

NATIONAL SEMINAR ON SCIENTIFIC &

TECHNICAL INFORMATION POLICY

(20 & 21 October 1986)

20 Oct. 1986

INAUGURATION

9.00 am	:	Registration
9.30 am	:	Arrival of Chief Guest Mr. S. Athukorale Chairman, Sri Lanka National Library Services Board
9.35 am	:	Lighting the oil lamp
9.40 am	:	Address Dr. R.P. Jayewardene Director General, Natural Resources, Energy & Science Authority
9.50 am	:	Address Mr. S. Athukorale
10.15 am	:	Address Mr. S.J. Sumanasekera Banda Deputy Secretary General Sri Lanka National Commission for Unesco
10.25 am	:	Address Mr. V. Montviloff Programme Specialist, PGI/UNESCO
10.35 am	:	TEA

NATIONAL SEMINAR ON  
SCIENTIFIC & TECHNICAL INFORMATION POLICY

(NARESA Auditorium)

PROGRAMME

20th October '86

9.30 - 10.30	Opening
10.30 - 10.45	Tea
10.45 - 11.45	General Discussions on National Information Policy
11.45 - 12.30	Instructions to working groups
12.30 - 1.30	Lunch
1.30 - 3.00	Working Group Discussions
3.00 - 3.15	Tea
3.15 - 4.15	Working Group Discussions

21st October '86

9.00 - 10.30	Working Group Discussions
10.30 - 10.45	Tea
10.45 - 12.30	Working Group Discussions
12.30 - 1.30	Lunch
1.30 - 3.00	Plenary Discussions
3.00 - 3.15	Tea
3.15 - 4.00	Recommendations
4.00 - 4.15	Closure

D Ms Karunanayake, C.I.  
A Mr Senadeera, N.T.S.A.  
C Mr Lankage, J.  
C Ms Korale, S.K.  
B Dr Samarajiva, R.  
D Mr Amarsinghe, N.  
A Ms Wijesinghe, M.  
D Mr Perera, M.J.C.  
B Ms Ratnasiri, D.A.  
D Ms Nethsinghe, C.L.M.  
C Mr Harrison, Perera  
B Mr Wijewardena, R.V.L.  
Mr Montviloff, V.  
D Ms Unamboowe, G.I.  
C Ms Corea, I.  
B Mr Jayawardena, D.D.S.  
A Dr Wimalaratne, K.D.G.  
C Mr De Silva, G.P.S.H.  
C Mr Ranasinghe, W.  
A Mr Kandasamy, T.  
B Mr De Silva, Dayananda  
D Dr Urugoda, C.G.  
C Mr Vidanapathirana, P.  
Mr Yapa, N.U.  
A Ms Amarasiriya, R.N.  
D Dr Liyanage, S.  
B Dr Goonatilake, S.  
C Ms De Silva, Vijitha  
A Mr Amarasiri, M.S.U.  
A Dr Fernando, R.  
B Mr Sugathadasa, K.  
D Mr Kanurathne, Y.K.  
B Dr Jayalini, N.W.W

National Seminar on  
National Scientific & Technical Information Policy

(20 & 21 October 1986)

Working Groups

Group A

Generation and collection of Information

Mr. N.T.S.A. Senadhira (Chairman)  
Mr. M.S.U. Amarasiri  
Dr. K.D.G. Wimalaratne  
Dr. Ravindra Fernando  
Mrs. M. Wijesinghe  
Mr. T. Kandasamy  
Mrs. R.N. Amarasinghe

Group B

Organization, Provision and Distribution of Information

Dr. N.W.N. Jayasiri (Chairman)  
Dr. R. Samarajiwa  
Mr. D.A. Ratnasiri  
Mr. D.D.S. Jayawardana  
Dr. S. Goonetilleke  
Mr. K. Sugatadasa  
Mr. Y.R. Karunaratne  
Mr. R.V.L. Wijewardana  
Mr. Dayananda de Silva

Group C

Manpower Development and User Education

Mr. G.P.S.H. de Silva (Chairman)  
Mr. J. Lankage  
Mr. P. Vidanapathirana  
Miss. Vijita de Silva  
Mr. Harrison Perera  
Mrs. I. Corea  
Mr. W. Ranasinghe  
Mrs. S.R. Korale

