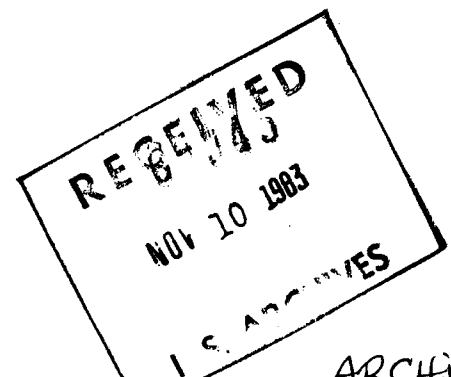


**RECOMMENDATIONS FOR THE ESTABLISHMENT
OF A TRAINING CENTRE FOR RECORDS
CONSERVATORS IN FRENCH WEST AFRICA**

**A REPORT FOR THE
INTERNATIONAL DEVELOPMENT RESEARCH CENTRE
(IDRC)**

by
Klaus B. Hendriks,

**Public Archives of Canada
OTTAWA, Ontario
K1A 0N3
June 1983**



© K.B. Hendriks

~~FOR USE BY IDRC STAFF ONLY
A L'USAGE EXCLUSIF DU PERSONNEL
DU CRDI~~

ARCHIV
25.171 : 377.006 (66)
H 4E

FOREWORD

From April 5 to May 7, 1983, I travelled on a mission sponsored by the International Development Research Centre (IDRC) to four African countries in order to study the following questions:

- i) What needs do exist for the conservation of archives and library materials in these countries?
- ii) What resources exist to meet these needs?
- iii) What are the gaps between the needs and resources?

While an examination of this kind is not dissimilar to the questions addressed in the excellent Lambert Report on Conservation in Canadian Museums (1), the key question underlying my present mission was:

Is it possible to fill the gaps between needs and resources by establishing a training school for records conservators in one of the African countries visited, which in the years to come would train sufficient competent conservators capable of preserving their respective country's cultural heritage?

The countries in which I studied this problem were the Republic of Niger, the People's Republic of the Congo, the Republic of Ivory Coast and the Republic of Senegal. They were visited in this order which turned out to be well chosen. I had the good fortune of being accompanied by Mr. Saliou Mbaye, Director of the Archives of Senegal, who introduced me to various colleagues in archives and libraries. Following a final week-long stay in Dakar, Senegal, I travelled to Paris to solicit the expertise and comments of colleagues at the National Archives, the National Library, at Unesco and in other institutions.

Without exception I was received in a most friendly and accommodating manner wherever I asked for comments and opinions. This journey was a most exciting and rewarding learning experience for me, and I hope that this report may eventually contribute to the preservation of the cultural heritage of French speaking African nations.

I wish to express my thanks to my superiors at the Public Archives of Canada for having selected me to fulfill this mission for the IDRC: Messrs. Ken F. Foster, Director General of Conservation and Technical Services Branch; Bernard Weilbrenner, Assistant Dominion Archivist; and Wilfred I. Smith, Dominion Archivist. The International Development Research Centre acted in a most generous and liberal, yet prompt

and exacting manner in preparing this mission. Of its staff members, Messrs. Ron Archer and Claude Boivin were particularly helpful. I would like to thank Ms. Anne Charron and the staff of the IDRC Library for their help before and after my trip. In Dakar, IDRC staff members Ms. Rose-Marie Erambert and Mr. Jean-Paul Joly were always helpful whenever I needed assistance and advice. Lastly, I would like to thank Mr. Saliou Mbaye who so patiently put up with the barrage of questions on all aspects of African history, culture and people to which I subjected him. His status in the archival community of French speaking Africa opened doors and channels of communication to which I would not have had access otherwise.

I left Paris on Friday evening, May 6, for a week of vacation and returned to Ottawa on May 16, 1983.

Klaus B. Hendriks
Ottawa, Ontario
June 27, 1983

TABLE OF CONTENTS

FOREWORD	(1)
TABLE OF CONTENTS	(iii)
1. INTRODUCTION	1
2. SUMMARY	4
3. CONSULTATIONS IN FOUR AFRICAN COUNTRIES AND THE NATURE AND CONDITION OF THEIR ARCHIVES AND LIBRARIES	8
3.1 REPUBLIC OF NIGER	8
3.1.1. Archives Nationales	8
3.1.2. Université de Niamey	10
3.1.2.1. Bibliothèque universitaire	10
3.1.2.2. Institut de Recherches sur les Sciences Humaines	11
3.1.3. Meteorological Data Niamey	12
3.2 THE PEOPLE'S REPUBLIC OF THE CONGO	15
3.2.1. Le Service de Bibliothèque, d'Archives et de Documentation	15
3.2.2. Bibliothèque Universitaire de l'Université Marien Ngouabi	16
3.2.3. Meteorological Data Brazzaville	
3.3. REPUBLIC OF IVORY COAST	20
3.3.1. Archives Nationales	20
3.3.2. Bibliothèque Nationale	21
3.3.3. Bibliothèque Universitaire	22
3.3.4. Meteorological Data Abidjan	24

3.4. REPUBLIC OF SENEGAL	27
3.4.1. Archives du Sénégal	27
3.4.2. Université de Dakar	29
3.4.2.1. Institut Fondamental d'Afrique Noire (IFAN)	29
3.4.2.2. Bibliothèque Universitaire	29
3.4.2.3. École de Bibliothécaires, Archivistes et de Documentalistes de Dakar (EBAD)	30
3.4.3. Meteorological Data Dakar	31
4. CONSULTATIONS IN FRANCE	34
5. FINAL COMMENTS	37
REFERENCES	39
APPENDIX A: NAMES AND ADDRESSES	42
APPENDIX B: LIST OF ABBREVIATIONS	50
APPENDIX C: EDUCATION IN AFRICA	53
APPENDIX D: SOME SCHOOLS IN FRANCE TEACHING BOOKBINDING	54

1. INTRODUCTION

The idea of installing a restoration studio in the Archives of Senegal was promoted as early as 1974 by its Director, Mr. Saliou Mbaye (A21) in a request for assistance to the National Archives of France. Technical assistance was also requested from UNDP in 1975, and from Unesco in 1977 and 1979, but without immediate result. In 1980 efforts intensified to obtain funds for setting up a restoration workshop for the Archives of Senegal. In a 17-page document entitled "Requête des Archives du Senegal", dated September 2, 1980 (2), the establishment of a "Cycle de Formation en Matière de Réprographie et Restauration du Patrimoine Écrit" was suggested, with financial help from the IDRC along with requests for assistance in other areas. As far as training was concerned, the document suggested that two experts come to Dakar for two years, four consulting missions of one month duration be carried out, and that two Senegalese nationals be trained for one year in a foreign country and for a second year in Dakar. No mention was made how this training schedule could be coordinated to produce competent records conservators.

A similar request by Senegal to the International Archival Development Fund (3) was discussed by the International Council on Archives' Commission on Archival Development on September 3, 1981. It specified equipment requirements and a scholarship for a restoration technician to stay at the National Archives of France for a period of three months. The scholarship was granted, the funds for equipment were declined.

The above request of the Archives of Senegal was submitted to the IDRC on September 22, 1981 (4). Mr. John Woolston, Director of the IDRC's Information Sciences Division, contacted the Dominion Archivist, Dr. W.I. Smith, on November 23, 1982 (5), which led to the mission described in this report.

The proposal to establish a training centre for records conservation is not without complexities. Not only are opinions divided about the technical and administrative details of this project - should experts travel to Africa, or should African nationals study in an established institution in Europe or North America? in which country should the training centre be located, and which institution should it be associated with? - but professional conservators themselves wrestle with problems concerning the development and growth of professions, the way they perceive themselves and how they are seen by others. To make matters worse, there are, to the best of my knowledge, no formal training courses, academic or otherwise, for archives conservators anywhere in the Western world. While there are about six academic training programs in North America (five in the U.S.A., one in Canada at Queen's University) teaching the conservation of fine art and objects of archaeological and ethnographic origin, conservators in archives, both here and in Europe, originate from the bookbinding

craft and develop later into book and document conservators. The term "paper conservator" is, incidentally, rather ambiguous and should entirely be avoided. Instead, the term "prints and drawings conservator" should be used for those professionals who conserve and restore works of fine art on paper (prints, drawings, watercolours), while "records conservator", "document conservator" or "archives conservator" are used for restorers of materials found in archives and libraries. Such material consists of paper having words written or printed on it. Examples are manuscripts, books, newspapers, type-written papers and journals, but also printed maps and architectural plans. It is the training of records conservators that this project is concerned with. While dwelling on the terminology of the archival world, the French term "conservateur" - a title held by some of the African colleagues who we visited, c.f. APPENDIX A - indicates a curator, i.e. a professional in charge of a collection. Other corresponding terms in English are archivist or librarian, according to circumstance. In order to become "conservateur", the holder must have a "licence", i.e. a university degree, plus a year of studies at the École nationale supérieure de bibliothéconomie (ENSB) in Lyon, France. Another route to becoming "conservateur" is to finish the second cycle of EBAD, which is another two years of studies after the basic course of two years.

During the many discussions held with archivists and librarians in Africa, it was not without difficulties to keep the conversation focused on the conservation of archives, as there was so much to ask, exchange, reminisce and so many experiences to share. It is, likewise, impossible to discuss the preservation of archival materials isolated from other technical services, such as microfilming, the storage of information on magnetically recorded media and so forth. We found that some institutions had priorities other than to install a restoration studio, usually microfilming. It is small wonder that the question, whether a multi-year training period in a foreign country should include instruction in micrographics, emerged time and again in our discussions. To add to the difficulties, it must be noted that there are nowhere in North America full-length academic courses given in microfilm technology and its applications, a remarkable fact in view of the enormous economical importance of the industry involved. Various institutions and associations give courses which range from one half day to two weeks, which would appear insufficient to provide an in-depth knowledge and experience in the field. Here again one must rely on apprenticeship type studies in a large institution where the various microfilming techniques are practised.

It would have been tempting to define a new species to be called "archives technician", an imaginary professional who would be competent in both the restoration of archival materials and in its microfilming. The term is already used often by archivists and archives administrators, but rarely by technically competent personnel. It carries a slightly derogatory meaning, as it smacks a little of someone who has been trained briefly to perform a few well-rehearsed manipulations without requiring experience or even judgement. The term of archives technician will be avoided in this report.

