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# Document Availability and Delivery: Problems and Prospects for Developing Countries

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**Notes/Citation Information**

This article is an invited paper prepared in honor of the retirement of Sayed Salim Agha, University Librarian, Universiti Pertanian, Malaysia in 1995.

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Document Availability and Delivery  
Problems and Prospects for Developing Countries

A paper prepared in honor of Syed Salim Agha by:

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## **Introduction**

The central theme of this paper was originally developed for the Third Conference on Librarians in International Development held at Oregon State University in Corvallis, Oregon, U.S.A. in May of 1991. The idea for the paper had its roots in the VIIth World Congress of the International Association of Agricultural Librarians and Documentalists (IAALD) where Syed Salim Agha presented a paper entitled "Effecting Information Transfer Through the Document Delivery Process in South East Asia." In that paper Syed Salim Agha outlined the barriers to document delivery along with potential solutions. His presentation left a lasting impression and six years later I found myself building on that paper for a presentation. Now, a decade later I am still building on his presentation. I am pleased to be submitting this paper for a volume honoring the career of Syed Salim Agha.

## **Background**

Over the years the concept of sharing resources to provide document access generally meant an interlibrary loan service. In today's environment it is much less a loan of materials but the providing of a surrogate document. Much of the activity in international borrowing and lending deals less with the provision of an original document but more with the provision of a photocopy, fax, or digital image of a document. Resource sharing in developed countries, while not perfect, has been a way of life for a number of years. These institutions share their documents both internally and externally in their countries. But what of countries that are information poor? If there are no resources to share, how can there be participation in resource sharing? For the purposes of this paper I am going to focus my attention on document availability in lesser developed countries.

Much has been written about proposals to aid in the sharing of library resources in developing countries but very little records the success or failure. The sharing of library collections has been aspired to for many years and the earliest occurrence of it in relation to developing countries found was in the early 1950s. Articles were written about plans to put forward and problems with the idea but little about the implementation of any programs. In 1989 an informal survey was conducted with a group of fifteen librarians worldwide and replies were received from four of them. The same survey was conducted in 1994 and resulted in three replies. All the replies to the 1989 survey indicated that there was increased awareness about document delivery and one indicated government support for such an effort. While some of the librarians who took the time to respond felt it had potential, most were not positive about the process. In 1994 there was a more positive response about the delivery of materials. Librarians from Southeast Asia reported a marked increase in activity. A librarian from the Caribbean indicated an increased awareness in the process but cited barriers to document delivery being wide spread.

J.S. Parker defines the basic function of the information profession as matching the needs of the user with the content of the document (Parker, 1979). This simplistic concept requires a complex set of variables to accomplish. Comprehensive document delivery on the global level has been a dream for years and an objective for several international organizations. UNESCO, in 1955, put forth the idea of an international library card so scholars could move from country to country to do their work and be admitted to the library of their choice without the formalities then required. This was delivering the client to the document, information delivery in a grossly inefficient manner. The UNESCO idea did not come to fruition.

## **Formal Resource Sharing Activities**

The idea of international access did not die and in 1972 Donald Urquhart,

founder of the National Lending Library for Science and Technology at Boston Spa in the United Kingdom, and Maurice Line, Chairman and Secretary of IFLA's Committee on International Lending and Union Catalogues, conceived the Universal Availability of Publications Programme (UAP).

UAP can best be described by Maurice Line:

"The objective [of UAP] is the widest possible availability of published material (that is recorded knowledge issued for public use) to intending users, wherever and whenever they need it, as an essential element in economic, social, technological, education and personal development. The programme aims to improve availability at all levels, from the local to the international, and at all stages, from the publication of new material to the retention of last copies, both by position action and the removal of barriers." (Line and Vickers, 1986, p. 325)

In short "all published information, wherever and whenever published should be available to anyone, wherever and whenever" (Steele, 1984, p. 358).

