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Digital Union Catalogue of Malay Manuscripts at the National Library of Malaysia: The Way Forward

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Abstract:

As an inherited legacy from the past generations, Malay manuscript represents an important storehouse of the Malay people in terms of their culture, thought, values and history. Thus, it is nationally recognized as the documentary heritage of the nation worthy to by officially collected, documented, disseminated and protected from extinction. Yet, challenges abound in tracing and building a comprehensive database of the Malay manuscript due to its scattered existence in private hands apart from the documented public collections. On the other hand, there is also an urgent need to study and transliterate the old Jawi script used in the Malay manuscript in order to make it more accessible to the contemporary audience. At present, the National Library of Malaysia (NLM), as an officially-entrusted custodian of the Malay manuscript at the national level, holds almost 5,000 copies of the original Malay manuscripts. In this regard, it is amongst the major institutions that hold Malay manuscript worldwide and is actively acquiring and developing its collections. Preservation measures undertaken at NLM include restoration of damaged manuscripts, microfilming, and digitization including disaster preparedness and recovery programme through physical and electronic means. In this paper, the main focus is on the latest digital union catalogue of Malay manuscript initiative undertaken by NLM. Specifically it discusses the salient characteristics and features of the new digital gateway in terms of its content, structure, accessibility and functionality amidst similar existing initiatives at the regional and international levels. Finally, it is envisaged that NLM, through this digital initiative, can effectively boost its role as an important source of information and research relating to Malay manuscript in the dawn of the big data era.

Keywords: Malay manuscript, documentary heritage, preservation, digitization

Introduction

Malay manuscripts are a priceless heritage of knowledge that has come to us from the distant past. What is meant by "Malay manuscripts" is written works, especially those written in Jawi script and produced as early as the late 15th century or around the 16th century and as late as the early 20th century.

In the beginning, the surface of rocks and chisels were used as tools for writing. Bricks and dry mud, as well as minerals such as iron and copper, were also used. Soon the Malays, by their own effort and insight, used tree bark to make their own paper, which they called daluang (Broussonetia papyrifera). Although the daluang lasted longer, the process of making it was a bit complicated. Hence its use was limited. Apart from the daluang, the Malays also used lontar leaf (Borassus flabellifera), pieces of bamboo, planks, parchment and cloth. Each required different way of writing. In terms of content, not much was written on the lontar leaf and bamboo, and only contents that were important and needed to be kept for a long time, such as genealogies, customs and prohibitions, were written on parchment and cloth. However, manuscripts written on these materials were not popular since they were not part of the Malay art of writing. The Malays found out about paper from Chinese traders and sailors in the 7th century, but supply of paper for the use of writing was difficult to find at that time. The arrival of Chinese and Arabic oriental paper was like a gift from God for Malay philosophers. When the westerns came to the Malay Archipelago in the 17th century, they enabled manuscripts writers from the archipelago to use paper from Europe. Most of the paper used was imported from England, Holland, Italy, France China and Arab countries.[1]

Background

The National Centre for Malay Manuscripts (hereinafter shall refer to *the Centre*) is the sole custodian of the national heritage for Malay manuscripts. Most Malay handwritten manuscripts are scattered not only in Malaysia but almost all over the world. Albeit the difficulty in acquiring our earliest written heritage, the Centre is pursuing the long-winded trails through hardship and constraints. To compete against commercial suppliers is not easy as the Centre, like any other governmental branch, has its limits thus many a time, our handwritten heritage lost to rich buyers at auction houses. Handwritten manuscripts are not like printed books that

[1] Siti Mariani S.M. Omar, *Malay Manuscripts: An Introduction* (Kuala Lumpur: The Legacy of Malay Manuscripts, 2012).

are printed in larger amount but they are written by a selected number of scribers that needed time to write. Thus books can be printed in thousands within minutes but scribing one manuscript took years. For religious writings and edicts, the manuscript could only be written when a teacher had completed his lecture, probably a few years. Most early writings were on parchment scrolls, as can be found during Han Dynasty (207 BC – 220 AD) and the Dead Sea Scrolls of the Valley of Qumran.[2]

When the Malays could write, remains a theoretical assumptions as historians, philologists, etymologists and anthropologists are still on the drawing board though the earliest could be the hand-chiselled stone inscription of the famous Terengganu Stone which was purportedly etched in 1303.[3] Both lithograph and petrograph were common in the old days and even today, some information are written on stone tablets such as the *History of the Camel Spring* in Xunhua Salar Autonomous Prefecture in Qinghai Province of China.