The objective of this mission was clearly defined in the letter by J. Woolston to W.I. Smith (5). The end of a successful project would see in place, in each of eight or nine (or more) countries, a corps of trained records conservators (5). At the beginning lies this survey of the facilities of national archives and libraries of four French speaking African nations, to establish their needs, and to assess the possibility of training a group of African nationals to become teachers of records conservation for students from all other French speaking countries. While examining the buildings in archives and libraries, I occasionally photographed some of the holdings in order to document their condition, using two of my own cameras which I had brought along.

In this report, I use the French terms for countries, titles, institutions etc. whenever there was doubt that the English version could be misunderstood. The following chapter summarizes my observations to which the majority of my African colleagues consented. The next chapter describes briefly the institutions which I visited, their holdings and condition and presents pertinent meteorological data (temperature and relative humidity) as their level and fluctuations affect strongly the permanence of archival records. A discussion part points out further considerations, ideas and disagreements on the basic scenario. A list of references is followed by APPENDIX A which contains the names and addresses of my principal discussion partners. APPENDIX B is a list of abbreviations and acronyms used in this report. Acronyms are spelled consistently without periods behind each letter. APPENDIX C sketches the elementary and secondary education in some French speaking African nations, and APPENDIX D has names and addresses of some French schools for bookbinding, the basic expertise of records conservators.

2. SUMMARY

Consultations were held with over thirty professional colleagues in African and French archives and libraries, as well as with officers of Unesco. If funding is found for the project, and if Public Archives of Canada can provide the technical expertise and language skills to conduct a course, the general scenario sketched in the following paragraph emerged as a realistic possibility. The execution would, of course, also depend on the Public Archives' inclination to look favourably upon a request for training by the African nationals.

A minimum of three, but ideally four, persons from an African country will spend approximately three years at the Conservation and Technical Services Branch of the Public Archives of Canada (PAC) for an in-depth training period in the preservation and restoration of materials to be found in archives. While the exact curriculum for such training has yet to be developed, it will combine regular lectures with practical work in an apprenticeship situation. The topics to be covered are broadly outlined as follows:

- The history of paper
- The manufacture of paper
- The nature of paper
- Various types of paper
- Factors affecting the permanence of paper

- Book printing
- Inks and their properties

- Prevention of deterioration: storage conditions
- Fumigation

- Planning a conservation laboratory
- Equipment and technical facilities
- Materials used in restoration

- Techniques of bookbinding
- Construction of boxes and book cases
- Various techniques of restoration: washing, bleaching, deacidification, re-sizing, mending and repair, etc.
- Matting, mounting and cases for display

- The nature and properties of photographic materials
- The nature and properties of magnetically recorded information

- The properties of special materials in archives: maps, globes, medals, fine art on paper, paintings, atlases, posters, architectural plans, newspapers, etc.

The training period may or may not include instruction in microfilm technology. Facilities for such training exist at the Records Management Branch of the PAC.

Incumbents to the trainee positions will have a baccalauréat degree, be graduates of EBAD and have at least two years experience in their chosen field as archivist, librarian or documentalist. General agreement existed that Canadian experts would participate in the selection of the trainees. The incumbents would already be employees of their country's government, who would continue to receive their salary while on an apprenticeship program at the PAC. Their government would guarantee them continued employment after their return, either as professors in a school for the training of archives conservators, or in any other related field. Married incumbents will be encouraged to bring their spouses to Canada.

After approximately three years in Canada, the four candidates will spend six months in Paris. Divided in two groups of two people, one group will spend three months in the conservation laboratory of the National Archives of France, the other in the restoration studios of the National Library. After three months, the groups will switch location.

The purpose of this stay is twofold:

1. To allow the student to become familiar with specialized procedures which are not practiced in the PAC;
2. To enable the students to become familiar with the various materials and their supplies used in France in the restoration of archives and library materials. The four countries I visited order most of their archival supplies from French companies, and it will be essential for future conservators in Africa not only to be familiar with the available materials but also to know exactly the details of purchasing them and having them delivered.

During the three and one half years of training by four African students, the host country in which the school will be established, will prepare the space for the new training facilities. The technical equipment will be selected, ordered, purchased, shipped to Africa and installed during this period. The space, preferably a separate building, must be air-conditioned and contain recording devices which record automatically the temperature and relative humidity. Other details of a technical nature can be agreed upon at a later date.

Upon their return to Africa, the professors will find the physical facilities ready to proceed with the setting up of a curriculum for the training of archives conservators. The envisioned school will have an initial staff of three or four teachers, one technician to help in the technical preparation of the courses and to service the equipment, and one secretary. The involvement of external sources of funding would largely terminate at this point, with the possible exception of giving occasional technical expertise during the initial teaching phase.

Once the school has started courses, the salaries of its staff members and all other expenses necessary to keep it going will be paid for by the government of the country in which it is located.

In another, more elaborate scenario, the training of three or four African archivists to become professors of archives conservation courses, would begin by having them become competent bookbinders in a two-year course in one of the French schools (c.f. APPENDIX D), followed by a period of 18 to 24 months of training at the Conservation and Technical Services Branch at the PAC. This route would resemble the education taken by European and North American records conservators. While the details of this proposal have not been worked out, it should be easy enough to determine the possibility and conditions of any of the French schools accepting the African students for a two-year period.

The resulting school would be a national project of regional scope. While its operating budget, including salaries, would be the exclusive responsibility of the host country, it is expected that some twenty African nations, whose official language is French, would send students there. Thus the preservation of the cultural heritage in archives and libraries of many African countries would directly benefit from its existence. The proposed centre should have the status of an "école nationale" in order to obtain continued financing by the government of the host country. The school would also be complementary to EBAD which has been operating successfully for over fifteen years and which had over 200 students from 19 different countries in 1981-82. The programme for records conservators will have a duration of two years.

The expenses for this project have been divided roughly into four sections:

1. The cost for travel of the candidates and their spouses to Canada, their stay in Canada, and annual travel to their home country.
2. The cost for technical equipment to outfit the training school.
3. The cost for travel by students from French speaking African countries to the school and their tuition fees.
4. The salaries of the staff members of the training school.

While it is suggested that expenses occurring under No. 3 will be paid for by the respective countries, and possibly by grants and bursaries from international organizations, such as ICA and Unesco and those occurring under No. 4 will be assumed by the country in which the training school is located, external funding needs to be found for the entire training period of four African students in Ottawa and Paris and for the initial equipment for the training school. In discussion with African colleagues it was confirmed that a monthly

stipend of \$1,000.- per person would be sufficient for rent, food, clothing and local transport in view of the candidates continuing to draw their salary from their government. For four people this would amount to \$192,000.-. For annual travel to their home country for six persons (four students, two spouses), a total of 30 trips, at \$1,500.- per travel, a sum of \$45,000.- is estimated. The technical equipment for the training school is generously estimated to cost \$250,000.-. A teaching aid for \$50.- per month and person (for four persons over four years) will cost \$9,600.-. Finally, an expense of \$22,500.- has been estimated for travel by Canadian experts to the African country that will host the training school to offer technical assistance in the initial phases of the program. The total estimate is therefore \$519,000.-. It may be noted that a period of four (4) years has been taken as a time basis for this estimate. Nevertheless, these cost estimates may require some revision in line with experience from previous similar projects.

3. CONSULTATIONS IN FOUR AFRICAN COUNTRIES AND THE NATURE
AND CONDITION OF THEIR ARCHIVES AND LIBRARIES

3.1. REPUBLIC OF NIGER

3.1.1. Archives nationales

The National Archives originated as part of the archives of the old Afrique Occidentale Française (AOF) in 1913, the territorial archives in the capital of Niamey. It contains many documents and reports from the French colonial régime, but considers itself today, under the leadership of its director, Mahaman E. Sade (Al), as an important tool in the planning and administration of government projects. This function is underlined by its being part of the Secrétariat général du gouvernement. This emphasis on the records management role of archives was found to be present in other African countries. While archives assist actively in the administration of the country, the collection of historical documents is of secondary importance.

The oldest documents in Niger's National Archives are from 1898: French reports of expeditions into French Africa. The holdings consist mostly of paper records with hand-written or type-written text. There are also several thousand photographs - mostly in black-and-white, but some in color -, about 250 motion picture films and several dozen audio tapes.

The National Archives has about a dozen employees and is housed in a building constructed in 1974 for the purpose. Its major client is the Nigerian government for whom reports, statistics and data are prepared. Individual researchers must fill out a form which identifies them and their request, so that a complete documentation of the use of the archives is obtained.

When visiting the storage area of the National Archives, the presence of fine sand, or dust, on boxes and shelves was observed for the first time. It is a phenomenon with which visitors from North America are quite unfamiliar. To what degree the presence of fine sand, which enters into buildings during sandstorms from the Sahelian environment, can cause damage to archives and library holdings, is not clear. With the exception of the Congo, the presence of fine sand was observed in collections in all of the other countries visited.

The storage area is equipped with seven air conditioning devices, type "Technibel", which run daily for about 12 hours (from 7:00 a.m. to 7:00 p.m.), six days a week. This modus operandi could give rise to cycling temperature and relative humidity conditions. When purchased, the air conditioners were specified to adjust the assumed outside temperature of 45°C to 25°C in the storage area, and a presumed outside relative humidity of 8% to 45%. Temperature and relative humidity are neither measured nor recorded in the storage area, which makes it difficult to evaluate the performance of the air conditioners. Meteorological data for the region of Niamey will be presented elsewhere in this report.

Technical equipment consists of three or four office copiers, two paper cutters and a nipping press in a small room. Some bookbinding work is done under contract at a cost of about F CFA 4000.- per volume. Here, as in other African countries, it was noted that maintenance service for technical equipment is difficult to obtain. When equipment breaks down it can remain inactive for long periods of time. The installation of microfilm equipment appears to be the National Archives' immediate priority for technical services. Care might be taken in including a long-term service contract in the purchase order for micrographic equipment. Its installation is not detrimental in any way to the present project, as the practical results of the training centre would not benefit the African countries for another five to seven years.

The Director of the National Archives, Mr. Mahaman E. Sade, strongly underlined the need for trained archives conservators. He pointed out the necessity of clearly defining the entrance level requirements for candidates who will train to become teachers of conservation, as well as their professional status after their return to Africa. Candidates who will be recruited to study abroad should be public servants already, must be graduates of EBAD, and must be guaranteed employment upon their return to Africa. The training period abroad should be between two and three years, according to Mr. Sade, but micrographics need not be part of the training, as it would burden the program too heavily. Mr. Sade spoke in favor of sharing the small resources available and thus feels that a restoration workshop at the National Archives could work also for other cultural institutions in Niamey.