This is tied in with another IFLA program, that of UBC or Universal Bibliographic Control. Once you know what is there, it must be provided. In 1974, the IFLA General Council approved the establishment of an office for international lending and UNESCO declared its support in both philosophical and financial terms. In 1980 an international office for UAP was put in place and work began to standardize the request form and to develop various models for countries to use. The proponents of UAP worked tirelessly for their ideal but in the last UAP report submitted by Maurice Line upon his retirement in 1989, he writes ". . . the main disappointment has been the inability to initiate a practical UAP Programme in one or two individual countries" (Line, 1990, p. 264). During the years since Mr. Line's retirement UAP has not died. While there has been little progress in finding a test country, there has been improved staffing and funding from the European Community and there is now a UAP newsletter being issued over the Internet as well as in paper copy. In addition the UAP is now involved in such projects as Copyright in Transmitted Electronic Documents (CITED) and worldwide availability of grey literature.

During the same time period another program was in its infancy and grew similarly to the UBC. The idea was born at a meeting of the International Association of Agricultural Librarians and Documentalists, (IAALD) in Bogota, Columbia in 1968. This idea modeled itself on the International Nuclear Information System (INIS) operated by the International Atomic Energy Agency in Vienna but covered the area of Agriculture. It was to be an international cooperative network dealing with both the bibliographic end and the document delivery end of the process. The program began in 1968 when Raymond Aubrac, a representative of the Food and Agriculture Organization of the United Nations (FAO), took the idea to the FAO offices in Rome. In April of 1970, the Director General of the FAO created a panel of experts to study the issue and in November of 1971, the 16th session of the FAO Conference passed a formal resolution regarding the establishment of an International Information System for Agricultural Sciences and Technology (AGRIS) and to begin technical cooperation with INIS. In January 1972, *AGRINDEX* experimental number was distributed and in November of 1972, the 17th Conference of the FAO funded AGRIS for a 3 year period. AGRIS survived its three years and in 1982 published its own vocabulary AGROVOC in five languages. By 1983, on its tenth anniversary, AGRIS had 130 participating processing centers. Almost a decade later, in 1992, a second edition of AGROVOC was published. While the bibliographic control part of the project grew, the document delivery aspect did not.

AGRIS eased the exchange of information by requesting that inputting centers include the addresses of authors or a document availability note for non-conventional literature so users could obtain reprints. At the 1984 technical consultation it was resolved that AGRIS centers provide a worldwide delivery for documents in their own areas and that countries move to get their own national document activities under control.

There has been much attention paid to document delivery over the past two decades and during the 1980s the literature was filled with interlibrary lending projects. Projects in the Caribbean and Latin America have been written about and many consortia described. COMUT, a program developed in Brazil in 1981 was geared toward delivering material at the national level in selected subject areas. As of 1986, COMUT had not begun. A review of the literature in 1994 found no reference to COMUT since 1986. REPIDISCA was or may still be an information network for the Latin American and Caribbean Region dealing with information on water. REPIDISCA was described in an article in 1982 with national centers cooperating responsible for identifying, selecting and obtaining national documents within the subject scope of the network, preparing the input work sheets for the document, disseminating the products and services of the network to local users and providing on request, copies of national documents at cost. At the time of the publication of the article, the document delivery portion had not begun but the bibliographic portion was well off the ground. No later evidence was found of REPIDISCA's existence since 1982.

Resource sharing appears to be lagging behind other information developments. While much is written about networks and document delivery, it seems the writing is at the beginning of the project, no follow up is done to report the progress on the project. The reality is that there are many obstacles to interlending internationally and document access and delivery locally. The problems are tied in with many areas of a country's development and cannot be considered independently of that country's environment.

### **Problems of Document Availability**

Why have all of these endeavors seemingly failed? One only has to read the massive amount of literature written by information professionals in both developed and developing countries to come to a general understanding of why this is not working.

The UAP idea brings together "all those involved with the production, storage, dissemination, conservation and use of publications, from the author, publisher and distributor, through information, library and archives personnel, to the user, the ultimate beneficiary" (Steele, 1984, p. 359). The five main elements to UAP are publication, supply, acquisitions, interlending and retention. The program calls for support at the national level with each country taking responsibility for supplying other countries with their own publications. It is not an independent program but requires a considerable degree of political and financial support at the local level.

To have UAP you must first have NAP (National Availability of Publications) and here is the root of the problem. The reasons are many and complicated but can be pigeon-holed into seven categories; economic, technical, socio-cultural, legal, political, physical, and functional.

