

# Environmental Sustainability Practices in Rural Libraries

Siti Khadijah Rafie<sup>1</sup>, Roziya Abu<sup>2</sup>, Siti Khairunnisa Sheikh Abdul<sup>3</sup> and Ahmad Zam Hariro Samsudin Mutalib<sup>4</sup>

<sup>1,3</sup>UiTM Cawangan Kedah, Sugai Petani, 08400 Merbok, Kedah

<sup>2,4</sup>UiTM Cawangan Selangor, 42300 Bandar Puncak Alam, Selangor

<sup>1</sup>[khadijahrafie@uitm.edu.my](mailto:khadijahrafie@uitm.edu.my); <sup>2</sup>[roziya307@uitm.edu.my](mailto:roziya307@uitm.edu.my); <sup>3</sup>[nnisa@uitm.edu.my](mailto:nnisa@uitm.edu.my);

<sup>4</sup>[ahmadzam@uitm.edu.my](mailto:ahmadzam@uitm.edu.my)

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## ABSTRACT

*The key purpose of this study was to investigate the implementation of environmental sustainability practices in Malaysian rural libraries. A qualitative approach was employed through interviews, observations, and examinations of documents related to the six (6) rural libraries which were involved in this study. This study concluded that rural libraries in Malaysia had not fully implemented the environmental sustainability elements as suggested by the International Federation of Library Association (IFLA). Nevertheless, rural libraries in Malaysia had put good effort into environmental sustainability practices.*

**Keywords:** *Rural libraries; environmental sustainability; qualitative approach*



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## **INTRODUCTION**

Libraries, regardless of their types and philosophies, play a vital role in community development by providing access to information and fulfilling the information needs of the community. Rural libraries are a reliable medium of information to the rural community, making them an ideal place to increase environmental awareness and implement the environmental sustainability concept simultaneously. The International Federation of Library Association (IFLA) has initiated the environmental sustainability concept along with the United Nation's (UN) agenda on sustainable development. The IFLA has created a Special Interest Group (SIG) for this purpose, called Environment, Sustainability, and Library Special Interest Group (ENSULIB), which aims to address (1) the climate change effects on libraries, (2) the implementation of environment-friendly practices in libraries, (3) the proposed environmental recommendations for professionals, (4) promoting sustainability library resources and services, and (5) increasing librarians' awareness of environmental sustainability. Correspondingly, the ENSULIB has come up with the Green Libraries term, which denotes environmentally aware and friendly libraries. Adhering to the IFLA, the buildings should follow the Leadership in Energy and Environmental Design (LEED) guideline and should also commit to sustainable routines such as reducing consumption and recycling.

In general, the awareness of environmental sustainability practices in libraries has begun for a long time in other countries (Karioja, 2013; Townsend, 2013). Hence, this study sought to explore environmental sustainability practices in Malaysian rural libraries. There are two (2) types of rural libraries in Malaysia; the ones (1) managed by the National Library of Malaysia (NLM) and the ones (2) managed by the state libraries. In this study, the researcher intended to focus on the rural libraries managed by NLM because of its uniformity of policies and procedures.

Environmental sustainability is known as one of the United Nations (UN) sustainability agendas. There are very few studies on the environmental sustainability of rural libraries (Karioja, 2013). Thus, this study aimed to explore environmental sustainability practices in Malaysian rural libraries.

The key purpose of this study was to investigate the implementation of environmental sustainability in Malaysian rural libraries. The specific objectives of the study were to identify the environmental sustainability practices in rural libraries and to explore the environmental sustainability characters for Malaysian rural libraries. This study also explored the awareness of environmental sustainability among rural library staff, users, and non-users. The findings might help the National Library of Malaysia (NLM) to fully understand their key roles in contributing to environmental sustainability practices.

## **LITERATURE REVIEW**

Environmental sustainability is a condition that meets human needs without compromising the health of the ecosystem (Morelli, 2011, p.3). It is also defined as responsible interaction with the environment to avoid the degradation of natural resources whilst allowing for a long-term quality environment. Another term for environmental sustainability is ecology.