3.1.2. Université de Niamey

3.1.2.1. Bibliothèque universitaire

There are eight university institutes, each of which has its own library, however we visited only the bibliothèque centrale and its director, Mr. Mano Couli-diati (A3). Of approximately 2000 students at the Université de Niamey, which has the privilege of granting degrees up to the master's level, about 1620 are registered at the bibliothèque centrale.

It contains approximately 6000 volumes. There is no Rare Book Collection, but I noticed volumes from 1855 and 1867 in the binding shop. Since there is no university bookshop, which in Francophone countries generally is a private business (as compared to the Anglo-phone system where it is part of and sponsored by the university), the Bibliothèque centrale fulfills an important function. In case of too high a demand on a volume, photocopies are made. They are free at present, but students will soon have to pay F CFA 75.- per page. (Price in the city of Niamey: F CFA 200.- per page).

Storage and study rooms are equipped with small air-conditioners which are installed in windows, but there are no monitoring instruments for temperature and relative humidity. There are no microfilm services. A small bookbinding studio is attached to the bibliothèque centrale, with two employees who were trained by a Congolese national in his own bookbinding business. Decisions as to which books go to the binding shop are made by library personnel.

Mr. Couli-diati sees the training of professional librarians as his first priority. As the number of students increases, there is not enough personnel to serve them. A restoration workshop is the next urgent requirement. Microfilming services, for which it is difficult now to find space, funds and expertise, are third in line. Mr. Couli-diati did not offer specific recommendations or suggestions concerning the current project.

3.1.2.2. Institut de Recherches sur les Sciences Humaines (IRSH)

Of the eight university institutes mentioned earlier, six are schools principally engaged in teaching and two are research institutions. They are l'Institut de Recherches sur l'Enseignement des Mathématiques (IREM; soon to become l'Institut de Recherches sur l'Enseignement des Sciences, IRES), and l'Institut de Recherches sur les Sciences Humaines, IRSH. The latter is a successor to l'Institut Fondamental d'Afrique Noire (IFAN) which was founded in 1938 as l'Institut Français d'Afrique Noire, but changed its name to the present one in 1971-72.

Among the wide range of activities pursued by IRSH are studies in sociology, history, linguistics and archaeology, as well as running two technical services. One of these, the data and publication section, produces the periodical "Études Nigériennes" and an information bulletin called "Mukararani". The audio-visual service documents Nigerian culture and development through the media of oral history and cinematography. It also collects sound tapes and motion picture films produced by others and conducts an active outreach program to make these records available.

The realization of future plans will provide for a cartography studio, a bookbinding centre and a centre for reprography which will house microfilming equipment, stencil duplicating facilities and office copiers.

Of particular interest to this mission was a collection of about 3000 hand-written Arab manuscripts. Each consists of a pack of loose, i.e. unbound, sheets of papers with rounded corners which are wrapped in a piece of decorated, embossed leather. The parcel is held together by a belt of soft leather. In some cases the original soft leather strips had been replaced by elastic rubber bands creating pressure points on the manuscript. The paper sheets and red and black inks were in excellent condition, indicating a high quality paper made probably over 150 years ago. The only visible damage was caused by insects and through abrasion caused by use. In discussing the future use of these manuscripts it was mentioned that researchers do not easily accept microfilm copies or other photocopies.

Wanting to be obliging to the clients, institutions often agree that the original be given to them. Mr. Sidikou strongly supported the project of establishing a training centre for records conservators in Africa and agreed that a restoration workshop in Niamey, resulting from the existence of a training centre, could serve all important archives and library collections in Niger.

3.1.3. Meteorological Data Niamey

Data for temperature and relative humidity levels were collected in all four African capitals in view of their significant effect on the permanence of archival records. Archival collections, if kept in buildings which are not closed from outside conditions - or which are not internally air-conditioned - are exposed to the changing outside atmospheric conditions. While it is well known that high temperature and high relative humidity have a detrimental effect on the longevity of paper records as well as of photographic materials, cycling temperature and relative humidity conditions are particularly dangerous. Since meteorological data are relatively easily obtained (as compared to data on air pollution or light levels in libraries and archives) they are presented here to demonstrate the average levels as well as the span between maximum and minimum values. The data for Niamey, Niger, were kindly made available by Mr. Mohamed Boulama (A4) and his colleagues Jean Dhossou and I. Also.

TABLE 1 shows absolute and average monthly temperatures in degrees Celsius over a ten-year period at Niamey Airport. TABLE 2 shows the corresponding data for the relative humidity. These data were compiled from more comprehensive tables showing the various values for the monthly absolute maximum and absolute minimum temperatures and relative humidities for each year of the given period. Space restrictions did not allow reproduction of the complete data here.

TABLE 1

**ABSOLUTE AND AVERAGE MONTHLY TEMPERATURES (°C) FOR A
TEN-YEAR PERIOD (1971-1980) IN NIAMEY/AEROPORT, NIGER (ALTITUDE APPROX. 230m)**

	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT	OCT.	NOV.	DEC.
ABSOL. MAX. TEMP.	39.3	41.0	43.6	45.0	45.2	43.0	39.4	38.5	40.8	41.6	40.5	37.8
ABSOL. MIN. TEMP.	10.2	12.2	13.6	15.2	20.5	17.8	19.1	18.0	19.4	16.6	14.0	10.5
AVER. MAX. TEMP.	32.6	35.8	38.6	40.8	39.6	37.2	33.7	32.7	37.8	37.8	36.0	32.9
AVER. MIN. TEMP.	16.3	18.5	22.7	26.1	27.5	25.5	23.6	23.1	23.6	24.0	19.5	16.7
AVERAGE TEMP.	24.5	27.2	30.7	33.5	33.6	31.4	28.7	27.9	29.2	30.9	27.8	24.8

TABLE 2

**ABSOLUTE AND AVERAGE MONTHLY RELATIVE HUMIDITIES (R.H.,%) FOR A
TEN-YEAR PERIOD (1971-1980) IN NIAMEY/AEROPORT, NIGER (ALTITUDE APPROX. 230m)**

	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT	OCT.	NOV.	DEC.
ABSOL. MAX. R.H.	49	68	99	98	97	98	100	100	100	100	88	72
ABSOL. MIN. R.H.	5	5	4	4	5	12	28	32	21	8	6	7
*AVER. MAX. R.H.	35	31	26	38	83	86	87	95	95	71	45	40
*AVER. MIN. R.H.	11	11	12	10	14	28	37	44	31	21	18	16

* For a five-year period (1974-1978)

3.2. THE PEOPLE'S REPUBLIC OF THE CONGO

3.2.1. Le Service de Bibliothèques, d'Archives et de Documentation

This department, located in the capital of Brazzaville, and headed by Mr. Jean-Pierre Bitoumbou (A5), comprises the National Library, the National Archives and the "Services de documentation", a bibliographic data base which provides information on special and current topics. The National Library, directed by Mr. Antoine Moulié (A7), has about 8000 volumes in its main quarters, but a total of 35,000 volumes in all of its five centres. Its holdings, as do those of the National Archives and the documentation centre, consist principally of paper records. There is no air-conditioning in any of the three collections, and temperature and relative humidity are neither measured periodically nor recorded. The department does not provide photocopying services to its clients who may use commercial photocopying at F CFA 100.- per page. However, there is one office copier for internal use. Some bookbinding is done under contract with reportedly good results, but there are no in-house restoration facilities. Technical assistance has been given since 1977 by Unesco in the form of micrographics equipment, including readers and reader-printers. Government departments are the principal users of the Service, followed by individual researchers. The person-year priorities for the department, as expressed by Mr. Bitoumbou, are one position for micrographics and one for bookbinding and restoration.

The National Archives has about ten employees. It holds numerous well-organized government records, but also books, journals and pamphlets, many of which have suffered from negligence in handling and damage caused by insects. The Chief of the National Archives, Mr. Edouard Nzino (A6), indicated his highest priority to be the establishment of a restoration workshop. The need for restoration services was also strongly expressed by him in the 1982 Annual Report of the National Archives (6). Since the Chief of the documentation centre, Mr. Joseph Mabika (A8) was absent during our visit, the facilities were explained by Mr. Romain Pindou (A9). Information on a current subject is collected or exchanged, then indexed and catalogued and, in a third step, made available to users. Here, as in the physical facilities of the other services, windows and doors are open during the day, allowing free access to insects and prevalent outside atmospheric conditions.

3.2.2. Bibliothèque Universitaire de l'Université Marien Nguabi (formerly: Université de Brazzaville)

Lively discussions were held with Mr. Bruno Wambi, conservateur de la bibliothèque (A10) and Mr. François Wellot-Samba (A11), director of the university library. It has about 45,000 volumes in its central collection, including a Rare Book Collection, and about 100,000 volumes overall, serving an enrolment of 10,500 students. The library is housed in a forty-odd year old building that has been used alternately as French military offices, a public health laboratory and a teaching college. The storage areas for library holdings are equipped with air-conditioning devices which keep the temperatures down to reasonable levels. However, temperature and relative humidity are not recorded. The holdings consist of the typical range of library materials. The major conservation problems were quoted as "sun, heat, relative humidity and mechanical damage", such as broken spines in books because of bad handling.

There are no microfilming services, and there seems to be hesitation on the part of the direction to start microfilming. There is a bookbinding workshop (which we visited) with three employees, two of which were trained at l'École des beaux arts in Brazzaville where bookbinding is taught. Books are hand-sewn, but a sewing machine ("couseuse électrique") is on order.

The binding workshop could form the nucleus of a full-scale restoration laboratory. The priorities for Technical Services at the university library, according to Messrs. Wambi and Wellot-Samba, are firstly binding and restoration services, secondly computer services, and finally micrographics. Both stated emphatically that there is a definite need for a restoration workshop, and that, in fact, such a service is indispensable. Both felt that it is entirely possible to share such services with the National Archives.

In discussing the project of establishing a training centre for records conservators in a West African country, it was learned that a request was made in 1975 to send a trainee to France to study bookbinding and restoration. In 1982, an employee (F. Koubemba-Nzaba) was sent to the Municipal Library in Toulouse for that purpose. The case illustrates the difficulty in placing African nationals into restoration workshops for train-

ing purposes. Messrs. Wellot-Samba and Wambi expressed their full consent with the idea of setting up a school for archives conservators and stated their firm conviction that it will solve their conservation problems. In their opinion, candidates from an African country should have a baccalauréat, be graduates from EBAD, and they should stay for at least two years in Canada. The proposed training school might have the status of an "école nationale" (as EBAD) which would give it special status and put its graduates in a position similar to "conservateurs" (curators). The proposed training centre could either be attached to the National Archives in a French speaking West African country; be attached to EBAD in Dakar; or be completely independant.

