

MANAGING GREY LITERATURE IN FISHERIES AND AQUACULTURE INFORMATION: EXPERIENCES IN MALAWI

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Abstract: Management of grey literature involves collection, organizing, searching and retrieving the documents. In Malawi, grey literature is generated through papers written by scientists for presentation at conferences, workshops or seminars; reports, dissertations and theses. Such type of information is not easy to manage. Some of the reasons are that, people wanting such information may not know of their availability. There are also some scientists who sometimes refuse to donate copies of their papers, research reports, theses or dissertations to libraries, whilst others may demand a fee for a librarian to have a copy for library users. Organizing, searching and retrieving such information may pose a challenge to some libraries since they are not easy to catalogue and classify.

In Malawi, management of grey literature in fisheries and aquaculture information faces the same challenges. However, through a network of fisheries institutions in the country, some of the problems are dealt with. The network which has been in existence for a number of years now has been involved in the creation of a depository of local literature in fisheries and aquaculture information some of which is unpublished.

Keywords: *grey literature, electronic database, digitization, aquatic commons, electronic information, Malawi, Malawiana collection.*

Introduction

In Malawi, management of grey literature in fisheries and aquaculture information faces the same challenges. However, through a network of fisheries institutions in the country, some of the problems are dealt with. The network which has been in existence for a number of years now has been involved in the creation of a depository of local literature in fisheries and aquaculture information some of which is unpublished. An overview of the 2003-2005 literature on fisheries and aquaculture in Malawi was carried out in

collaboration with FAO. Annex 1 provides a brief analysis to show the types and place of publication as well as the prevalence of grey literature.

Definition of Grey Literature

Grey Literature refers to publications issued by government, academia, business, and industry, in both print and electronic formats. It is not controlled by commercial publishing interests, and where publishing is not the primary business activity of the organization. Scientific grey literature comprises newsletters, reports, working papers, theses, government documents, bulletins, fact sheets, conference proceedings and other publications distributed free, on exchange, for sale or available on subscription. The quest for scientific knowledge is an evolutionary process in which every increment of new knowledge adds to, modifies, refines, or refutes earlier findings (Subramanyan, 1981). Scholarly, peer reviewed journals are the major venue of communication for the science community to publish and present results of current research to colleagues. Since research tends to focus on specific areas of a discipline, readers often desire additional information to help place the research in a wider perspective. Auger (1989) pointed out that the advantages of grey literature over other means of dissemination are quick access, greater flexibility, and the opportunity to go into considerable detail when necessary. Thus, grey literature, covering nearly every aspect of the sciences, serves scholars and lay readers alike with research summaries, facts, statistics, and other data that offer a more comprehensive view of the topic of interest (Weintraub 2007).

Management of Grey Literature in Malawi

Malawiana collection exercise

The collection of grey literature in Malawi involves going round to offices and approaching authors (mostly scientists) to obtain copies of their documents. The frequency of visits to offices depends on the library concerned. These documents are often classified, catalogued and shelved at a particular location, popularly known as *Malawiana Collection* in most libraries.

The Malawiana collection at Bunda College also contains copies of aquaculture and fisheries science publications sourced through the internet or other institutions such as SAIAB (South African Institute for Aquatic Biodiversity) and IAMSLIC members.

Electronic bibliographic databases

Some libraries have created electronic bibliographic databases, which are often subject-based, for their grey literature. Documents indexed in a particular database are usually shelved in one location in boxes for easy retrieval.

Bunda Library has created an electronic database 2001 – '*Aquaculture and Fisheries Database*'. The library collects local publications and enters their bibliographic details in a database using the CDS/ISIS for Windows (WINISIS) software. The database is heavily used by researchers, lecturers and graduate students when they want to know

which research projects have already been conducted in Malawi and their results. There are over six hundred and sixty five records in the database.

Digitization of Malawiana

The electronic bibliographic database has its documents only available in Bunda College Library and not accessed widely. That is why there are various efforts to digitize the Malawiana collections so that they are widely available online.

