to conserve and enhance earth architecture in Lalibela, but also proposed an action plan to be further developed in a follow-up mission.

2.1.3 Timbuktu, Mali

*Elaboration of a conservation manual and of building regulations*

Timbuktu has been facing serious urban development pressures in the past years largely exacerbated by the lack of legal instruments of control and efficient implementation to protect the property’s integrity and authenticity.

The formulation of building regulations has thus been requested by the World Heritage Committee as per Decision 33 COM 7B.45 and a draft was elaborated in conjunction with a conservation manual with the technical support of an Italian expert, in 2009. Both documents are now with the management authority of Timbuktu who organized a stakeholders’ workshop to discuss the building regulations, which were adopted in August 2011.
2.1.4 Old Towns of Djenné, Mali

As Timbuktu, the World Heritage Property the Old Towns of Djenné is confronted to problems which are well known at other World Heritage properties, ranging from sustainable development, to particular conservation issues as well as capacity building, communication and education. In that context, a series of activities have been implemented in Djenné in order to improve the local situation. Djenné also served as a hub to concentrate and better showcase WHEAP activities.

a. Pilot project and technical specifications: Pilot rehabilitation project of the Youth House

The rehabilitation of the Youth House of Djenné, launched on 15 of March 2011, in cooperation with the Ministry of Culture/ Mission culturelle de Djenné, and with methodological and technical assistance from CRAterre-ENSAG, encompasses a range of programmes objectives. It aims at reaching maximum visibility and usefulness for the population of this important building, which is both a very valuable historic structure and a community centre. The project exemplifies the possibilities and advantages of earthen modern building standards including, naturally, all sanitary and electricity facilities and other requirements such a public place of social events should offer, e.g. furniture, sound system and lights.
The Youth House was officially inaugurated in November 2011. The successful rehabilitation may also contribute to tourism development in the town as it provides an up-to-date reception space. The rehabilitation is thus perceived to contribute to the socio-economic development of the town and the promotion of urban conservation by using local materials, techniques and specialists. Further, the State Party identified and subcontracted local masons and artisans to execute the works. The knowledge achieved in the course of this rehabilitation, is compiled in a publication on technical guidelines for a wide dissemination of best practices.

**b. Pilot project and technical specifications:** *Elaboration of building regulations*

Prior to the works for the rehabilitation of the Youth House of Djenné, a technical preparation was conducted for the executive document, with a full fledged analysis of the building’s structure and state of conservation which involved several on-site missions.
c. **Technical/ thematic seminars:** Regional workshop for site managers

A regional site managers workshop was organized in Djenné with the participation of over 30 national and international experts and professionals including the site managers from Koutammakou, the Land of the Batammariba (Togo), The Royal Palaces of Abomey (Benin), Cliffs of Bandiagara (Land of the Dogons), Timbuktu and Old Towns of Djenné (Mali), Stonetown of Zanzibar (Tanzania), Ksar of Ait-Ben-Haddou (Morocco). The workshop aimed at identifying site management challenges and defined priorities for improved management in aspects of sustainability, conservation, management, communication and capacity building.

d. **Capacity building:** Workshop for tourist guides

A one-day workshop of tourist guides (7 December 2010), in cooperation with the Cultural Mission of Djenné and EPA, was held to take stock of the most pertinent problems the tourism branch faced in and around Djenné. Twelve local tourist guides including the President of the Bandiagara tourist guides association and a representative of the national organization for tourism and hotel industry in Mali (OMATHO), as well as representatives of the authorities and the international experts invited for the site management workshop (including two Italian experts from Udine), took part in the meeting. The workshop aimed at identifying problems and challenges for the development of tourism and to propose solutions concerning the creation of an association for guides, improvement and visibility of tourist activities and support by local authorities.
e. **Capacity building: Exchange programme with Italian institution**