The economic problems facing developing countries are overwhelming. There is a serious shortage of resources; human, financial and material that limits the services that can be provided. The lack of trained librarians with a service ethic, the inability to pay for the service among libraries, lack of materials to lend and the amount of money

needed to provide the service all hinder the development of an interlending system. These problems are compounded by the high overhead cost per item, because many have to come from overseas, and the problems associated with the exchange of currency are overwhelming.

Technical problems are also an impediment. The lack of photographic equipment, insufficient maintenance of the equipment available, shortages of paper and spare parts, erratic electrical supply, inadequate printing and binding of materials make the storage of these materials and the provision of them on demand difficult at best. Lack of a good communication system in a country as far flung as Indonesia make national availability a near impossibility.

Socio-cultural problems present the greatest challenge to NAP. The potential user does not have motivation to seek the information and many times lacks the training and tradition to use information. There is only a small number of people involved in research and in some countries, reading habits are poorly developed because of a strong oral tradition. There is a lack of social recognition of the library as an institution and the value of the library profession. The intangibility of the benefits of information escapes the potential users and much of the information available is in a language that they cannot read. In areas where librarians know one another there is informal interlibrary lending and they cannot see a reason to formalize it. Few statistics are gathered to assess the service and generally the poorly trained professionals do not encourage the use of the materials. They also mistrust one another and feel threatened by change. Couple this with the poor social status of the librarian, and you have no demand to provide this service.

Legal restrictions impede the development of NAP. Many countries do not have a copyright deposit law and if they do there are ways to get around it. Many legal deposit laws exclude government publications. Even if there is a flourishing publishing industry, publishers are not required to deposit nationally and libraries have to try to locate and acquire the material through other means. In some developing countries microtexts are subject to customs scrutiny and librarians are personally responsible for the protection of their collection. This makes them reluctant to share them within the country let alone outside the country.

The politics of a country also play an important role in the development of NAP. Censorship is very much the norm for some of these countries and governments limit the information both coming or going. There is no clear distinction between classified and unrestricted documents and an official can take an oath of secrecy if they do not want to give out a printed document for whatever reason. Many governments divide the responsibility for libraries in different areas of the government or divide them by size or type. There is competition and duplication of effort because of poor planning. The lack of appropriate information policies and information infrastructure slows any movement toward NAP. Cumbersome bureaucratic procedures in both administration and financing allow for no cohesive development of a national library or designate a decentralized program of NAP. To paraphrase a librarian from one developing country, ethics are harder to have in a repressive regime.

The physical area or geography of a country makes a difference. It is much easier to develop programs for physical movement of materials nationally in a country such as Lesotho that is compact than it is in a country such as Indonesia that is comprised of 931 inhabited islands with 5 main islands. The physical layout of the country coupled with an inadequate communication system hinder NAP.

The functionality of the existing system conflicts with the development of a good national system. There are few tools available to identify references and no established delivery system for nonconventional materials. Procedures and controls are complex and bureaucratic. Even if these obstacles were overcome, there is the problem of poor postal systems, frequent power failures and the other technical problems mentioned earlier. The ineffective performance of the system, the lack of effective policies and procedures, lack of tools, inadequate bibliographic control by the book trade and libraries, insufficiently trained personnel and lack of attention to failure in library services all slow the development of a national publications program.

The articles from the developing countries about the UAP program echo the above problems. It seems that these problems are universal no matter where the library is located. Lack of trained personnel and staff, limited resources, unstable governments, centralization of decision making, constant changing of priorities, poor communications system all seem to be the common bond. Until some of these problems are addressed at the most basic level, NAP will struggle to survive.

All is not bleak with the concept of NAP along with UAP. Malaysia has made great strides in national availability of publications and document delivery. In 1988, as a result of an initiative of the National Library of Malaysia, a Memorandum of Understanding was drawn up and signed by the Executive Officers/Chief Librarians on institutions who wished to participate in the system. The National Library of Malaysia is the coordinating body and monitors developments. As of 1991 the scheme was working reasonably well. In 1993, the Universiti Pertanian became one of the document suppliers for the International Food Information Service (IFIS) publisher of *Food Science and Technology Abstracts*.

