

# The Timbuktu Manuscripts Project

pr.

January 1, 2003

## Project Description

[www.sum.uio.no/timbuktu](http://www.sum.uio.no/timbuktu)

This project is funded by the  
Norwegian Agency for Development Cooperation (NORAD)  
and executed by the Centre for Development and the Environment,  
University of Oslo  
in cooperation with  
Ahmed Baba Institute, Timbuktu  
National Center for Scientific and Technological Research (CNRST)  
UNESCO (through funding from the Government of Luxembourg)  
The Institute for the Study of Islamic Thought in Africa (ISITA)

©2000/2001/2002/2003 Compiled by Alida Jay BOYE with contributions from Abdelaziz ABID, Stephanie DIAKITE, Mohamed Gallah DICKO, John O. HUNWICK, Mamadou Diallo IAM, Rex Seán O'FAHEY, & Knut S. VIKØR, Sidi Mohamed Ould YOUNBA



# Timbuktu Libraries Project

<b><u>ACRONYMS</u></b> .....	<b>IV</b>
<b><u>I. BACKGROUND</u></b> .....	<b>4</b>
<u>1. TIMBUKTUS LITERARY &amp; CULTURAL HERITAGE</u> .....	4
<u>2. THE NATIONAL AHMED BABA CENTER FOR DOCUMENTATION AND RESEARCH IN TIMBUKTU</u> .....	5
<u>3. PRIVATE COLLECTIONS OF TIMBUKTU AND NORTHERN MALI</u> .....	6
<u>4. THE HISTORIC TIMBUKTU MANUSCRIPTS: AN ENDANGERED TREASURE</u> .....	7
<b><u>II. RESEARCH &amp; HIGHER EDUCATION</u></b> .....	<b>9</b>
<u>1. BACKGROUND</u> .....	9
<u>2. OBJECTIVE</u> .....	9
<u>3. PROJECT ACTIVITIES FOR RESEARCH</u> .....	10
<u>3.1 Training</u> .....	10
<u>3.2 Research and Publication</u> .....	10
<u>a) Descriptive Cataloging</u> .....	11
<u>e) Other dissemination activities</u> .....	12
<u>4. RESOURCES</u> .....	12
<u>5. RISKS</u> .....	13
<b><u>III. PHYSICAL CONSERVATION OF MANUSCRIPTS</u></b> .....	<b>14</b>
<u>1. BACKGROUND</u> .....	14
<u>2. OBJECTIVES</u> .....	14
<u>3. PROJECT ACTIVITIES</u> .....	15
<u>4. RESOURCES</u> .....	18
<u>5. RISKS &amp; PROBLEM AREAS</u> .....	18
<b><u>IV. ELECTRONIC DOCUMENT MANAGEMENT (EDM)</u></b> .....	<b>19</b>
<u>1. BACKGROUND</u> .....	19
<u>2. OBJECTIVES</u> .....	19
<u>3. PROJECT ACTIVITIES</u> .....	20
<u>3.1 Development of Data bases</u> .....	20
<u>3.2 Image Capture</u> .....	21
<u>3.3 Storage &amp; Back-up</u> .....	22
<u>3.4. Image Retrieval and Consultation Facilities</u> .....	22
<u>5. RESOURCES</u> .....	23
<u>6. RISKS &amp; PROBLEM AREAS</u> .....	23
<u>6.1 Technical obsolescence</u> .....	23
<u>6.2 Consultation of Manuscripts</u> .....	24
<b><u>V. TOURISM</u></b> .....	<b>25</b>
<u>1. BACKGROUND</u> .....	25
<u>2. OBJECTIVE</u> .....	25

## ACRONYMS

<b>CEDRAB</b>	The Ahmed Baba Centre for Documentation & Research, Timbuktu ( <i>Centre de Documentation et de la Recherche Ahmed Baba</i> ) (converted to IHERI-AB)
<b>CNRST</b>	National Centre for Scientific and Technological Research, Bamako ( <i>Centre National de la Recherche Scientifique et Technologique</i> )
<b>IHERIAB</b>	National Institute of Islamic Studies and Higher Education Ahmed Baba, Timbuktu ( <i>Institut des Hautes Etudes et de Recherche Islamique</i> ) (formerly CEDRAB)
<b>ISITA</b>	Institute for the Study of Islamic Thought in Africa, Northwestern University, USA & University of Bergen, Norway
<b>NORAD</b>	Norwegian Agency for Development Cooperation, Oslo
<b>NUFU</b>	Norwegian Council of Universities' Committee for Development Research and Education
<b>NWU</b>	Northwestern University, Evanston, Illinois, USA
<b>UNESCO</b>	United Nations Educational, Scientific, and Cultural Organisation
<b>UoB</b>	University of Bergen, Norway ( <i>Universitetet i Bergen</i> )
<b>UoM</b>	University of Mali, Mali ( <i>Université du Mali</i> )
<b>UoO</b>	University of Oslo, Norway ( <i>Universitetet i Oslo</i> )

## INTRODUCTION

**The ultimate goal of the Timbuktu Libraries Project is to preserve and promote wide access to the invaluable cultural and literary heritage held in both public and private collections of manuscripts in the Timbuktu area. Through training and upgrading facilities, the project will increase the capacity of the national Ahmed Baba Institute (IHERI-AB), to perform its essential missions of restoration and conservation, and scientific exploitation and dissemination of the content of the manuscripts currently in its possession. Finally, IHERI-AB will have the capacity to provide services to private collectors and owners. Infrastructure and research collaboration established through the project will be made available to private collectors under service agreements. In the long run, this capacity will be extendable to regional, national, and international collections of literary heritage including archive centers of all kinds. The project is comprised of four highly integrated components :**

- A. Research & Higher Education,**
- B. Physical Conservation,**
- C. Electronic Document Management,**
- D. Tourism & Dissemination.**

Recognizing the need for a regional center to promote the exploitation of written sources from African history, the Centre de Documentation et de la Recherche Ahmed Baba (CEDRAB) in Timbuktu was created in 1970 through a UNESCO initiative. New legislation has recently been passed in Mali to transform IHERI-AB into an institute of higher learning (Institut des Hautes Etudes et de Recherche Islamique Ahmed Baba – IHERI-AB). There is a pressing need to train both existing and prospective research staff to undertake high-level research and training activities at the newly established institute.

Through training and the upgrading of facilities, the project will increase IHERI-AB's capacity to perform its essential missions of restoration and conservation, and scientific exploitation and dissemination of the content of the manuscripts currently in its possession. Ultimately, IHERI-AB will have the capacity to provide services to private collectors and owners and infrastructure and outreach programs established through this project will be made available to private collectors under service agreements.

A project team was established through several planning meetings which took place in 1999 and 2000 at Northwestern University, Evanston, Illinois; Timbuktu, Mali; and Universities of Bergen and Oslo, Norway establishing the Timbuktu Libraries Project. During the planning phase funded by NUFU in 1999, overall objectives, international project teams and timetables were established for each of the four project components.

The overall objective of the **Research & Higher Education Component** is to support the exploitation and dissemination of the content of the manuscripts specifically through the revitalization of the research unit at IHERI-AB, network activities and formal masters and doctoral level training.

The ultimate goal of the **Physical Conservation Component** is to increase the capacity for physically conserving and managing historical documents in West Africa in general and specifically in the Timbuktu area through the establishment and operation of a University of Mali accredited and affiliated Conservatory of Literary Arts to be housed at IHERI-AB.

The overall objective of the **Electronic Management Component** is to provide wide access to the content of the manuscripts through the development a comprehensive electronic document management system for the IHERI-AB collection of Arabic manuscripts qualifying IHERI-AB as a

service provider for private collectors.

The overall objective of the **Tourism & Dissemination Component** is to promote the Timbuktu Libraries locally, nationally and internationally and stimulate sustainable income-generation activities.

