

## Preservation and Conservation in Provincial Archives in Pakistan

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### **Introduction**

Modern society depends a great deal upon information, because in the rapid and busy life, it is in great need of right and accurate kind of information at the right and proper time to improve its capability, experience and development. A manager of business firm should have to be able to take a right kind of decision. A businessman might need information to set up a new business. A teacher, scholar, and specialist might need information to keep themselves up-to-date and well informed in their fields of specialization. A historian might need information to open the door of the past and transmit the evidence and experiences of the nations, governments, and prominent personalities. All this goes to show the significance of information. In this information era various organizations in the form of institutions deal with information (of the past and the present), *libraries* and *archives*, inter alia, being two of them.

At this time, in Pakistan, there are four provincial archives in Pakistan (1) Sindh Archives, Karachi (2) Baluchistan Archives, Quetta (3) NWFP Archives, Peshawar, and Punjab Archives, Lahore. which are established only to preserve archives of provinces respectively. Archives, in whatever medium and format, are vulnerable, and also very sensitive to rapid fluctuation in temperature and relative humidity, so that they have to be kept in carefully controlled storage areas within secure building. Archives which are physically deteriorating should be identified and receive professional treatment, so that the unique information which they contain can be passed on to the future generations. These all occur in the archive profession by the function of preservation and conservation. The situation of the preservation and conservation of valuable materials at the Provincial Archives is as under:

### **Safe Building and Security**

Archival material is vulnerable, unique and irreplaceable, so first it needs a secure and safe building. Suitability of building may involve appropriate area where building is intended for construction, soil be tested,

climate be considered and their changes and planning for disaster such as earthquakes, flood, storm, fire etc. For the security a system be established whereby the building and material be saved. Below the data is shown for the action taken by the Provincial Archives for safe building and security.

**Table—1**

Name of Provincial Archives	Climate	Disasters Planning	Security Officer	Intruder Alarm	Fire Alarm	Fire Extinguisher	Screening System
Sindh Archives	Unsuitable	None	Chokidar	None	None	Installed	None
Baluchistan Archives	Suitable	None	None	None	None	None	None
NWFP Archives	Normal	None	Guard	None	None	Installed	None
Punjab Archives	Suitable	None	Guard	None	None	Installed	None

Source: Data collected through Questionnaires

The buildings of the Provincial Archives except Sindh Archives, Karachi are situated at the area where climate is suitable while the building of Sindh Archives is at a seashore, which is not suitable because of salt winds and humidity, which are hazardous for the archives. The planning for disaster planning such as fire, flood, earthquake etc. which is very important before construction or accommodation of archives was ignored in all the Provincial Archives. In the Provincial Archives except Baluchistan Archives various kinds of Fire Extinguishing Systems have been installed but no training has been provided to the staff. The security measures are also not fully taken for the Provincial Archives. In Sindh Archives one Chokidar and in NWFP and Punjab Archives one guard is assigned at the entrance for vigilance. There is no installation of the Intruder Alarm and Fire Alarm. For security purpose no equipment has been fitted at entrance gate for the screening of staff and users.

### **Storage Environment**

The second important component of the Preservation is to provide suitable storage environment to protect records from various elements by

which records may be deteriorated and damaged such as temperature and relative humidity, light, and insects, fungi etc. The situation of Provincial Archives regarding Storage Environment is given below:

### Temperature and Relative Humidity

The situation of Provincial Archives regarding temperature and relative humidity is examined below:

**Table—2**

Name of Provincial Archives	Establish System	Equipment Used for temperature	Equipment Used for RH	Condition Level
Sindh Archives	Yes (Partially)	Air-Conditioning (only in Rare Book Section)	Humidifier (only in Rare Book Section)	20 <sup>0</sup> C temperature and 60 <sup>0</sup> RH
Baluchistan Archives	None	None	None	None
NWFP Archives	None	None	None	None
Punjab Archives	None	None	None	None

**Source: Data collected through Questionnaires**

To store the significant records in appropriate storage environmental condition the Provincial Archives have failed to create suitable atmospher. The Sindh Archives is centrally air-conditioned but it is out of order for a long time. At this time, only rare books section is individually air-conditioned and humidifier installed for maintaining temperature at 20<sup>0</sup>C and relative humidity at 60<sup>0</sup>C. Other all records including public records are neither monitored nor controlled in terms of required temperature and relative humidity. Whereas in Baluchsitán, NWFP and Punjab Archives no such system has been adopted until the time of the writing of this thesis.