It is a principle of UAP that each country should attempt to reach a minimum of 70% self-sufficiency in relation to the documents that are needed. UAP emphasizes the need for a planned approach to availability of publications to ensure that everyone can have access to everything rather than everyone actually owning everything (Bradbury, 1992). By setting up regional networks for sharing, this core literature could provide for the region.

No one part of the system can be ignored. Inadequate libraries generate little demand. With no demand, tools are not developed to identify references and with no demand or no money there are no references to identify. There are solutions to these problems but they are not quick or inexpensive. Western models cannot be realized in developing countries where psychological and political aspects differ. Planning needs to take into account the condition of the country, the environment that the information system must exist in.

Leaders of developing countries need to be convinced of the priority of information. Many developing countries have no national library and the information function is spread throughout the government in competing agencies. There is no coordination of information activities and the lack of a publications deposit law hinders the collecting of in-country publications. Library cooperation begins at the grassroots level so resource sharing among nearby institutions should be encouraged. Government policies making the librarian personally responsible for the book collection must be eliminated if any interlibrary lending even on the most basic level is to happen. The role of the political forces cannot be under emphasized in this process.

### **Prospects for Document Access**

Networking is a viable way to share resources. The establishment of networks



has met with some success. The term network dates back to 1560 and generally describes any cooperation activity between individuals or institutions. A network has its unique policies and caters to the needs of the group. Networking has been successful when networks have common characteristics and needs. While AGRIS is not a perfect network and has not solved the document delivery problem, it has set up a worldwide network to deal with the bibliographic accessibility of publications. This common need to access the subject has made AGRIS a viable network and it continues to work toward solving the document delivery problem with the establishment of AGLINET, a voluntary association of large agricultural libraries collaborating to improve provision of the needed publications. Many networks in Latin America remain in existence today because they have a common bond by subject and language. It does no good to bind a network together if they cannot communicate in a common language. The most successful networks are the ones that have many characteristics in common in both socio-economic development and bureaucratic capability. Networks should be dynamic and change with the changing needs or cease if there is no longer a need to exist.

The problems of no common currency can be overcome if there is a willingness to do it. AGRIS proposed a coupon scheme for its members where coupons are sent in lieu of cash. The coupons would be good for up to 10 pages of a document or one microfiche duplicate plus airmail costs. Coupons could be reused and excess coupons could be redeemed in local currency each year. Net lenders could trade their coupons in for cash if they do not borrow enough to use them. Still to be determined is who is to provide the cash. While the AGRIS scheme remains a proposal there is positive movement in this direction. At the writing of this paper the offices of UAP and International Lending were beginning a pilot project involving 20 countries to use a voucher scheme for international lending. The vouchers would be issued in multiples of 10 and each full voucher would cost US\$8 each and a half voucher will be US\$4 each. Vouchers could be reused or turned into IFLA for US dollars.

For a number of years there have been organizations that provide aid in collection building for developing countries, particularly in the sciences. There are a number of successful ventures and only two will be highlighted here. The International Centre for Theoretical Physics (ICTP) and the Third World Academy of Sciences (TWAS) are two successful schemes. The ICTP receives materials from libraries, publishers, international conferences, and international organizations. These in turn are distributed in the lesser developed countries. TWAS established a database under a UNESCO contract that records the available publications and both donor and recipients interest by subject and level. As shipments are made the database is updated. In both these systems, the recipient does not choose the materials to be received.

In 1991 the International Council of Scientific Unions (ICSU), UNESCO, TWAS, and the European Commission joined forces to form the International Network for the Availability of Scientific Publications (INASP). This network became operational in June of 1992 and provides information and advisory services. It serves as a "clearinghouse" to match supply and demand for scientific materials. The recipient requests specific materials and the network matches that request with a donor. There has been progress made in the area of scientific material to aid in the area of collection building.

### **Impact of Technology**

According to John R.U. Page information became a commodity with the rise of on-line systems. Information is bought and sold and the right to possess information must be paid for (Page, 1984). Information has always had a price attached to it but this price is more evident in the age of technology. An example of the cost of information can be seen in gathering sources for this paper. The University of Kentucky

provided a library collection at a considerable cost and spent an additional US\$165.26 to update this paper. Of that cost US\$69.26 was for an online search in the LISA Database and US\$96 was spent on articles through the CARL UnCover System (US\$65 for CARL to deliver the articles and US\$31 in copyright royalties).