The project will be implemented in three phases over a 10-year period :

1999 – 2002    Planning and Pilot Phase

2003 – 2007    Development Phase

2008 – 2010    Capacity Embedding

During the planning and pilot phase, the research team was headed by:

- John O. Hunwick, Professor of African History and Religion (Islam) at Northwestern University, USA
- Mahmoud A. Zouber, Former Director of IHERI-AB, Presently special advisor to Mali's President
- Rex Seán O'Fahey, Professor of History, University of Bergen, Norway

the conservation team was headed by :

- Stephanie Diakit , Agence Mali Management (AMM), Conservation Specialist
- Mohamed Gallah Dicko, Director of the Institute Ahmed Baba (IHERI-AB), Timbuktu, Mali

the electronic management team (EDM, or ARELMAT in French) was headed by:

- Mamadou Diallo Iam & Modibo Haïdara, Director(s) of CNRST
- Abdelaziz Abid, UNESCO
- Knut Vik r, Centre for Middle Eastern and Islamic Studies, University of Bergen, Norway

Administrative coordination was headed by:

- Mamadou Diallo Iam & Modibo Haïdara, Director(s) of the National Centre for Technological and Scientific Research (CNRST), Bamako, Mali
- Alida Jay Boye, University of Oslo, Norway

In addition to these team members, the project is identifying experts in the various fields to serve as special advisors to the various project components.

Both physical conservation and electronic access are prerequisites for facilitating the exploitation of the manuscripts for research purposes. Specific project objectives particularly for these two components were tested out in the field through a pilot project funded by NORAD and the Ford Foundation for the period 2000-2002. The project was presented to a wide variety of actors in the Timbuktu arena including researchers, private collectors, religious leaders, the press and representatives of the Malian Government during the launching of the pilot project in October 2000.

A separate proposal is in the making for renovating the existing physical structures at IHERI-AB to house a digitisation lab and digital consultation facilities, upgrade the manuscript restoration laboratory, and increase the capacity of the manuscript room.

The project is well-suited to replication in other centers in Western, Central and Eastern Africa. Cooperation and outreach services can eventually be extended to other regions in Mali and West Africa. In addition, south-south collaboration has been established particularly with Morocco and South Africa. Collaboration with East Africa, Zanzibar in particular, in connection with the work carried out by the University of Bergen in this region is envisaged. The Institute for Islamic Thought in Africa (ISITA) based at Northwestern University and newly established by Professors Hunwick and O'Fahey will provide a framework through which new projects can be initiated.

This document is a comprehensive proposal representing the efforts of project participants to coordinate activities related to the overall objective. The document has been developed during the planning and pilot phase and will evolve as the project progresses. The present proposal was discussed in detail during various planning meetings in Bergen and Timbuktu financed through planning funds from NUFU and workshops held in Timbuktu with IHERI-AB staff, representatives from the CNRST and the Ministry of Education and resource persons from the region during the pilot project financed by NORAD and the Ford Foundation. Updated versions of the proposal will be posted in French and English on the project website: <http://www.sum.uio.no/timbuktu/>.

## **I. BACKGROUND**

### **1. Literary & cultural heritage of Timbuktu**

The Niger Bend is to West Africa what the Nile Valley is to Egypt: an ecological life source and a civilizational magnet. The great northward curve of the river Niger has allowed for the settlement of populations along a vast stretch of well-watered land. Historically, the Niger also provided a great highway of communication across the region and provided a link between the lands of the desert and North Africa and the lands of the savannahs and forests in the South. The intensive and extensive human activity that has taken place in this region for thousands of years has left behind its traces in a large number of archaeological sites. Only a few of these have been scientifically explored, while many have been brutally exploited by local treasure hunters.

Over the past 600-700 years another legacy has developed: that of the literate culture of Islam symbolized by the extraordinary richness of private collections of Arabic manuscripts that still survive, often precariously, in the Niger valley and its desert hinterland. Timbuktu, located on the northern most bend of the River Niger in Mali, was a celebrated centre of Islamic learning from the fourteenth century onwards. Not only were books brought into the city, but local scholars wrote their own works and there is also evidence of a sophisticated local book copying industry in Timbuktu.

The historic city of Timbuktu, now the administrative centre of Mali's Sixth Region, lies at a crucial point where the Sahara desert meets the river Niger. Its geographical setting made it a natural meeting point for settled African populations and nomadic Berber and Arab peoples. Founded around the year 1100 CE, it rapidly became a focal point for caravan commerce originating in North Africa or the Saharan oases. The city's rapidly growing prosperity, soon attracted scholars to it from many quarters—from Mediterranean Africa, from the Saharan oases and from West African towns such as Jenne and Walata.

By the mid-fifteenth century Timbuktu was as much a city of learning as it was a city of commerce. The scholars who settled there brought their libraries with them, and avidly purchased manuscript books imported from North Africa and Egypt. Leo Africanus remarked on the "numerous judges, scholars and priests [i.e. imams], all well paid by the king, who shows great respect to men of learning", and added "Many manuscript books coming from Barbary are sold. Such sales are more profitable than any other goods." Books were not only imported to Timbuktu, they were also copied there, and it was the local copying tradition that enabled Timbuktu scholars to build up their own libraries.

By the fifteenth century, the city's scholars were writing their own books for teaching purposes and to satisfy a demand for scholarly works in law, Qur'anic study, traditions of the Prophet Muhammad, theology, and Arabic language, and a more popular demand for pietistic literature and poetry in praise of the Prophet.

In the sixteenth century we see the emergence of local chronicles and biographical dictionaries. During the period of the Askias (or rulers) of the Songhay empire (1493-1591), there was considerable support for the Muslim scholars of the city, many of whom lived in the northern quarter around the celebrated Sankoré Mosque. Some received gifts from the rulers in cash and kind, and the renovation of the city's mosques was underwritten by the state. One of the rulers, Askiya Dawud (who reigned 1549-83) is said to have established public libraries in his kingdom.

But the principal resource of Timbuktu scholarship lay in the private libraries of individual scholars and some of these libraries were evidently quite large. The celebrated scholar Ahmad Baba (d. 1627), who was among those deported to Morocco in 1593 following the Moroccan conquest of Timbuktu and the Songhay empire, complained to the sultan of Morocco that his library of 1,600 books had been plundered, and his library, so he said, was one of the smaller in the city.

To this day the city still boasts some 60-80 private collections, the largest of which, the Mamma Haidara Memorial Library, has been rehabilitated through a grant from the Mellon Foundation, while a catalogue of its contents is being published by the Al-Furqan Islamic Foundation. The contents of several

other private collections were acquired by the Centre Ahmad Baba, a public institution that now contains over 18,000 manuscripts.

Efforts are now being made to preserve this literary heritage, beginning with some of the major collections of the city of Timbuktu. This is an urgent mission, since poverty is leading to the sale of some fine items, while climate and insects continue to take their toll on the fragile paper.

## **2. The National Ahmed Baba Institute in Timbuktu**

*(Institute des Hautes Etudes de la Recherche Islamique-Ahmed (IHERI-AB))*

The Centre de Documentation et de Recherches Ahmed Baba (CEDRAB) in Timbuktu was created in 1970 through a UNESCO initiative and became operative in 1977 through financial support from Kuwait. The Centre was recently converted to an Institute of Higher Education (IHERI-AB).

The role of the Center is to:

- (1) organize prospecting and collection in the field of historical documents in Arabic and African languages;
- (2) establish archives and catalogues of the collected documents;
- (3) assure the conservation of the manuscripts according to modern scientific norms;
- (4) disseminate through authentic documentation, African literature in Arabic;
- (5) to develop an Arabo-Islamic culture in Timbuktu, being one of the great centers;
- (6) to be an institute charged with the exchange of information, research, and a node for cultural relations between Mali and the Arab world and all other countries interested in African civilizations and cultures.