The highest priority at present are plans for a new library building. While details about the cost, the financing - which may be shared between the Congo and foreign sources - and building plans are not yet available, the building could be ready for occupancy in 1986. This would coincide well with the beginning of courses in the proposed training centre: restored items from the University Library would return into storage areas in which the atmospheric condition is fully controlled.

3.2.3. Meteorological Data Brazzaville

TABLE 3 shows absolute and average monthly temperatures in degrees Celsius, and TABLE 4 corresponding data for relative humidities. The data were collected at Maya Maya Airport in Brazzaville. The careful observer will notice the unusually high average relative humidity levels, particularly in comparison with corresponding data from Niamey, Niger. (c.f. section 3.1.3.) The data shown here were made available by Mr. Gabriel Mankedi (A12).

TABLE 3

**ABSOLUTE AND AVERAGE MONTHLY TEMPERATURES (°C) FOR A
TEN-YEAR PERIOD (1971-1980) IN BRAZZAVILLE/MAYA MAYA, CONGO (ALTITUDE: 313m)**

	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT	OCT.	NOV.	DEC.
ABSOL. MAX. TEMP.	33.8	34.4	34.7	34.0	33.8	31.6	31.2	33.1	34.6	34.5	33.7	33.3
ABSOL. MIN. TEMP.	19.0	19.4	19.2	19.7	19.4	15.6	13.9	20.7	17.6	19.0	19.2	19.3
AVER. MAX. TEMP.	30.6	31.4	31.8	31.7	30.9	28.3	27.1	28.5	30.9	30.9	30.4	29.9
AVER. MIN. TEMP.	21.1	21.4	21.5	21.6	21.6	18.9	17.5	18.5	20.6	21.4	21.2	21.2
AVERAGE TEMP.	25.9	26.4	26.7	26.7	26.2	23.6	22.3	23.5	25.8	26.2	25.8	25.6

TABLE 4

**ABSOLUTE AND AVERAGE MONTHLY RELATIVE HUMIDITIES (R.H.,%) FOR A
TWENTY-TWO-YEAR PERIOD (1961-1982) IN BRAZZAVILLE/MAYA MAYA, CONGO (ALTITUDE: 313m)**

	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT	OCT.	NOV.	DEC.
ABSOL. MAX. R.H.	100	100	100	100	100	100	100	100	100	100	100	100
ABSOL. MIN. R.H.	33	30	19	31	27	14	24	24	28	21	28	30
*AVER. MAX. R.H.	97	96	96	96	96	96	95	90	90	94	96	97
*AVER. MIN. R.H.	56	53	51	53	56	57	56	52	48	51	55	57
**AVERAGE R.H.	82	80	80	81	81	82	78	72	69	75	81	83

* For a seventeen-year period (1966-1982)

** For a ten-year period (1971-1980)

3.3 REPUBLIC OF IVORY COAST

3.3.1. Archives Nationales

The role and function of the National Archives of Ivory Coast in the capital of Abidjan, which is part of the Ministère de l'Intérieur, was well described in a recent article (7) published by its Director, Mr. Dominique Tchriffio (A13). Founded in 1913, it became the National Archives in 1957, and has now 36 employees. In July 1981 the Ivorian government decided officially to build a new archives building. The actual construction may be delayed, since the government also decided - just a few weeks before my visit in Abidjan - to move its headquarters inland to Yamoussoukro. The present building, which is not air-conditioned and in which temperature and relative humidity are neither measured nor recorded, houses large numbers of well-organized government records. As in Niamey, heavy dust - or fine sand - is deposited on shelves and manuscript boxes. The holdings are mainly paper records, including 1300 books, since motion picture films and historical photographs have traditionally been collected by the Ministère de l'Information. Microfilm rolls produced at the National Archives are kept there also. There are perhaps a few hundred geographical maps in the National Archives, but no pictures. Sound tapes are collected by the Groupe de Recherche sur la Tradition Orale, (GRT0), and video tapes are kept by the government-run TV station.

Technical services in the National Archives consist of a microfilm laboratory, a restoration workshop and computer services. There are cameras for microfilming, one copier/duplicator and a processing machine. The processor is presently out of order for lack of service. The in-house computer services produce the official journal "La Gazette". There is a technician for microfilming and restoration. The restoration workshop was established in 1974 as part of a Unesco mission by Mrs. Monique Thibault, of the French National Archives in Aix-en-Provence, who also taught restoration techniques to four persons in the National Archives of Ivory Coast, reportedly with good success. Three of these staff members have since left the archives. An Ivorian national, Mr. Justin Zigo Dasso, spent six months in Paris as an intern in the restoration laboratory of the National Archives of France, and has accumulated ten years of experience in technical services in archives.

With this type of expertise available, Mr. Tchrippo contributed much in stimulating discussions to the proposal of establishing a training centre for archives conservators in West Africa. It was here that the many possible options, that had been tossed around, began to be reduced to a few basic alternatives in order to assure a rather definite shape. Mr. Tchrippo also pointed out the necessity for clearly defining the status of the African students in terms of their public service status. He suggested that they be recruited and classified as archivists, i.e. their minimum entrance level requirement would be a baccalauréat plus two years of university studies. After a careful selection process, the candidates should study for at least three years in Canada, according to Mr. Tchrippo. One year would be spent for studying elements of chemistry, biology, physics and the nature of materials, and the following two years in the specialization of document restoration. Another six months should be spent in a different institution for a total study period of 3½ years.

Candidates also should know precisely what is expected of them after their return to West Africa and that they can look forward to permanent employment in their chosen field. Mr. Tchrippo's colleague Mr. Zigo Dasso also pointed to the many difficulties that the National Archives have experienced in ordering supplies for technical services from France. Shipments may take an extraordinary length of time to arrive, but worse yet, it is often necessary to order minimum quantities that simply exceed both the budgets for such supplies and the actual need for them. The possibility that several West African countries form a pool which will jointly order restoration supplies was discussed as a potential resolution.

3.3.2. Bibliothèque Nationale

The National Library building in Abidjan was built by CIDA in the late 1970s. Under the direction of Mr. Seydou Gueye, it houses approximately 90,000 volumes (including 3000 in the Rare Books Department); several hundred geographical maps; all postal stamps ever issued by Ivory Coast; several hundred rolls of microfilm; numerous color slides of the country's regions and cultural events; about 50 motion picture films and a few sound tapes. There are no videotapes. All holdings are kept under the same conditions which are unknown, since no measuring or recording instruments for temperature and relative humidity were installed when the building was constructed.

There are no microfilm facilities at the National Library, but their installation is the first priority of Mr. Gueye. The Director's second priority is the expansion of the present bookbinding workshop, which already employs ten people. These bookbinders learned their trade either in a special school (École Régionale d'Abidjan à Treichville) or in the government printing office (imprimerie nationale). As the school at Treichville was mentioned elsewhere, I made an effort to locate it and to obtain more information on its bookbinding course.

With respect to a proposed African training centre for records conservators, Mr. Gueye suggested the baccalauréat to be the minimum entrance level, but a "licence" degree would definitely be desirable. The duration of study in Canada should be two years plus or minus six months, according to the candidates's background. Their salary should also be determined according to their training. For example, if a candidate had a "licence" and two years of further studies, they should be paid like an archivist or a librarian.

There was general agreement about the distribution of the cost for the proposed school. External funding would be required to pay for the cost of training three to four African nationals in Canada to become teachers, and also to pay for the initial equipment of the school. The government of the country in which the school will be located will employ the teachers, who will all be nationals of that country, as public servants and pay their salaries as well as all other costs necessary to run the training centre. Students from French speaking countries wishing to enroll in the two-year course for records conservators will have to be paid either by their own government, or through grants and fellowships from international cultural organizations. Mr. Gueye felt that micrographics should be part of the training of the teachers and later become part of the curriculum at the training centre.

3.3.3. Bibliothèque Universitaire

The central library of the Université nationale de Côte d'Ivoire has about 69,000 volumes. There are 125,000 books in all of the university's libraries combined. We discussed the training centre project with the Director of the central university library, Mrs. Françoise N'Goran (A15), her Assistant Director, Mr. Gustave Zoro Trome and a special technical consultant, Mr. Bernard Césari (A16).

Mrs. N'Goran hailed the proposals for a training centre as a useful initiative. While there are no micrographics facilities at the library, the existing bookbinding workshop (which we visited) is always overloaded with work and should be, in the words of the staff members, expanded. It now has three employees, of which two were trained in Treichville and one learned the trade "chez un particulier". Mrs. N'Goran suggested, in detailed comments on the projected school for records conservators, a baccalauréat degree plus a teaching diploma or graduation from EBAD as a minimum entry level requirement - quite in line with previous suggestions. ~~The training period in Canada should, in~~ Mrs. N'Goran's opinion, not exceed three years, the conservation course in Africa should be planned for two years. The curriculum should include microfilm technology - a proposal made more often by librarians than by archivists.

African nationals for training in Canada should be public servants, already employed and continue to be paid their salary. Mrs. N'Goran, if given the use of four new person-years, would as her first priority hire two records conservators, and secondly two microfilm technicians. If there were only two person-years available, her priority would remain the same: they would be used to expand the restoration workshop. Aiding in that decision is the availability of commercial microfilm services in Abidjan. It may be of interest to note here that one of Mr. Césari's projects is an attempt to establish a two-year course for archivists and librarians at the University in Abidjan, similar to EBAD at the University of Dakar.

On my last full day in Abidjan, a Saturday, I tracked down - after two previous unsuccessful attempts - the École Régionale de Treichville. The bookbinding course is attended by students who have at least six years of school education, that is at the end of the "premier cycle". They are young - around 13 to 14 years old. Bookbinding is a two-year course, followed by a one-year internship, usually at the government printing office. The course has been given since 1957 by Mr. Souleymane Keita (A17). It ends with a written confirmation that the student took the course. Many of the students from this course found work in libraries and printing shops. In order to assess the future of this course and to find out whether it could be linked to the present project, I visited Mr. Pierre Gautier (A18), Regional Director of Education for Abidjan. He

recommended that I talk to Mrs. Rosette Allé (A19). She told me that Mr. Keita's course was a purely practical course, containing no theoretical and historical aspects of the subject and had no official status. The certificate was a "local diploma", not an official one. While there were many good reasons to continue that particular course, it will be impossible to relate it in any way to the current project.