There are two types of conservation to be dealt upon, the preventive (or preservative) conservation and curative (remedial) conservation for restoration. The first is for the method to avoid the deterioration of library materials while the latter the direct treatment for the materials that have suffered damage or deterioration of papers. The Conservation and Preservation Division of the National Library of Malaysia deals in both methods of conservation, particularly the curative approach through its remedial restoration.

Handwritten manuscripts are no longer leaf-casted as the process may damage the fibres of the fragile laid papers. As most restaurateurs and conservators may understand, in leaf-casting papers would be immersed in the water and this would definitely make the paper physically be swollen and later forced to dry. How tedious and delicate the process may be, the Division would try its best to restore to its original image through minimal repair or other traditional approaches in order to retain its rarity. To a restaurateur, it is quite a heart-breaking to see a paper that can be repaired and restored to undergo a tissue lamination where the end product would definitely become alien. This is what happened to our invaluable *Hikayat Hang Tuah* where all pages were silk laminated thus lost its original image and paper texture. Though the process is reversible but it would take years to restore.

[2] The scrolls were claimed to be written around 8 BC but later when tested against carbon dating, it was found to be around 33 AD but only on selected scrolls. See: Georges Bonani, et al. "Radiocarbon Dating of Fourteen Dead Sea Scrolls." *Radiocarbon* 34.3 (1992): 843-849. Cf. Andrew Lawler, "Who Wrote the Dead Sea Scrolls?" *Smithsonian* (2010).

[3] Syed Muhammad Naquib al-Attas, *The Correct Date of the Terengganu Inscription: Friday 4th Rejab, 702 AH* (Kuala Lumpur: Muzium Negara, 1984).

Deacidification

Due to both internal and external factors, paper often becomes acidic. Acid causes deterioration and damage to the paper and may end its life. Most of the handwritten manuscripts acquired by the National Centre for the Malay Manuscripts, National Library of Malaysia are acidic in nature and some of them are even worse, brittle and fragile. As these manuscripts are priceless and rare, the initial purpose is to restore and preserve both its textual contents as well as its physical beings. Thus in the process of curating the manuscripts, they have to undergo the process of deacidification.

The deacidification is a process to de-acidify papers from its acidity, to increase its pH from its acidity form to 8.5 or 9.0 in other words it is a process to remove acid from the manuscripts. With the presence of acid, papers can be brittle, fragile and easily be broken into small pieces. The deacidification is to neutralise the acid so that the papers can be stronger and last longer. Though most of the deacidification does not strengthen the paper but at least it removes the acid from the paper thus the future damage of the paper can be minimised. There are three main techniques of deacidification, i) wet technique or aqueous deacidification, ii) dry technique or non-aqueous deacidification, and iii) vapour or gas technique. Not many conservators are using the gas technique except those doing the mass deacidification, such as the Library of Congress but then it includes new books as well. Like the British Library and the National Library of Republic of Indonesia, the National Library of Malaysia uses the non-aqueous technique. Mass deacidification not only confined to vapour method of the deacidification as being carried out by the Public Archives of Canada in its test-pilot project, but also to the other two, both aqueous and non-aqueous as long as there is enough space or area to place the materials for the deacidification.[4]

In non-aqueous deacidification, there are various types of chemicals involved such as barium acetate $Ba(C_2H_3O_2)_2$, barium hydroxide $Ba(OH)_2$, calcium acetate $Ca(C_2H_3O_2)_2$, magnesium acetate $Mg(CH_3COO)_2$, magnesium methoxide $C_2H_6MgO_2$, and methyl magnesium carbonate $MeMgCO_3$. The Conservation and Preservation Division of the National Library of Malaysia uses barium hydroxide $Ba(OH)_2$ and methanol CH_3OH for its dry deacidification as barium hydroxide is known as the least chemical that causes damage to the structure and fibre of the paper. Unfortunately it may cause skin, eyes and nasal irritations while its toxicity may cause bleeding, vomiting and damage to the kidneys as mentioned by

[4] Peter G. Sparks, *Technical considerations in choosing mass deacidification processes* (Washington, D.C.: Commission on Preservation and Access, 1990).