The World Economic Forum (WEF) stated that environmental sustainability refers to the condition where organizations, procedures, and processes ensure the effective management of natural resources for the current and future needs (Ratiu & Anderson, 2015). The Online Dictionary of Library Science (ODLIS) defined green libraries as a designed library that minimizes the negative impact on the natural environment and maximizes the indoor environmental quality by careful site selection, using biodegradable products and natural resources, and conservation of resources such as energy, water, and paper (Mansour, 2020, p.11). The American Library Association has created the Task Force on Environment (TFOE), promoting green librarianship even before environmental sustainability term have been widely used (Williams, Charney, & Smith, 2015). The TFOE has been educating and creating awareness among librarians and users by arranging environmentally related programmes. Many libraries in the United States and the United Kingdom have been adopting the green library concept by following the guidelines of the Leadership for Energy and Environmental Design (LEED) for their library buildings. The green library buildings should adhere to these criteria: 1) energy effectiveness, 2) reduced air pollution, 3) use of maximum

daylighting, 4) ability to recycle the construction materials, and 5) use of renewable resources. In addition, they are also committed to increasing environmental awareness among library staff and library patrons.

Karioja (2013) highlighted several characteristics of environmental sustainability practices in libraries, which include environmental issues, environmental management strategies, and environmental finance. The findings were similar to a study conducted by Michnik (2015). Michnik also proposed that environmentally sustainable libraries should further adopt the environmental concept in library activities and programmes. For example, a library in Helsinki developed four (4) steps in defining itself as a green library by (1) creating awareness among users on environmental issues, (2) providing all materials related to environmental subjects/ issues, (3) organizing environmental events, and (4) setting good examples as a green library (Karioja, 2013). Another approach to adopting environmental sustainability in libraries is by applying Information Communication and Technology (ICT) to reduce papers as well as assisting users in retrieving current and accurate information online (Alemanne, Mandel, & McClure, 2011). Besides, a few libraries in Portugal adopted a few approaches to environmental sustainability by (1) applying environmental management, (2) adopting environmental management, (3) effectively reducing the library's environmental impact, (4) increasing environmental awareness among librarians and patrons, and (5) acknowledging the importance of environmental sustainability in the library (Dias, 2017). A survey by Townsend (2014) had also proven that the adoption of environmental sustainability in libraries will increase environmental awareness among library users and library staff.

## **RESEARCH METHODOLOGY**

To explore the environmental sustainability practices in Malaysian rural libraries, a qualitative approach was employed in this study through semi-structured interviews for data collection. The researcher had also received approval from the National Library of Malaysia (NLM) to conduct a study on the rural libraries managed by NLM. Six (6) rural libraries were involved in this study and the selection of the rural libraries was based on the data obtained from the Research Department, NLM. The six (6) rural

libraries consisted of two (2) most active rural libraries, two (2) average performing rural libraries, and two (2) least active rural libraries. The two (2) most active rural libraries were labelled as RL1 and RL2, while the two (2) average performing rural libraries were labeled as RL3 and RL4. The least active rural libraries were labelled as RL5 and RL6 respectively.

A multiple case study approach, as highlighted by Abu, Grace and Carroll (2011), is the most suitable method to understand and compare each rural library in this study in order to understand the environmental sustainability practices in each rural library. In addition, the use of this methodology enables the researcher to use multiple data sources such as documentation, records, library portfolios, observations, interviews and the data collected from the participants (rural library staff, users, and non-users). All of the interview questions were also open-ended, which allowed the participants to express their opinions and ideas regarding the study (Abu, Grace, & Carroll, 2011).

Five (5) users of rural libraries and two (2) library staff were interviewed. The respondents involved in this study comprised the local library staff and volunteer participants from the local community. All of the respondents involved were interviewed for approximately 10-40 minutes individually depending on their responses. The researcher used a voice recorder to record the interview sessions and to gather relevant information. The interview questions were related to their awareness on environmental sustainability and the practices.

