

## Open access initiatives and institutional repositories: Sri Lankan scenario

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The paper investigates the open access initiatives in terms of open access publishing and institutional repositories for scholarly communication in Sri Lanka. Relevant data from Directory of Open Access Journals (DOAJ), *OpenDOAR* and Sri Lanka Journals Online (SLJOL) were analyzed to study the status of open access in Sri Lanka. Further, websites of all established institutional repositories (IR) of Sri Lanka were explored to gather the relevant data. Semi-structured interviews with Librarian of National Science Foundation and the staff involved in the development of many IRs and digitization projects were also carried out. Findings show that many libraries in Sri Lanka have established institutional repositories. The recently created national open access policy is under review. Different universities and special libraries such as science and technology libraries were granted financial and technical support by the NSF for digitizing their rare contents. However, all digitized contents have not been uploaded yet. There are 60 locally published journals available online through SLJOL, but only 10 journals have been listed in DOAJ. Though there are 23 institutional repositories in Sri Lanka, only seven repositories are registered in *OpenDOAR*.

**Keywords:** Open access; Institutional repositories; Scholarly communication; Sri Lanka

### Introduction

Rapid developments in information technology have brought paradigm shifts in several aspects of the information landscape which has impacted library systems, information services and scholarly communication channels. One of the most important paradigm shifts in scholarly communication process is the rise of e-publishing and open access to information.

The term open access has been defined differently by different authors. Suber<sup>1</sup> states that open access content is “digital, online, free of charge and free of most copyright and licensing restrictions. What makes it possible are the internet and the consent of the author or copyright-holder”.

OA journals emerged in the 1990s. The fundamental idea of OA scientific publications is to remove access barriers and enable readers to access scientific publications free of cost. It gives authors and their works more visibility, readership and citations, and thereby increase impact of their research.

Research and development (R&D) is embedded in the higher education policy of Sri Lanka and strongly emphasized in academic and national research institutions. The University Grants Commission (UGC), National Science Foundation (NSF) and National Centre for Advanced Studies in Humanities and Social Sciences (NCAS) drive scholarly research in Sri Lanka by providing various research grants and other financial and technical assistance. Research is being carried out by all 15 state universities, 32 research institutions, other science and technology institutions and professional associations in Sri Lanka. The average annual research output ranges from 1000-1200 local publications and a few international publications.

Inaccessibility of research papers is one of the major problems in developing countries like Sri Lanka that limits the researchers to productively engage in research activities. According to Okerson<sup>2</sup>, in developing countries; research infrastructure and the capacity to absorb scientific and technical knowledge are weak, leading to low levels of scientific output.

National Article Index compiled by National Library and Documentation Services Board of Sri Lanka indexes all research papers published in local journals. National Article Index is a monthly publication which indexes the journal articles of the previous month. As the index indicates, research findings are disseminated in various formats in different media, mainly through national and international journal articles along with conference proceedings. Social scientists and the researchers carry out research in local languages and select monographs as the main medium of publication. However, unpublished materials such as theses, dissertations, other research reports and working papers should be made visible to the global communities through institutional repositories. Sri Lankan Science Index (<http://thakshana.nsf.ac.lk>) launched by National Science Foundation, Sri Lanka indexes Sri Lanka's research outputs except theses and dissertations and they update their records on a regular basis. The Global Open Access Portal (GOAP) of UNESCO funded by the Governments of Colombia, Denmark, Norway, and the US Department of State presents a current snapshot of the status of Open Access (OA) to scientific information in 158 countries worldwide. Sri Lanka is also one of the countries that has joined this network. GOAP country pages show that Open Source Software (OSS) based projects like Hanthana Linux, Lanka Linux User Group and Sri Lanka FOSS serve communities to deploy technology in a cost effective way. The Directory of Open Access Repositories (*OpenDOAR*) has registered all Sri Lankan repositories. This paper addresses the initiatives that support open access publishing and archiving, and the strategies to empower scholarly communication through open access in future in Sri Lanka.

## Review of literature

Scholarly communication comprises a broad range of activities “including the discovery, collection, organization, evaluation, interpretation, and preservation of primary and other sources of information, and the publication and dissemination of scholarly research”<sup>3</sup>. Prosser<sup>4</sup> mentioned that “publication of research results has been an integral part of the research process”. Journal publishing has four functions - registration, certification, awareness and archiving the research findings. “Traditional subscription based model is no longer working in the

best interests of science or society. A better future for scholarly communication is now within our reach. We simply need to reach out and grab it”<sup>5</sup>.

