REPUBLIC OF NAMIBIA

MINISTRY OF EDUCATION, ARTS AND CULTURE
NATIONAL ARCHIVES OF NAMIBIA

Digitization Policy

Preamble

This policy is valid for the National Archives of Namibia. It was compiled in June 2008, last updated in September 2017, and is subject to annual revision.

The purpose of this policy is to guide the process of digitization in the National Archives for optimal access to, and preservation of, the national heritage entrusted to the National Archives.

A. Selection

Although digitisation is an excellent means for facilitating access to archival documents, it is costly in terms of digitisation equipment, storage and backup equipment, and staff cost. Staff cost implies not only the cost of creating a digital copy, which in most cases is minimal, but also the creation of metadata, and the continuing curation of the digital collection which will constantly have to be guarded against hardware and software obsolescence. These factors limit the amount of digitisation, and call for stringent criteria to select material to be digitized.

Documents should be considered for digitisation for four main reasons:

1. Improved public access
   1.1 to key historical documents which should be generally available in Namibia, in particular teaching and learning, such as
   - the Treaty of Hoachanas
   - the Hendrik Witbooi Papers

   1.2 to government documents which should be generally available to every citizen, e.g.
   - the Government Gazette
   - Government policies

   1.3 for regionally important documents which should be shared with other countries, under the terms of bilateral cultural agreements, e.g.
   - the ECSA accession which covers especially South Africa

1.4 for material with high frequency of use by the general public which is endangered by theft or careless handling, e.g.
- photos
- maps
- the biographies collection

2. Preventive preservation
   2.1. for deteriorating documents of high user frequency, e.g.
   - NAO (Native Affairs Ovamboland)
   - German files on the 1904 war
   - maps
   - newspapers, newspaper cuttings

3. Proactive preservation
   3.1. for documents which are threatened by becoming unreadable by technological change, or by slow but irreversible deterioration, e.g.
   - audio tapes and audio cassettes
   - obsolete video formats
   - films
   - colour photos and transparencies
   - self-destructive paper-based print technologies (eg heat- and pressure-sensitive paper)

4. Digital consolidation of scattered material
   4.1. for multi-part documents which have been distributed and collected inconsistently and are therefore rarely available in complete sets, and which may be complemented digitally with material from other collections, e.g.
   - liberation struggle periodicals
   - conference paper sets

Priorities for digitization should also be selected according to the following criteria:

5. Is the material arranged, organised, described, can it easily be fitted into a meaningful and lasting numbering system so that digital images can be correlated to the originals? (Otherwise a later re-arrangement may threaten the correlation between original object and the digital metadata)
6. Is the material unique or do other collections exist with more or less the same information? (e.g. newspaper cuttings collections covering the same period, same subject area, and same newspapers)
7. Does metadata already exist which only has to be converted? How comprehensive is the available metadata, e.g. in digital finding aids and catalogues?
8. Is the material physically suitable for the existing hardware? Or is hardware easily accessible elsewhere? (Large formats, negatives, transparencies, microfilms
9. Does the material have to be transported to the scanning location? Does the necessary transport involve preservation hazards? (oversized material such as maps / fragile material such as glass negatives)
10. Can additional donor funding be acquired for the digitisation of this material?
11. Is the digitised material likely to generate additional revenue?

12. Is the digitisation likely to generate added value, such as improved search facilities through optical character recognition?
13. Is the copyright cleared?

An evaluation template taking all factors into account should be used to identify the urgency of digitisation of a specific group of material.

B. Care for originals

Except for a few categories of material, digitisation should not be seen as a preservation medium but as a method enabling better care for the original documents. Digitisation does not relieve the Archives of its duty to maintain the original documents in optimal condition.

Before and during digitisation:

Best care is to be taken that original documents are not damaged by the digitisation process.