3.3.4. Meteorological Data Abidjan

TABLE 5 shows average and absolute values for the temperature in Abidjan over a 15 year period. TABLE 6 presents corresponding data for the relative humidity. While the average relative humidity never drops below 82%, cycling may occur between ten and one hundred per cent which creates rather unfavorable conditions for the longevity of archival materials. Data were obtained from reference (8) through Mr. A.S. Cissoko (A20).

TABLE 5

**ABSOLUTE AND AVERAGE MONTHLY TEMPERATURES (°C) FOR A
FIFTEEN-YEAR PERIOD (1961-1975) IN ABIDJAN/PORT-BOUET, IVORY COAST (ALTITUDE: 4.7m)**

	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT	OCT.	NOV.	DEC.	YEAR
ABSOL. MAX. TEMP.	33.3	34.0	33.5	33.6	33.8	31.2	30.0	29.5	31.0	31.0	33.2	31.8	34.0
ABSOL. MIN. TEMP.	16.0	16.0	19.5	19.8	19.4	19.8	19.6	18.0	18.4	19.8	20.0	18.5	16.0
AVER. MAX. TEMP.	30.1	30.6	30.6	30.7	30.3	28.6	27.4	26.7	27.1	28.4	29.8	29.8	29.2
AVER. MIN. TEMP.	23.2	24.3	24.6	24.3	23.9	23.3	23.0	22.1	22.2	23.3	24.0	23.7	23.5
AVERAGE TEMP.	26.7	27.4	27.6	27.5	27.1	25.9	25.3	24.5	24.6	25.9	26.9	27.9	26.4

TABLE 6

**ABSOLUTE AND AVERAGE MONTHLY RELATIVE HUMIDITIES (R.H.,%) FOR A
FIFTEEN-YEAR PERIOD (1961-1975) IN ABIDJAN/PORT-BOUET, IVORY COAST (ALTITUDE: 4.7m)**

	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT	OCT.	NOV.	DEC.	YEAR
ABSOL. MAX. R.H.	100	100	100	100	100	100	100	100	100	100	100	100	100
ABSOL. MIN. R.H.	10	22	47	46	49	61	60	64	63	62	37	20	10
AVER. MAX. R.H.	97	96	95	95	95	96	94	97	98	95	96	96	96
AVER. MIN. R.H.	66	69	69	70	70	74	76	77	76	75	71	70	72
AVERAGE R.H.	82	83	82	83	83	85	85	87	87	86	83	83	84

3.4 REPUBLIC OF SENEGAL

3.4.1. Archives du Sénégal

The capital of Senegal, Dakar, was my point of arrival in West Africa. After a brief familiarization with the IDRC offices and staff members and a short visit to the Archives of Senegal, I left in the company of its Director, Mr. Saliou Mbaye, for Niamey. Following travel to the three previously described countries, I spent a full work week in Dakar.

However, in the meantime I had ample opportunity to discuss the present proposal with Mr. Mbaye. He was present at most of the meetings discussed on the preceding pages. Credit is due him for the many ideas and suggestions that he contributed to our discussions.

The importance of the Archives of Senegal for all of French speaking West Africa is well established. While the archival holdings of the former Afrique Équatoriale Française (AEF), which included today's nations of the Central African Republic, Chad, Gabon and the former French Congo, were shipped by the French to Aix-en-Provence, where they are kept in the Dépôt des Archives d'Outre-Mer of the Archives Nationales de France, the holdings from the former territories of the old Afrique Occidentale Française (AOF) are largely in Dakar. Here was the headquarters of the French colonial administration and the seat of the Governor General for the AOF.

As Mr. Mbaye pointed out in his request for assistance to the Archives of Senegal (2), their origin is the former archives service of the AOF which was founded in 1913. Today it is divided into three major parts: the holdings of the old Senegal (1816-1958), the holdings of the former AOF (1895-1959), and the records of the modern Senegal since 1958. In quantity alone these records are impressive, being several times larger than in the national archives visited previously. A library with 21,000 volumes and a documentation service are also part of the Archives of Senegal. The latter two departments edit the Bibliographie du Sénégal.

The holdings of the Archives du Sénégal consist mostly of paper records. There are several hundred microfilm rolls which were produced in-house. There are no motion picture films and only a few photographs - perhaps a few hundred - but none from the 19th century.

There is a large collection of postcards which are silver prints. Neither temperature nor relative humidity are measured or recorded in the storage areas. An attempt had been made to purchase some hygrothermographs, but apparently they are not commercially available in Senegal.

Of the over fifty staff members at the Archives du Sénégal, two work full time in the microfilming facilities. A third person was at an internship in France during my visit. Of two bookbinders, one - Mr. Ibrahim Zal - was also in France for studies, the second was in training at the government printing office. There is no restoration workshop other than basic bookbinding facilities.

Mr. Mbaye has long been a strong advocate of establishing competent restoration services at the Archives of Senegal. He was after all the driving force behind the present project. In my discussions with him during our travels and in Dakar, he offered the following thoughts on the proposal:

Candidates for an extensive study period in Canada should be graduates of EBAD and have some work experience as archivists. They should demonstrate interest in the preservation and restoration of archival materials and enthusiasm and willingness to contribute to their conservation. Mr. Mbaye feels that a two-year study period in Canada would be sufficient, and that micrographics technology should be included in the curriculum. He also recommended that the future professors spend three to six months in France, preferably in Paris, for an internship. Besides collecting the relevant literature in the French language, negotiations could be carried out with suppliers of restoration equipment and materials concerning the availability of spare parts and service contracts. The subsequent training of African nationals in the proposed training centre should be one to two years. The entrance level for the African nationals to the training school should be either the "baccalauréat" (c.f. APPENDIX C) or for those who have been actively working in the field, the DFEM and five years experience in bookbinding.

3.4.2. Université de Dakar

3.4.2.1. Institut Fondamental d'Afrique Noire (IFAN)

The Institut Fondamental d'Afrique Noire was one of three institutes at the University of Dakar which I visited. Its Director, Mr. Amar Samb (A22), classified IFAN's library as the most important in terms of numbers of languages in Black Africa represented here. It has 70,000 volumes and several hundred Arabic manuscripts on history, medicine and religion. A principal concern of IFAN is the development of the country and research and teaching in Senegal. Researchers always use the original books and manuscripts for their work. There are also about 60,000 black-and-white photographs: 9x12cm and 6x6cm negatives and corresponding prints in the format of about 8x11½cm (3-3/8x4-1/2"). The prints are mounted on cards and kept vertically in drawers in metal filing cabinets.

While Mr. Samb listened attentively to the proposed project, he mentioned as his top two priorities micro-filming and publishing. There is at least one micro-film camera at IFAN, but it was impossible to determine the extent to which it is used. On the other hand, IFAN has a great need to publish the results of its research, and money for that purpose is lacking. Since the University of Dakar does not have its own press, their publications are actually printed in France. A pamphlet published by the University of Dakar entitled Note d'Information sur l'IFAN mentions a bookbinding workshop, but I did not see it.

3.4.2.2. Bibliothèque Universitaire

The University of Dakar exists since 1956, its central library since 1965. The library has about 300,000 volumes. There are also a few microfilms, about 1000 microfiches and two microfilm readers. Students pay F CFA 50.- per page of photocopying. As its Director, Mr. Théodore Ndiaye (A23), explained, there has been central air-conditioning at the library since 1965, which unfortunately broke down a year ago. The repair will require nine million F CFA. There are also hygro-thermographs, which are likewise out of order at present. Consequently, Mr. Ndiaye listed as his first priority the repair of the central air-conditioning. A second priority is the hiring of a maintenance electrician: a person who could repair the small breakdown of equipment which can be so effective in slowing down operations.

There are no microfilm services at the University Library. A request made to Unesco two years ago was unsuccessful. For Mr. Ndiaye the establishment of a University Press is also high on the priority list, followed by a reprography technician who would be responsible for running the photocopiers, microfilming operations, microfilm readers, and stencil copying equipment. Having listed all these priorities, Mr. Ndiaye left no doubt, however, that the conservation of the library holdings assumes great importance in his mind. There is a small bookbindery and although I did not see it, it appeared that less and less bookbinding is done there. There is, in fact, a specialist whose principal concern is conservation: the rare book librarian who supervises the bookbinding workshop, decides which books are sent there and, most important, organizes an annual disinfection and fumigation campaign at a cost of F CFA 900,000.-, during which the library is closed for four days. Moreover, an annual de-dusting ("dépoussiérage") is done at a cost of C CFA 300,000.-, the first case I came to know in which an institution combats the presence of fine sand and dust. These are, of course, active conservation measures, and Mr. Ndiaye expressed his support for a training centre and also indicated that he would send employees there for training.

3.4.2.3. École des Bibliothécaires, Archivistes et de Documentalistes de Dakar (EBAD)

EBAD, which was founded in 1967 as a joint project by the government of the Republic of Senegal and Unesco, is an institute of the University of Dakar. Its former Director, A. Bousso has described its scope and operations in a paper published ten years ago (15). Today it has twelve full-time professors and twenty-four part-time lecturers (among them Saliou Mbaye, Director of the Archives du Sénégal). EBAD's present Director, Mr. Henri Sene, feels that a training centre for records conservators should be associated with EBAD and thus be part of the University of Dakar. He agrees that the initial three or four African nationals, who will study in Canada to become teachers at the training centre should be graduates of EBAD. In Mr. Sene's opinion, a group of professors trained in Canada should run the restoration services of the Archives of Senegal and teach the conservation of archival materials at EBAD. There is already given a course at EBAD on some aspects of conservation. I had a useful conversation with Mr. A. Tendeng (A25), who teaches the course "Protection Physique des Documents". While it is not a practical course, it presents basic requirements for

archives buildings, the nature of archives materials and their deterioration and elements of restoration techniques. The course also addresses the role of micrographics in archives. Mr. Tendeng, needless to say, is in support of establishing a training centre for archives conservators which would be part of the University of Dakar and associated with EBAD.

3.4.3. Meteorological Data Dakar

TABLE 7 presents absolute and average monthly temperatures in degrees Celcius for a ten-year period of Dakar. TABLE 8 shows corresponding values for the relative humidity in Dakar. These data have been made available through Mr. Mansour Seck (A26) of Senegal's national meteorological service.