There are profound changes in scholarly communication channels too. Fidisun<sup>6</sup> stated “transformation has been so rapid and so dramatic that there has been very little opportunity to access, adjust and respond to the impact on scholarly communication”. A crucial paradigm shift in scholarly publishing is open access publishing.

According to Sawant<sup>7</sup>, OA publishing has altered the landscape of every aspect of scholarly publishing and has tremendously grown since 2002. As on 21 March 2016, there are 11,451 journals indexed in DOAJ from 136 countries. Shorley & Jub<sup>8</sup> stated that over 1.9 million articles were published in 2010 and that number has been rising around 3.5% per year but OA articles are growing faster. Open access publishing includes open access journals and open access books. According to Bennett<sup>9</sup>, “nowadays there is a general acceptance of open access by the majority of publishers and most have initiated some sort of open access model in their existing journal programme”.

There are two routes to open access; the gold and green where gold route to open access deals with publications in OA journals which are peer reviewed and are accessible through internet without charges and Green route to open access is self-archiving. The published research paper or the manuscript before publishing is archived in an open access online repository. David<sup>10</sup> stated that open access will become the dominant business model for scholarly journals in the internet age”.

Suber<sup>1</sup> argued that only 31% of the almost 9000 journals listed in the DOAJ use author-payee model. While the other 69% of open access journals use other business models to offset the cost incurred for publication. Open access journals published in Sri Lanka do not levy article processing charge (APC). OA journals perform peer review and then make the approved contents freely available to the world.

## Repositories

Institutional repositories, subject repositories and archives, personal web pages and social media are some of the strategies that are used for archiving and communicating research outputs which may be preprint or post print.

According to Pinfield, 'a repository may be defined as a set of systems and services which facilitates the ingest, storage, management, retrieval, display and reuse of digital objects<sup>11,12</sup>. Repositories may be set up by institutions, subject communities, research funders, or other groups.

A number of journals allow authors to archive their preprints in repositories. Today many funding bodies, research institutions, universities, governmental bodies and ministries have mandated that the research papers generated with the support of these entities should be made available in the open access domain. Jub<sup>13</sup> mentioned that there are about 90 research funding bodies that have mandated open access. In addition to open access journals, there are open text books and open educational resources. Open text books being a subset of open educational resources (OER) significantly impacts on monetary savings of students in addition to its overall impact on students' learning<sup>14</sup>. Pinfield et al<sup>11</sup> indicated that Europe has the largest number of repositories which amounts to 1066 repositories (47%) and North America has the second largest number of 477 repositories (21%) while South America has 391 repositories (18 %) and Asia, 389 (17%) of the world's total repositories.

### Open access scenario in South Asia

Krishnamurthy and Kemparaju<sup>15</sup> claimed that open access to knowledge and information has far to go in India. Their study emphasized that several stake holders such as government, business, individual users, telecommunication and information service providers should build a strong information infrastructure. They also further indicated that India has only 20 repositories. Sawant<sup>16</sup> used several sources to identify 25 repositories in India and concluded that there is a need for cooperative efforts among academics, library professionals and the user community to lower the barriers for the implementation and management of IRs in the country. Mohammed<sup>17</sup> gave an overview of archived materials in IR and stated that India is far ahead in open access movement compared to other developing countries. The author however stated that for a country with 400+ universities and number of research institutions, the number of IRs is far from satisfactory.

There were 543 open access journals in India during 2012 and 54 repositories were listed in

*OpenDOAR*<sup>18</sup>. This study further mentioned that India is at the 4<sup>th</sup> place in open access publishing and 7<sup>th</sup> place in the number of IRs in the world.

Islam<sup>19</sup> pointed out that there are 23 Bangladeshi open access journals available in DOAJ and only three IRs were found in *OpenDOAR* from Bangladesh.

In Sri Lanka, growth of IRs and open access movement is advancing since 2009. UNESCO GOAP<sup>20</sup> Open Access Portal states, "there is significant room for more awareness raising, capacity building, and sensitization programmes involving all stakeholders in order to create an open data environment to facilitate universal access to information, knowledge and community heritage".

However, there is a scarcity of literature regarding the status of open access in Sri Lanka. Therefore, the present study attempts to bridge the gap by empirically exploring the present situation related to open access.