### Light

Light, whether natural or artificial can weaken some materials, causing them to fade or darken. The situation of the Provincial Archives regarding light is given below:

**Table—3**

Name of Provincial Archives	Sunlight	Stack Areas	Windows covered with	Artificial Light on / off	Measures used to prevent adverse effect of light
Sindh Archives	Away	Windowless	-	Off	None
Baluchistan Archives	Away	Windowless	-	Off	None
NWFP Archives	Away	With window	Curtains	Off	None
Punjab Archives	Away	With window	None	Off	None

**Source:** Data collected through Questionnaires

Sunlight as well as artificial light contains a high level of ultraviolet radiations. To avoid from adverse effect of the sunlight the Sindh and Baluchistan Archives have stored their public records in windowless stack areas Whereas NWFP and Punjab Archives have stacks area with window while the NWFP Archives use curtains. To avoid adverse effect of artificial light the only step which has been taken in the Provincial Archives is off the light when the records are not needed

### **Fungi, Insects and Mildew etc.**

Fungi, mould and mildew weaken material, causing ink to fade, material to fall apart, and brown spots (foxing) to appear. Such growths are caused by moisture in the air. Insects such as cockroaches, silverfish, termites, booklice and bookworm, beetles and moths all feed on the cellulose and starch in books and papers and other archival material. They may stain items and eat them. To save from these hazards the situation of the Provincial Archives are given below:

**Table—4**

Name of Provincial Archives	Evidence found	Preventive Measures	Designed Pest Control Programme	Fumigation Chamber
Sindh Archives	Yes	Taken	None	Exists
Baluchistan Archives	Yes	None	None	None
NWFP Archives	Yes	Taken	None	Exists
Punjab Archives	Yes	Taken	None	Exists

Source: Data collected through Questionnaires

In the Provincial Archives evidences are found for the existence of insects, fungi etc. to rescue from the harms. No Pest Control Programme has been designed. The only system is the fumigation, which is used in Provincial Archives (except Baluchsitan Archives).

### Protective Packaging

Storing archival material in enclosures is one important preventive preservation technique, which provide protection from light, dust and airborne pollutants. They also provide protection from water, smoke, heat and other destructive agents. The situation of Provincial Archives about Protective Packaging is given below:

**Table—5**

Name of Provincial Archives	Records kept in	Type of Enclosures	Acid-Free	Made or Purchased
Sindh Archives	Enclosures	Boxes	Yes	Purchased
Baluchsitan Archives	Enclosures	Bastas	None	Made
NWFP Archives	Enclosures	Wooden Cupboards and Boxes	Yes (Boxes)	Purchased
Punjab Archives	Enclosures	Wooden Cupboards or Drawers	None	Made

Source: Data collected through Questionnaires

The Provincial Archives have various kinds of material in various formats and sizes. The Sindh Archives are now keeping in the public

records in acid-free boxes, which are purchased from a local vendor. Other types of records such as registers, maps, large sheets etc. are not kept in boxes. Non-paper materials such as microforms and audiovisual material are kept in cases. The Baluchistan Archives has also started to prepare bastas, in which they are storing the public records. These bastas are not acid-free. The large amount of the public records are still openly kept without any enclosures. The NWFP Archives was initially keeping the public records in wooden cupboards. But now they are purchasing the acid free boxes from local vendor. The situation of the Punjab Archives is critical because no acid-free boxes and enclosures are used for the storage of public records. The Punjab Archives kept their records in the wooden cupboards. For this purpose in the sections where public records are kept these cupboards are fitted with in the walls. The cupboards are of convenient height, 7-8 feet.

### **Protective Reprography**

Any original material is unique important and fragile. Therefore constant uses will adversely affect them. To avoid the use of the original records over and over again the method of the reprography is used. The method and equipment for reprography used by the Provincial Archives is given below.

**Table—6**

<b>Name of Provincial Archives</b>	<b>Designed Reprographic Policy</b>	<b>Reprographic Records</b>	<b>Technique Used</b>
Sindh Archives	None	Selected	Photostat, Microfilm
Baluchistan Archives	None	None	None
NWFP Archives	None	A Category files (not all)	Photostat, Microfilm
Punjab Archives	None	A Category files (not all)	Photostat, Microfilm

**Source: Data collected through Questionnaires**

The Provincial Archives have no policy framed for the reprography that what material will be reproduced in which format for use and handling. In the Provincial Archives the photocopying and



microfilming technique for reprography is used. In Baluchistan no such type of technique is used.

### Conservation Treatment

As archival material is old and used by research scholars over and over again. Moreover, the archival material is acquired in already deteriorated form. Therefore, it requires conservation treatment to restore the material by manual and mechanical methods. The Provincial Archives give the following treatment for repair and restoration of their records.

Table—7

Name of Provincial Archives	Conservation Laboratory	Method of Treatment	Acidity Checking	De-acidification of document	Binding	Lamination
Sindh Archives	Exist	Traditional and Mechanical	Yes	Yes	Yes	Yes
Baluchistan Archives	None	None	None	None	None	None
NWFP Archives	Exist	Traditional and Mechanical	Yes	Yes	Yes	Yes
Punjab Archives	Exist	Traditional and Mechanical	Yes	Yes	Yes	Yes

Source: Data collected through Questionnaires

The Provincial Archives except Baluchistan Archives have established a conservation laboratory where traditional and mechanical processes are given to the records including binding and lamination. In these laboratories the facility of acidity checking is available and also de-acidification of the documents. In fact, these sections or laboratories are not fully active. At this time they are restricted to binding and lamination work at the most.