In today's electronic information environment, the Internet has become a major source for dissemination and retrieval of grey literature and often serves as a user's initial introduction to a topic area. Well designed Web sites give users access to a body of digitally produced grey literature that complements the existing body of print materials. It is a major source of information retrieval and dissemination and there is growing acceptance to include references to relevant Web sites in scholarly papers and journal articles. Scientific publishing on the World Wide Web makes it possible to disseminate new information to a global audience in a matter of minutes.

Many of Malawi's aquaculture and fisheries publications are in poor condition and also too fragile for frequent use. Maintaining and disseminating digital copies of these works, would save the wear and tear on the original documents. Pending a true digital repository, the publications that are already available in electronic format are to be stored on CD-ROM to complement the objective of saving the original documents. Furthermore, those users not eligible to take the rare documents outside the confines of the physical library will be able to access the electronic copies from many locations at any time and they will be delivered to many simultaneous users, bearing in mind any copyright restrictions.

More importantly, digitizing the local publications is viewed as a solution to the problem of lack of local content on the Internet whilst also exposing the locally generated material (grey literature) to a wider community.

Challenges

Libraries face a number of challenges in the management of grey literature in Malawi.

First, most libraries do not have collection development policies on grey literature. In a survey conducted in 2003 it was discovered that none of the institutions, apart from academic organizations, has a policy or mechanism put in place to ensure that local publications are easily and readily accessible to other users, either within or outside the country. As a result, most publications are kept in the individual offices and are not organized or catalogued in any way, as was noted during the site visits. However, despite having no policy, some individual scientists ensured that their work is exposed to the international community by publishing in peer-reviewed journals. It is interesting that some scientists have published work which has been indexed for the ABAFR CD-ROM (Aquatic Biology, Aquaculture and Fisheries Resources produced by NISC SA). As of

May 2007 there were 484 entries on Malawi and at least 10 Malawian scientists had 2 or more entries in ABAFR.

The academic institutions, specifically Universities (Bunda and Chancellor Colleges), automatically have their publications deposited in the library. The university policy ensures that graduating students' projects and dissertations are deposited in the library, ensuring maximum dissemination and usage of dissertations and theses in academic institutions. However, all in printed form.

The other challenge is the unwillingness of some scientists to donate papers to the libraries. Some scientists do not see any benefits of donating their papers to the library; whilst others may demand payment.

Thirdly, Malawiana materials are difficult to organize because many librarians lack skills for cataloguing, classification, electronic database management and digitization. Coupled with this challenge is the lack of trained staff to provide access to the collections.

Finally, most aquaculture and fisheries libraries and information centres in Malawi have no or inadequate financial resources to enable them to travel and collect publications, to pay for publications or to embark on digitization projects.

Role of Networking Focal Point in Grey Literature Management

Bunda College Library is a focal point for aquaculture and fisheries information in Malawi. Over many years the Library has been involved in the collection of local publications, creation of an electronic bibliographic database, producing printed bibliographies from the database and responding to information requests from other fisheries institutions. These activities have assisted in ensuring that grey literature is reasonably well managed and utilized.

Since 2003 to date, Bunda Library acquired from various sources and included in its database 55 documents published over the three years in sources outside Malawi. A very broad classification of these shows that the majority relate to applied fisheries or aquaculture rather than to a pure science:

Fisheries	41	(including 7 on fisheries information)
Pure Science	11	
Human Health	3	(vectors/parasites)

Documents published in Malawi totalled 20, including 9 articles from a journal published by Bunda, 5 reports from the Department of Fisheries and 3 reports from an NGO. The 28 B.Sc. dissertations and M.Sc. theses were all published by Bunda. All publications in this group related to practical fisheries or aquaculture and none was classified as pure science.

A further 123 documents published outside Malawi and not held by Bunda Library were retrieved using various sources. These include a high proportion of pure science articles, mainly Cichlid biology (>30%).