In support of the activities in Djenné and to further enrich gained knowledge and experience, a professional exchange with the Italian non-profit organization CEFS (Centro Edile per la Formazione e la Sicurezza) from Udine has been organized with the site manager and the mayor from the Old Towns of Djenné. The exchange took place in April 2011 and included discussions on waste and water management and archaeological conservation, visits of construction sites, and presentations at the University of Udine as well as discussion on future partnerships for cultural and economical activities between the two towns.
2.1.5 Didactic materials for earthen architecture conservation and sensitization to be used by African regional institutions EPA and CHDA

The capacity building and training component for the WHEAP has been designed taking into account the priority needs for the Africa region. This project activity foresees the development of teaching material to be used by the two regional training institutions EPA and CHDA. In the course of the programme, the material should be adapted for use at training institutions in other WHEAP regions. In the course of two workshops held in Benin in May 2010 and Kenya in November 2011, two international experts produced, in cooperation with the two training institutions, a tool comprising several teaching modules, structured around five main themes:

1. Sensitization and valorisation about the significance of earthen architecture heritage as a contributor to sustainable development, for housing needs and to promote a sense of identity
2. Capacity for conservation and management of earthen architecture heritage
3. Conservation of earthen architecture in the territorial and urban context
4. Improvement techniques and practices for new construction
5. Implementation of the World Heritage Convention

It is foreseen that these packaged materials will be further adapted for capacity building activities in the other regions where WHEAP will be implemented.

2.1.6 Work at Dossémé, Royal Palaces of Abomey, Bénin

The aim of this project was to undertake simultaneously restoration and revitalisation works in order to reach better living conditions for the Dadassi, the women who represent the kings during festivals and ensure the vitality and good conservation of the property.

This work has been initiated by the Directorate for Cultural Heritage of Benin, and more specifically by the team in charge of managing the Royal Palaces. It was accomplished by July 2011 in the framework of the bi-lateral agreement between Abomey and the World Heritage City of Albi in France with methodological and technical assistance from CRAterre-ENSAG.

The project allowed increasing the number of women living in Dossémé from 4 to 18 giving priority to security matters including the reconstruction of the fence and restoration of gates. It also focused on the study of the role of the Dadassi and on finding ways of improving their daily life. This has led to the definition of a new programme planned for 2012, which will include renewal of the electricity and water networks, several roof restorations. The programme will provide assistance to develop revenue-generating activities for the Dadassi and also foresees the publication of a book on Dossémé and the role of the Dadassi.
2.1.7 Nomination of Agadez on the World Heritage List


Several stakeholders meetings were held and a draft management plan was elaborated in part thanks to the financial support of UNESCO.

CRAterre-ENSAG assisted the Ministry of Culture in the elaboration of an implementation strategy taking into consideration current conservation issues and conditions.

The State Party intends to submit the nomination dossier by February 1, 2012 for consideration to World Heritage Committee at its 37th session in 2013.
2.1.8 Upcoming activities 2012

Study on the economic potential of the Old Towns of Djenné

On the basis of the discussions and results of the workshops for site managers and tourist guides, a study on an improved economic benefit of the site’s tourism and cultural resources for the local (and regional) community will be conducted by CEVI (Centro di Volontariato Internazionale per la Cooperazione allo Sviluppo). The study should provide guidance for a better use of the cultural resources, in order to enhance the economic role of the World Heritage property and augment the benefits for the local community.

Steering Committee

A Steering Committee meeting is planned in 2012 to assess the project achievements and discuss strategic directions for the implementation of the programme.

International colloquium on earthen architecture and Hassan Fathy

An International conference on earthen architecture and Hassan Fathy’s work is planned in the framework of the Conservation project for Africa and in consideration of the occasion of the 40th anniversary of the World Heritage Convention. It will be held at UNESCO Headquarters in December 2012, with the generous support of the Italian Funds-in-Trust.

