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NEW HORIZONS IN AGRICULTURAL INFORMATION MANAGEMENT

PROCEEDINGS

OF AN INTERNATIONAL SYMPOSIUM

MARCH 13-16, 1991

BEIJING, CHINA

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Functioning of the National Agricultural Information Network (AGRINET)

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Abstract

Resource sharing through networks can make services and materials available to patrons, cut costs, and reduce unnecessary duplication of materials. This paper describes the objectives and the cooperative projects of the Sri Lanka Scientific and Technical Information Network (SLSTINET) and the Agricultural Information Network (AGRINET). Both are being developed jointly by scientific and agricultural libraries and are coordinated by the Natural Resources Energy and Science Authority (NARESA) of Sri Lanka. AGRINET is a subsystem of SLSTINET. The Selective Dissemination of Contents Page (SDCP) Scheme is the most important cooperative activity undertaken by AGRINET. Two databases, the Union Catalogue of Agricultural Periodicals (UNILIST/AGRI) and the "Agricultural User Profile Inventory" (UP/AGRI) are being produced by automated methods. These two databases were used to draw up the SDCP Scheme by creating a user demand file, a periodical demand file, and selecting the donor library for a given periodical. Apart from the SDCP Scheme, the two databases, UNILIST/AGRI and UP/AGRI are tapped to develop resource sharing and resource improvement programs such as: Cooperative Acquisition Plan for agricultural periodicals (CAP/AGRI), agricultural periodical holdings list, directory of agricultural scientists, periodical demand report and subject interest reports. Briefly describes the participation in SAIC (SAARC Agricultural Information Centre) which is a regional cooperative information system and in AGRIS (International Information System for Agricultural Sciences and Technologies), which is the world's largest agricultural bibliographic information system and the only one which is cooperative and international. Describes the cooperation of the Central Library of the Department of Agriculture for AGRINET activities through its participation in AGRIS.

Introduction

Sri Lanka is a small developing country with a population of around 16 million. It is a poor country with a per capita GNP that stood at \$339 in 1985. It has a high literacy rate (around 80 percent) and a relatively well-developed education system.

Data compiled by the Ministry of Plan Implementation for 1984 showed a total of 5,557 qualified natural scientists and technologists in Sri Lanka, of whom 2,951 (53 percent) were engaged in research and development activities. The Scientific and Technological Research System is not very productive, has not been adequately funded, and is

perceived as being in crisis. One aspect of the crisis has been funding. Since 1960, per capita research and development expenditure has declined to 0.14 percent in 1983. There has been continued pressure on library budgets, manifested most dramatically in 1973-75 when the government suspended all foreign purchases by universities including all foreign periodical subscriptions, when faced with high food and energy prices in the world market.

The Sri Lanka STI Library community's response to budgetary pressure was resource sharing. Resource sharing had become the more or less official STI policy after a UNESCO consultancy mission on the setting up of a National Scientific and Technical Documentation Centre in 1968. Even so, the actual implementation of the recommendations for a union list, bibliographies, reproduction capacities, etc., set the Sri Lankan STI agenda for the 1970s and the 1980s. The government of Sri Lanka, on the recommendation of UNESCO, established the Sri Lanka Scientific & Technical Information Centre (SLSTIC) in 1977 as part of the National Science Council (redesignated in 1982 as the Natural Resources, Energy and Scientific Authority (NARESA)). The first edition of the Union List of Scientific and Technological Serials (UNILIST) was issued in 1979. The idea of a voluntary, but semi-official, network of STI libraries was raised at a meeting of the Directors of Scientific Research Institutions in 1977. The membership in this network, since named the Sri Lanka Scientific & Technical Information Network (SLSTINET), had grown from 23 in 1979 to 105 by 1989. Work on rationalizing the purchases of expensive but essential abstracting and indexing journals through a cooperative acquisition plan (i.e., eliminating multiple subscriptions within Sri Lanka) commenced in 1978.