1. Where available and adequate, overhead camera digitisation technology is to be preferred over flat-scanner technology.
2. Scanning processes which involve automatised movement of originals (roll scanners, automatic sheet feeders) must be avoided where the original is fragile and likely to be damaged by the process (brittle paper, tears in the original, etc).
3. Stapled and glue-bound documents ("perfect binding") which do not open wide enough for scanning may be opened, or the glued spine cut off for better scanning, if the document is a modern mass-produced book or document with sufficient margin which can easily be re-bound.
4. In archival files, any metal clips, staples, "Indian" file binders should be removed before digitisation.
5. "Prussian" style sewed file binding may be opened for digitisation if necessary, in particular if the file is thick, might be damaged by manipulation, or if the binding obscures parts of some documents.
6. Loose papers must be checked for correct order before digitisation
7. Unnumbered pages must be numbered before digitisation, preferably in soft pencil in the top right corner (or elsewhere if that space is unsuitable)

After digitisation:

Best care is to be taken that original documents are kept safe in optimal condition:

1. Originals are never to be discarded, unless they have deteriorated to an extent where it is pointless to keep them as a source of information. Possible future improvements in technology should be considered in such decisions.
2. Rare or unique originals should be kept at optimum storage conditions in suitable enclosures (envelopes, folders, boxes) without disturbance, and only used in well-motivated cases to rectify mistakes, to clarify doubts in the digital version, or to improve on digitisation quality where required, or to carry out restoration. The enclosures should be marked with a stamp or in writing **"Digitised – use electronic version"**.
3. Modern published originals in good condition may be kept in circulation for normal consultation, but photocopying should not be allowed; instead copies should only be printed from the digital version. To ensure this, they should be

stamped or labelled with a text such as **"Digitised. Photocopying prohibited. Draw copies from digital version"**, and the location of the digital version given.

4. Published bound documents which were disassembled for digitisation, should be re-bound where necessary, except where the digitisation was done from redundant duplicates.
5. Disassembled archives should remain as loose pages, but be secured as best as possible against damage by bundling, encasing, interleaving, encapsulation or other suitable methods which may differ from case to case according to the format and condition of the original.

C. Technical standards

1. Resolution and file formats

1.1. Normal text documents, including manuscripts, should be scanned in 300 dpi resolution (unless a project partner requires higher resolution).
1.2. Images (photos, artwork) and manuscripts of particular national importance should be scanned in 600 dpi resolution. (Photographic prints of A4 and larger size: 400 dpi)
1.3. Photo negatives, transparencies and other small-format photographic originals should be scanned in 1200 dpi or higher, depending on an assessment of the actual needs.
1.4. All scans should be saved in uncompressed TIFF file format.
1.5. Audio material should be saved in uncompressed WAV format.
1.6. Other specifications for audio and video digitizations still have to be determined.

2. Preservation and data security

2.1. For two-dimensional images, a master copy is to be kept as an uncompressed TIFF file in the original resolution on the archival server.[1] This is meant to ensure safe future migration of the data to new hardware and software platforms.
2.2. A backup tape copy of the uncompressed master files is to be stored at a secure offsite location. Relatively unsafe media such as writable CDs, DVDs, and memory sticks are not to be used as a backup media.
2.3. The archival server is to be monitored for data corruption and other signs of hardware failure.
2.4. Timely action has to be taken for migration to new hardware and software platforms if this appears necessary.

3. Manipulation

3.1. Master copies should not be cropped, cleaned, or otherwise manipulated. In particular, no effort should be made to erase or conceal underlinings, marginalia, stamps or other property marks, tears, shelf numbers, page numbering, etc. No digital enhancement of photographs (photoshop) should be attempted on the master copy. Any such manipulation, where it is deemed necessary to improve on readability and aesthetics, should be done on additional copies or derivatives.
3.2. Adjustment of orientation of the scanned image is permissible.

4. Derivatives

4.1. Derivatives in the form of compressed, collated, OCR'ed and otherwise manipulated files may be used to display the digital object to the end user.
4.2. Derivatives should as far as possible be done in international standard file formats such as TXT, RTF, JPG, JP2, GIF, or PDF.
4.3. Proprietary files formats should be avoided by all means to ensure that derivatives are not unduly threatened by obsolescence, which might later require re-creation of the derivatives from the master copy.

[1] Safe formats for audio and audiovisual data will have to be decided once sufficient expertise is available. Current recommendations point to WAV as the preferred format for audio files.