Of the total 178 documents published, ca.50% was on applied fisheries and aquaculture and ca. 50% on pure science. The most notable differences are seen in the:

- place of publication i.e. those published in Africa are almost exclusively fisheries and aquaculture related rather than pure science;
- type of publication i.e. apart from the cichlid magazines, almost 90% of the pure science documents are articles published in scholarly journals.
- diversity of publication i.e. the fisheries and aquaculture documents are found in more diverse types of publication, often more difficult to identify and obtain.
 - 40% in scholarly journals
 - 21% in magazines or newsletters
 - 22% in conference proceedings
 - 15% published by international or non-governmental organizations

The above analysis is in keeping with several widely held views about the literature of fisheries and aquaculture, namely that there are fewer opportunities to publish in scholarly journals, which have a higher coverage of pure science. Relatively little is published in Africa – or what is published is difficult to find. It mainly relates to applied rather than pure science. Fisheries and aquaculture information is published in a range of what is often described as ‘grey literature’, such as conference proceedings, institutional reports or series and newsletters.

Locally, there are problems of staffing in other fisheries institution libraries such as:

- Fisheries Research Unit Library in Monkey Bay – it is managed on a temporary basis by a messenger
- Malawi Fisheries College Library has no staff
- National Aquaculture Centre – Library and Information Centre is run by one permanent staff member.
- Department of Fisheries Headquarters library has no staff

These problems make the work of managing grey literature in Malawi difficult. There is known to be a lot of grey literature in the aquaculture and fisheries institutions, which are geographically dispersed in the north, central region and south Malawi. These collections are not accessible to users and their contents are not indexed in any system.

New Opportunities in Grey Literature Management

Digitization projects

A number of libraries will embark on the creation of digital repositories for their Malawiana collections. One of the digitization projects involves the use of Greenstone software <http://www.greenstone.org/>. Bunda College Library is the national centre for the Pilot Project on Greenstone User Support in Southern Africa (<http://www.sagreenstone.unam.na/>) In addition the library has secured funding from INASP (International Network for the Availability of Scientific Publications) <http://www.inasp.info/> to purchase equipment for digitizing at least 1000 documents in the Malawiana collection in the next 12 months. Digital libraries will among other purposes enhance the local content online.

Use of Aquatic Commons digital repository

In September this year, Afriamslic librarians from Botswana, Uganda, Malawi, South Africa, Tanzania and Namibia together with fisheries scientists from all around Malawi were introduced to the Aquatic Commons digital repository (<http://aquacomm.fcla.edu>) at a one day Workshop sponsored by the FAO Fishcode Programme. During discussions it was agreed that much more awareness raising is needed for both librarians and scientists of the availability and benefits of digital repositories. It is envisaged that as more librarians and scientists become aware of the Aquatic Commons, more grey literature will be entered and made accessible to all.

Follow-up Action

Bunda Library, in consultation with users, should identify the relevant documents that have not yet been acquired and make efforts to acquire them for inclusion in the collection and the Malawi fisheries and aquaculture database.

Better procedures are needed to capture the fisheries and aquaculture information published in Malawi and to ensure that it is widely disseminated via international databases.

Better opportunities are needed for all fisheries and aquaculture stakeholders to publish, in order to share and verify the results of their research and development. As stated above, the development of the Aquatic Commons is one means that is being pursued <http://aquacomm.fcla.edu>

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ANNEX 1

Publications on Fisheries and Aquaculture in Malawi 2003-2005

Broad classification of all external publications

Subject	Published in Africa	Scholarly Journal	Magazine/newsletter	Conference Proc.	International or non-governmental organizations	Report/thesis/Book	Total
Fisheries/aquaculture	38	32	17	18	12	2	81
Pure Science (including cichlid biology)	6	51	27	5	0	3	86
Other related (information/human health)	2						11
Total	46						178