The technology made it possible for me to do this from my desk top. The database search and the searching of the University of Kentucky Catalog and the requests for the articles from CARL UnCover were done in the space of a few hours with other activities in between. The delivery of the articles was through a fax, and delivery was less than 24 hours from the time of request. Clearly technology has impacted document delivery but at a price that is no longer transparent to the user.

What impact does this have on developing countries? Communications has greatly improved the movement of documents in the past decade but not the cost to do it. Fax transmission is possible to many parts of the world reducing the time delay in inefficient postal systems but it is expensive and the quality is not always the best. The receiving library must know the fax is coming and leave the equipment on. Communication networks such as the CGNET and access to the Internet coupled with optical scanning also have potential. This is not always practical and does not take into consideration the "information isolated areas." These areas as defined by Jane Kinney Meyers refers to a condition where the use, value, and transmission of information is impeded by a combination of cultural, political, developmental, infrastructural, and economic characteristics (Keylard, 1993). For these areas fax or internet transmission are not the answer. Yet these areas are not without hope. There is some speculation that CD-ROM will alleviate the problem.

CD-ROM has greatly revolutionized bibliographic searching of materials. No longer was electronic searching dependent on the telecommunications system and electronic bibliographic searching was now put in the hands of the end user. With the proper equipment, electronic database searching could be budgeted. Aside from the cost for the CD-ROM, lack of document delivery would detract from the usefulness of the CD-ROM. Once again the usual barriers to document delivery applied.

Technology can improve document delivery. CD-ROM is now making research collections possible without transporting thousands of pounds of printed material and allocating space. There are several projects being worked on that have great potential. The UNESCO General Information Program has been working on a core list of journals in the life sciences. The outcome was identifying several thousand journals that satisfied 80% of the coverage of major indexing and abstract journals. The next step is to put the full text of these journals on CD-ROMs. Another project that has great potential for closing the information gap is the Core Agricultural Literature Project located at Cornell University. This project's goal is to identify the core literature in agriculture and to put the full text of 6,000 monographs covering all the disciplines plus 500 journals covering the last five years in all areas of the agricultural sciences. Annual updates are planned as well. The Consultants Group on International Agricultural Research (CGIAR) has also contributed to the literature available on CD-ROM with the CIARL-BRS (Compact International Agricultural Research Library--Basic Retrospective Set. This is the full text output of research publications produced by the institutions of the CGIAR. The ADONIS collection on CD-ROM provides 700-800 biomedical journals on CD-ROM and is updated weekly. This is available for a price.

CD-ROM, as all technology, comes with its own set of problems as personnel from the Royal Tropical Institute (KIT) found when they executed 50 CD-ROM project in developing countries. The pitfalls KIT encountered were the misconception that CD-

ROMs answered questions rather than provide information, the assumption that training was not necessary to use the CD-ROM and little understanding of what the technology involved. In some instances CD-ROM creates another barrier between the user and the information as CD-ROMS are not inherently intuitive to the users. CD-ROM has had and will continue to have an impact on document delivery and resource sharing.

### **The Future**

As so aptly stated by Maurice Line:

"Charity is likely to run dry when demand reaches a certain level and libraries, or governments, for that matter international bodies, are no longer prepared to spend valuable resources meeting foreign demand."  
(Line, 1990, *Interlending and Document Supply*, p. 49)

Where is this leading? Is the gap between the information have's and the have nots widening? Until the question of sustainability can be addressed I think it will. CD-ROM has the potential for providing resources and if sustained could greatly improve NAP in a country. Any system put in place must be self-sustainable. There are many projects going on to introduce CD-ROM to developing countries and there is some hope. Once CD-ROM is introduced in the library, the library becomes more involved with technology. More demands are made on the library because more is expected of them. Users are enthusiastic about the service and the value can be seen.

Technology can also promote sharing of resources in a low tech fashion. If only selected libraries in a country have the resources, they can share with other in-country libraries via the phone or mail. Much more could be provided to countries at a much lower cost. This in-country networking could greatly improve NAP.