The validity of the study was determined by an interview guide to conduct semi structured interviews with all participants in this study. The workspace environment was observed and photographs were taken to supplement data during the data collection. Triangulation was used in gathering data (interviews and observations) for the study.

The researcher used ATLAS.ti version 7 to analyze data in this study. The researcher separated the data through coding after compiling and organizing the data. Coding is thus a method that enables similarly coded data to be organized and grouped into categories or “families” because they share some characteristics (Johnny Saldana, 2016). In the context of this study, hundreds of coding were produced and those coding

led the researcher towards conducting thematic analysis involving all six (6) case studies.

**Table I: Interview Questions**

<b>Respondents</b>	<b>Interview Questions</b>
Rural Library Staff (Assistant Librarian and Library Assistant)	Do you think the rural library is located at a strategic location?
	How about the interior design?
	Did the library organize programs/ activities related to the environment (i.e., pollution, recycle)
	If yes, do you think those programs benefited the users
	If no, do you have initiative to do so?
Rural Library Users	Do you think the rural library is located at a strategic location?
	How about the interior design?
	Has the rural library educate you on how to preserve the environment (i.e., prevent pollution, gotong-royong, recycle, etc.)?
	If no, do you think that the management should to do so?
	How do you think the rural libraries can help to preserve the environment?
Rural Library Non-Users	Are you aware of the rural library in your area?
	Do you think the rural library is located at a strategic location?
	If you have been to the library, what do you think of the interior design?
	Do you think the rural library should organize programs/ activities related to the environment (i.e., pollution, recycle)?

## **FINDINGS AND DISCUSSIONS OF THE STUDY**

All the six rural libraries in this study implemented environmental sustainability approaches in their library programmes and services. There were sixty-two (62) respondents involved in this study. Twelve (12) of them were the rural library staff and twenty-three (23) were the rural library users. The other twenty-seven (27) were the non-users. Twenty-five (25) out of twenty-seven (27) of the non-user respondents also agreed that libraries should embark on environmental sustainability elements in their programmes and services. However, only two (2) non-user respondents did not agree that environmental sustainability had been adopted in libraries.

**Table 2: Summary of the Case Studies**

<b>Library</b>	<b>Staff</b>	<b>Users</b>	<b>Non-Users</b>
<b>RL1</b>	<ol style="list-style-type: none"> <li>1. Communal work</li> <li>2. Recycled handcraft workshop and recycling awareness</li> <li>3. Pollution prevention activity</li> </ol>	<ol style="list-style-type: none"> <li>1. Communal work</li> <li>2. Recycled handcraft workshop</li> <li>3. Cooperation with other agencies</li> </ol>	<ol style="list-style-type: none"> <li>1. Communal work</li> <li>2. Tree planting</li> <li>3. Pollution prevention activity</li> <li>4. Information related to the environment</li> </ol>
<b>RL2</b>	<ol style="list-style-type: none"> <li>1. Participation in go-green competitions</li> <li>2. Environmental campaign</li> <li>3. Cooperation with schools</li> <li>4. Planting campaign</li> </ol>	<ol style="list-style-type: none"> <li>1. Communal work</li> <li>2. Environmental campaign</li> <li>3. Pollution prevention activity</li> <li>4. Recycling activity</li> <li>5. Environmental poster</li> </ol>	<ol style="list-style-type: none"> <li>1. Communal work</li> <li>2. Environmental campaign</li> <li>3. Pollution prevention activity</li> </ol>
<b>RL3</b>	<ol style="list-style-type: none"> <li>1. Communal work</li> <li>2. Recycling activity</li> <li>3. Recycled handcraft workshop</li> <li>4. Cooperation with other agencies</li> </ol>	<ol style="list-style-type: none"> <li>1. Communal work</li> <li>2. Recycling activity</li> <li>3. Recycled handcraft workshop</li> <li>4. Environmental campaign</li> </ol>	<ol style="list-style-type: none"> <li>1. Communal work</li> <li>2. Recycling activity</li> <li>3. Pollution prevention activity</li> <li>4. Cooperation with other agencies</li> </ol>
<b>RL4</b>	<ol style="list-style-type: none"> <li>1. Communal work</li> <li>2. Recycling activity</li> <li>3. Recycled handcraft workshop</li> <li>4. Cooperation with other agencies</li> </ol>	<ol style="list-style-type: none"> <li>1. Communal work</li> <li>2. Recycling activity</li> <li>3. Recycled handcraft workshop</li> <li>4. Environmental campaign</li> </ol>	<ol style="list-style-type: none"> <li>1. Communal work</li> <li>2. Recycling activity</li> <li>3. Pollution prevention activity</li> <li>4. Cooperation with other agencies</li> </ol>
<b>RL5</b>	<ol style="list-style-type: none"> <li>1. Communal work</li> <li>2. Participation in go green competitions</li> <li>3. Pollution prevention activity</li> <li>4. Recycling activity</li> </ol>	<ol style="list-style-type: none"> <li>1. Communal work</li> <li>2. Environmental talk/seminar</li> <li>3. Pollution prevention activity</li> <li>4. Recycling activity</li> </ol>	<ol style="list-style-type: none"> <li>1. Environmental campaign</li> </ol>
<b>RL6</b>	<ol style="list-style-type: none"> <li>1. Communal work</li> <li>2. Collaboration with other rural libraries to organise environmental programmes</li> </ol>	<ol style="list-style-type: none"> <li>1. Communal work</li> <li>2. Posters containing environmental information</li> <li>3. Environmental campaign</li> </ol>	<ol style="list-style-type: none"> <li>1. Communal work</li> <li>2. No need for environmental sustainability</li> </ol>