5. File naming convention

As far as feasible, digital master files should be named uniformly according to the following scheme of three to four elements, which may be modified according to special requirements:

(a) acronym of the original's repository
(b) shelf number / call number within the repository
(c) further subdivisions where applicable, e.g. several volumes of the same file number (special characters may be used as separators)
(d) consecutive page numbering preceded by the letter "p" [Unnumbered verso pages may be indicated by adding the letter "v" after the previous page number]

The file name may not contain any of the following characters:
/ @ # % ^ & ? * ( ) | $ < > and blanks (empty spaces).
The dot (.) should be restricted to the place preceding the file extension.
Hyphens (-), underscores (_), plus (+) and square brackets ([]) are permissible.
In call numbers containing vertical slashes (/) or dots (.), those should be either omitted:

Example: TLE/0071 convert to tle0071

or, if that would lead to confusion, replaced by hyphens:

Example: 23/17/4 convert to 23-17-4

File naming convention for archival files
Example:

Repository: National Archives of Namibia
Archival group: ZBU
Storage unit: 113
File number: J.XIII.b.4
Volume number: 2
Folio: 37 verso

translates to:

nanZBU[113]J-XVIII-b-4v2p37v

6. Quality control

Quality control of the scanned images by a second person (not the scanning operator) is absolutely vital. Quality control has to be done with the original at hand, and includes checking for

- Completeness (missing, or duplicate pages)
- Completeness of the image (cropped images)
- Correct sequence and numbering
- Focus
- Screen orientation
- Correct file format and resolution

7. Metadata

Wherever possible, metadata creation and adequate retrievable storage should be undertaken immediately after digitisation, possibly compined with quality control.

Metadata standards will be developed and provided in a separate document.

D. Access

1. Master copies

High-resolution digital master copies are stored offline on the archival server. Direct user access to master copies on the archival server is not allowed; access to master material should be mediated by staff making copies.

2. User copies

Acess to user-friendly derivaties of digitised material is generally permitted on the in-house public server, except where access to the original is not allowed for other than preservation reasons. Access to the in-house public server is given in the Archives Reading Room.
Such material may also be made available in regional records centres outside Windhoek.

Upon special requests, copies of high-resolution master copies may me made available to users if this is required for research purposes.

3. Internet access

Each case of making archival material accessible on the internet must be carefully considered with its individual merits. This will be regulated by a separate policy.

4. Provision of digital copies

In analogy to the provision of photocopies, digital copies are only issued to users against a written confirmation that they will be used for personal research only; that they will not be passed on or copied to third parties; and that permission to publish the copies in any format will require a separate permission from the archives.

Digital copies for publication in any format (digital or non-digital) are issued against payment of the applicable fees. Digital copies of material where the copyright is held by third parties will not be issued.

The pricing for digital copies of already digitised files should be lower than photocopying, to discourage the damaging practice of photocopying.

E. Additional considerations

In the archival profession, microfilming is generally considered a much safer long-term preservation option for documents. There is currently little doubt that properly produced and stored silver microfilms have a proven lifespan of several hundred years, while the curation of digital copies requires constant attention to prevent them from becoming obsolete and unreadable. It is also alleged that microfilming is faster. Several archives have therefore opted for parallel digitisation and microfilming.
However, the National Archives of Namibia is following the route of primary digitisation, with the option of future conversion of the digital files to microfilm.
A detailed discussion of this question is outside the scope of this policy, but the main reasons are:

1. Digitisation allows immediate quality control of the image on the screen; whereas on microfilms poor quality (focus, exposure) is only discovered once the film has been developed (WYSIWYG – what you see is what you get). Skipped pages or other error corrections are easy to insert later in a digital sequence, while such errors are difficult to correct with microfilm.
2. Ease of access. Microfilm reader/printers are expensive and difficult to maintain, therefore rare, while digital files can be read on any state of the art computer.
3. Ease of duplication. Duplication of microfilms entails a specialised mechanical, optical and chemical process which is currently not even available in Namibia, while digital images can be copied by any computer on a variety of carriers. This also facilitates backup copies for disaster management.
4. Ease of use. It is faster to move in digital files, than to scroll through a film; colour scan images are far easier to read and evaluate than a black-and-white microfilm.
5. Easy transfer by electronic means (email, internet) all over the country, which is an equitable development goal.