IHERI-AB's active phase of acquisition began after 1977 under the directorship of Dr Mahmoud Zouber, a Malian scholar trained in Cairo and Paris. At the present time, under the directorship of Mohamed Gallah Dicko, the IHERI-AB collection contains some 18,000 items, ranging from single folio trade documents and poems to 500 folio volumes on Islamic law. In between come manuscripts of varying sizes dealing with Koranic exegesis, theology, Sufism (Islamic mysticism), Prophetic traditions, local histories, social and political issues, and a great deal of satirical and praise poetry, correspondence between regional political and religious figures, and judicial documents etc. The World Survey of Islamic Manuscripts published by the Al-Furqan Islamic Heritage Foundation in England has catalogued several collections including most of the IHERI-AB collection. A handlist of the first 9,000 items has been published by the Al-Furqan. The vast majority of the items at IHERI-AB is of local authorship written in Arabic, but there are a few items in the local Songhay, Fulfulbe or Tamasheq languages. Among the rarer items is a beautiful illuminated copy of the *Shifa'* of Qadi Iyad penned in Morocco, and one volume of the *Wafayat al-A'yan* of Ibn Khallikan copied by Ahmad Baba in Marrakech in 1599. Almost all the items are in the Arabic language, though there are several poems and letters in the Songhay language-the only examples of this language written in the Arabic script so far preserved.

There are two broad categories of material:

- i) Manuscripts of a "literary" character-religious treatises, chronicles, poems, nearly all of which are by named authors. These items are books in a number of fields, mainly religious ( including much in the

field of Islamic law ), but also including works in Arabic literature and history. The authors of these works are in part local, i.e. from Timbuktu or other towns in the immediate region, and in part from other areas of West Africa. The writings of the early nineteenth century Fodiawa scholars, Uthman b. Muhammad Fodiye, his brother Abdullahi and his son Muhammad Bello of Sokoto ( Nigeria) are represented, as are other authors from the area of northern Nigeria.

From western Africa there are many books by nineteenth and early twentieth century Mauritanian writers, as well as works by the scholar and state-builder Al-hajj Umar b. Sa'id (d. 1864), and the great Tijani Sufi leader of Senegal Ibrahim Niassé (d. 1975). There are also some manuscript books from the greater Islamic world.

ii) Items of a documentary character. These include letters, commercial and legal documents. Items in this category constitute a precious source for the study of trans-Saharan trade in the nineteenth and early twentieth centuries, and of the practice of slavery in Timbuktu and its region. In addition there are documents concerning the renting of houses, inheritance schedules, land ownership documents, and sales of houses. Taken as a whole, the documentary richness of the collection provides a solid basis for researching the social and economic history of Timbuktu in the immediate pre-colonial period

The Center is currently under the auspices of the Ministry of Education and has recently been given autonomous status. IHERI-AB has two divisions, The Division of Research and Documentation and the Division of Archives and Conservation. The entire Center is in dire need of revitalization. While IHERI-AB contains a large and extremely rich collection of Arabic manuscripts, it presently functions as little more than a storehouse. Most of the elements that would permit it to function as a dynamic center of preservation and study of the manuscripts are lacking. Most of the personnel lack the necessary professional training, and there is no permanent senior researcher with a PhD in History or Islamic Studies who could direct research. New legislation was passed in Mali in 2000 to transform IHERI-AB into an institute of higher learning (Institute des Hautes Etudes et de la Recherche Islamique Ahmed Baba - IHERI). There is a pressing need to train both existing and prospective research staff to undertake high-level research and training activities at the newly established institute.

### **3. Private Collections of Timbuktu and Northern Mali**

In addition to this public collection there are an estimated 60-80 private collections in Timbuktu and may be as many as 300,000 manuscripts in the entire 6<sup>th</sup> and 7<sup>th</sup> regions of the Republic of Mali. New collections are constantly being “discovered”. Many of these private collections have been handed down through generations and manuscripts have been bought and sold perhaps as far back as the (13<sup>th</sup> Century). For the private collections, the status of their owners will often be an indication of the quality of the collection. The team has begun working with two of the major private collections which have been officially converted to libraries and need urgent attention: the Mamma Haidara Memorial Library, and the Mahmoud Kati Library.

The Mamma Haidara Memorial Library contains some 5,000 items, including many books of local authorship, and historical documents of the 18th-20th centuries. A grant from the Mellon Foundation, has allowed the curator, Abdul Kader Haidara to construct a building to house the collection, and to install such basic equipment as a telephone, computer and fax machine (see: <http://pubweb.nwu.edu/~jhunwick/haidara.html> ). However, the manuscripts themselves need conservation measures. Roughly half the collection, consisting of the authored volumes, has been catalogued, and a handlist of these will be published by the Al-Furqan Foundation, London. The archival documents and minor works, however, remain uncatalogued. None of the manuscripts has been physically conserved and most of them need repairing and restoring. In order to conserve their content for research purposes, it will be necessary to digitize at least the most important items, many thousands of images.

The Mahmoud Kati Library is an extraordinary treasure, since it once belonged to the 16th century historian of Timbuktu after whom it is named. The fact that a library from the 16th century should have survived the ups and downs of political life in the Niger valley as well as the hazards of climate over a period of five hundred years (and in some cases considerably more) is something of a miracle, and makes this library a unique treasure. It contains roughly 3,000 Arabic manuscripts some bearing copying dates from as early as the 14th and 15th centuries. Some of these contain historical notes in their margins, and the library is said to contain correspondence and other items of historical interest from the 16th and 17th centuries. A few items were examined by Professor Hunwick in August 1999.

The Kati family library has the potential for revolutionizing our understanding of the social and political history of the Timbuktu region in the 16th century. Its “discovery” is probably the most significant event in the history of recovering the intellectual legacy of precolonial Muslim Africa over the past half century. At present, however, it is simply stored in trunks in Timbuktu in the house of the Kati family representative, Ismaël Dadié Haïdara, as there is no library building to house it. There is an urgent need to obtain funding to house and preserve its volumes, and to record and analyze its contents. In the end, this library will greatly enrich our understanding of the intellectual tradition of Muslim Africa as exemplified by Timbuktu’s unique heritage, and will create a new documentary basis for the interpretation of the history of the great Songhay empire.

#### **4. The Historic Timbuktu Manuscripts: An Endangered Treasure**

The collections of both the IHERI-AB and the private family libraries of Timbuktu are in danger. Each year more documents become brittle and unreadable and the manuscripts are being handled without care. Some of the private collections are either totally unprotected or are being sold to Western tourists or prospectors from neighboring countries for the simple purpose of subsistence revenue generation. These collections are generally unknown to Africanists worldwide and have the potential to offer extensive new research to historians, theologians and literary and ethno/linguistic scholars.

This legacy – an African legacy, an Islamic legacy, and a human cultural legacy – is in danger of being lost if constructive action is not taken to preserve it. Rodents and insects (termites and book worms) can wreak havoc. Fire is another threat, and for a season of the year rain water drips through leaky roofs. Manipulation of the manuscripts is often destroying them.

In some cases settlements are being abandoned, the most notorious case being Boudjbeha, some 250 km. NE of Timbuktu. A large collection (some 600 mss) is held in the town's mosque, but now the population has dwindled to only about 100 persons, the mosque is falling in ruins and being filled with drifting sand, and the manuscripts risk being buried. A further danger is simple human ignorance. In some cases family collections are now in the hands of persons who lack the deep understanding of the Islamic sciences that their fathers and grandfathers had, and are scarcely interested in the manuscripts they have inherited. This may lead to two possible consequences: firstly, the low esteem in which the manuscripts are held leads to their receiving no special care and attention. They are simply stored away and left to rot. Secondly, if a buyer presents himself (some western tourists and buyers from the richer Arab countries sometimes make purchasing tours) the manuscripts may be sold to realize a cash value, since the owner does not place a cultural or historical value on them.

The absence of book arts artisans and qualified binders and paper conservators is explained by the gradual decrease in the industry of sacred text copying and the general decrease in academic activities in the region over the ages essentially attributable to the severity of economic conditions. The cultural and artistic memory, however, remain vibrantly alive. During the initial conservation activities of the Timbuktu Manuscripts Project local Tamashek artisans were re-trained in the binding and paper conservation activities their forefathers executed for the original scholars and collectors. Their transition back to these traditional book arts activities was accomplished with remarkable grace and dexterity –

clearly demonstrating the presence of unexploited talent banks and the opportunities for fully sustainable development of the lost art and industry of the book in the region.

Whilst we are, for the moment concentrating on the IHERI-AB collection, it should be pointed out that they represent possibly only a minor part of the total number of the historic documents one can expect to find in the city and its surrounding area. It is also therefore necessary to carry out a broader survey of manuscript collections in the region to lay the groundwork for future conservation and research activities.