National Networks

SLSTINET

The primary objective of SLSTIC is to promote resource development and resource sharing activities of the country's scientific and technical libraries. SLSTIC has now organized a hundred or more scientific and technical libraries to form a network designated the Sri Lanka Scientific and Technical Information Network (SLSTINET). SLSTIC has inaugurated jointly with the assistance of other libraries, several cooperative projects including:

- UNICAST: Union Catalogue of Scientific & Technical Books in SLSTINET
- Union List of Periodicals in SLSTINET
- Cooperative plan for the acquisition of scientific and technical abstracting journals.

SLSTIC acts as the coordinating center of SLSTINET by providing various services to improve the resources of the libraries. In addition to the above, SLSTIC provides services such as photocopying, document procurement, microfilming services, training services, and consultation services, etc. It also publishes its own newsletter.

SLSTINET continues to function, convening annual meetings of STI libraries, convening committees on standardization and other matters, holding training programs, and maintaining the union catalogues. Its membership has grown to 105, incorporating almost all the STI libraries and documentation centres. SLSTIC serves as the supplier (but more accurately as the locator, since its own holdings are minuscule) of last resort for the domestic inter-library loan system.

With the growth and expansion of SLSTINET activities, four specialized sub-networks were created with the main objective of organizing specific subject-oriented projects. These sub-networks are AGRINET, HELLIS, RERINET, and TECHNINET dealing respectively with agriculture, health sciences, renewable energy, and technology. These sub-networks offer unique services to users in member institutions such as the contents page dissemination service in AGRINET, the offline computerized database search facility in HELLIS, and the building of technology information packages in TECHNINET. They are connected to specialized international STI networks established by international organizations.

AGRINET (National Agricultural Information Network)

AGRINET includes 22 libraries attached to agricultural and allied fields. This network was formed to improve the resource sharing and information transfer activities of the agricultural libraries in Sri Lanka with a view to providing better service to the agricultural scientists and technologists engaged in research and study.

The setting up of an agricultural subsystem is a very timely measure as priority has been given to agricultural information by all the developing countries.

Objectives of AGRINET:

- To improve the agricultural information facilities in Sri Lanka
- To promote exchange and transfer of agricultural information within Sri Lanka
- To work out resource sharing programs
- To assist libraries in the subsystem in staff and resource development activities
- To operate as a subject-oriented subsystem of the Sri Lanka Scientific and Technical Information Network
- To advise the UNISIST National Committee on matters relating to dissemination of agricultural information
- To link with regional and international information systems through SLSTIC.

Functions of AGRINET:

1. Selective Dissemination of Contents Pages (SDCP)

Libraries participating in the Agricultural Information Network (AGRINET) decided to launch a special program to share periodical resources. The most economic and convenient way to disseminate information on articles appearing in current periodicals is to circulate contents pages of the periodicals. A library which receives a large number of agricultural periodicals finds it costly in time, money, and effort to distribute photocopies of contents pages of all periodicals. Since most are not of core interest to users, such a service would lead to resource wastage.

AGRINET libraries decided to distribute contents pages selectively among their users. The Selective Distribution of Contents Pages service would help a user of one library obtain photocopies of contents pages of periodicals received by another library.

SLSTIC compiled a union list by collecting information on current agricultural periodicals acquired by the AGRINET libraries. It was revealed that the 22 cooperating libraries receive 661 titles. The information was entered in the microcomputer at NARESA to create a database named "Union List of Current Agricultural Periodicals" (UNILIST/AGRI).

SLSTIC periodically conducts surveys to evaluate agricultural information needs of users with the help of the AGRINET libraries. Questionnaires from 293 agricultural information users were collected in 1989. A database entitled "Agricultural User Profile Inventory" (UP/AGRI) was created using the data collected from the user survey.

The two databases, UNILIST/AGRI and UP/AGRI were used to draw up the SDCP Scheme in the following manner:

1. The creation of a "User Demand File" by analyzing the profile inventory (UP/AGRI) and extracting relevant data from the Union List (UNILIST/AGRI). A record in the User Demand File contains the user code (which identifies the user), periodical code, and holding libraries:

DAG /22017 CRI, PGIA

(User Code) (Periodical Code) (Holding Libraries)

No record is made if the periodical demanded by a user is available in his or her library. A tag was introduced in the records of the union list to indicate that the periodical has no contents page. Hence, it was possible to prevent entering such periodicals in the User Demand File.