Group D

National and International Cooperation

Mrs. G.I. Unamboowe (Chairperson)

Mrs. C.I. Kumaranayake

Mr. M.J.C. Perera

Dr. C.G. Uragoda

Mr. N. Amarasinghe

Dr. S. Liyanage

Ms. C.L.M. Nethsinghe

National Seminar on  
Scientific & Technical Information Policy  
20 & 21 October 1986

WORKING GROUPS

GROUP A

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Generation & Collection of Information

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General Instructions to Groups

All groups are requested to study para 58-71 in Guidelines. Following procedures may be adopted by the Groups for discussions:

- determine the existing information situation  
(The working paper may be consulted for this purpose)
- Assessing the policy implication of this situation
- Formulating a policy based on this assessment for endorsement  
by the relevant authority  
(The relevant sections of the Guidelines may be consulted for  
this purpose).

# Guidelines on National Information Policy: (Scope, Formulation and Implementation)

General Information Programme and UNISIST

United Nations Educational,  
Scientific and cultural Organization



GUIDELINES ON NATIONAL INFORMATION POLICY:

SCOPE, FORMULATION AND IMPLEMENTATION

prepared by Mrs. Ines Wesley-Tanaskovic

General Information Programme

United Nations Educational,  
Scientific and Cultural Organization

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III - National Information Policy

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## PREFACE

This document is concerned with the planning and implementation of national information policies. It is addressed primarily to decision-makers and planners in governments and public institutions which are increasingly faced with the problem of formulating policies tangible with the growing importance of information as an essential national resource. It also attempts to provide guidance to those whose duty is to translate information policy into on-going activities. More specifically it is designed to highlight the variables involved, illuminate problem areas, emphasize questions requiring answers and identify for its users the essential elements for designing information policies for their particular socio-economic environment. Therefore, it is neither a collection of recipes nor a guide proposing a unique approach.

The formulation and implementation of a national information policy is a task involving information specialists as well as administrators and planners from different fields and at different levels, with the active participation of representative user-groups. If this task is to be performed effectively, the efforts of all concerned must be co-ordinated and their respective responsibilities clearly defined. The establishment of a national agency for information has been the action that many governments have taken in order to do precisely this, while making it clear that such an agency should serve as a co-ordinating mechanism rather than an operational body. Its policy function should be broad enough to cover all disciplines in all areas of applications. Its main task, therefore, should be to ensure that the combined efforts, however dispersed, are on the right scale, properly balanced, make an effective use of available resources and are implemented in accordance with the national development plans.

In this respect, Unesco has endeavoured to help its Member States meet their information needs and to provide them with appropriate guidelines for action. Thus, in 1972, the General Conference of Unesco, at its seventeenth session, launched the UNISIST intergovernmental programme for the advancement of scientific and technological information considered a basic resource for socio-economic development. Recognizing that the active participation of Member States was needed for the successful implementation of this programme, the General Conference invited Member States to establish (1) national focal points concerned with questions of national information policy formulation, planning and co-ordination, and (2) UNISIST national committees to serve as national links with the UNISIST programme of Unesco. To this end, the Director-General sent out a circular letter in 1973 (CL/2297).

A checklist of proposals for information policy objectives was prepared later, taking into account the functions assigned to the national focal points. This document was based on one of the recommendations of the UNISIST Intergovernmental Conference (Paris, 1971) which stated: 'A governmental, or government-chartered, agency should exist at the national level to guide, stimulate and co-ordinate the development of information resources and services in the perspective of national, regional and international co-operation'. This checklist came to be known as Information Policy Objectives (UNISIST Proposals), (SC/74/WS/3, Paris 1974) and has been widely used for many years.

The remarkable changes in the attitudes of most countries towards information during the past decade have vindicated the choice of these objectives; their basic principles are still valid today and applicable to all fields of knowledge. Many governments have adopted the original UNISIST concept of the establishment of co-ordinating mechanisms or focal points in their national information systems and, in doing so, they have increasingly concentrated their attention on information as a resource to be used for economic and social development and on the application of modern technology. The UNISIST programme followed this evolution and adjusted its aims to the changing needs of Unesco's Member States.