TABLE 7

**ABSOLUTE AND AVERAGE MONTHLY TEMPERATURES (°C) FOR A
TEN-YEAR PERIOD (1973-1982) IN DAKAR-YOFF, SENEGAL, (ALTITUDE: 28.6m)**

	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT	OCT.	NOV.	DEC.	YEAR
*ABSOL. MAX. TEMP.	34.0	34.5	37.3	35.8	33.8	31.9	33.0	32.5	33.3	36.2	37.0	36.3	37.3
ABSOL. MIN. TEMP.	12.6	13.9	14.1	14.0	16.4	16.9	20.3	20.2	19.1	18.6	16.4	14.4	12.6
AVER. MAX. TEMP.	25.0	24.1	24.3	24.6	25.1	28.1	29.3	29.7	30.1	30.3	29.2	26.4	27.2
AVER. MIN. TEMP.	17.4	16.7	17.6	18.5	19.8	22.9	24.5	24.6	24.5	24.3	22.4	19.5	21.1
**AVERAGE TEMP.	21.2	20.5	21.0	21.6	22.5	25.6	27.0	27.2	27.3	27.3	25.8	23.1	24.2

* Period from 1968 to 1977

** From Dakar-Ville (Altitude: 32m)

TABLE 8

**ABSOLUTE AND AVERAGE MONTHLY RELATIVE HUMIDITIES (R.H.,%) FOR A
TEN-YEAR PERIOD (1973-1982) IN DAKAR-YOFF, SENEGAL, (ALTITUDE: 28.6m)**

	JAN.	FEB.	MAR.	APR.	MAY	JUNE	JULY	AUG.	SEPT	OCT.	NOV.	DEC.	YEAR
ABSOL. MAX. R.H.	100	100	100	100	99	99	100	100	100	100	100	100	100
ABSOL. MIN. R.H.	8	11	7	19	31	34	51	58	39	20	11	11	7
AVER. MAX. R.H.	89	93	93	93	92	89	88	91	93	96	90	89	91
AVER. MIN. R.H.	46	55	58	65	67	67	68	71	71	64	49	46	61

4. CONSULTATIONS IN FRANCE

The objective of meetings in Paris was to sound out colleagues at the National Archives and the National Library as well as at Unesco about the present proposal. I first met with Messrs. Pierre Durye (A28) and Gilbert Barbier (A29) at the Archives nationales de France. Both listened with interest to the possible routes of establishing a training centre for archives conservators in a French speaking country in West Africa. Being aware of the need for conservation in archives of African countries and being recipient of numerous requests from those countries to accept African nationals as interns in their restoration workshops, they agreed that a national school in one African country having a regional, or international, scope would be, if successful, the most promising solution to the pressing conservation problems of national archives and libraries. The restoration workshop of the National Archives of France hires incumbents who have studied bookbinding in one of the established technical colleges listed in APPENDIX D. It was Mr. Barbier who gave me the names and addresses of these schools. Candidates must have knowledge of the nature and deterioration of (i) paper; (ii) parchment; and (iii) leather (for bookbinding) and must be familiar with (iv) techniques of gold-lettering. Agreement existed also on the point that three to six-months internships of African nationals in European or North American institutions are merely patchwork and do not solve the long-term conservation problems that African countries face now. While Messrs. Durye and Barbier felt that they could not accept three or four African nationals for three years into their restoration workshop, they were supportive of the general idea and considered it possible that the African students could spend three to six months with the National Archives' restoration services after their return from Canada.

Mr. Barbier was kind enough to lead me through the well-equipped and staffed restoration workshops at the National Archives. I was impressed by the extensive leaf-casting equipment ("procédé de fibre de papier"; or "procédé de pulpe de papier"; or "colmatage à la fibre de papier"; also referred to as "le refibrage") and the extent to which is it used at the National Archives. This method of document repair is not practised at the Public Archives of Canada, yet it should definitely be part of the curriculum of the African students. It could be taught to the future professors during their final stay in France.

Mr. Jean Favier (A27), Directeur général des Archives de France and Directeur des archives nationales, contributed valuable comments on the current project which were particularly useful in view of his intimate knowledge of the archival community in French speaking West African countries. Important was also that he consented to have three to four African nationals as interns in the National Archives for three to six months, after their training in Canada. As a point

of caution, Mr. Favier posed the question: what would happen to the proposed training centre once enough conservators have been trained? Could there be a time about 20 years from now when no country would send any more students to the school? Stating that he never saw a school closing down, he could foresee a problem in such a situation. There seems to be no decrease in the demand by students to attend EBAD, after more than 15 years of operation and a present enrolment of over 200 students in the first and second year. The proposed conservation training centre would graduate a maximum of ten students per year. Should the demand for its services decrease to such an extent that it would become useless to continue courses, it might indeed be closed down. However, it seems more likely that the school could expand its curriculum into teaching microfilm technology and other technical services to archives and libraries that are in the developing stage and that will find increased application during the next decades. Examples are videodisc technology and computer services, but there are others. Mr. Favier's point is well taken and worth keeping in mind.

At the National Library of France I had discussions with Mrs. Thérèse Kleindienst (A30) and Mr. Albert Labarre (A31). Mrs. Kleindienst expressed support for the proposed training school, the conservation of the National Library's holdings being a primary concern of senior management. The conservation services at the National Library are considerable, employing roughly a total of 80 people. Both agreed that three or four African nationals would be welcome as interns for a few months after their return from Canada. Mr. Labarre then gave me a tour of the excellent conservation studios at the National Library.

While at the National Archives, I visited Mr. Charles Kecskeméti (A32) to inform him of the current project. In his position as executive secretary of the International Council of Archives (ICA) he is keenly aware of the need for expertise in conservation in African archives and libraries. He expressed his full support for the current plans, offered his help and asked to be kept informed of further developments.

I also visited two professional colleagues, Mrs. Françoise Flieder (A33) and Mr. Franz Schmitt (A34). Mrs. Flieder is a scientific advisor to both the National Archives and National Library. Her laboratory has produced and published significant research on the stability and preservation of materials in archives and libraries during the past twenty years. Her interests are directed towards, among other things, the properties and preservation of paper records - including methods of deacidification -, properties of inks, methods of fumigation, the stability of leather and the preservation of photographic materials. It is following her suggestion that the restoration laboratories of the French National Library and National Archives use a 1% Borax solution for deacidification. She put me in

touch with Mr. Claude Goulard of the Micrographic Services at the Centre de Documentation Scientifique et Technique (part of Centre National de la Recherche Scientifique, CNRS), in whose laboratory a Senegalese national, Mr. Alassane Diop of IFAN, had spent a two-year study period in reprography. Mr. France Schmitt runs one of the most advanced motion picture film archives in the world in Bois d'Arcy, outside Paris. Apart from visiting his exemplary storage and laboratory facilities, I was interested in the works of a French film-maker who in the 1950s and 60s had produced important documentaries on the life and culture of peoples in Niger, which are now of great interest to the Nigerian authorities. Copies of these films are at the film archives in Bois d'Arcy, and my interest concluded in a lengthy telephone conversation with the film-maker, Mr. Jean Rouch.

At Unesco in Paris I had discussions with Mr. Frank Evans (A35) and Ms. Susan Mahin (A36) as well as brief conversations with Mr. A. Bousso, one of the driving forces behind the founding of EBAD, Mrs. F. Gallo of the General Information Programme and Mrs. Mireille Moreau of the Documentation Service of that Programme.

Of particular interest to me were several Unesco projects related to the present proposal: a technical training centre for archival restoration and reprography in Sudan (10), a regional demonstration and training centre in Argentine (11), and a project on archives preservation in Nepal (12). In all three cases, technical experts travelled to the respective country on missions which lasted two weeks, four weeks and 18 months, respectively. While agreeing that an adequately trained faculty is the most important requirement for any technical training centre, Mr. Evans pointed out that Unesco could assist financially in the current project through their Participation Program: Experts could be sent to Africa for short terms. In addition study grants could be made available for African nationals to train abroad. Ms. Mahin had herself worked on a project closely related to the present IDRC concern: a regional centre in a French speaking country in West Africa for the training of reprography and restoration technicians (22). In this proposal various experts would be sent to the country to train the African nationals. The training centre would be attached to the National Archives of the host country. The overall cost of the project from 1982 to 1984 was estimated to be about U.S. \$770,000.- In a Telex to Mr. John Woolston after my return to Canada, Mrs. Mahin confirmed her opinion that experts should be sent to Africa, instead of having African nationals trained abroad. This would be more economical and would give better results. Her comments and the experience of Mr. Evans at Unesco were most helpful in developing the proposals of this report.

5. FINAL COMMENTS

There can be no doubt that there is a tremendous need for competent conservation and restoration services in archives and libraries in countries of West and Equatorial Africa. Paper records have suffered from cycling temperature and relative humidity conditions, insects, the presence of dust and sand causing abrasion, and the lack of care by users. The vast majority of librarians and archivists consulted are keenly aware of this condition and are consequently in full support of efforts that will lead to the placement of competent records conservators in their collections. Restoration services will focus on binding techniques, leaf-casting and mending procedures, deacidification treatments and fumigation. While there was not a general consensus on details of the proposal described here, opinions are undivided that restoration expertise is urgently needed. Mbaye's article in La Gazette des Archives (9), his report on the need for restoration services in archives of third-world countries (14), and the annual reports of the national archives of The Congo (6) and Senegal (19, 20) clearly demonstrate the awareness of such need.

The proposed training centre for records conservators would, if successful, render superfluous the numerous three to six months internships by African Nationals in French speaking countries of Europe and North America. It would provide great encouragement to all aspects of archives and their development in Africa. Unesco, if it can be convinced that there are properly trained records conservators in place, will probably be more inclined to provide funds for the purchase of restoration equipment for use in African archives. There is good news as far as the construction of new buildings is concerned: a new university library in Brazzaville, and a new archives building in Yamoussoukro. The existence of a training school for records conservator will heighten the awareness of national governments to provide adequate storage conditions, in which holdings are protected from dust and insects and where the temperature and relative humidity are kept at reasonable and constant levels. The practice of returning valuable documents, that have been painstakingly restored by skilled conservators, into uncontrolled storage conditions is increasingly considered to be undesirable. Ample literature exists which can be consulted when planning new archives facilities (21, 22). The proposed school will have a curriculum geared to the specific needs on archives in tropical climates. While the training program for the African nationals, who will become teachers upon their return to Africa, has not been worked out, Crespo's excellent study (11) should prove useful, as well as the pertinent literature by Perotin (16), Davies (17), Plumbe (18) and the Canadian Public Archives' own in-house training program (13), all of which will be consulted.

An important question is where the training centre will be located. In the majority of proposals and discussions, Dakar appears to be the place favored by most people involved. While the National Archives of the Ivory Coast are likely to have a new building in the near future, and while they also are hosting every year the archivists freshly graduated from EBAD as interns, Mr. Tchriffio seemed to indicate that they have neither a mandate nor facilities to provide training for records conservators. Since the majority of requests for grants in support of archives restorers originated in Dakar, its choice as site for a new training centre would probably meet with very little resistance. It would have the advantage of making available the rich holdings of the Archives of Senegal for the project, the proximity of the University of Dakar and its association with EBAD. The training centre could therefore be either part of the University of Dakar or be part of the Archives of Senegal.