2. The records are sorted by periodical code and used to create the "Periodical Demand File." A record of this file contains the following information:

017	DAG/22 NARA/11 RRI/02	CRI, PGIA
(Periodical Code)	(Users)	(Holding Libraries)

3. Selection of the donor library for a given periodical is made by computer. If the periodical is acquired by only one library, then automatically it becomes the donor library. If more than one library receives the periodical, the library which has been assigned the lowest number of periodicals is selected as the donor. This procedure was adopted to distribute the burden of photocopying evenly among libraries.

017	DAG/22 NARA/11 RRI/02	CRI, PGIA	
(Periodical Code)	(Lisers)	(Donor)	
Code)	(Users)	(Donor)	

AGRINET's procedure for implementation of the SDCP Scheme:

- 1. The donor library, when it receives a SDCP title (i.e., a periodical assigned to it), should send a photocopy of the contents page to SLSTIC. Thus the donor library is burdened with only one photocopy per issue.
- 2. SLSTIC identifies the user libraries which need the contents page, duplicates it, and sends the copies to the user libraries. (SLSTIC does not send contents pages directly to the user.)
- 3. The user library which receives the contents page sends the contents page to the user. If there is more than one user, duplication will be done by the library concerned.
- 4. A user who wishes to obtain an article makes a request to his or her library. This library locates another which holds the periodical (by consulting the Union List) and initiates an inter-library loan request.
- 5. SLSTIC distributes reports showing the progress of the SDCP Scheme periodically among the AGRINET libraries.
- 6. Progress of the Scheme is reviewed at AGRINET meetings.

Apart from the SDCP Scheme, the two databases, UNILIST/AGRI and UP/AGRI, are tapped to develop resource sharing and resource improvement programs.

2. Cooperative Acquisition Plan for Agricultural Periodicals (CAP/AGRI)

Since the Union List shows the degree of duplication of a title in AGRINET, it is possible for libraries to identify the periodicals that could be dropped from their list of acquisitions. Libraries are requested to name the titles which they will continue to acquire even at a very high cost. These titles are labelled "Core Journals" for the library concerned. Indication of core journals ensures prevention of dropping a title by all libraries.

3. Agricultural Periodicals Holdings List

Each library is supplied with a list of periodicals held by that library.

4. Directory of Agricultural Scientists

A directory giving detailed information about scientists and technologists engaged in study and research in agriculture and allied fields is compiled using the Profile Inventory (UP/AGRI). Librarians can use the directory as a tool for "Contact Services." Additionally, users can contact other scientists engaged in research in fields similar to their own fields of study and interest.

5. Periodicals Demand Report

The Periodicals Demand Report indicates the demand made for a periodical by information users of AGRINET libraries. The Demand Report also proves useful when a library reviews its periodicals acquisition policy. A library, recognizing the fact that its periodicals are useful to the entire network, may drop a title which is in low demand and retain a title which is in high demand.

6. Subject Interest Report

The Subject Interest Report shows demand for information on a particular subject by agricultural information users. The Profile Inventory is analyzed to find the demand for subjects. The Subject Interest Report is useful to identify the areas of specialization of libraries. Also, it guides a library in building up its collection according to the needs of its users.

Participation in Regional Agricultural Networks

SAARC Agricultural Information Centre (SAIC)

The SAARC Agricultural Information Centre is the recent creation of a regional agricultural documentation centre under the auspices of the SAARC. SAIC makes efforts in improving networking among agricultural library and information centres in the region. SAIC's objective is to create a South Asian Agricultural Information Network that would make the rich information resources in these countries more easily and widely accessible to users in and outside the region.

The Central Library of the Department of Agriculture has been designated as SAIC National Focal Point for Sri Lanka by the Governing Board (G.B.) of SAIC and the Technical Committee on Agriculture (TCA).