Thus, the UNISIST intergovernmental programme was strengthened by its merger with Unesco's programme for documentation, libraries and archives to form the General Information Programme (PGI) following the nineteenth session of the General Conference of Unesco in 1976. It has expanded its scope to include not only scientific, technological and mainly bibliographic information but also other fields of knowledge and other kinds of information. All subsequent meetings and studies sponsored by PGI, in particular the Second UNISIST Intergovernmental Conference (Paris, 1979), supported this expanded concept of information and emphasized anew the need for a revision of the functions of national focal points and for improved co-ordination in national systems.

Over the five years which followed the Second UNISIST Conference in 1979, the rapid achievements in the field of new information technologies, with their widespread repercussions, both outside and inside the information field, have already generated significant changes in policies and practices for the provision of information the world over, though in various degrees and in manners which differ from one place to another. This being so, it ensues that new solutions must be sought. Conscious of this trend, Unesco has studied its implications carefully and in the elaboration of the Organization's Medium-Term Plan (1984-1989) they were borne in mind.

The scope and structure of Unesco's Major Programme VII 'Information systems and access to knowledge', duly reflect the concerns of Member States which have to take up the challenge and adapt their strategies in order to increase their national capabilities for providing and exploiting information for development. Many opportunities for assistance are offered in the Programme. One of the programme elements with a high priority is assistance for the formulation of national information policies and plans based on the assessment of the potential for the application of modern technologies. Strengthening Unesco's communication links with national focal points and national committees and liaising among them is considered of the utmost importance in this regard, as is the production of appropriate guidelines for action in Member States, especially as regards the finding of a solution to the co-ordination problems of national information services in general.

The present guidelines are a revised version of the original UNISIST proposals. The text explores the alternatives open to decision-makers and draws together some of the lessons of experience which can be inferred from past efforts. It attempts to place the functions (stimulation, co-ordination, financial support) of the earliest national focal points and UNISIST national committees within a new, broader context and show what implications this may have on their establishment and administration. However, it is designed only to provide the general concept for formulating and co-ordinating the national information policies from which the users are free to draw those ideas which they feel best suit their national situation.

These guidelines were prepared under contract by Mrs. I. Wesley-Tanaskovic and were based inter alia on material prepared by S. Adams, J. Gray, K. Keren and S. Parker. The draft was submitted to a thorough discussion during the International Seminar on National Information Policy and Planning organized by Unesco/PGI in collaboration with the Yugoslav National Commission for Unesco and the International Referral Centre for Information Handling Equipment (IRCIHE) in Dubrovnik (June 1984). The seminar was attended by Mr. F.S. Abdul-Razzaq (Iraq), Mr. A. Adu (Ghana), Mr. J. Bao (People's Republic of China), Mr. P. Canisius (Federal Republic of Germany), Mr. M. Djurovic (Yugoslavia), Mr. R. A. Gietz (Argentina), Mr. B. Kustrin (Yugoslavia), Mrs. S. Lampert (Jamaica), Mr. R.S. Mabomba (Malawi), Mr. M.A.K. Madkour (Arab Republic of Egypt), Mr. A. Marks (Netherlands), Mr. J. Mihel (Yugoslavia), Mr. B.M.Y. Mohdnoorajala (Malaysia), Mr. H. Schälger (Austria), Mrs. E. Tornudd (Finland), Mrs. N. Tudor-Silovic (Yugoslavia), Mrs. M. Trask (Australia), Mrs. F. Zahawi (Arab League), Mr. Zultanawa (Indonesia) and Mrs. I. Wesley-Tanaskovic as consultant and several observers.

Comments and suggestions regarding these guidelines are welcomed, and should be addressed to the Division of the General Information Programme, Unesco, 7 Place de Fontenoy, 75007 Paris.

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EXECUTIVE SUMMARY

(A step-by-step approach to national information policy formulation and implementation).

STEP I - Determine the overall framework for the project (paragraphs 1-21)

Aim: identify the information fields to be covered

Issues/questions:

- decide what information we are dealing with (STI, numerical bibliographical ...)
- concentrate attention on information as a resource for economic and social development and on the application of modern information and communication technological devices for the advancement of this development.
- emphasize the magnitude of current investments and attempts made to draw up information policies for better channelling and concentration of these investments.