**Recommendations:**

- (1) The Provincial Archives should design a complete anti-disastrous planning to protect the archival material from fire, flood, earthquakes etc. Moreover, the Provincial Archives must provide necessary training to their staff in respect of fire, fighting and other natural disasters so that they may be alerted and fully prepared to safeguard their centers.
- (2) For security of the record and building the Provincial Archives should appoint an experienced Security Officer (a retired army officer is preferred) and then design a system for security according to the requirements of the Provincial Archives and also install the security devices including an intruder alarm, connect fire alarm with local fire brigade headquarter, and install fire extinguishing system etc.
- (3) The Provincial Archives should install Screening Machine at the entrance for the checking of the staff, visitors, researchers etc. Firearms such as weapons, explosives and other items, which are dangerous for records and building should be prohibited. For this purpose a property desk or lockers be provided where such items be deposited. It is also suggested that Provincial Archives provide a temporary Identification Card to the researchers which must be worn at all times during their presence in the building premises.
- (4) To monitor the temperature and relative humidity, the Provincial Archives must use devices which record climate conditions continuously (*at present two types of instruments are available in the market (1) those which record condition at a specific moment such as a Thermometer (approx. \$ 10 and up), Simple Dial-Type Hygrometer (\$ 15 and up), Humidity Indicator Strips (from \$ 1 to \$ 5 per Strip), Sling Psychrometer (approx. \$ 100), Battery-Operated Psychrometer (\$ 150 and up), an Electronic Temperature / Humidity Meter (\$ 300 and up) and Min/Max Digital Thermohygrometer (\$ 70), and (2) those which record climate condition continuously such as Recording Hygrothermographs (approx. \$ 700 and up) and Dataloggers (approx. \$ 500 and up) etc.*) and install the necessary equipment in each Strong Room / Stack Area as required for measuring temperature and relative humidity.



- (5) To create a stable environment condition, a well-designed and efficient air-conditioning system installed for controlling the environment because it controls both temperature and relative humidity and filters air pollutants. Compromise levels for combined medium and safe comfort are 18<sup>0</sup>C to 22<sup>0</sup>C temperature and 45% to 55% relative humidity is appropriated.
- (6) To control the adverse effects of light the Provincial Archives should store archival material away from sun light. Keep them in windowless rooms / stacks or cover the windows with heavy black curtain or blinds. Keep the light off whenever possible and reduce the voltage of bulbs. For artificial lights the Provincial Archives should install ultraviolet filters over fluorescent lighting; these filters are plastic covers that slip over the fluorescent tubes, screening out the ultraviolet rays. There are also fluorescent lamps available with built-in ultraviolet filtration. Replace fluorescent lighting with incandescent lamps whenever possible. Inspect material regularly, checking for fading or drying or brittling. Material should be kept in acid-free boxes, folders, envelopes etc. Original records should not be displayed in exhibitions of if they are, they must be displayed in glass cases where human touch does not reach them.
- (7) For the safety of records and save the records from various hazards such as insects, rodents, fungi, mould, mildew, dust and pollutant, acidity etc the Provincial Archives should check the incoming material and fumigate infested material to kill fungi, insects etc. and immunize them and then keep them in acid-free boxes etc to save them from dust and other pollutants.
- (8) To prolong the life of records and to reduce or defer the need for laboratory treatment by improving the physical storage environment, the Provincial Archives must keep archival material regardless of physical form such as files, maps, charts, models, oral archives, registers etc in acid-free boxes, containers, envelopes etc. If not easily accessible in market, prepare them according to their requirements.
- (9) For over-use of the original records, which are fragile, brittle and which deteriorate the records and to control mishandling, the Provincial Archives must give orientation to the users for handling of the original records and precautions. Moreover, the Provincial

Archives should reproduce those original records in another medium, which is frequently used.

- (10) All the permanent records of the provincial government will be reproduced by any media such as microfilm, scanning, photocopying etc. For the reproduction of other material such as manuscripts, rare books, newspapers, private collections the decision will be made by the Advisory Committee on the basis of their significance.
- (11) The Provincial Archives should establish a Special Media Preservation Laboratory for reformatting and duplicating records created on textual and non-textual formats. This may include duplicating and reformatting microfilms, sound and video recordings, motion picture films, still photos etc
- (12) The Provincial Archives should establish a full conservation laboratory with skilful conservation staff to give treatment to the historical documents to prolong life of records in their original format. The conservation laboratory repairs and stabilizes textual records (un-bound papers, bound volumes and cartographic items and photographic images) among the holdings.
- (13) The conservation laboratory should be able to examine and analyze the archival material. Check the acidity and de-acidify them.
- (14) For the restoration of the documents the Provincial Archives be able to laminate by all required methods and attempt to bring them in the original shape and form.

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