In the observer's opinion the University of Dakar would provide the most suitable site for the establishment of a school for records conservators. The presence of EBAD and the support of its staff are considered to be necessary to ensure a successful beginning of the project, to guide it through its difficult initial period, and to effectively maintain its operation once it has been established. As EBAD has its own physical facilities, a school for archives restorers of regional vocation should likewise occupy a separate building which will house restoration studios with the necessary technical equipment as well as classrooms. A further strong reason to associate the proposed school with the University graduation would give the specially trained conservators an appropriate recognition in the archival community and will also improve employment opportunities.

The proposal to place the projected course at the University of Dakar does not exclude the participation of the Archives of Senegal. Quite to the contrary: the course will need the close co-operation of the Archives of Senegal, the support of its Director and its important holdings. The Director of the Archives of Senegal has been the strongest driving force behind numerous efforts to establish competent restoration services in Dakar. His wide expertise as an archivist and reputation in the archival community will, no doubt, contribute to the success of the proposed school. The Director of the Archives of Senegal can be expected to head an advisory committee on the course and to participate actively in the development of the course syllabus. Every co-operation between EBAD and the Archives of Senegal is strongly advocated so as to make the project virtually a joint endeavour between the two institutions.

It is highly desirable that all technical equipment be ordered and financed by one organization in order to ensure consistency, uniformity and compatibility. It should be purchased from well-established and reputable companies that will provide maintenance services and replacement parts. The equipment will most appropriately be purchased in France and be located in new facilities at the University of Dakar. It will be used for most of the time in teaching and demonstrations. It is anticipated, however, that it will be used for the restoration of the holdings of the Archives of Senegal during academic holidays, thus providing the Archives of Senegal with immediate help in urgent conservation problems.

REFERENCES

1. LAMBERT, Anne M.
Conservation in Canadian Museums: Goals for the 1980's (A Discussion paper prepared for the Museum Assistance Programmes of National Museums of Canada).
Ottawa, National Museums Canada, 1980. p. 1-67.
2. MBAYE, Saliou
Requête des Archives du Sénégal.
Dakar, Direction des Archives du Sénégal, 2 septembre 1980. 17 p.
3. MBAYE, Saliou
Application for Grant.
In: Application to the International Archival Development Fund: Setting up a restoration workshop for the archives of Senegal. Fund Dossier CAD/80/15. p. 1, 3-4. Oslo, Commission on Archival Development, International Council on Archives, September 3, 1981. (CAD/81/9).
4. FALL, Aliou
Équipement et assistance au profit des Archives du Sénégal.
Dakar, Ministre du Plan et de la Coopération, Sénégal, 22 septembre 1981. 2 p.
5. WOOLSTON, John E.
Letter to Dr. W.I. Smith, Dominion Archivist, PAC.
Ottawa, IDRC, November 23, 1982. 3 p.
6. NZINO, Edouard
Rapport annuel 1982.
Brazzaville, République Populaire du Congo, Services des Archives Nationales, 1982. 28 p.
7. TCHRIFFO, Dominique
Les Archives Nationales, instrument de travail au service de l'administration et de la planification. Fraternité Hebdo (Abidjan, Côte d'Ivoire), 24^e année, n° 1218, 3 septembre 1982, p. 8-13.
8. RÉPUBLIQUE DE CÔTE D'IVOIRE,
MINISTÈRE DE TRAVAUX PUBLICS, DES TRANSPORTS, DE LA CONSTRUCTION ET DE L'URBANISME
Le Climat de la Côte d'Ivoire. Abidjan, ASECNA, Service météorologique, 1979, 86 p.

9. MBAYE, Saliou
Problèmes spécifiques aux Archives en Afrique.
La Gazette des archives (Paris), 1^{er} trimestre, n° 116, 6 août 1982,
p. 20-29.

10. ROPER, Michael
Establishment of a Technical Training Centre in Archival Restoration
and Reprography. Paris, Unesco, 1980. 31 p.
(RP/1979-80/5/10.1/03/FMR/PGI/80/160 (ROPER))

11. CRESPO, Carmen
Development of a Regional Demonstration and Training Centre at the
School for Archivists, University of Cordoba. Paris, Unesco, 1981.
28 p.
(RP/1979-80/5/10.1/03/FMR/PGI/81/116E)

12. DEWARAJA, A.
Archives Preservation. Project Findings and Recommendations (Nepal).
Paris, Unesco, 1978. 34 p.
(UNDP/NEP/70/009/FMR/PGI/78/232 (UNDP))

13. CANADA. PUBLIC ARCHIVES. TECHNICAL SERVICES
Training Program: Records Conservation. Ottawa, PAC, October 1982.
30 p.

14. MBAYE, Saliou
Rapport sur les besoins du tiers-monde dans le domaine de la restau-
ration des archives. Brême, International Council of Archives, Con-
servation and Restoration Committee, 31 mai - 1^{er} juin 1979. 6 p.

15. BUSSO, Amadou
University of Dakar School for Librarians, Archivists and Documental-
ists. Unesco bulletin for libraries (Paris), Vol. XXVII, n° 2,
March-April 1973, p. 72-77, 107.

16. PEROTIN, Yves
A Manual of Tropical Archivology. Paris, Mouton and Co., 1966.
149 p.

17. DAVIES, John
A study of the basic standards and methods in preservation and resto-
ration workshops applicable to developing countries. Brussels,
Unesco, 1973. 89 p.

18. PLUMBE, Wilfred J.
The Preservation of Books in Tropical & Subtropical Countries.
London, Oxford University Press, 1964. 72 p.
19. MBAYE, Saliou
Rapport annuel 1981. Dakar, Direction des Archives du Sénégal.
1981. 75 p.
20. MBAYE, Saliou
Rapport annuel 1982. Dakar, Direction des Archives du Sénégal,
1982. 89 p. + 3 Annexes.
21. BELL, L.; FAYE, B.
La conception des bâtiments d'archives en pays tropical. Paris,
Unesco, 1979. 190 p. (Documentation, bibliothèques et archives:
études et recherches, 9).
22. DUCHEIN, Michel
Les Bâtiments et Équipements d'Archives. Paris, Unesco, 1966.
312 p.
23. MAHIN, Susan A.
Centre régional de formation de techniciens de la reprographie et de
la restauration des documents d'archives et de bibliothèques: Afrique
francophone. Paris, Unesco, 1980. 5 p.

APPENDIX A

NAMES AND ADDRESSES

1. M. Mahaman E. Sade
Chef du Service des archives nationales
B.P.S. 550 (Boite postale service)
B.P.P. 10 639 (Boite postale privée)
NIAMEY
République du Niger
Tel.: Bureau 72-26-82
Domicile 72-36-54

2. M. Hamidou A. Sidikou
Directeur
Institut de recherches sur les sciences humaines (IRSH)
Université de Niamey
B.P.S. 318
B.P.P. 12 022
NIAMEY
République du Niger
Tel.: 73-46-03

3. M. Mano Coulidiaté
Bibliothécaire en chef
Bibliothèque de l'Université
Université de Niamey
B.P. 10896
NIAMEY
République du Niger
Tel.: 73-27-13/14/15

4. M. Mohamed Boulama
Directeur de la météorologie
Météorologie nationale
Ministère de Transport
B.P. 218
NIAMEY
République du Niger
Tel.: 73-21-60

NAMES AND ADDRESSES

5. M. Jean-Pierre Bitoumbou
Directeur des Services de Bibliothèques,
d'Archives et de Documentation
B.P. 1489
BRAZZAVILLE
République populaire du Congo
Tel.: 81-12-87
81-08-53
6. M. Edouard Nzino
Chef de Service des Archives Nationales
B.P. 1489
BRAZZAVILLE
République populaire du Congo
Tel.: 81-34-85
7. M. Antoine Moulié
Chef de service
Bibliothèque Nationale populaire du Congo
B.P. 1489
BRAZZAVILLE
République populaire du Congo
Tel.: 81-08-53
8. M. Joseph Mabika
Chef de service du Centre National de Documentation
B.P. 1489
BRAZZAVILLE
République populaire du Congo
Tel.: 81-08-53
9. M. Romain Pindou
Centre National de Documentation
B.P. 1489
BRAZZAVILLE
République populaire du Congo
Tel.: 81-08-53

NAMES AND ADDRESSES

10. M. Bruno Wambi
Conservateur
Bibliothèque Universitaire de Brazzaville
Université Marien Ngouabi
B.P. 2025
BRAZZAVILLE
République populaire du Congo
Tel.: 81-14-30

11. M. François Wellot-Samba
Conservateur
Directeur des Bibliothèques de l'université
Marien Ngouabi
Université Marien Ngouabi
B.P. 822
BRAZZAVILLE
République populaire du Congo
Tel.: 81-14-30

12. M. Gabriel Mankedi
Directeur du Service Météo
ANAC (Agence Nationale de l'Aviation Civile)
B.P. 208
BRAZZAVILLE
République populaire du Congo
Tel.: 81-07-55 B
81-31-45 D

13. M. Dominique Tchriffo
Directeur des Archives Nationales de Côte d'Ivoire
B.P. V126
ABIDJAN
République de Côte d'Ivoire
Tel.: 32-41-58
32-74-20

NAMES AND ADDRESSES

14. M. Seydou Gueye
Directeur de la Bibliothèque Nationale
B.P. V 180
ABIDJAN
République de Côte d'Ivoire
Tel.: 32-38-72

15. Mme Françoise N'Goran
Conservateur
Directrice Bibliothèque universitaire
Université d'Abidjan
08 B.P. 859
ABIDJAN 08
République de Côte d'Ivoire
Tel.: 43-90-00, poste 3393

16. M. Bernard Césari
Directeur
Centre Universitaire d'Information et de Programmation
Conseiller Technique auprès du Recteur
Université d'Abidjan
ABIDJAN 08
République de Côte d'Ivoire

17. M. Souleymane Keita
Professeur
École Régionale de Treichville
Boulevard Mamadou Konate
ABIDJAN - TREICHVILLE
République de Côte d'Ivoire

18. M. Pierre Gautier
Directeur Régional de l'Enseignement
B.P. V 45
ABIDJAN
République de Côte d'Ivoire
Tel.: 22-85-96

NAMES AND ADDRESSES

19. Mme Rosette Allé
Inspecteur de l'Enseignement Primaire
ABIDJAN - TREICHVILLE
05 B.P. 1224
ABIDJAN 05
République de Côte d'Ivoire
Tel.: 32-15-61