## **II. RESEARCH & HIGHER EDUCATION**

### **1. Background**

CEDRAB was established in the 1970s primarily as a national organisation to collect, house and conserve the historic manuscripts of the region of Timbuktu and to initiate research activities. In 2000, the Malian Government passed a decree to convert CEDRAB to a full-fledged institute of higher learning : Institute des Hautes Etudes et de la Recherche Islamique Ahmed Baba (IHERI-AB). There is a great need to train both existing and prospective research staff to undertake high-level research and training activities at the newly established institute.

At the University of Mali there are many well-educated scholars interested in Islamic History and Culture, but none of them read or understand Arabic. There is a serious lack of bilingual and trilingual scholars to study the content of the Arabic manuscripts and make them known to the scientific community (both national and international). Malian scholars who read and understand Arabic have traditionally only been interested in the religious texts as such.

For many years professors Sean O’Fahey (University of Bergen) and John Hunwick (Northwestern University) have been working together to achieve a better understanding of African Islamic thought. They embarked ten years ago on the Arabic Literature of Africa (ALA) project, and in the mid-1990s published the first two volumes of this guide to the Islamic intellectual tradition in Africa. Encouraged by the graduate students who came to work with them, and the international network of scholars they came into contact with, they came up with the idea in the year 2000 of creating an Institute for the Study of Islamic Thought in Africa (ISITA), with the object of continuing their work and expanding the field, so that the study of this African intellectual tradition might become a regular element in African Studies, and better appreciated by the wider world of those who think or write about Africa.

The principal task of ISITA is to examine the intellectual tradition that has lain behind political movements and social movements in Muslim Africa, and the roles that faith and spirituality have played in shaping some African societies. A primary task is to explore and document the Arabic and African language writings of Africa – work on documenting just who the African Muslim writers were and how to access their writings is already underway in their Arabic Literature of Africa project.

The primary goals of ISITA, therefore, are to stimulate research into Islamic thought in Africa through conferences, workshops and publications, the exploration and conservation of African manuscript libraries in collaboration with African research institutions, and training of a new generation of both African and non-African scholars in this field. The ISITA project was launched in January 2001 with special funding from the Ford Foundation.

It is on the basis of the aspirations and goals of ISITA and the dire needs of the Malian research community that the higher education & research component has been developed and will be implemented in Mali. Although ISITA funding will not directly support the Timbuktu project, ISITA will provide a vital and much needed network for Malian scholars utilizing the Arabic manuscripts of Timbuktu to further research on African Islamic thought, Malian history and Malian cultural heritage as well as for staff development for the newly established IHERI.

### **2. Objective**

The overall objective of the Research & Higher Education Component is to provide training of current and prospective CEDRAB/IHERI staff to support the exploitation and dissemination of the content of the manuscripts specifically through the revitalization of the research unit at IHERI-AB and formal masters and doctoral level training. To obtain this objective, it will be necessary to train both Malian and

international researchers in (a) the identification, description and cataloguing of manuscripts, (b) the editing and translation of manuscripts, and (c) presentation and publication of research studies in the fields of History, Literature, Islamic Law, Sufism, etc. The aim is to draw upon existing competencies both in the North and in the South through the newly established Institute for Islamic Thought in Africa (ISITA) based at Northwestern University and its associate centre, the Centre for Middle Eastern and Islamic Studies, at the University of Bergen. Staff development and dissemination activities including both in-house, national and international publications will be the ultimate goal of this component. Several media options will be exploited for dissemination of the material in both electronic and paper format.

### **3. Project Activities for Research**

#### **3.1 Training**

Training activities will be directed both towards existing staff at IHERI-AB and at prospective staff to be recruited to develop the newly established IHERI. In-house training will be supplemented by formal training on both the Masters and the PhD level as well as participation in international conferences and short-term guest researchers. In order to reach the overall project objectives, it is necessary to train researchers in (a) the identification, description and cataloguing of manuscripts, (b) the editing and translation of manuscripts, and (c) presentation and publication of research studies in the fields of History, Literature, Islamic Law, Sufism, etc. To work in any of these fields requires advanced competence in the Arabic language and in the broad field of Islamic Studies, and acquaintance with the major tools of reference in the field. In addition to training IHERI-AB's present staff, prospective staff will be recruited from graduates of the University of Mali and other institutions of higher learning, who have a sound knowledge of Arabic and French (and preferably also English), and sent for postgraduate education in Arabic and Islamic Studies and/or History, with the aim of obtaining the M.A. (maîtrise), or in exceptional cases, the PhD. Formal training will take place using the "club sandwich model" drawing upon the expertise at the University of Bergen, Northwestern University, institutions of higher learning in Mali and institutions such as the Université Mohamed V in Rabat, the Université Cheik Anta Diop in Dakar, and the University of Beirut. Potential candidates for such postgraduate training should be selected in Year 2 of the project, so that they can return to IHERI-AB as active researchers by the beginning of Year 5.

Later, one or more suitable candidates who have obtained the M.A. may be sent for doctoral studies at the University of Bergen or Northwestern University, if they are competent in English, or to France. Persons thus trained would eventually be team leaders in research at IHERI-AB. In the mean time, existing researchers at IHERI-AB can be given in-house training in the identification and cataloging of Arabic manuscripts, and the editing of texts. Specialists, among others Rex Sean O'Fahey and Knut Vikør at Centre for Middle Eastern & Islamic Studies at the University of Bergen, John Hunwick at Northwestern University and Endre Stiansen at the Centre for Development and the Environment at the University of Oslo will be drawn upon to advise students. Researchers at IHERI-AB will also be sent on short professionalizing courses in the analysis and cataloging of Arabic manuscripts. The Al-Furqan Islamic Heritage Foundation (London) regularly puts on such courses in various locations (e.g. Cairo, London, Istanbul and Rabat).

#### **3.2 Research and Publication**

### **a) Descriptive Cataloging**

The verification of existing catalog entries, and their expansion to fill the new bi-lingual (Arabic/French) format will begin in Year I, as this operation ought to be undertaken immediately prior to conservation and digitization. The new description of a manuscript would be added to the physical folder of the newly conserved item, and incorporated into the digital folder of the manuscript. A published handlist of 9,000 manuscripts of IHERI-AB already exists. It was published by the Al-Furqan Islamic Heritage Foundation, which will be asked to provide a digital copy to serve as a basis for the new catalog. At present, there are a further 6,000 items that are cataloged only in the IHERI-AB in-house handwritten lists. Since only items selected for conservation and digitization will be verified at this time, a more systematic verification will need to take place eventually for the items not originally selected.

As noted above, the cataloging of manuscripts requires certain research competencies including fluency in Arabic and French. A knowledge of historical interpretation for compiling description is also necessary.

### **b) Editing and Translation of texts**

The re-cataloging of the manuscripts will continue through Years 1 and 2. In Year 2 work will also begin on the publication with translation of certain items in the collection. International scholars will work with Malian scholars at IHERI-AB to select some of the more fundamental works from the collection (e.g. biographical dictionaries, chronicles) for publication. Shorter items may be initially published through the journal *Sudanic Africa*, published through the Centre for Middle Eastern & Islamic Studies, University of Bergen; larger items can be published by IHERI-AB in collaboration with *Sudanic Africa*, which publishes a monograph series entitled "Texts and Sources", edited by Dr Knut Vikør. Such collaboration will provide both technical support and a locus for international distribution. Additionally, certain texts would be translated for use in the Malian school system.

Due partly to lack of bilingual competence (French/Arabic), IHERI-AB has provided very little translation of the Arabic texts.

### **c) The Journal *Sankore***

In addition to such independent items, the project aims to help revive, upgrade and internationalize IHERI-AB's journal *Sankoré*. The journal was launched in 1985, but only a few issues were produced. In order to promote the research potential of IHERI-AB, and to provide an incentive for the study of the history and literature of the Middle Niger region of Mali, *Sankore* should be revived and enhanced both physically and intellectually, so that it can attain international status as a research journal on a regular basis. Professors O'Fahey and Hunwick, and Dr Vikør are all members of the editorial board of *Sudanic Africa*, and thus have experience in the production of a research journal. Efforts will be made in Year 1 to prepare the way for such publication; the aim will be to produce the first issue of a revived *Sankore*, using desktop publishing techniques, at IHERI-AB during Year 2 of the project. Distribution of the journal *Sankore* could be provided both as hardcopy and/or net-based publishing in the long term.