Green and Leese in their paper, "Nonaqueous Deacidification of Paper with Methyl Magnesium Carbonate."[5]

First a conservator needs to identify the acidity of the paper by using pH test through litmus paper or any other test for acidity. A simple test would be by using any pH pen or pencil that is available in market such as Abbey pH pen and pH colour table. A conservator needs to draw a simple line onto the page of the paper using the pen and let it dry. This simple test will show if yellow colour means it is acidic while purple colour means is neutral or alkaline.

Identifying acidity not only for papers but also on its writing as in many instances, the using of pigmented ink may damage the paper. Ink with high acidity may hinder the curating of the manuscript as it may diminish the ink thus no longer can be read or utilised. The acidity in the ink, especially if the ink is made from plant or fruit(s), would damage the paper sometimes leaves an impression like a burnt paper. Many a time, a conservator would advise to conserve the paper by tissue lamination as the ink has already damaged the paper. Again as in the case of *Hikayat Hang Tuah*, the Division at that time decided to laminate those pages with silk lamination in order to deter them from further deterioration and damage although it should done for selected number of pages. Determining the type of deacidification method is also important, whether aqueous or non-aqueous by prioritizing

The dry deacidification process is by using 20gm of barium hydroxide $Ba(OH)_2$ which is mixed with one liter of methanol will be mixed thoroughly and applied to the paper evenly and later to be dried in room temperature.

The Post Treatment of Manuscripts

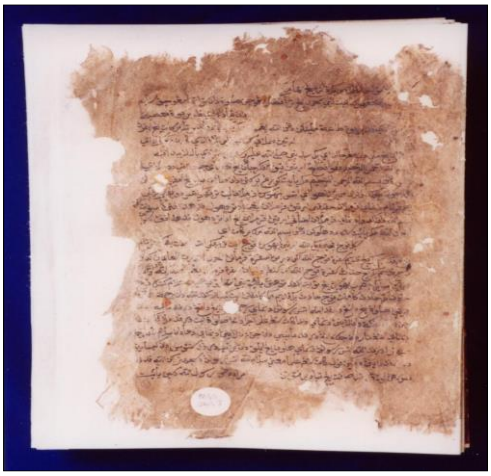
After the manuscripts are treated and restored to its nearest original version or whatever that could be conserved, then they will be sent to the National Centre. There are of course other requirements and guidelines to be followed for its preservation such as temperature between 18°C-20°C with relative humidity between 45-55% and should not be above 65% as it expedites chemical reactions. High relative humidity and combined with high temperature would provide moisture that encourages growth of mold and insect activity. Tropical climate like Malaysia does not have extreme low temperature that may desiccate and embrittle the manuscripts, but proper air-conditioner is needed to regulate the temperature.

[5] Comparatively, 18-20gm of barium hydroxide is added to a litre of methanol while only 2gm of magnesium carbonate is needed to a litre of methanol. Thus methyl magnesium carbonate is an alternative to barium hydroxide where the former is being practised by the Library of Congress. See: Frazer G. Poole, "Current Lamination Policies of the Library of Congress" *The American Archivist*, 39.2 (Apr 1976): 157-159. Although barium hydroxide causes concern on health safety but care for the texture and fibre of the paper is also taken into consideration by many conservators and chemists. Barium hydroxide becomes carbonate after its exposure to the air, i.e. $Ba(OH)_2 + CH_3OH \rightarrow BaCO_3$.