The SAIC National Focal Point will be responsible for collecting, compiling, processing, and updating information at the national level with the guidance and assistance of SAIC, which in turn will handle the overall key data and make them available to each member country. The system will function according to a common methodology developed and controlled by SAIC and publications will be issued and distributed to each country through national focal points.

As a preliminary step, action has been taken to compile a Directory of Agricultural Institutions in the SAARC region. This project has been undertaken by SAIC on a priority basis as recommended by the SAIC Governing Board and the Technical Committee on Agriculture respectively.

Participation in International Agricultural Networks

AGRIS

The Central Library of the Department of Agriculture acts as the National Centre for the International Information System for Agricultural Sciences and Technologies (AGRIS). This project is executed by the Department of Agriculture with grant support from IDRC. The project commenced in 1982 and the first phase terminated in 1986.

Its primary objective is to establish a National Agricultural Information Service in which the Central Library will act as a focal point allowing it to function as the National Resource and Referral Centre for Agricultural Information.

The specific objectives of the project are:

- 1. To capture the agriculture literature being generated in institutions throughout Sri Lanka
- 2. To input records of these documents to AGRIS
- 3. To produce a National Agricultural Bibliography
- 4. To provide services of retrospective searching, current awareness, and SDI (Selective Dissemination of Information)
- 5. To provide a document delivery service on request.

The AGRIS Project is an important development for agricultural information in Sri Lanka. From its inception in January 1982 to the present time, this project has made excellent progress in taking AGRIS to the scientists of Sri Lanka and participating in the system. The majority of the users of AGRIS are scientists who are users of

AGRINET libraries. However, since the project conclusion in 1986, a lack of funds at the Central Library has forced it to significantly curtail its services.

In order to further strengthen agricultural information services with special reference to AGRIS and CARIS projects the Central Library submitted a new proposal to IDRC in 1989. It is appreciated that IDRC has readily agreed to fund this new project commencing in 1991. The Central Library has been requested to take over the coordination of AGRINET activities which is presently handled by NARESA with this proposed project coming into effect in 1991.

As IDRC has suggested, being the National Focal Point for AGRIS, coordination of AGRINET by the Central Library will definitely assist in the rationalization and sharing of the country's agricultural literature in a more efficient manner, and will enable the scientific community of Sri Lanka to benefit from, as well as contribute to, the latest agricultural research.

References

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Yapa, N.U. 1987. In: *Information, communications, and technology transfer*. 26th Annual Seminar of the Federation of International Documentation held in Montreal, Canada.

USER PROFILE			
Name of Library	Number of Users	Number of Journal Titles	SDCP Titles Assigned
ARTI	10	18	11
CISIR	17	44	22
CRI	17	75	33
DAG	128	65	27
DF	4	28	21
DI	2	6	5
IIMI	6	43	20
MADR	-	3	1
MASL	-	1	1
NARA	8	11	7
PGIA	22	112	54
RRI	13	73	33
SRI	6	-	-
TRI	24	101	32
UB	12	1	1
UR	8	57	33
VRI	12	18	7
WRB	4	5	4

ARTI Agrarian Research & Training Institute

CISIR Ceylon Institute of Scientific & Industrial Research

CRI Coconut Research Institute
DAG Department of Agriculture
DF Department of Forestry
DI Department of Irrigation

IIMI International Irrigation Management Institute

MADR Ministry of Agricultural Development and Research

MASL Mahaweli Authority of Sri Lanka NARA National Aquatic Resources Agency PGIA Postgraduate Institute of Agriculture

RRI Rubber Research Institute
SRI Sugar Research Institute
TRI Tea Research Institute
UB University of Batticaloe
UR University of Ruhuna

VRI Veterinary Research Institute

WRB Water Resources Board

NEED LIST		
Name of Library	Number of Journal Titles Needed for Scientists	
ARTI	20	
CISIR	46	
CRI	51	
DAG	201	
DF	19	
DI	8	
IIMI	15	
MADR	27	
MASL		
NARA	<u>-</u>	
PGIA	78	
RRI	49	
SRI	29	
TRI	73	
UB	54	
UR	35	
VRI	36	
WRB	17	

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