As in other aspects of a country's development, evolution is preferable to revolution. The movement toward NAP will not happen overnight and will not happen at all if there is no demand for it. Change must begin at the grassroots level and that is where the library professional comes in. Many librarians are not librarians at all but clerks who do clerical work. The mechanics of the library is stressed but not the service aspect. Networking within the country for the information professionals is important to information development. Existing professional associations must act as a forum for change. Professional associations could aid in the adoption of standard forms and help develop a general manual to promote resource sharing on the practical level. This is something the librarians can do themselves but they will need help. Many professionals, particularly in science and technology, who are studying in developed countries could be great allies for these people. These people could create the demand for information services and then there would be a need for the demand to be met.

This may seem like a simplistic approach and perhaps it is. In all the reading I have done, over and over, information systems developed by someone outside the country have failed. It is up to the librarians of these countries to begin working on their own problems and applying their own solutions. As countries develop and become more literate the demand will be there for publications. National library professional organizations can play a key role in aiding in this process. One voice can be ignored but many cannot. By networking both within and without the country librarians can adapt the information technology to their needs. Some of the problems are within their control and can be address. Many librarians have a choice on how to spend their resources and perhaps spending them on local material and a photocopier instead of expensive publications from a western publisher may be a small part of the solution to their problem. Training of professionals is also the key. Good in-country training programs with technology adaptation will raise the qualifications of the profession and

we hope the status.

Professional isolation is a serious problem for librarians in developing countries. Even those who have studied abroad are cut off from what is happening in the information industry once they get back into their own environment. By networking with their colleagues the professional isolationism will be minimized.

There are many other elements that need to be addressed concerning document availability but cannot in a paper of this length. The whole legal questions must be addressed as well as the question of sustainability. Access to information costs money and this has to be recognized at the highest level. The amount of money required to operate an information system is relatively small compared to other needs. Information professionals must lobby their governments for sustainable funding. Perhaps as suggested by my colleague John Villars, of the Ghana National Scientific and Technological Information Network, agencies providing aid for information should require the host government to pay a percentage of the cost of information. That percentage would be raised each year until the host government was paying 100% of the cost. This would be a condition of the aid.

### Conclusions

According to Graham Cornish, there are four basic requirements of a document delivery service.

*To find:* ability to locate something in a reasonable length of time.

*To request:* ability to request the document once it is found.

*To receive:* ability to receive the document in a timely fashion.

*To recompense:* ability to pay for the requested item.

(Cornish, 1991 *Libri*, p. 279-283)

As the world becomes a smaller place, we find that many countries are able to meet these four requirements. The number of catalogs available over the Internet and locating tools available make finding materials much easier than even a decade ago. Requests continue to become standardized through the efforts of organizations such as IFLA who not only set standards but provide training to go along with it. The ability to receive the documents in a timely fashion has also changed with the use of fax and bit-mapped images over the Internet. The question of compensation is also being addressed with the use of coupons or combined billing.

As Bernhard Fabian said "shared poverty does not create wealth" (Line, 1990, *Interlending and Document Supply*, p. 48) so where does this leave the information poor? Universal Availability of Publications is an attitude that starts at the grass roots level. The information professionals in a country must truly believe that information must be shared and through their organizations effect change. They must make their governments realize the economic importance of information and work toward building core collections to provide NAP within their country. Influence is a way to bring change and this influence should be exerted through the associations of the library and information profession to bring social, political and economic change. The aid is there to help these countries build a regional or in-country network but the infrastructure to provide the service and the financial support to sustain the system must come from within. Library and information professionals must learn to proclaim the value of their services and create the demand for their services. Once this is done, UAP will be a reality and the country will become a contributing member of the global information network.

In his paper a decade ago, Syed Salim Agha listed barriers to document delivery. Many of those barriers still exist but others are systematically crumbling. His proposal

for a coupon scheme may happen through the efforts of IFLA. The problems of training and communications are also being addressed on the international level. Resource sharing in Southeast Asia seems to be a reality. Many of the barriers will take years to overcome but it is due to the vigilance of information professionals such as Syed Salim Agha that progress has been made and the seed of change sown.

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