### Objectives of the study

This study aims to explore the open access initiatives in Sri Lanka and the adoption of open access for scholarly communication practices. Specific objectives are as follows:

- To explore the status of open access journals and institutional repositories in Sri Lanka;
- To investigate the initiatives and status of open access policy development; and
- To recommend strategies and guidelines to empower open access adoption in Sri Lanka.

### Significance of the study

Development of a country inevitably depends on scientific or research outputs which in turn depend on access to scientific and technical knowledge. Financial constraints faced by the researches in developing economies limit their access to quality scholarly works and hence obstructs research and development activities in those countries. Okerson<sup>3</sup> echoes this and states that research infrastructure and capacity to absorb scientific and technical knowledge are weak in developing countries thereby leading to a low level of scientific output and furthering under

development. This view seems to be true for developing countries like Sri Lanka. Though resource sharing, networking and consortia access are some strategies that overcome the inaccessibility problems, open access is becoming increasingly popular among researchers, academic communities, research institutions and universities due to its unparalleled impacts on scholarly access and visibility. Sri Lanka, in line with the global trend, envisages sophistications in information system development and scholarly communication yielding maximum research output and impact. Implementation of IRs (green open access) and publishing in open access journals are considered important for research and development in Sri Lanka. Therefore, this study seeks to contribute to the development of academic literature on OA with special focus on its implementation in Sri Lanka. This work would be useful to develop and adopt open access means for scholarly communication.

### Research design

This study was limited to the websites of institutional repositories of universities and other research institutions in Sri Lanka. The websites were identified from the national e-repository of National Science Foundation of Sri Lanka. In addition OpenDOAR and DOAJ were also consulted. SLJOL was explored to study the Sri Lankan scholarly publications and their status. Cross Archival Search was accessed through national e-repository (<http://dl.nsf.ac.lk/>). This platform showcases all repositories available in Sri Lanka with related links. Directory of Sri Lankan institutional repositories was also consulted (<http://dl.nsf.ac.lk/DIRSLIR/>) for extracting such information as relevant repositories' URL, software used, contents, metadata and other related information. This work was carried out between 15<sup>th</sup> of June to 15<sup>th</sup> of September 2015. In addition to the secondary data obtained from the above sources, Librarian and staff of National Science foundation who were engaged in developing IRs and digitization activities were also interviewed to get more in-depth information.

### Analysis

#### Sri Lanka Journals Online (SLJOL)

Like most countries, Sri Lanka also has had a tradition of publishing print journals and around the turn of the century, started moving towards publishing

electronic journals. The Sri Lanka Journals Online (SLJOL) platform hosts open access journals published in Sri Lanka. This platform is supported by International Availability of Scientific Publications (INASP) with the aim of providing visibility of research papers published in Sri Lankan journals to the global communities.

The list of sixty Sri Lankan journals published on SLJOL (<http://www.sljol.info/>) platform is given at Annexure I. There are 579 tables of contents listing 6052 articles, out of which 5487 articles are available in full text (PDF) as on 15<sup>th</sup> September.

Sri Lanka is slowly moving to open access and so far, ten Sri Lankan research journals have been indexed in Directory of Open Access Journals (DOAJ). Among them four are medical journals, two each are agriculture and computer science journals and one each belong to statistics and psychiatry. These journals began publishing in the OA mode since 2010 and altogether there are 1264 research papers indexed in DOAJ from these journals. Open Access Journals indexed in DOAJ are given in Table 1.

#### Institutional Repositories (IR) of Sri Lanka

Institutional repositories were introduced in Sri Lanka after 2005. Institutional repositories are meant to archive a particular institution's research output. Krishnamurthy and Kemparaju<sup>9</sup> stated that "an IR is a natural extension of an academic institution's role as a generator of primary research and its four essential characteristics are institutionally defined, scholarly content, cumulative and perpetual and interoperability and open access". This is applicable not only for academic institutions but also for other institutions which concern research and development.

The first IR in Sri Lanka was established in 2006 by National Science Foundation (NSF), Sri Lanka. During 2006 to 2008, there were only two repositories in Sri Lanka. From 2009 onwards, the IRs began to grow and it reached 23 in the year 2015. This includes all IRs of research institutions, university libraries and National Science Foundation (NSF) of Sri Lanka.

Most of the repositories have been established using DSpace software and a very few have used Greenstone and WinISIS.

These IRs contain published and unpublished materials of the institutions and their members.