Although experts differ in determining the correct temperature and relative humidity but they provide perfect range for both libraries and archives to adhere. The climate-control system should never be turned off or lowered setting at night or on weekends because once the invaluable materials are damaged, the cost of treatment is higher including the loss of intellectual national heritage.

Instead of acquiring thermo hygrograph as the present practice by the Division, it would be advisable to use portable low-cost data logger that measures temperature, relative humidity and even dew point, simultaneously. While thermohygrograph uses paper and plotter to record temperature and relative humidity, data logger uses electronic sensors and a computer chip to record temperature and RH at intervals determined by the user. Battery operated thermohygrograph uses data from paper charts and must be plotted in a graph and strung together manually for weekly, monthly or annual analyses, the digital data logger also battery operated that can be moved easily from one place to another, with a single monitor. In many instances, the plotter in the thermohygrograph always the culprit as it sometimes fails to print.

Before treatment



After treatment

Digital Preservation

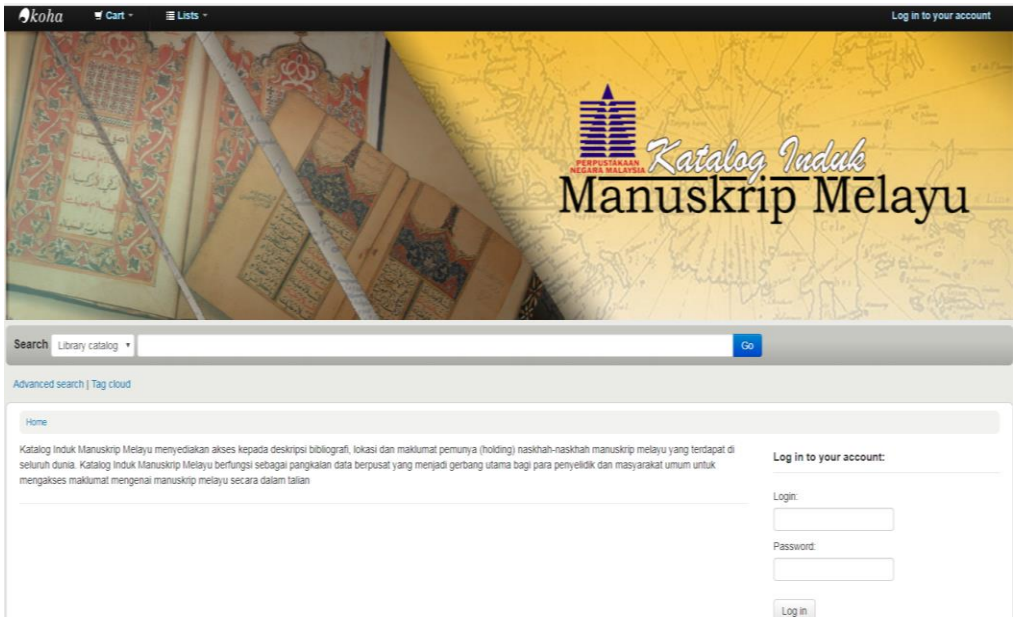
The digital world transforms the concept of traditional preservation rather than protecting the physical integrity of the object to determine the creation and maintenance of objects whose intellectual integrity is its main feature.[6] At present, Malay manuscripts are not only preserved through traditional methods, new trends show that digitalization projects for invaluable heritage are among the best initiatives to preserve the physical structure of the average manuscripts that are fragile and decayed.