### **d) Exploration of libraries of Timbuktu and region**

The fourth element of the research program will be the exploration of Arabic manuscript collections and libraries within Timbuktu city and also in other localities in the 6th and 7th regions of Mali. This will be begun in Year 4 when the cataloging and digitization of the contents of IHERI-AB is complete and

continue through Year V to provide a large database for further research. There are between 60 and 80 private collections in the city of Timbuktu, varying in size from a few dozen items to 5,000. New collections are constantly being discovered and there could be over three hundred other collections scattered throughout the 6th and 7th regions. The project would aim first to locate the collections and their owners, then to establish handlists of the contents of the more important of these collections. Finally, the aim would be to assist owners in the preservation of their manuscripts, and to digitize unique or otherwise valuable items.

#### **e) Other dissemination activities**

Other dissemination activities include:

- revival of the copying industry of Timbuktu (see section on Physical Conservation) to publish new editions of the manuscripts using “traditional” calligraphy, illumination and binding techniques;
- production of hard copies and on-line versions of the catalog(s) for the manuscripts;
- production of a bulletin on project activities, findings and outcomes from the Electronic Document Management component;
- publication of translations through international publishing houses;
- publication of articles in international journals.

## **4. Resources**

### **Human Resources**

A working group has been established to plan and execute this component, which will be responsible for Research, Publication and Training on the actual scholarly content of the manuscripts. The Research Component will be lead by Pr John Hunwick of Northwestern University, Illinois, USA who has also been associated with the University of Bergen. He is a well-known scientific scholar in Arabo Islamic Culture and has worked with the Timbuktu libraries since the establishment of IHERI-AB. Pr Rex Seán O’Fahey, from the Centre for Middle Eastern & Islamic Studies, University of Bergen, Norway, and research staff of IHERI-AB are participating members of this group. It is expected that other international scholars will later become involved in undertaking collaborative research projects with Malian scholars, based on the materials in IHERI-AB and other local libraries. The core group consists of the following members:

Pr John Hunwick	Group leader, Northwestern University
Pr Rex Seán O’Fahey,	University of Bergen, Norway;
Mahmoud A. Zouber	Presidence
Sidi Mohamed Ould Youbba,	Head of Research, IHERI-AB, Timbuktu,
Sane Chirfi Alpha	IHERI-AB
Noury Al Ansar,	IHERI-AB
Michael Carter	University of Oslo, Norway
Drissa Diakité	Dean, Faculty of Letters, University of Mali
Marc Geoffroy	Institute de Recherche et l’Histoire des Textes, CNRS

Fatima Harak	Institute of African Studies, Rabat, Morocco
Albreicht Hofheinz	University of Oslo
Mama Hasseye Tanapo	University of Mali
Adbul Kader Haidara	Prospecteur, IHERI-AB
Mohamed Maiga	IHERI-AB
Mohamed El Mansur	University Mohamed V, Rabat, Morocco
Mohamed Maghroui	University Mohamed V, Rabat, Morocco
Endre Stiansen	University of Oslo, SUM, Norway
Moussa Touré	IHERI-AB
Seydou Touré	HEGIRE
Knut Vikør	University of Bergen, Norway

The establishment of basic desktop publishing facilities will require upgrading the existing computer park with both software and hardware.

Continued exchange between researchers and experts in this field and those learning the trade is an essential ingredient to success of this project. This includes both funding for Malian researchers and technicians to participate in international conferences and workshops as well as for Norwegian researchers and students to carry out fieldwork in Timbuktu.

Since few of the essential research tools are currently to be found in the IHERI-AB library, a small budget will be necessary to purchase the required volumes. In a broader sense, the IHERI-AB library needs to be upgraded to provide researchers with the necessary resources to undertake research.

Given the lack of sufficient expertise in Mali, particular efforts will be made to seek scholarships through existing international networks, NUFU in particular, to provide academic degrees for national scholars.

## **5. Risks**

For the research & academic training component, lack of high-level expertise on the exploitation of Arabic manuscripts is a risk; as the major task of this project is precisely to upgrade this expertise the project will be dependent on drawing upon the competencies of the international research communities.

### **III. PHYSICAL CONSERVATION OF MANUSCRIPTS**

#### **1. Background**

Since its creation in the late 1970s, the IHERI-AB has collected over 18,000 Arabic manuscripts composed of a wide variety of material including original African thought transcribed into Arabic. Because of lack of resources (manpower as well as finances) IHERI-AB has done very little restoration and conservation of these manuscripts.

The IHERI-AB collection ranges from single folio documents to 500 folio volumes. The manuscripts themselves are piled one on top of another in metal or glass-fronted wooden cabinets in a single room with air-conditioning which is generally shut off. Large volumes have their own leather casings; smaller items are placed inside folders of card (not acid-free) and tied together in bundles. Such items often get damaged, and sometimes misplaced. Many of the items are in extremely fragile condition and are in urgent need of restoration and preservation so that they can be safely handled.

In addition to the IHERI-AB collection, it is estimated that there are approximately 60-80 private collections in the city of Timbuktu. Whilst some of the manuscripts are in surprisingly good condition (naturally preserved by the desert climate), others are stained, torn, chipped, or eaten away by insects. In many cases the paper is in a fragile state and leather binding covers need restoration. These documents are in danger. Having survived the ravages of fire, humidity, invasion, not to speak of dust and insects under the care of the holders, they are extremely fragile and in dire need of physical restoration and permanent conservation before they can be safely studied and/or exposed for public viewing.

During the pilot phase funded by the NORAD and the Ford Foundation, the team leader undertook a survey of the IHERI-AB collection and two private collections. With this limited funding, the team also managed to equip the bindery at IHERI-AB with supplies adequate to restore 750 single folio and 250 multi folio manuscripts and bindings; repair some of the existing binding equipment; and provide several preliminary training workshops in binding and paper restoration techniques. Everything possible was done with the means at hand to upgrade infrastructure; however, additional funding will have to be sought to undertake more substantial renovations of the restoration laboratory. Work carried out during the pilot phase provided the team with realistic ambitions for determining long-term goals for the component.

#### **2. Objectives**

The ultimate goal of this component is to increase the capacity for physically conserving and managing historical documents and in reanimating the literary and artistic activities associated with the production of literary works in West Africa in general and specifically in the Timbuktu area through the establishment and operation of a University of Mali accredited and affiliated Conservatory of Literary Arts to be housed at IHERI-AB. The project team is developing proposals to formalize an accredited conservation, calligraphy, book arts curriculum through a University of Mali. This capacity will be extendable to regional, national, and international collections of literary heritage including archive centers of all kinds.

This project component addresses the direct multi-term needs and the urgent short-term necessity to build sustainable technical and artistic capacities in the arts and sciences of the book and literary restoration and conservation identified during the pursuit of the greater effort as identified in the Timbuktu Manuscripts Project. It proposes a sequential development approach in the service of the ultimate goal of supporting efforts of both the public and private sector to maintain and further develop the valuable cultural heritage reflected in Arabic language manuscripts and ethnic language manuscripts transliterated into Arabic or other languages discovered in the Republic of Mali.

The short-term primary goal is to increase the capacity of Malian institutions and upgrade the competence of Malian technicians and artisans to preserve the literary heritage of Timbuktu. Although manuscript acquisition is an important activity of IHERI-AB, rather than assist IHERI-AB in their mission to collect manuscripts, this project will assist IHERI-AB in developing indigenous talent banks and thus,

the capacity to perform its essential missions of restoration and conservation of the manuscripts already in its possession. An extended goal will be to develop IHERI-AB's capacity as a service provider for conserving private collections.

The physical conservation component has several sequential objectives:

- 1) to establish a functional physical conservation unit at IHERI-AB;
- 2) to train local artisans who could then provide services to private collectors;
- 3) to initiate outreach projects on the local, national and regional level;
- 4) to train conservation personnel at IHERI-AB for short-term urgency;
- 5) to develop plans for the establishment of a Conservatory of Literary Arts in Mali.