In order to fully implement environmental sustainability in the libraries according to IFLA guidelines, the rural libraries should have adhered to the green building guidelines. It was found out that most Malaysian rural libraries were unable to apply the green building guidelines because most of the buildings were existing buildings. According to Mr. Mohammad Shahrizal, the Senior Director of Rural Libraries Department in NLM, the management used environmentally friendly paints for the libraries and also roof tiles to ensure effective air circulation in the libraries.

As seen in Table 2 above, all of the rural libraries had adopted the environmental sustainability concept through library activities and programmes. For instance, communal work or mutual assistance was a common environmental program in rural libraries. This involved activities which the community had cooperated to clean their areas (Kushandajani & Astuti, 2017). The rural libraries had joined the local community in the communal work to clean the village area including the rural libraries. Other activities were recycling activities, recycling awareness, environmental campaigns, pollution prevention activities, collaboration with other agencies, and many more. These activities were the initiatives taken to create environmental awareness among users which are essential for environmental sustainability.

Libraries play their roles in providing information and knowledge to the users. Karioja (2013) indicated that libraries, specifically public libraries, contribute significantly to the social and cultural values within the community to which environmental sustainability is included. As rural libraries have a huge role in implementing environmental sustainability; hence, this study attempted to review the environmental sustainability practices of Malaysian rural libraries.

By interviewing the participants (rural library staff, users, and non-users), this study had discovered the environmental sustainability practices in the libraries. In general, the participants' responses were reasonable and appropriate for answering the research questions. The rural library staff in this study acknowledged the importance of the environmental sustainability elements; hence, they had planned for future activities and programmes that would increase environmental awareness among users. In the same vein, the users of the rural libraries were also

aware of the importance of environmental sustainability in the libraries and agreed to continuing the practices. However, only a minority (7.4%) of the non-user participants viewed environmental sustainability practices in rural libraries as of no significance.

## **CONCLUSION AND RECOMMENDATIONS**

This study has made a serious attempt to cover environmental sustainability practices in rural libraries in Malaysia. Even though this study focuses on only (6) selected rural libraries, it could also be generalized to other Malaysian rural libraries. This study concluded that rural libraries in Malaysia adopted the environmental sustainability elements in their programmes and activities although they were unable to have green buildings. Malaysian rural libraries have put in their best effort to increase environmental awareness among their users. It is strongly recommended that rural libraries in Malaysia adopt and implement the environmental sustainability elements in their libraries. It is also recommended that this study is expanded within the context of rural libraries where they may come under management of the state libraries or NLM.