Table 1—OA Journals of Sri Lanka available in DOAJ

Sl. no.	Journals	Subject	Publisher	Platform/ Aggregator
1.	<i>Sri Lankan Journal Anesthesiology</i>	Medicine	College of Anesthesiologists of Sri Lanka	SLJOL <a href="http://www.sljol.org">http://www.sljol.org</a>
2.	<i>Sri Lanka Journal of Forensic Medicine</i>	Medicine (General)	University of Peradeniya	SLJOL <a href="http://www.sljol.org">http://www.sljol.org</a>
3.	<i>Anuradapura Medical Journal</i>	Medicine (General)	Anuradhapura Clinical Society	SLJOL <a href="http://www.sljol.org">http://www.sljol.org</a>
4.	<i>Sri Lanka Journal of Bio Medical informatics</i>	Medicine (General)	Health Informatics Society, University of Colombo	SLJOL <a href="http://www.sljol.org">http://www.sljol.org</a>
5.	<i>Journal of Tropical forestry and Environment</i>	Agriculture	University of Sri Jayawardenapura	<a href="http://journals.sjp.ac.lk/index.php/jtfe">http://journals.sjp.ac.lk/index.php/jtfe</a>
6.	<i>Journal of Agricultural Sciences</i>	Agriculture	Sabragamuwa University of Sri Lanka	SLJOL <a href="http://www.sljol.org">http://www.sljol.org</a>
7.	<i>Journal of Computer Science</i>	Computer Sciences	University of Sri Jayewardenepura	<a href="http://journals.sjp.ac.lk/index.php/jcs">http://journals.sjp.ac.lk/index.php/jcs</a>
8.	<i>International Journal - Computer Science &amp; research Applications</i>	Computer Sciences	INREWI Publications	<a href="http://www.ijcsra.org">http://www.ijcsra.org</a>
9.	<i>Sri Lanka Journal of Applied Statistics</i>	Statistics	Applied Statistics Ass. Of Sri Lanka	SLJOL <a href="http://www.sljol.org">http://www.sljol.org</a>
10.	<i>Sri Lanka Journal of Psychiatry</i>	Psychiatric	SLJOL Sri Lanka College of Psychiatric	SLJOL <a href="http://www.sljol.org">http://www.sljol.org</a>

Nearly 7,000 full text materials are available for free access via these IRs. As Brown<sup>21</sup> notes, “libraries have played a key part in setting up and running repositories; but patterns of deposit and use remain patchy”. Sri Lanka is not an exception to this scenario as majority libraries in Sri Lanka also seem to operate its repositories with less content and low usage.

National Science Foundation of Sri Lanka launched some initiatives prompting the establishment of Institutional Repositories (IR) in state universities and research institutions. This project of NSF led to the establishment of IRs in nine universities and twelve research institutions in Sri Lanka.

Registry of Open Access Repositories (ROAR) was developed by University of Southampton, UK (<http://roar.eprints.org/>). Globally, there are 4054 repositories registered in ROAR. Only one repository-International Water Research Institute (IWMI) of Sri Lanka has been registered in it in 2009 and has 2236 records.

In addition, *OpenDOAR* is an authoritative directory of academic open access repositories

developed by University of Nottingham, UK. This provides a quality-assured listing of open access repositories around the world. *OpenDOAR*'s staff harvest and assign metadata to allow categorization and analysis to assist the wider use and exploitation of repositories. Each of the repositories has been visited by *OpenDOAR* staff to ensure a high degree of quality and consistency in the information provided. The following repositories of Sri Lanka have been registered in May 2015 at *OpenDOAR*. (<http://www.opendoar.org/>) [*'Sri Lanka'* is keyword used for searching in the *OpenDOAR*]

1. Central Environmental Authority Repository (CEA e-Repository)
2. Coconut Research Institute Repository (CRI Repository)
3. Digital Repository, the Open University of Sri Lanka
4. National Science Foundation of Sri Lanka, Digital Repository (NSF Digital Library)

5. Hector Kobbekaduwa Agrarian Research and Training Institute Repository (HARTI)
6. Rubber Research Institute Repository (RRI Repository)
7. Tea Research Institute Repository

#### **National e-Repository**

National Science Foundation (NSF) of Sri Lanka has laid another milestone in the history of open access in Sri Lanka. Though there were number of repositories created and they are Open Archive Initiative Protocol for Metadata Harvesting (OAI – PMH) compliant, there exists a need for a one stop search interface. Towards this end, the National Science Foundation (NSF) has created a National e-Repository (<http://dl.nsf.ac.lk>) in addition to Sri Lanka Science Index, which assimilates all Sri Lankan publications and even unpublished materials. NSF developed this National e-Repository in order to provide cross archival search service through a single interface (<http://dl.nsf.ac.lk/ohs/>). Collective research outputs in Sri Lanka can be accessed through this national repository. This operates like an information network of repositories around the country as NSF acts as central focal point. This single platform facilitates information seekers to locate researches carried out in Sri Lanka without wandering. Users can access the repositories listed in Table 2 through the e-repository platform. Some more repositories that are included in the Sri Lankan Institutional repositories site but are not accessible were excluded from this table. All information reported in Table 2 are as prevailed at 15<sup>th</sup> of June, 2015.