2.2 Arab States

2.2.1 Consultation meeting on the implementation of the WHEAP in the Arab States at the World Heritage Centre

A one-day consultation meeting on the implementation of the World Heritage Earthen Architecture Programme (WHEAP) in the Arab States was held on 11 January 2010 at UNESCO Headquarters, Paris. About 25 experts gathered to exchange on the challenges and opportunities for World Heritage earthen architecture conservation in the region and to develop an appropriate strategy, including a road map with priority actions and concerns and recommendations for fundraising action. The meeting was made possible thanks to the financial support of the private joint initiative SECCR/ARCAPITA Bank in favour of World Heritage.
2.2.2 New Gourna Village, Egypt

Project for the Safeguarding of New Gourna Village, Egypt

UNESCO together with national and local partners has launched in 2009 a two-year project for the safeguarding of New Gourna village. This village, which is a testimony heritage of Hassan Fathy’s pioneering ideas on sustainable architecture, has undergone major degradations since its construction between 1946 and 1952 and was in desperate need of urgent restoration measures. The UNESCO initiative aimed mainly at assisting the Government of Egypt in its efforts to preserve this precious outstanding heritage of Hassan Fathy. The main goal of the initiative is to rehabilitate this important architectural heritage, as well as to valorise Fathy's ground-breaking ideas and revive their relevance for contemporary sustainable architecture. New Gourna was included in the 2010 World Monument Watch List and the World Monuments Fund expressed its interest in participating in the development of the project. In the first phase, the World Monuments Fund supported the socio-economic survey. To date, the following activities have been implemented:

- Organization of the first Scientific Committee meeting on the safeguarding project of New Gourna Village in Luxor, Egypt. This scientific committee meeting was organised in cooperation with the Egyptian Ministry of Culture and the Governorate of Luxor. The Scientific Committee was composed of 14 renowned international experts of Hassan Fathy’s work and philosophy.
- Physical Survey, 2011
- Socio-Economic Survey supported by the World Monuments Fund
- Launch of emergency stabilization works for the most damaged buildings
- Finalization of the master plan
- Identification of the short term actions
The project has been temporarily suspended owing to political changes in the country. An international conference on Hassan Fathy’s work and on earthen architecture is planned in December 2012 at the World Heritage Centre.

### 2.3 Other related Activities

#### 2.3.1 Inventory of earthen properties inscribed on the WHList

The inventory was launched in 2010 with financial support from the France UNESCO Cooperation Agreement. It aims to set up a data base and identify key issues and needs to be considered by the WHEAP steering committee as to refine the action plan initially proposed as well as the contents of the activities.

Thus far the inventory counts 135 World Heritage properties fully or partially built with earth, representing 19% of the overall number of sites (both natural and cultural).

A questionnaire was sent to the managers of all these sites with a return rate of 50% the collected data already convey a rough idea of the situation.
The number of the earthen properties inscribed in the Tentative List is estimated to be 173. This estimation would need complementary information and the assessment of an additional 450 properties to be confirmed. The study is compiled in a document that comprises data analysis, for each region and identifies key issues. These lead to the following recommendations:

1. Publish and disseminate this study in order to make the results available to professionals and sensitize decision makers.
2. Complete the study with a more systematic coverage of all 135 properties, if possible.
3. Update regularly and have results ready for presentation at Terra 2012.
4. Update with more information of properties inscribed on the Tentative Lists.
5. Undertake additional analysis by typology.

2.3.2 Mediterra 2009: 1st Mediterranean Conference on Earth Architecture

The 1st Mediterranean Conference on Earth Architecture, Mediterra 2009, organized by University of Cagliari, Escola Superior Gallacaecia, CRAterre and the Regione Autonoma della Sardegna under the aegis of UNESCO World Heritage Centre, ICCROM, ICOMOS-ISCEAH International Scientific Committee on Earthen Architectural Heritage and the Getty Conservation Institute, was held on 13 to 16 March 2009 in Cagliari, Italy. The conference gathered specialists from throughout the Mediterranean region. It also had a transdisciplinary contribution that bridged natural sciences, social sciences, and professional practices.