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## **REFERENCES**

- Abu, R., Grace, M., & Carroll, M. (2011). The role of the rural public library in community development and empowerment. *International Journal of the Book*, 8(2), 63–74.
- Alemanne, N. D., Mandel, L. H., & McClure, C. R. (2011). Chapter 3: The Rural Public Library as Leader in Community Broadband Services. *Library Technology Reports*, 47(6), 19–28. Retrieved from <http://content.ebscohost.com/ContentServer.asp?T=P&P=AN&K=666>

47763&S=R&D=aph&EbscoContent=dGJyMNxb4kSeqa44y9f3OLC  
mr0qep7dSsKm4S6%2BWxWXS&ContentCustomer=dGJyMPGvr1C  
lqbZluePfgex44Dt6fIA%5Cnhttp://search.ebscohost.com/login.aspx  
?direct=true&db=lxh&AN=66647

Dias, S. M. (2017). Environmental sustainability for public libraries in Portugal: A first approach. *Electronic Green Journal*, 1(40). <https://doi.org/10.5070/g314029905>

Johnny Saldana, M. O. G. (2016). *Qualitative research: Analyzing life*. Retrieved from [https://books.google.com.my/books?id=4\\_o0DQAAQBAJ&printsec=frontcover&dq=Qualitative+Research+Analysing+Life+Johnny+Saldana++Citation&hl=en&sa=X&ved=0ahUKEwj762ess7oAhU-yDgGHZXzBgUQ6AEIKDAA#v=onepage&q=Qualitative Research Analysing Life Johnny Saldana](https://books.google.com.my/books?id=4_o0DQAAQBAJ&printsec=frontcover&dq=Qualitative+Research+Analysing+Life+Johnny+Saldana++Citation&hl=en&sa=X&ved=0ahUKEwj762ess7oAhU-yDgGHZXzBgUQ6AEIKDAA#v=onepage&q=Qualitative%20Research%20Analysing%20Life%20Johnny%20Saldana)

Karioja, E. (2013). Sustainability in libraries: A comparative study of ecological sustainability in IFLA WLIC 2012, 41+42.

Kushandajani, K., & Astuti, P. (2017). Managing Village Governance Based On Mutual Assistance (Gotong Royong). *Advances in Social Science, Education and Humanities Research*, 84(6), 2014–2017. <https://doi.org/10.2991/iconeg-16.2017.51>

Mansour, E. (2020). Libraries as agents for development: The potential role of Egyptian rural public libraries towards the attainment of Sustainable Development Goals based on the UN 2030 Agenda. *Journal of Librarianship and Information Science*, 52(1), 121–136. <https://doi.org/10.1177/0961000619872064>

Michnik, K. (2015). Public libraries digital services and sustainability issues. *The Bottom Line*, 28(1/2), 34–43. <https://doi.org/10.1108/BL-12-2014-0034>

Morelli, J. (2011). Environmental sustainability: A definition for environmental professionals. *Journal of Environmental Sustainability*, 1(1), 1–10. <https://doi.org/10.14448/jes.01.0002>

- Ratiu, C., & Anderson, B. B. (2015). The multiple identities of sustainability. *World Journal of Science, Technology and Sustainable Development*, 12(3), 194–205. <https://doi.org/10.1108/wjtsd-05-2015-0022>
- Townsend, K. (2013). Saturation and Run Off : How Many Interviews are Required in Qualitative Research?. *Australian and New Zealand Academy of Management*, 1–17.
- Townsend, A. K. (2014). Environmental sustainability and libraries: Facilitating user awareness. *Library Hi Tech News*, 31(9), 21–23. <https://doi.org/10.1108/LHTN-07-2014-0059>
- Williams, B. F., Charney, M., & Smith, B. (2015). Growing our vision together: Forming a sustainability community within the american library association. *Sustainability: Science, Practice, and Policy*, 11(2), 57–69. <https://doi.org/10.1080/15487733.2015.11908147>