#### **National digitization project**

National Science Foundation provides leadership for national digitization initiatives in Sri Lanka. It implemented the National Digitization Project under the consolidated grant of the Sri Lankan government. This was a five year project and that started in 2011<sup>22</sup>. The project focuses on digitization of local Science and Technology (S&T) literature, training library staff on database management and administration, provide equipment and database hosting facilities and technical support and troubleshooting. In addition to the digitization and training activities, NSF also supported the establishment of institutional repositories by installing DSpace and related trainings

for relevant staff. NSF further supported even in providing virtual space in the server available at NSF to those who were unable to set up a server. This project has so far completed digitization of ten libraries that include the University of Morotuwa, Post Graduate Institute of Agriculture, and Council for Agricultural Research Policy, Industrial Technology Institute, Central Environmental Authority, Coconut Research Institute, Hector Kobbekaduwa Agrarian Training and Research Institute and South Eastern University of Sri Lanka. Types of materials digitized in this project were periodical articles, local, foreign S&T journals, postgraduate theses and dissertations, research papers presented at local and foreign conferences, technical reports, research reports, maps, pictures, images, monographs, historical documents and annual reports of local S&T institutions.

#### **Transparency of open access policy**

Open access policy is important for each and every institution that deals with archiving and disseminating information through institutional repositories. National Science and Technology Commission and National Science Foundation of Sri Lanka have formulated a policy template on open access to research information for universities and research institutions of Sri Lanka. This policy template covers working papers, book chapters, videos, images, teaching materials, lecture notes, computer software, guide books and extensions but not open research data. This framework covers all copyright issues, obligations for research grant recipients, article processing charges (APC), licensing and commendations. This policy will reviewed annually for a period of three years. Universities and other research institutions can follow this template to prepare the policy framework in local context.

#### **Conclusion**

Open access initiatives in Sri Lanka have been introduced in most universities and some research institutions. There are 23 Sri Lankan institutional repositories that are active, but need to be enriched with more content. Repository developers in future should give more attention to enrich quality of collections. Registering repositories in OpenDOAR and ROAR is also imperative to realize the option of a one stop search interface for readers of scientific