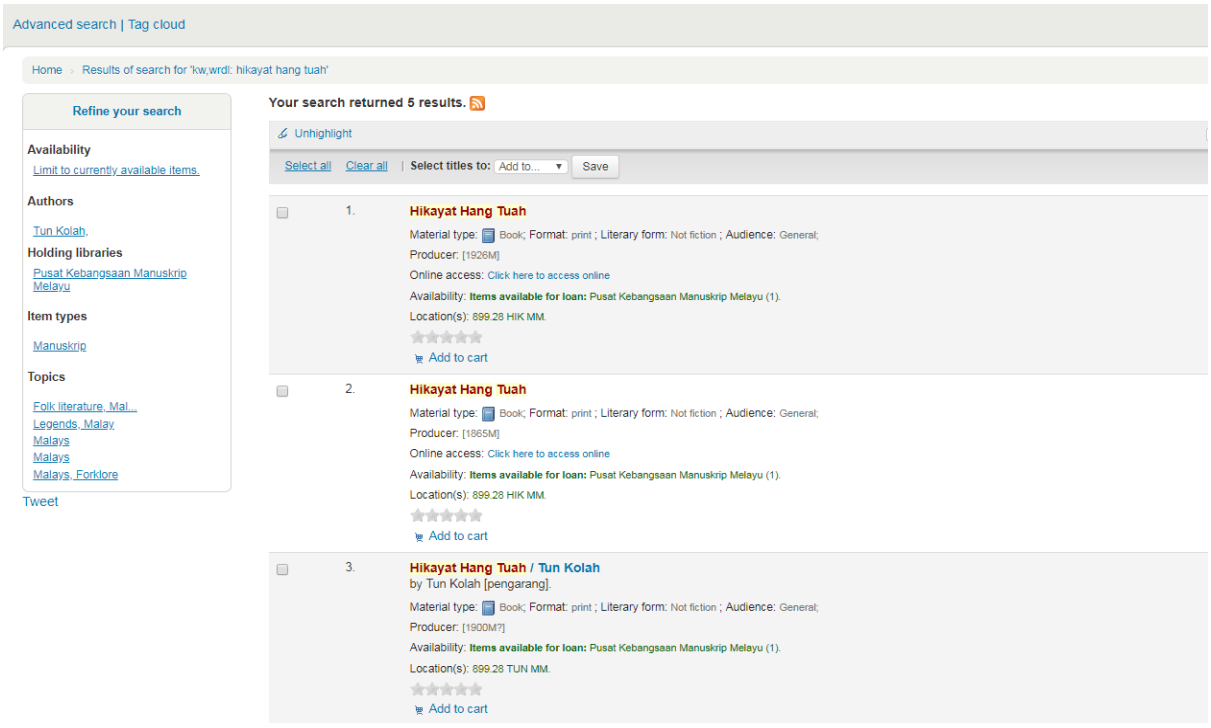
[6] This quote is based on the presentation paper *"Preservation of the National Treasures: Malay Manuscripts," the Hidden Treasure "*, (Seminar Kepustakawanan, 2011).

NLM started the Malay manuscript digitization project from 2000. However, the pilot project only managed to digitize 500 copies of selected Malay manuscripts. Financial constraints to be the main factor of the project can't be implemented comprehensively. However, NLM continues to process the manuscript digitally internally for the purpose of preservation and reference although it can only be done in small quantities because of the burden of the officer's tasks. NLM has, therefore, worked in various ways and endeavors to digitize all Malay manuscripts of almost five thousand copies in the collection. This endeavor is worthwhile when the government begins to pay attention and finally agrees to provide allocation for digitization of all remaining copies through the 11th Malaysia Plan.

Digital Union Catalogue of Malay Manuscripts

The Digital Union Catalogue of Malay Manuscript is a resource sharing service hosted and coordinated by the NLM for libraries, researchers and the public. It provides access to comprehensive information on Malay manuscripts not only in Malaysia but involves Malay manuscript repositories worldwide. This Union Catalogue contains bibliographic descriptions, locations and holdings information and covers Malay manuscripts in various fields. Among the areas in the Malay manuscripts are history, culture, language, legal, medical, hikayat, beliefs and charms, technology, architecture, cosmology and many more.