### **3. Project Activities**

#### **3.1 Establishment of a functional physical conservation unit at IHERI-AB**

The basic conservation infrastructure and skills developed during the pilot phase need to be expanded and extended on a large scale if only to satisfy the urgent restoration and conservation needs of the Timbuktu region, not to speak of their extension to other valuable collections and archives already identified and equally needful in the Republic of Mali and the sub-region in general. Due to the large number of widely dispersed regional collections, developing IHERI-AB's capacity as a qualified conservation service provider has been identified as the most equitable method of ensuring that adequate attention and qualified services be provided. Equipping and training the manpower necessary to each qualified collection would be an unreasonable task. Centralizing the technical activities associated with conservation in the IHERI-AB facilities has additionally been identified as the best method to ensure that quality services are provided within the precepts and scope of recognized international literary conservation standards.

During the planning phase, a survey was carried out of the IHERI-AB collection. An assessment was made of the problems of physical conservation and an estimate of the cost of materials. The IHERI-AB currently possesses a small supply of equipment to de-acidify manuscripts, to make paper, and to photograph/-microfilm manuscripts. Due to climatic conditions in the region de-acidification is practically unnecessary, the quality of raw materials available for making paper are inappropriate to the era of the manuscripts in the collections in question.

In order to respond to the needs of the collections a working hand bindery and a paper conservation lab need to be equipped and staffed by qualified conservation personnel. A rational collection management policy needs to be established and put into practice requiring specific archival, management, and oversight training including maintenance of pre and post conservation digital archives.

A significant aim will be to train a number of local artisans to carry out conservation work, develop a conservation manual and eventually train others in the art of conservation. The first year will be devoted to skills acquisition for IHERI-AB trainees. The AMM technical assistance team will work with three IHERI-AB trainees to train them in conservation project design, management, and execution and prepare them to take on the task of providing services for physical conservation in the Timbuktu area. In cooperation with IHERI-AB staff, the team will draft technical maintenance and tools construction manuals which will be published (in French) during the second year and will support on-site presentation and extension training including a survey of private collections. Intensive evaluation and audit training for turnover of all activities to the established unit will take place during the fourth year with follow-up Year

V.

Physical restoration will be documented through pre & post digital images and each item in the collection will have a conservation history established which will be stored in a database allowing consultation in the future of restoration during this period (see Section III). Additional surveys will need to be carried out to quantify and qualify the complete body of associated work and to identify manuscripts which are of such high textual or esthetic value that they require specialized restoration and /or conservation measures.

### 3.2 Training of local artisans, sensitivity training & outreach to private collectors

During the first year, four technical forums in conservation techniques and collection management will be arranged for interested private and institutional collectors and artisans from the Timbuktu region precepts. A focal group of 20 selected artisans will then participate in specialized outreach training in Year II. The following year, a target group of 10 local artisans will enter an intensive training program in service provider project design. Finally, assistance will be provided to establish a local artisan physical conservation cooperative in Timbuktu.

Conservation surveys will be undertaken of 130 private collectors from the greater region (1/3 in the city of Timbuktu and 2/3 in the 6<sup>th</sup> and 7<sup>th</sup> regions). Ten surveys will be conducted in Year I, 20 in Year II, 50 in Year III, and 50 in Year IV. Two conservation/collection management services presentations will be made for private collectors in the region to assist them in managing their own collections. Four regional extension presentations will be made to interested parties in neighboring regions/countries. Two sensitivity presentations will be made during the 2<sup>nd</sup> and 3<sup>rd</sup> years by representatives of the IHERI-AB conservation trainee program to a national audience including the archival management services of administrative services of the Republic in conservation technique and archive/collection management.

### 3.3 Outreach projects on the local, national and regional level

Outreach projects will be initiated on the local, national and regional levels and service provider functionality tested out. Specific project targets will be selected during the 1<sup>st</sup> year designated by the research component of the project. Extracts of the collection will be published for specific educational, historical, cultural, theological, or scientific purposes or simply be generated by and for general literary public interest and for the purposes of tourism. The current IHERI-AB research services are already surveying their collections in light of requests from the Ministries of Education of the Republic for the incorporation of extracted literary works of the collections in national publishing projects for curriculum inclusion in public elementary, secondary, and medersa study programs. Activities will include five local, and three national projects in Year II; ten local, five national and two regional publishing projects in Year III with anticipated increased crossover to research services; and 20 local, five national and 7 regional publishing projects in the fourth year.

One important aspect of the conservation efforts is to establish royalty agreements for private collection patrimony management, to encourage private collectors to maintain their libraries through potential long-term maintenance revenue. The objective is to establish 20 such agreements during the 3<sup>rd</sup> year and 50 during the 4<sup>th</sup> year.

Outreach efforts will be supported by the development of a website concerning the physical conservation of historic documents. This website will eventually include research component activities (see Section IV).

### 3.4 Training of Conservation personnel for short-term urgency

A specific on-site, 36 month intensive restoration and conservation curriculum will be developed for a

core Restoration and Conservation Team resident at IHERI-AB. It is expected that at the end of year one of the program 3 staff members will be qualified in basic restoration and conservation enabling them to make available for research a large percentage of IHERI-AB's collection over the next 4 years. Over the next twenty four months up to 10 individuals would exit the intensive program and be available for such "standard" conservation activities to both public and private clients under service provider agreements with IHERI-AB.

IHERI-AB staff and associates will be provided with short-term training of 2-3 weeks a year in conservation and archiving at various international centres of expertise to be selected during the pilot project.

### 3.5 Development of a Conservatory of Literary Arts

The development and operation of an accredited Conservatory curriculum in book arts including restoration, conservation, collection management, binding, calligraphy and illumination will serve several purposes:

- engender the talent and skills banks necessary for the current and future conservation needs of the region, the nation, and eventually be extendable to an international client base;
- reanimate a formerly viable culturo-economic industry in a severely depressed region;
- widen educational opportunities in the region for all qualified Malian and/or international students of the art of the book;
- promote the artistic and technical pursuits appropriate to the cultural heritage at stake.

Lecture, lab, and administrative space for the Conservatory must be integrated into the existing IHERI-AB complex. A 48 month program issuing a Master of Art degree will be developed in the following disciplines:

- binding
- calligraphic and decorative arts
- restoration of literary or archival works
- conservation of literary or archival works
- collection management

It is estimated that the Conservatory would be able to integrate approximately 20 students per year for the first degree cycle. After which a progressive enrollment program of 25% add on per year is envisaged. Advanced studies in artistic development of Master skills are projected for year 5-7 of operation integrating no more than 5 students from each discipline for a 2 year cycle.

The Conservatory would additionally administer a wide audience outreach program including workshops, seminars and other outreach activities in literary appreciation, book arts, and archival disciplines for both public and private sector stakeholders. The Conservatory would additionally serve as a resource for the Government and private collectors alike in all aspects of collection management and preventative/permanent conservation.

It is estimated that programs such as the one developed by UNESCO for archival conservation would be integrated into the standard curriculum and available on audit or short-term basis for collection managers and/or technicians on all levels.

Teaching and training resources would need to be recruited for the first 10 year development cycle of the institution after which it is expected that post-Master emanating students will constitute a large

percentage of the teaching corps of the institute.

#### **4. Resources**

IHERI-AB will select three trainees for this component for full time skills acquisition in an on-site training program in all of the above activities during the first three years of the project. During the 3rd year, it is expected that the trainees will be active service providers for all elements of the physical conservation component and intense training and marketing in extension of the services to private and institutional collectors will become the training focus.

The working group for conservation is responsible for activities related to physical restoration and conservation of damaged manuscripts as well as training local artisans in book binding, paper conservation and restoration techniques. The group will create adequate and secure storage facilities at IHERI-AB for the physical manuscripts in IHERI-AB's possession. This group will also participate in public awareness campaigns.