2.3.3 Terra 2012: 11th International Conference on the Study and Conservation of Earthen Architecture Heritage

The 11th International Conference on the Study and Conservation of Earthen Architecture Heritage, Terra 2012 will be held in Lima, Peru, from 22 to 27 April 2012 on the occasion of the 40th anniversary of the UNESCO Convention. Terra 2012 will focus on conservation of earthen architectural heritage against natural disasters and climate change. More than 500 specialists in the fields of earthen architecture are expected to attend. The conference is organized by the International Scientific Committee on Earthen Architectural Heritage (ISCEAH) and the Pontifical Catholic University of Peru (PUCP) with the support of UNESCO - World Heritage Centre, CRAterre-ENSAG, ICCROM, ICOMOS, Proterra, the Getty Conservation Institute and the Ministry of Culture of Peru. Papers related to the WHEAP programme have been accepted for presentation and it is expected that the Conference will serve as an important opportunity to continue exploring potential partnerships for implementation of specific components of the overall programme.
2.3.4 Workshop on Earthen Artisans in Tlaxcala, Mexico

The Workshop on Earthen Artisans in Latin America and the Caribbean in Tlaxcala, Mexico was held in Tlaxcala, Mexico in September 2009 and gathered 35 participants including artisans, earthen architecture specialists and representatives of Cultural Institutions. The result of the workshop, supported by the Spanish Funds-in-Trust, on techniques, oral traditions and forms of passing on the craft was compiled in a document published by the UNESCO Office in Mexico.

2.3.5 Bam, Iran

Major restoration project following the destructive earthquake in Bam and its Cultural Landscape

Following the earthquake that hit Bam (Iran) in December 2003, a UNESCO/Italian Funds-in-Trust project for the rehabilitation of the cultural heritage of Bam and its Cultural Landscape was initiated in 2004. The rehabilitation and restoration of selected buildings in adobe architecture was one of the main objectives of the project which included major capacity building and training activities. This component was successfully implemented and the project was terminated in 2010, although the restoration project at this site continued on a bilateral basis between Italy and Iran.
2.3.6 Promotional leaflets on the WHEAP for 2010 and 2011

A promotional leaflet on the WHEAP in English was produced in 2010. This leaflet was updated and translated into French in 2011 to reach an even wider public. Short texts and illustrative images outline the programme’s objectives and achievements to a wider public and aim to arouse the interest especially of potential donors for further fund-raising.

Copies have been distributed to different partners at the 34th and the 35th session of the World Heritage Committee in Brasilia, 2010 and Paris, 2011, and at many other adequate occasions (meetings, workshops...).
3. Summary of Activities and Achievements under Phase 2

The table below summarizes the contributions of each implemented achievement to the expected results:

<table>
<thead>
<tr>
<th>Expected results under Objective 1</th>
<th>Planned Activities under Phase 2</th>
<th>Achievements</th>
</tr>
</thead>
</table>
| 1.1 Identification and understanding of problems earthen architecture heritage is exposed to in the larger context of sustainable development. | Activity 2.1.1 Studies conducted at 4 sites | • LALIBELA (ETHOPIA) Mission report Earthen Architecture on the Lalibela World Heritage Site, Lalibela (Ethiopia), 4 to 11 July 2010
• TIMBUKTU (MALI) Elaboration of a conservation manual for Timbuktu (Mali)
• NEW GOURNA VILLAGE (EGYPT) Physical Survey of New Gourna Village (Egypt) 2010
• NEW GOURNA VILLAGE (EGYPT) Socio-Economic Survey of New Gourna Village (Egypt) 2011 |
| 1.2 Appropriate methods and techniques of interventions concerning earthen architecture. | Activity 2.1.2 In-depth evaluation of past interventions undertaken at 2 sites Activity 2.1.3 Pilot projects at 4 sites | • YOUTH HOUSE DJENNE (MALI) Pilot rehabilitation project of the Youth House -Mission report Study on the rehabilitation of the Youth House in Djenné (Mali), July 2010
• NEW GOURNA VILLAGE (EGYPT) Project for the Safeguarding of New Gourna Village (Egypt) 2011 Identification of short-term actions and emergency stabilization |
| 1.3 Technical specifications for the restoration of historic towns as well as for the inclusion of modern infrastructures. | Activity 2.1.4 Technical specifications for the conservation of 2 historic towns Activity 2.1.5 Technical specifications for the inclusion of modern infrastructures for 2 sites | • Publication on technical guidelines for a wide dissemination of best practices on the Study on the rehabilitation of the Youth House in Djenné (Mali)
• Research programme Study on the economic potential by CEVI - Djenné (Mali) (to be conducted) |
### 1.4 Efficient protection and enhancement of at least 12 earthen architecture sites protected under the World Heritage Convention.