Possible action:

national negotiations and consultations through interviews and visits; international assistance

STEP 2 - Define the scope of the needed national information

A. Assessment of information needs (paragraphs 22-28)

Aim: identify where and for whom information is required

Issues/questions:

- is there an assessment of national development goals?
- which development area require significant use of information?
- what are the user groups?
- are the information requirements in keeping with the country's major national development goals?
- is there an assessment carried out on the relative value to users of libraries?

archives?  
translation/documentation facilities?  
information analysis and repackaging services?  
extension services?  
referral services?

- have the areas in which information is needed been ascertained? (current research; technical specifications; statistical data ...)?
- to what extent do general information services (national libraries; computing centres) provide back-up service to more specialized services?

Possible action:

survey through interviews; analysis of data collected

B. Means designed to satisfy information requirements (paragraphs 29-51)

Aim: Identify the extent of information handling and existing information services.

Issues/questions:

- to what extent is information (published or unpublished) generated?
  - . is it based on recording and processing local data?
  - . is it made widely known?
  - . who generates information (government, local publisher)?
  - . is it being encouraged (by legislation - copyright; by subsidies; by government support)?
- to what extent is information collected from abroad?
  - . are there any organizational measures to facilitate it?
  - . are there any sustained financial resources?
  - . what factors affect its functioning (import agencies, transportation, postal systems, customs, foreign exchange regulations)?
  - . is there a trend towards the use of computerized services and telecommunications?
- how effective is the distribution of information?
  - . is there an effective system for the distribution of information (local and foreign) through booksellers, local agencies?
  - . is the existence of information locally recorded and announced?
  - . national bibliography at regular intervals?
  - . legal deposit firmly enforced?
  - . does it cover unpublished information or information published by computerized processes?
  - . are the contents of documents made known?
  - . what are the facilities of access to international abstracting and indexing services?

- . what are the most common forms of document delivery used in the country? (libraries; documentation centres;)
- . what local and national referral services exist in the country (guides to information sources; directives; inventories; centres ...)
- to what extent is the provision of information organized?
  - . what institutions are involved in the provision of information?
  - . is there any co-ordination of their activities?

Possible action:

survey through interviews; international assistance.

C. Promotion of the effective use of information (paragraphs (52-57))

Aim: identify the users' awareness of information importance.

Issues/questions:

- is there any education and training of users?
- any popularization activities?
- any research in information science?

Possible action:

survey through interviews of educational institutions and of users.

STEP 3 - Formulate a national information policy (paragraphs 58-64)

A. Prepare a basic policy statement (paras. 58-64)

Aim: to provide a basis for planning and effective co-ordination of information activities and assign the responsibilities for ensuring the provision of information services.

Issues/questions:

- is there already some kind of policy?
  - . formal statements of national information policy issued?
  - . official policies embodied in legislation (copyright, legal deposit, library services)?
  - . policies established by custom?
  - . policies implied in broader policies of parent organization?
- is this policy endorsed by the government?
- is this policy formulated for broad structural and operational objectives?

Issues/questions:

- are there any plans designed to implement the provisions of the national information policy?
  - . is this performed at a professional co-ordinating level?
  - . are the users involved in the planning process?
  - . are the plans flexible enough to be subject to modification?
  - . are the plans approved at the relevant government level?
  - . are the implementation tasks distributed among the institutions concerned?
  - . is the budgetary allocation distributed according to the priorities?
- is the time element adequately taken into account for the selection of priorities in the implementation of the policy?
  - . are priorities set over a given period of time?
  - . what is the balance required between priorities for short-term and long-term planning?
  - . has a medium-term plan (5-6 years) been prepared or been assigned?
- are there any plans to identify the categories of information that are best obtained from national sources? through regional cooperation?
- are there any plans to introduce new information technologies in the local data bases of the essential services (national and local statistics, inventories of current research, referral services ...)?
- was there any attempt made to make use of resources available outside the country (remote consultation, abstracting and indexing services, computer based searches ...)?
  - . are there any easily accessible information locations? community information services?
  - . are there any effective lending arrangements?
  - . are there any links with other national nodes?
- are there any information programmes (national or by sector) in preparation?
  - . do these programmes state clearly the new services foreseen? the improvement? the support activities?
  - . are the programmes fairly realistic in size?
  - . are the programmes submitted to a national policy co-ordinating body?
- are the budgets adequately prepared?