The core group includes the following members:

Dr. Stéphanie Miller Diakité,  
Graham Dominy, National Archives, South Africa  
Alexio Motsi, National Archives, South Africa  
Dr. Mohamed Gallah Dicko, IHERI-AB, Timbuktu  
Mr. Abderhamane Dicko, IHERI-AB, Timbuktu

#### **5. Risks & Problem areas**

Conservation as a field presents very few “risks” for results oriented projects but rather gives very tangible benchmarking scenarios. The greatest risk is that IHERI-AB does not manage to fully play out the role of service provider and offer the services provided through the project to assist private collectors. This risk can be circumvented eventually by the education stakeholders who will hopefully, in this case still be able to technically support private collector initiatives. The development of a wide reaching conservation movement carries very little risk except that less than fully trained individuals damage a document of great value. The risk can be minimized through the follow-up by international partners established through the project’s network and again by ensuring that IHERI-AB fully plays out the service provider role and that private and public collectors feel comfortable, safe, and welcome in the technical environment we assist in creating.

## **IV. ELECTRONIC DOCUMENT MANAGEMENT (EDM)**

*(Archivage Electronique des Manuscrits de Tombouctou – ARELMAT)*

### **1. Background**

*The most promising strategy for saving the intellectual and artistic content of endangered volumes is to transform or convert it to a different medium – by copying it to film or digital electronic form.*

Joint Task Force on Text and Image, April 1992, Preserving the Illustrated Text.

Each year more documents maintained at IHERI-AB become brittle and unreadable and manuscripts are being handled without care or in the case of some private collections, sold to tourists. Through earlier projects, IHERI-AB has been furnished with some basic equipment. The photo and microfilm lab at IHERI-AB have several pieces of good quality equipment, but they are not being used, either because the technician does not know how to use them, or because they lack some spare part or supply items, or because they suffer from inappropriate technology syndrome.

The initiative for this component came from Mamadou Diallo Iam at the CNRST who was shocked at the state of affairs and proposed in 1993 to scan and/or photograph the manuscripts and develop an image database for consultation. Hard copies of the manuscripts could then be archived in a safe place.

This component will handle the data technical portion of the project (including eventual microfiche options) for developing a comprehensive electronic document management system to make the collections known and facilitate research through organized access to electronic resources. Databases for pre- and post conservation images will be developed and managed within this unit as a support to the conservation team. A modest desktop publishing unit will be established within this component as support to the Research component.

A close collaboration with UNESCO's Information & Informatics Division has been established and the work prepared for UNESCO by the National Library of Prague will be considered for the selection of standards and digitisation techniques (see [http://www.unesco.org/webworld/mdm/czech\\_digitization/index.html](http://www.unesco.org/webworld/mdm/czech_digitization/index.html)). Technical options in this relatively new field are changing too rapidly to detail in a proposal seeking long-term funding. Current options presented in a separate document entitled *Technical Requirements and Options* will lay the groundwork for future choices.

### **2. Objectives**

The overall objective of this component is to develop a comprehensive electronic document management system for the IHERI-AB collection in Timbuktu which would qualify IHERI-AB as a service provider for private collectors. Preserving images of texts which are important to scholarship through the use of electronic technology for image capture, storage, retrieval, and networked access is the primary goal of this component. In general, the aim is to create conditions whereby researchers who wish to consult these manuscripts could do so without physically handling the individual items, while at the same time the artistic quality of the calligraphy and decoration of the manuscripts could be preserved for future generations of Malians to take pride in. It is expected that the experience gained and skills developed will increase national capacity to undertake EDM in other libraries such as the national archives.

### 3. Project Activities

#### 3.1 Development of Data bases

Building upon already existing catalogues and databases, four databases will be developed and connected through a local network to facilitate future access and consultation of information on the manuscripts as well as the actual images.

- 1) Manuscript Image Data Base (*la banque de données des images des manuscrits - BDIM*)
- 2) Catalogue Data Base (*la banque de données des catalogues des manuscrits - BPCM*)
- 3) IHERI-AB Library Data Base (*la banque de données de la bibliothèque du IHERI-AB – BDBC*)
- 4) The Physical Restoration of Manuscripts Data Base (*la banque de données des restauration des manuscrits – BDRM*)

1) **The Manuscript Image Data Base** will only include the actual image of the document, (including all details such as illuminations, calligraphy, footnotes, marginal comments, etc...) and transfer them into a server devoted to the task of storage. Mirroring techniques will be used to avoid any loss of data later on. Images will be accessible from the catalogue database through a relational link. Access to the image will be non-obligatory for use of the catalogue base, given the size of the image base. The images can be stored in the proprietary database format, or in Web format (preferably jpg, or whichever format is most space efficient), depending on the database's ability of display. Selected items of this databank will be available on the internet.

2) **The Catalogue Data Base** is the overall manuscript catalogue which will include items listed in the *Format of Descriptive Catalogue Entries* developed by the research team. The documents will be catalogued in a fairly simple database application building upon and improving the already existing catalogues including as entries title, subject . Cataloguing in itself requires rigorous specialists in the field of Arabic documentation and interpretations of, for example, authorship should be carefully supervised by experienced researchers. The database application will be developed in-house on the basis of an off-the-shelf database management program which fulfills the following requirements:

- Relational, linking the four databases described above;
- Ability to properly handle Arabic script, for display, indexing etc.;
- Ability to store images or link externally to image files, locally or on external drives, discs or CD-ROMs;
- Ability to communicate with Web server software.

The assumption is that the database will run under Arabic Windows or Windows 2000 Professional, MultiLanguage Version. The catalogue database will have a mixture of Arabic and Latin text fields, so that the relevant fields can be searched in the form required. The catalogue will be based on the format developed for the provisional Furqan catalogue (see general introduction), with minor amendments as required, in particular the addition of Latin text fields. The data from that catalogue may then be typed or imported into the new catalogue.

To maintain confidentiality of some manuscripts photographed from private collections, only a selection of data contained in the BDCM will be accessible to the public on line.

3) **The IHERI-AB Library Data Base** is the general IHERI-AB's modern library catalogue which provides archival information on each book in the IHERI-AB library; information which is presently recorded manually. The BDBC will also contain bibliographical data for research and academic purposes. Data will be freely available to all, in Arabic, English and French. Comments and scientific findings on the manuscripts could also be accessed through this database. (Through previous Norwegian funding, the CNRST assisted several University libraries in Bamako to upgrade to electronic databases with a high degree of success.)

4) **The Physical Restoration of Manuscripts Data Base** is a survey of restoration processes and will document the process of restoring each document. In order to maintain the restoration history of the manuscripts, each document will be photographed first before any physical restoration of the manuscript and secondly following physical restoration. These images will be linked record to record with the catalogue and it will be possible to search individual digitally photographed pre-restoration images of the manuscripts stored in this database. The database will provide information of particular interest to the physical conservation team and other conservation specialist concerning paper & ink types, date of physical document, size, condition & restoration notes. Some of this information can be imported from the catalogue database. The BDRM will be of no interest to non-specialists, so its access will be restricted to the Conservation team dealing responsible for the physical restoration and conservation of the manuscripts. Pre and post restoration images and data will however be available on line.

### 3.2 Image Capture

The objective is to convert the manuscripts to a high quality electronic media as digital image (i.e. no text recognition). Each page from the manuscripts already collected by IHERI-AB (ca. 18,000) will be photographed before and after restoration and dynamically added to the computer-based image bases. The images from the pre-restoration stage will be stored for documentation of the conservation process. Post-restoration images will be the basis for exploitation of the documents for academic purposes.

Manuscripts will be photographed using classical silver film photo apparatus. The film will then be developed and scanned using film scanners. The precise number of pages to be photographed is not yet known (each manuscript containing between 1 and 500 pages); however, it is estimated that the entire IHERI-AB collection contains a total of about 700,000 images. Pre and post restoration images will be stored in an appropriate back-up storage systems with a total capacity of about 1000 GB. Since manuscripts differ in size, quality, age, and historical & esthetic value, the documents will be grouped according to type document.