- **Pilot Projects**
  - **NEW GOURNA VILLAGE (EGYPT)**
    - Project for the Safeguarding of New Gourna Village (Egypt) 2011
  - **YOUTH HOUSE DJENNÉ (MALI)**
    - Mission report *Study on the rehabilitation of the Youth House in Djenné (Mali)*, July 2010
  - **DOSSEMÉ ROYAL PALACES OF ABOMEY**, restoration and revitalisation project of the Dadassi women’s traditional dwelling (BENIN) 2011

### 1.5 Elaboration of management and conservation plans for at least 12 earthen architecture sites (World Heritage or on Tentative lists).

- **Activity 2.1.6 Management plans produced for 4 sites**
  - **LALIBELA (ETHIOPIA)**
    - Mission report *Earthen Architecture on the Lalibela World Heritage Site*, with Draft Action Plan, Lalibela (Ethiopia), 4 to 11 July 2010 sent to the State Party and to the donor
  - **NEW GOURNA VILLAGE (EGYPT)**
    - Master Plan *Project for the Safeguarding of New Gourna Village (Egypt)* 2011
  - **YOUTH HOUSE DJENNÉ (MALI)**
    - Management Plan 2010
  - **TIMBUKTU (MALI)**
    - Management Plan 2006-2010
  - **AGADEZ (MALI)**
    - Urban regulation in view of the nomination of the city in World Heritage list.
<table>
<thead>
<tr>
<th>Expected results under Objective 2</th>
<th>Planned Activities under Phase 2</th>
<th>Achievements</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1 Dissemination of a wide range of publications</td>
<td>• Activity 2.2.1 Publication of the Study of the World Earthen Architectural Heritage</td>
<td>• Elaboration of a “World Heritage Inventory and condition of properties built with earth”</td>
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<td></td>
<td>• Activity 2.2.2 Preparation of awareness and promotional material</td>
<td>• Two promotional leaflets on the WHEAP for 2010 and 2011 have been produced and disseminated. The leaflet in 2011 was translated in English and French.</td>
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<tr>
<td></td>
<td>• Activity 2.2.3 International Conference on earthen architecture conservation</td>
<td>• International Conference on Earthen Architecture will take place in conjunction with an exhibition dedicated to Hassan Fathy</td>
</tr>
</tbody>
</table>
| 2.2 Production of guidelines and adoption of policies for conservation, revitalization and valorization of earthen architecture heritage | • Activity 2.2.5 Research programmes | • YOUTH HOUSE DJENNE (MALI) Building regulations established for Djenné (Mali), September 2010  
• TIMBUKTU (MALI) A draft version of the building regulations of Timbuktu (Mali) has been elaborated |
| 2.3 Organization of capacity building activities in earthen architecture conservation and management by regional training institutions | • Activity 2.2.6 Training courses | • World Heritage Earthen Architecture Programme, Capacity building and training, Mission report to Benin, July 2010  
• Report on the regional site managers workshop, 8 & 9 December 2010 held in Djenné (Mali);  
• Report on the tourist guides meeting, 7 December 2010, involving 12 people in Djenné (Mali);  
• Youth House Djenné (Mali)-capacity building of local artisans  
• Teaching material on Earthen Architecture for the development of didactic programme for the regional training institutions CHDA and EPA |
2.4 Involvement of trained national professionals in the conservation and management of earthen architecture