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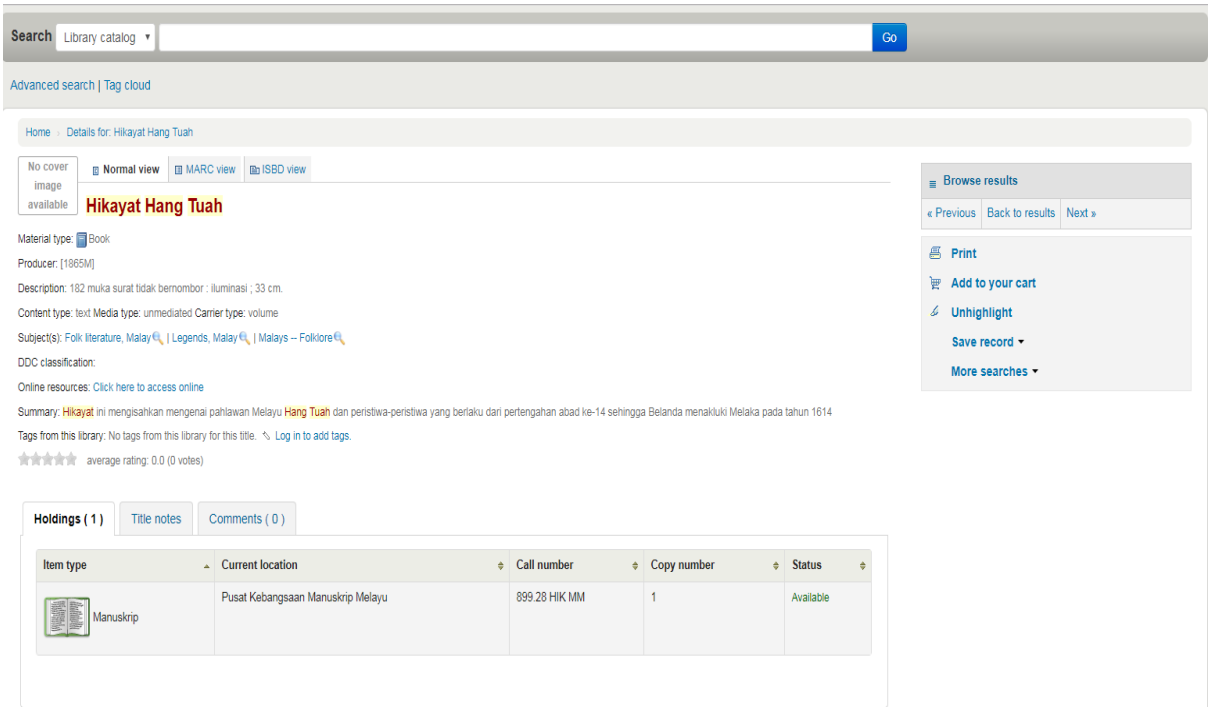
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Content type: text Media type: unmediated Carrier type: volume
Subject(s): Folk literature, Malay | Legends, Malay | Malays -- Folklore
DDC classification:
Online resources: Click here to access online
Summary: Hikayat ini mengisahkan mengenai pahlawan Melayu Hang Tuah dan peristiwa-peristiwa yang berlaku dari pertengahan abad ke-14 sehingga Belanda menakluki Melaka pada tahun 1614
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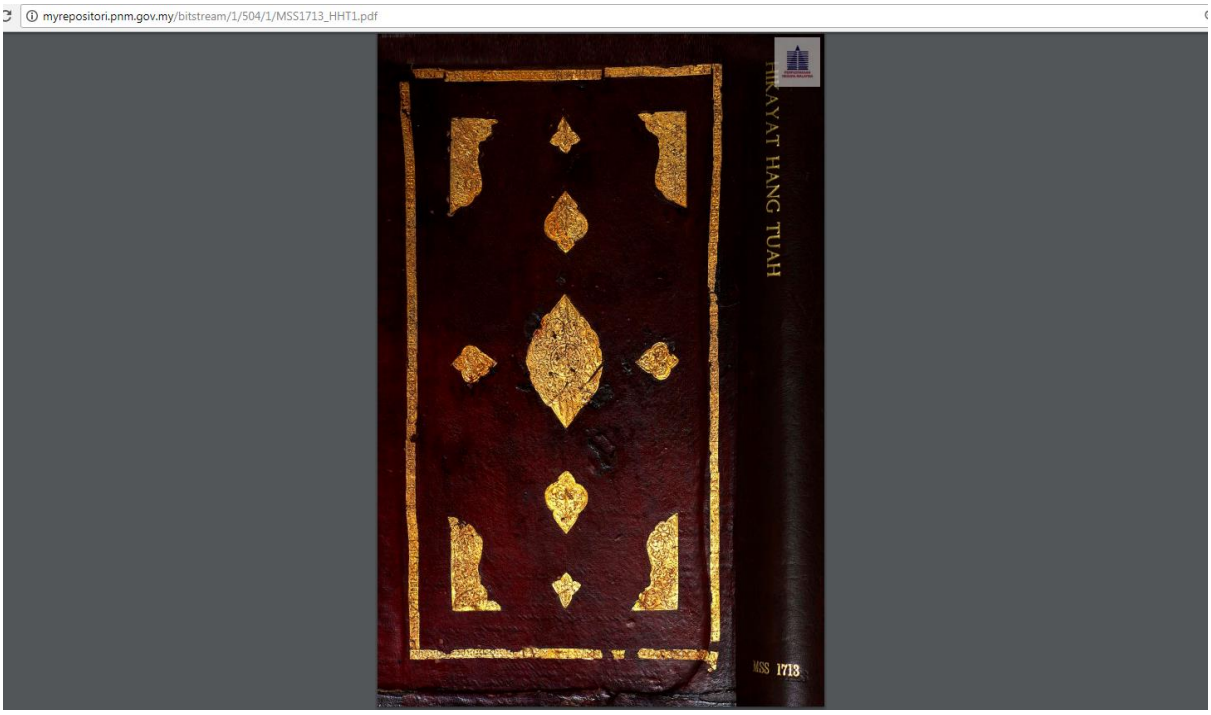