Table 2—Institutional Repositories in Sri Lanka

Name of the Institutions	URL	Software	Subjects	Content	Metadata
National Digital Repository	<a href="http://dl.nsf.ac.lk/">http://dl.nsf.ac.lk/</a>	DSpace	Multidisciplinary	Articles, Unpublished books	10,815 items
Central Environment Authority	<a href="http://cea.nsf.ac.lk">http://cea.nsf.ac.lk</a>	D-Space	Ecology and Environment	Articles, Unpublished, Books	11,055 items
Coconut Research Institute	<a href="http://cri.nsf.ac.lk/">http://cri.nsf.ac.lk/</a>	D-Space	Agriculture, Food and Veterinary	Article, Books	2,057 items
Hector Kobbekaduwa Agrarian Research & Training Institute	<a href="http://harti.nsf.ac.lk/">http://harti.nsf.ac.lk/</a>	D-Space	Agriculture, Food and Veterinary	Articles; Books	1,651 items
National Institute of Fundamental studies	<a href="http://ifs.nsf.ac.lk/">http://ifs.nsf.ac.lk/</a>	DSpace	Science	Journal articles and research publications	371 items
International Water Management Institute, Open Archive	<a href="http://www.iwmi.cgiar.org/publications/iwmi-research-reports/">http://www.iwmi.cgiar.org/publications/iwmi-research-reports/</a>	INMagic	Hydrology, water research	Research reports	170 items
Rubber Research Institute	<a href="http://rri.nsf.ac.lk/">http://rri.nsf.ac.lk/</a>	DSpace	Agriculture, Food and Veterinary	Articles, Theses Unpublished Books	1327 items
Tea Research Institute	<a href="http://tri.nsf.ac.lk/">http://tri.nsf.ac.lk/</a>	DSpace	Agriculture, Food and Veterinary	Articles	1427 items
Open university of Sri Lanka Digital Archive	<a href="http://digital.lib.ou.ac.lk/docs/">http://digital.lib.ou.ac.lk/docs/</a>	DSpace	Multidisciplinary	Articles, Theses Learning objects	863 items
Rajarata University	<a href="http://repository.rjt.ac.lk/jspui/">http://repository.rjt.ac.lk/jspui/</a>	DSpace	Multidisciplinary	Articles, Conferences, Presentations	1223 items
Ruhuna University Digital Repository	<a href="http://dilru.lib.ruh.ac.lk:8080/jspui/">http://dilru.lib.ruh.ac.lk:8080/jspui/</a>	D Space	Multidisciplinary	Articles, University Journals Theses	61 items
South Eastern University of Sri Lanka	<a href="http://ir.lib.seu.ac.lk/">http://ir.lib.seu.ac.lk/</a>	DSpace	Multidisciplinary	Articles, Rare Books, Folklores, Islamic Heritage, Arabic –Tamil	1322 items
Sri Jayawardanapura University Scholar Bank	<a href="http://dl.sjp.ac.lk/dspace/index.jsp">http://dl.sjp.ac.lk/dspace/index.jsp</a>	DSpace	Multidisciplinary	Articles, University Journals Theses	1311 items
University of Colombo Digital Archive	<a href="http://archive.cmb.ac.lk/research/">http://archive.cmb.ac.lk/research/</a>	DSpace	Multidisciplinary	Articles, University Journals Theses	3888 items
University of Colombo, Faculty of Medicine	<a href="http://www.ucfmrepository.cmb.ac.lk">http://www.ucfmrepository.cmb.ac.lk</a>	Dspace	Medicine, Health Sciences	Theses, books, Journal articles	191 items

Table 2—Institutional Repositories in Sri Lanka

—Contd.

Name of the Institutions	URL	Software	Subjects	Content	Metadata
University of Kelaniya	<a href="http://repository.kln.ac.lk/">http://repository.kln.ac.lk/</a>	DSpace	Multidisciplinary	Articles, University Journals Theses	5168 items
University of Moratuwa Digital Library	<a href="http://dl.lib.mrt.ac.lk/">http://dl.lib.mrt.ac.lk/</a>	DSpace	Architecture, Engineering, Computer Science	Articles, Theses, University Journals e-books	4730 items
Postgraduate Institute of Agriculture	192.248.43.136:8080/jspui	DSpace	Agriculture Sciences	Theses, publications	1231 items
University of Peradeniya Digital Library	<a href="http://www.dlib.pdn.ac.lk/archive/">http://www.dlib.pdn.ac.lk/archive/</a>	DSpace	Multidisciplinary	Articles, University Journals Theses	5045 items
Research repository; University of Jaffna	<a href="http://repo.lib.jfn.ac.lk/ujrr/">http://repo.lib.jfn.ac.lk/ujrr/</a>	DSpace	Multidisciplinary	Research papers. Books, other publications	720 items
Sri Lanka Medical Index	<a href="http://www.hellis.cmb.ac.lk">http://www.hellis.cmb.ac.lk</a>	DSpace	Health Sciences	Journals; theses	2052 items
Department of Irrigation	<a href="http://www.repo.irrigation.gov.lk">http://www.repo.irrigation.gov.lk</a>	DSpace	Irrigation	Drawings; reports & papers	1046 items
Sri Lanka Institute of Information Technology	<a href="http://dspace.sliit.lk/">http://dspace.sliit.lk/</a>	DSpace	Information technology	Research papers, theses	839 items

publications and researchers investigating on repositories. Besides, the extent and pattern of usage and perception on use of these repositories are also have to be investigated as to foster and sustain the quality of repositories.

Scholarly communication through open access gold route should be explored further. This study also recommends furthering research on perception of researchers and administrators towards open access, their behaviors and impact of open access papers. Advocating the effectiveness as well as assessing the impact of using and publishing in open access journals and archiving papers in open archives or institutional repositories are required. This study recommends the institutions to formulate their own open access policy and make open access mandatory in order to maximize openness of scholarly output of such institutions.