It is estimated that the IHERI-AB collection contains less than 6% of the manuscripts from the Timbuktu region, the rest are in private hands. The digitization team will approach the private owners and request that their collection be photographed in exchange of being trained by the conservation team in conservation and restoration techniques. Ideally, all pages of all manuscripts in the entire region would be digitized. This would take a decade and would depend on the private collectors' willingness to have their collections photographed. A selection would be made during in-depth surveys to determine priorities based on the following criteria, which are again based on IHERI-AB's prospecting policy:

- local production
- high esthetic value (illuminations) including unique calligraphy

- rarity of the manuscript
- trade & legal documents
- age of the document
- pre & post images for restoration data base (determined through restoration survey)

### **3.3 Storage & Back-up**

The resulting post-restoration image files will be stored electronically and the images compressed as photographed. The size of each image file of the photographed page will vary depending on precise selection of software, image type, and resolution. The images should be readily available both for producing new copies and for access on demand potentially over the internet. Appropriate storage equipment will be selected from current market options.

Back-up duplications of the image files will be copied and stored in special fire and water resistant cabinets at IHERI-AB for use only when all else fails (eventually an extra copy at Mo & Rana in the Norwegian mountains.) In addition to securing the individual image files, the entire data base system will require a reliable back-up system in case of breakdown.

One or more sets of microfilm copies of the images will also be produced from the image files. During the registration, cataloguing and preservation process, image files and catalogues will be stored on removable drives.

### **3.4. Image Retrieval and Consultation Facilities**

From the consultation room at IHERI-AB, a client should be able to easily download an entire manuscript for reading or other forms of exploitation. The system should allow a client first to consult a single page before downloading the entire manuscript. Note that this process refers to images, not recognized text. Text recognition cannot be done electronically given the significant variation in the calligraphy of the individual authors of the manuscripts. Electronic images will in some cases be accompanied by new editions of the Arabic text, transcripts or translations in book form.

In addition to local consultation, access through internet or intranet might be established with a secure management system for maintenance and access.

For later consultation, three options should be available: permanent storage on a dedicated computer, distribution to intermittent users (sales) or data/image base distributed (cost-free) over the internet (See *Technical Requirements and Options* annexed). A website for the Timbuktu manuscripts will be developed potentially providing the following services either free of charge or at cost:

- 1) access to IHERI-AB library catalogue
- 2) access to catalog of manuscripts from the region
- 3) full-text publications of articles translations, transcriptions, and eventually the journal *Sankore* (see *Research Component* )
- 4) direct order of CDs with photographic images of manuscripts and possibly direct download upon request

### **3.5 Dissemination**

The project team will document experiences from work undertaken within this component and produce a bulletin on project activities, findings and outcomes for those interested in developing similar ventures.

## 5. Resources

### Human Resources

The core of this Working Group is presently engaged by the CNRST, which has experience in desktop publishing, databank development and digitizing. This working group will perform manuscript digitisation, transfer and storage of images, database development, implementation of a LAN and its link to Internet through a Web site, training of IHERI-AB staff in computing, desktop publishing, and database management essential to the project operations.

The core group consists of the following members:

Modibo Haïdara	Group Leader, CNRST
Abdelaziz Abid	UNESCO
Alphadoulou Abdoulaye	IHERI-AB, Timbuktu
Knut Vikør,	Univ. of Bergen, Norway
Albrecht Hofheinz	University of Oslo
Mohamed Hassoun	ENSUP, Sciences de l'Information et des Bibliothèques, Lyon
Cheickna Kondé,	Desktop Publishing and Database, CNRST
Dontigui Samaké,	Librarian, Desktop Publishing, CNRST
Boubakar M Guindo,	Database expert, CNRST
Darahamane Salaha	IHERI-AB, Timbuktu

Consultants in EDM can be very expensive and several low-cost options should be investigated. One option would be to attract a Malian EDM expert working at a university in the US to be part of the program currently installed in Mali to draw upon the expertise of expatriate Malians. Malians obtain release-time with salary from their University to give courses at the University of Mali. Expertise could be obtained through Malinet.

A data technician will provide support to researchers for lay-out and graphics presentation for submission of articles to journals (including *Sankore*). Mock-up and printing for *Sankore* and other electronically generated publications will be undertaken either at IHERI-AB, CNRST, at a local service provider or at a service provider in Bamako.

## 6. Risks & Problem areas

### 6.1 Technical obsolescence

As stated by the Task Force on Archiving of Digital Information for The Commission on Preservation and Access and The Research Libraries Group:

*Continued access indefinitely into the future of records stored in digital electronic form cannot under present circumstances be guaranteed within acceptable limits. Although loss of data associated with deterioration of storage media is an important consideration, the main issue is that software and hardware technology becomes rapidly obsolescent. Storage media become obsolete as do devices capable of reading such media; and old formats and standards give way to newer formats and standards.*

For the Electronic Document Management component, obsolescence of and damage to electronic

storage facilities in the long run is a high risk requiring migration to new systems. This would be a natural responsibility for UNESCO.

## **6.2 Consultation of Manuscripts**

During the pilot project, information was obtained on the level and reliability of interface technology available through service providers in Timbuktu. It became evident that internet facilities are too weak to encompass downloading of manuscripts through internet. In consultation with UNESCO, it was decided that the possibility of using satellite facilities to run the project website from Timbuktu should be explored. Malians will receive extensive training in website design and management.

## **V. TOURISM & DISSEMINATION**

### **1. Background**

One significant spin off which can assure project sustainability is tourism in terms of generating income locally. In close collaboration with the Ministry of Tourism and UNESCO a plan for tourist activities both in the Timbuktu region and worldwide will be developed and supplementary funding sought. Contacts have already been made with museums interested in exhibiting the manuscripts.

### **2. Objectives**

The overall objective of the Tourism & Dissemination Component is to disseminate information about the manuscripts and the importance of their preservation to a local, national and international audience and stimulate sustainable income-generation activities.

### **3. Activities**

#### **Awareness Campaigns**

Building upon the meetings, seminars and conferences executed during the Pilot Phase, awareness campaigns will continue drawing especially from local, national and international media.

#### **Translations and popularization of texts**

Fundamental works from the collections will be selected for translation and dissemination. Poetry readings were already organized very successfully during the “Journée du Livre” in Timbuktu and the “Chemin de l’Encre” in Bamako. The plan is to organize Saturday night poetry readings with translation of texts at IHERI/CEDRAB in Timbuktu during the tourist season.

#### **Revival of the calligraphic industry**

Master calligraphers from North Africa will be invited to give master classes for calligraphers in Timbuktu both for producing new hard copies of the manuscripts and for producing artistic calligraphic motives. Potential outputs will include both revival of the copying industry in Timbuktu and the design and production of post cards with calligraphic texts.

#### **Website development**

A preliminary website was launched early on in the project. In the long-term, this website will be based in Timbuktu through satellite facilities.

#### **Multi-media, Documentary Films & Videos**

Slide shows developed during the pilot phase will be professionalized. A promotional video is being produced for fundraising purposes and a professional documentary video about the manuscripts is being developed.

#### **Exhibitions**

In close collaboration with the Ministry of Tourism, the plan would be to improve the presentation of the manuscripts of Timbuktu which are housed at IHERI-AB. The project could also be extended to include exhibitions of private collections and other museum facilities presenting the manuscripts in Mali.

A long range plan is to organize a travelling exhibition of the manuscripts to international museums around the world. Contacts have already been made with the Art Institute in Chicago which plans a major exhibition on Islamic African Art for 2005-2006 and are interested in presenting the manuscripts from Timbuktu. This would however require major funding to assure that stress on the manuscripts is minimal.

Preliminary contacts have also been made with the New York Public Library to do an exhibit at the Schomburg Centre for Research in Black Culture in Harlem, New York.

## **ASSOCIATED DOCUMENTS AVAILABLE UPON REQUEST**

I. *Organizational Structure*

II. *Role of Participating Institutions*

III. *Qualifications of Project Participants*

IV. *Resource Persons*

V. *Project Timetable*

VI. *Technical Requirement & Options for Electronic Document Management*

VII. *Format for Descriptive Catalogue Entries*

VIII. *Project document for the establishment of the  
Institute for Islamic Thought in Africa (ISITA)*

IX. Letters of Recommendation

Malian Ministry of Education

Tore Rose, Director of UNDP, Bamako