Conclusion

Manuscripts should be preserve to prolong their life span so that over the centuries they remain as the national heritage which reflects the rich civilisation of the Malays besides their intellectual capabilities.

Generally, Malay manuscripts found are in poor condition. Very seldom are they in their complete original form. Many factors contribute to their deterioration. Realisation that manuscripts can deteriorate quickly is not enough. If the problem of preservation is not addressed immediately, we may lose our documentary heritage. NLM is very much aware of the need to preserve the manuscripts. Besides doing preservation works whether traditional or digital methods, NLM also embarks on efforts to inculcate the need to care for and treasure any old, valuable items or artefacts. Besides that, NLM also provide microfilmed and digital copy of a manuscript to be used for reference within and outside the country.

References

Al-Attas, Syed Muhammad Naquib, (1984). *The Correct Date of the Terengganu Inscription: Friday 4th Rejab, 702 AH*. Kuala Lumpur: Muzium Negara.

Lawler, Andrew, (2010). "Who Wrote the Dead Sea Scrolls?" *Smithsonian*.

Siti Mariani S.M. Omar, (2012). *Malay Manuscripts: An Introduction. The Legacy of Malay Manuscripts.* Kuala Lumpur: Perpustakaan Negara Malaysia.

Siti Mariani S.M. Omar, (2012). *Centre for Malay Manuscripts, National Library of Malaysia. The Legacy of Malay Manuscripts.* Kuala Lumpur: Perpustakaan Negara Malaysia.

Siti Rodziah Othman, (1994). *Development of Preservation Activities at the National Library of Malaysia.* (Paper work at Seminar Kebangsaan Pemeliharaan Sumber Perpustakaan Dalam Persekitaran Tropika. Kuala Lumpur: Perpustakaan Negara Malaysia.

Sparks, Peter G, (1990). *Technical considerations in choosing mass de-acidification processes*. Washington, D.C.: Commission on Preservation and Access.

Wan Ali Haji Wan Mamat, Haji, (1987). *An Introduction to Malay Paleography*. M.A. Thesis, University College London.

Wan Hussin Wan Ismail & Faizal Hilmie Yusof, (2016). *The National Centre for Malay Manuscripts: Conserving the Invaluable Nation's Intellectual Heritage.* Jurnal Filologi Melayu 23, 60 - 65