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*Annexure I*

Journals of Sri Lanka available on SLJOL			
Sl. no.	Journals title	Subject	Publisher
1.	<i>Anuradhapura Medical Journal</i>	Medicine	Anuradapura Clinical Society
2.	<i>Built-Environment Sri Lanka</i>	Architecture, project management, Urban planning & Landscaping	Sri Lanka Institute of Architects
3.	<i>Ceylon Journal of Medical Science</i>	Medicine and Medical Sciences	University of Colombo Sri Lanka
4.	<i>Ceylon Journal of Otolaryngology</i>	ENT, and related sub disciplines	College of Otorhinolaryngologists and Head and Neck Surgeons of Sri Lanka
5.	<i>Ceylon Journal of Science (Biological Sciences)</i>	Biological Sciences	University of Peradeniya
6.	<i>Ceylon Medical Journal</i>	Medicine and Medical Sciences	Sri Lanka Medical Association
7.	<i>COCOS</i>	Technological and technical aspects of the study of coconut	Coconut Research Institute of Sri Lanka
8.	<i>Engineer: Journal of the Institution of Engineers, Sri Lanka</i>	Engineering research and applications	Institution of Engineers, Sri Lanka,
9.	<i>Galle Medical Journal</i>	Medicine	Galle Medical Association.
10.	<i>International Journal of Prevention and Treatment of Substance Use Disorders</i>	Drug addiction	The Colombo Plan
11.	<i>International Journal on Advances in ICT for Emerging Regions (ICTer)</i>	Information & Communication Technology (ICT)	University of Colombo School of Computing
12.	<i>Journal of Agricultural Sciences</i>	Agriculture	Sabaragamuwa University of Sri Lanka.
13.	<i>Journal of Diagnostic Pathology</i>	Pathology, Medical microbiology and parasitology	College of Pathologists of Sri Lanka
14.	<i>Journal of Environmental Professionals Sri Lanka</i>	Environmental Studies	Institute of Environmental Professionals of Sri Lanka
15.	<i>Journal of Food and Agriculture</i>	Agriculture, Food and nutrition	Wayamba University of Sri Lanka
16.	<i>Journal of Management</i>	Management Sciences	South Eastern University of Sri Lanka
17.	<i>Journal of Science of the University of Kelaniya Sri Lanka</i>	Natural and Applied sciences	Faculty of Science, University of Kelaniya, Sri Lanka.
18.	<i>Journal of the Ceylon College of Physicians</i>	Clinical Medicine, Medical development and research	Ceylon College of Physicians
19.	<i>Journal of the College of Community Physicians of Sri Lanka</i>	Community Medicine	College of Community Physicians of Sri Lanka

Journals of Sri Lanka available on SLJOL			
Sl. no.	Journals title	Subject	Publisher
20.	<i>Journal of the National Science Foundation of Sri Lanka</i>	Science and Technology	National Science Foundation
21.	<i>Journal of the Postgraduate Institute of Medicine</i>	Medical education, professionalism, Clinical and preventive medicine	Postgraduate Institute of Medicine , University of Colombo
22.	<i>Journal of the Rubber Research Institute of Sri Lanka</i>	Rubber research and topical interest	Rubber Research Institute of Sri Lanka
23.	<i>Journal of the University Librarians Association of Sri Lanka</i>	Library and Information Science	University Librarians Association of Sri Lanka
24.	<i>Journal of the University of Ruhuna</i>	Science and Technology, Management & Social Sciences	University of Ruhuna.
25.	<i>Kelaniya Journal of Management</i>	Commerce, Economics, Finance, Management and Informatics	Faculty of Commerce and Management Studies of the University of Kelaniya
26.	<i>Medico-Legal Journal of Sri Lanka</i>	Forensic Pathology and Clinical Forensic Medicine	College of Forensic Pathologists of Sri Lanka
27.	<i>OUSL Journal</i>	Open and distance learning/ teaching	Open University of Sri Lanka
28.	<i>Sabaragamuwa University Journal</i>	Multidiscipline	Sabaragamuwa University
29.	<i>Sri Lanka Journal of Advanced Social Studies</i>	Humanities and Social sciences.	National Centre for Advanced Studies in Humanities and Social Sciences (NCAS)
30.	<i>Sri Lanka Journal of Aquatic Sciences</i>	Aquatic sciences including limnology,	Sri Lanka Association for Fisheries and Aquatic Resources
31.	<i>Sri Lanka Journal of Bio-Medical Informatics</i>	Bio-Medical Sciences	HISSL & Post Graduate Institute of Medicine - PGIM
32.	<i>Sri Lanka Journal of Child Health</i>	Pediatric Medical education	Sri Lanka College of Pediatricians
33.	<i>Sri Lanka Journal of Critical Care</i>	Critical care medicine.	Postgraduate Institute of Medicine, University of Colombo, Sri Lanka.
34.	<i>Sri Lanka Journal of Development Administration</i>	Public administration and public management	Sri Lanka Institute of Development Administration - SLIDA
35.	<i>Sri Lanka Journal of Diabetes Endocrinology and Metabolism</i>	Diabetes, endocrinology and metabolism in humans and human tissue.	Endocrine Society of Sri Lanka.
36.	<i>Sri Lanka Journal of Forensic Medicine, Science &amp; Law</i>	Forensic Medicine, Forensic Sciences & Law and Ethics as applied to forensic practice	Department of Forensic Medicine, Faculty of Medicine, University of Peradeniya Sri Lanka.
37.	<i>Sri Lanka Journal of Humanities</i>	Humanities and the Social Sciences	University of Peradeniya.
38.	<i>Sri Lanka Journal of Humanities and Social Sciences</i>	Humanities and Social Sciences	National Centre for Advanced Studies in Humanities and Social Sciences.
39.	<i>Sri Lanka Journal of Obstetrics and Gynaecology</i>	Obstetrics and Gynaecology	Sri Lanka College of Obstetricians