20. M. A.S. Cissoko
Ingénieur de la Météorologie
ANAM (Agence Nationale des Aérodrômes et de la Météorologie)
15 B.P. 990
ABIDJAN 15
République de Côte d'Ivoire
Tel.: 36-71-71, poste 724/741

21. M. Saliou Mbaye
Directeur des Archives du Sénégal
Immeuble Administratif
Avenue Roume
DAKAR
République du Sénégal
Tel.: 21-50-72

22. M. Amar Samb
Directeur de l'Institut Fondamental d'Afrique Noir (IFAN)
Université de Dakar
B.P. 206
DAKAR
République du Sénégal
Tel.: 21-16-52

23. M. Théodore Ndiaye
Directeur de la Bibliothèque de l'Université de Dakar
Université de Dakar
B.P. 2006
DAKAR
République du Sénégal
Tel.: 23-02-79

NAMES AND ADDRESSES

24. M. Henri Sene
Directeur, EBAD (École de bibliothécaires, archivistes et
documentalistes)
Université de Dakar
B.P. 3252
DAKAR
République du Sénégal
Tel.: 23-07-39
23-05-42
25. M. A. Tendeng
Professeur, EBAD
Université de Dakar
B.P. 3252
DAKAR
République du Sénégal
26. M. Mansour Seck
Directeur de la Météorologie Nationale
Bureau à l'Aéroport Dakar
DAKAR-YOFF
République du Sénégal
Tel.: 20-08-51
27. M. Jean Favier
Directeur général des Archives de France
60, rue des Francs-Bourgeois
75 003 PARIS
FRANCE
Tel.: 277-1130
28. M. Pierre Durye
Conservateur en Chef aux Archives Nationales
Archives nationales
60, rue des Francs-Bourgeois
75 003 PARIS
FRANCE
Tel.: 277-1130, poste 210

NAMES AND ADDRESSES

29. M. Gilbert Barbier
Chef des Ateliers de Restauration des Archives de France
Archives nationales
60, rue des Francs-Bourgeois
75 003 PARIS
FRANCE
Tel.: 277-1130
30. Mme Thérèse Kleindienst
Secrétaire général
Bibliothèque nationale
58, rue de Richelieu
75 084 PARIS
FRANCE
Tel.: 266-6262
31. M. Albert Labarre
Conservateur en Chef du Service de la Conservation et de la
Restauration
Bibliothèque nationale
58, rue de Richelieu
75 084 PARIS
FRANCE
Tel.: 266-6262
32. M. Charles Kecskeméti
Secrétaire Exécutif
Conseil International des Archives
60, rue des Francs-Bourgeois
75 003 PARIS
FRANCE
Tel.: 277-1130
33. Mme Françoise Flieder
Directeur de Recherche au CNRS
Centre de recherches sur la conservation des documents graphiques
36, rue Geoffroy Saint Hilaire
75 005 PARIS
FRANCE
Tel.: 587-0612

NAMES AND ADDRESSES

34. M. Frantz Schmitt
Conservateur
Chef du Service des Archives du Film
Centre National de la Cinématographie
7 Bis, rue Alexandre Turpault
78 390 BOIS D'ARCY
FRANCE
Tel.: 460-2050
460-2879
35. M. Frank B. Evans
Programme Specialist
Division of the General Information Programme
Unesco
7, place de Fontenoy
75 700 PARIS
FRANCE
Tel.: 577-1610, poste 4660
36. Mme Susan A. Mahin
General Information Programme
Unesco
7, place de Fontenoy
75 700 PARIS
FRANCE
Tel.: 577-1610

APPENDIX B

LIST OF ABBREVIATIONS (IN ALPHABETICAL ORDER)

AEF

Afrique Équatoriale Française

AOF

Afrique Occidentale Française

ANAC

Agence Nationale de l'Aviation Civile

ANAM

Agence Nationale des Aérodrômes et de la Météorologie
(Côte d'Ivoire)

ASECNA

Agence pour la Sécurité de la Navigation Aérienne en Afrique et à
Madagascar
(Agency for the Safety of Aerial Navigation in Africa and Madagascar)

AUPELF

Association des Universités Partiellement ou Entièrement de la Langue
Française (Université de Montréal)

CELHTO

Centre d'Études Linguistiques et Historiques par Tradition Orales

CIDA

Canadian International Development Agency

LIST OF ABBREVIATIONS

CRDS

Centre de Recherches et de Documentation du Sénégal

EBAD

École de Bibliothécaires, Archivistes et de Documentalistes de Dakar.

GRTO

Groupe de Recherche sur la Tradition Orale
(à l'Université d'Abidjan)

ICA

International Council of Archives

IFAN

Institut Français de l'Afrique Noire (1938-1972)
Institut Fondamental de l'Afrique Noire (since 1972)

OUA

Organisation de l'Unité Africaine (Dares Salam)

PAC

Public Archives of Canada

LIST OF ABBREVIATIONS

UNDP

United Nations Development Program

Unesco

United Nations Educational, Scientific and Cultural Organization

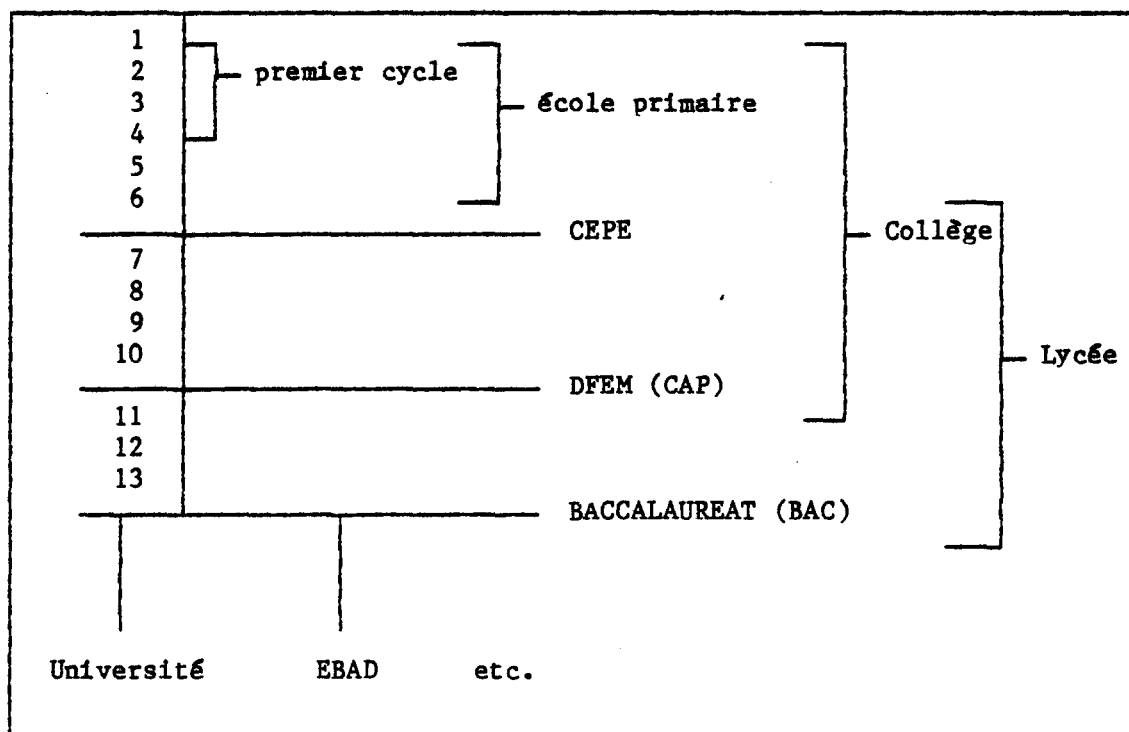
WARBICA

West African Regional Branch of the International Council on Archives
Branche Régionale Ouest-Africaine du Conseil International des Archives

Beginning at age six, the first four (4) years of elementary school comprise the "premier cycle"; after a total of six (6) years, the "école primaire" is terminated with a "Certificat d'Études Primaires Élémentaires", CEPE. It is also referred to as "Certificat d'études du Premier Degré".

i) after four (4) years a "Diplôme de Fin d'Études Moyennes", DFEM, is obtained. Sometimes it is also called: "Certificat d'Aptitude Professionnelle", CAP, or "Brevet des Études du Premier Cycle", BEPC. This is the end of the college level.

- Année**



APPENDIX D

SOME SCHOOLS IN FRANCE TEACHING BOOKBINDING

1. Lycée Technique Estienne
18, boulevard Auguste Blanque
75 103 PARIS
FRANCE
Tel.: 570-9619

In charge of bookbinding: M. Constantin

2. Collège d'enseignement technique mixte (Rouelle)
170, rue de Tolbiac
75 103 PARIS
FRANCE
Tel.: 589-3856
589-0306

3. Collège technique rue Madame
19, rue Madame
75 006 PARIS
FRANCE
Tel.: 598-3185

Contact: Mlle Barras; M. Fournier

4. Collège d'enseignement technique de Lisieux
4, rue du Moulin-à-Tan
14 100 LISIEUX
Dept. Calvados
FRANCE
Tel.: (16) 31-62-1718

5. École Privée :

Union Centrale des Arts Décoratifs
6, rue Beethoven
PARIS
FRANCE
Tel.: 520-5405

SOME SCHOOLS IN FRANCE TEACHING BOOKBINDING

6. Academic training in conservation:

Université de Paris I (Sorbonne)
Maîtrise de science et technique de restauration
et conservation des oeuvres d'art
1, rue Michelet
PARIS
FRANCE

Responsable du cours de 4 ans: M. Sodini

First two years:

Cycle préparatoire : hisoire de l'art;
ou : cycle de sciences.

Le baccalauréat est nécessaire, ensuite on peut entrer en maîtrise:

1. Technologie des matériaux
 2. Année des stages
- Ici la spécialisation en:
oeuvres d'art; ou:
archéologie et ethnographie

7. L'Institut Français de Restauration des Oeuvres d'art

I.F.R.O.A.
42, avenue de Gobelins
PARIS
FRANCE
Tel.: 337-9337
336-6760

Le baccalauréat n'est pas nécessaire

Le directeur est M. Coural

Nombre maximum d'élèves: 4x4 = 16

Il y a 4 sections de 4 ans durée chacune:

1. peinture
2. oeuvre d'art sur papier
3. ébéniste
4. céramique