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<tr>
<th>Activity 2.2.4 Technical/thematic seminar</th>
<th>• Report on the regional site managers workshop, 8 &amp; 9 December 2010 held in Djenné (Mali);</th>
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<tr>
<td>• Setting-up of an active global network for exchange of information</td>
<td><strong>•</strong> Exchanges between professionals through communication tools</td>
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<td>• <strong>•</strong> Exchange between two professionals from Djenné and Italian experts from the University of Udine (Italy)</td>
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<td></td>
<td>• Study for a sustainable tourism development at World Heritage Site of the Old Towns of Djenné</td>
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<td></td>
<td>• Steering Committee CERKAS Morocco 2012 (in preparation)</td>
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</table>
4. Lessons learned / Recommendations

A major achievement of the first phase of the WHEAP with a strong long term effect is the enhancement of the visibility of the programme which was accomplished through coherent activities in Africa, the Arab States and Latin America.

Thanks to the inventory project on earthen architecture sites, a precise idea on specificity, quantity, and conservation needs of earthen architecture sites and what they represent has been acquired. This inventory will be concluded and further developed and the updated version should be presented at Terra2012 in Peru in April 2012.

The implementation of conservation Pilot Projects in Djenné (Mali) and Abomey (Benin), and the preparation work for the nomination file of Agadez (Niger) allowed to better understanding of the issues related to sustainability, conservation and management of earthen architectural heritage in a living city. The various activities in this Pilot Project have enabled the application of all levels of intervention pertaining to earthen architecture conservation ranging from policy making to actual rehabilitation works. This concentration of financial and technical resources for the development of appropriate methods and techniques was significant to improve conservation strategies of important earthen architectural heritage sites in Africa. This methodological approach can be transposed to other sites.

Through capacity building and training workshops and meetings in Djenné, regional site managers and experts gathered and exchanged expertise to develop recommendations valid for both local and regional levels.

The development of didactic materials, along with a comprehensive capacity building strategy for the African regional training institutions, is also crucial for the dissemination of earthen architecture know-how, valorisation, conservation and management. The lessons learned through the development process will be important for the implementation of the capacity building component of WHEAP in other regions of the world.

However, the WHEAP programme has not been able to mobilize the planned financial resources in order to fully implement the action plan as had been foreseen for the first phase. Given the financial circumstances, it will be necessary to re-evaluate the scope of the programme in order to concentrate on the most pertinent activities for the future regional phase while in parallel giving more time for fundraising activities. All these points should be further discussed during the Steering Committee meeting in Morocco 2012 CERKAS.
Annexes

Reports and documents on above mentioned activities can be found on the UNESCO World Heritage Website under


• 01 - WHEAP Project document
• 02 - WHEAP Document de projet
• 03 - DRAFT WHEAP inventory June 2011
• 04 - WHEAP Leaflet Earthen Architecture Programme
• 05 - WHEAP Dépliant programme sur l'architecture de terre
• 06 - WHEAP info 2011 English
• 07 - WHEAP info 2011 Français
• 08 - WHEAP info 2010
• 09 - Réhabilitation et revitalisation de la Maison des jeunes de Djenné : rapport intermédiaire 2°, mars 2011
• 10 - Réhabilitation et revitalisation de la Maison des jeunes de Djenné : LIVRET de détail, février 2011
• 11 - Réhabilitation et revitalisation de la Maison des jeunes de Djenné : LIVRET des plans, janvier 2011
• 12 - Réhabilitation et revitalisation de la Maison des jeunes de Djenné : rapport de la mission de démarrage, juillet 2010
• 13 - Teaching material, phase I, mission report to Benin, August 2010
• 14 - Earthen Architecture on the Lalibela World Heritage Site, July 2010
• 15 - Rapport de mission pour l'élaboration d'un projet de règlement d'urbanisme pour Djenné, juin 2010
• 16 - Meeting Report on WHEAP for Arab States, 11 January 2010