Journals of Sri Lanka available on SLJOL			
Sl. no.	Journals title	Subject	Publisher
40.	<i>Sri Lanka Journal of Psychiatry</i>	Psychiatry	Sri Lanka College of Psychiatrists.
41.	<i>Sri Lanka Journal of Radiology</i>	Radiology and allied disciplines	Sri Lanka College of Radiologists
42.	<i>Sri Lanka Journal of Social Sciences</i>	Entire range of Social Sciences	National Science Foundation of Sri Lanka
43.	<i>Sri Lanka Journal of Surgery</i>	Surgery and broadly related surgical sciences	College of Surgeons of Sri Lanka
44.	<i>Sri Lanka Journal of Urology</i>	Urology	Sri Lanka Association of Urological Surgeons.
45.	<i>Sri Lanka Journal of Venereology</i>	Curative and preventive Science, Sexual health,	Sri Lanka College of Venereologists.
46.	<i>Sri Lankan Journal of Agricultural Economics</i>	Agriculture and Agricultural Economics	Sri Lanka Agricultural Economics Association
47.	<i>Sri Lankan Journal of Anaesthesiology</i>	Anaesthesiology	College of Anaesthesiologists of Sri Lanka.
48.	<i>Sri Lankan Journal of Applied Statistics</i>	Applications of Statistics, theoretical and methodical aspects of statistics	Institute of Applied Statistics, Sri Lanka
49.	<i>Sri Lankan Journal of Human Resource Management</i>	Theory and practice of human resource management	Faculty of Management Studies and Commerce, University of Sri Jayewardenepura
50.	<i>Sri Lankan Journal of Infectious Diseases</i>	Infectious diseases & Microbiology	Sri Lankan Society for Microbiology (SSM)
51.	<i>Sri Lankan Journal of Librarianship and Information Management (SLLIM)</i>	Librarianship, information management, records management, information technology	National Institute of Library & Information Science (NILIS), University of Colombo
52.	<i>Sri Lankan Journal of Medical Administration</i>	Medical Administration, Management of health services	College of Medical Administrators of Sri Lanka
53.	<i>Sri Lankan Journal of Physics</i>	Physics and related areas	Institute of Physics - Sri Lanka
54.	<i>Staff Studies</i>	Economic Research	Central Bank of Sri Lanka.
55.	<i>TAPROBANICA: The Journal of Asian Biodiversity</i>	behavior, conservation breeding, conservation, ecology, geology, evolution, morphology, physiology and systematics	Taprobanica Private Limited, Sri Lanka and Research Centre for Climate Change, University of Indonesia, Depok, Indonesia.
56.	<i>Tropical Agricultural Research</i>	Agriculture Sciences	Postgraduate Institute of Agriculture, University of Peradeniya
57.	<i>Tropical Agricultural Research and Extension</i>	Agricultural Research and Extension in the Tropical and Subtropical Areas	Faculty of Agriculture, University of Ruhuna, Sri Lanka
58.	<i>Vidyodaya Journal of Science</i>	Pure and Applied Sciences	University of Sri Jayewardenepura
59.	<i>Vingnanam Journal of Science</i>	Science and Technology	Faculty of Science, University of Jaffna
60.	<i>Wayamba Journal of Management</i>	Management and organizational theory	Department of Business Management, Faculty of Business Studies and Management, Wayamba University