- . was there any comparative study made on the costing techniques?
  - . are the budgets prepared for a given period of time?
  - . is the budgeting centralized or decentralized?
  - . is provision of information considered as an overhead item of expenditure? what are the percentages?
- Is there a permanent planning mechanism established for the implementation of the information policy?
- . is there a national information co-ordinating organization (NICB)?

Possible action:

comparative study of the priorities in the various policy provisions; budget allocations; level of government approval; design a national mechanism for information policy implementation

STEP 5 - Develop a national information co-ordinating organization (paragraphs 129-152)

Aim: Harmonize all the information activities and stimulate the development of information resources and services

Issues/questions:

- what are the various focal points established in the country (FAO: UNEP ...)
- what would be the most generally acceptable location in government for the NICB? (planning commission?)
- what responsibilities should be allocated to NICB (co-ordination or policy or both?) in the current context in the country? (programmes?)
- what structure should be given to the NICB in view of local circumstances? Staff size and competence?
- what status should have the NICB officers?
- how should NICB proceed in the establishment of its main functions?
  - . initial co-ordination of assessment of information requirements?
  - . allocation of responsibilities?
  - . preparation of Medium-Term Plan
  - . promote regional co-operation

Possible action:

determine the location of the NICB; define its functions and status; set up NICB operations through national negotiations and agreements

## INTRODUCTION

These guidelines concentrate on major problems related to national information policy and planning, and focus on the following main questions:

- identification of information requirements;
- means of satisfying information requirements;
- promotion of effective use of information;
- a basic policy statement with regard to the provision of information;
- information policy-making procedures;
- the implementation of information policy;
- the national information co-ordinating organization.

In the Introduction the rationale for a national information policy is briefly restated. The need to produce guidelines is argued, their purpose and form of presentation are discussed and an attempt is made to determine their respective target audiences.

It is suggested that the guidelines are to be addressed primarily to information-related planners, particularly in developing countries, and to information specialists responsible for the formulation and the implementation of the national information policies, for their guidance as well as for helping to ensure that, as a national resource, information is properly recorded and used in the best interest of society and of its individual members.

\* \* \* \*

## I. Information as a resource for development

1. The concept of information as a national resource for social and economic development has come to be widely accepted in recent years. Nevertheless, while the rapid delivery of the right information to the right user at the right time and place is confidently forecast on the basis of the current advances in the field of information and communications technologies, what has not been yet fully developed, are the social and institutional mechanisms to share, diffuse and utilize the information which is being generated. All countries recognize today that the capacity to utilize information and knowledge is the basis of progress and of social well-being. Increasingly, information is recognized by planners and administrators as indispensable to all the processes essential to development.

2. The problems arising in connection with the handling of the ever-increasing volume of information are a cause of growing concern to national policy-makers and information-related planners alike. Hence the pressures which are being exercised on national governments to lead them to promulgate information policies which will provide guidance and support to those involved in producing, transferring and using information and help ensure that, as a national resource, information is properly recorded, stored and used in the best interests of society and of its individual members.

## II. The need for a national information policy

3. Governments are still striving the world over to ensure that the information requirements of society are met and that users have access to and can fully utilize the information they need to carry out their respective functions; they are striving to define and implement a national information policy. A strong case can be made out for governments deciding on a national policy for information in accordance with their development plans. Most governments have already made major investments in the acquisition and delivery of information, either for its generation by means of research and surveys, its management in information centres, archives and libraries or for its distribution by various means. The magnitude of these investments suggests the need for a national information policy designed to guide those responsible for setting relevant priorities and for the latter's implementation.

4. In addition, governments should be able to exercise a certain measure of co-ordination of activities carried out for the implementation of such priorities. Interest in the supply of information is increasingly growing among non-governmental institutions and associations, but also within individual government departments. Very naturally, there has been a tendency for all these agencies, both public and private, to elaborate their own information policies, designed to meet their own specific needs, and these agencies do not usually make any attempt to share their resources. The absence of co-ordination at the national level entails a wasteful duplication of work, on the one hand, and on the other, leaves considerable gaps in the provision of information, thus making it difficult to concentrate investment on the provision of information in areas of national economic and social importance.

5. The information policy problems recently entailed by the new information and communications technologies are likely to require increasing attention,

given the rapid pace of technological advance and the prospect of cheaper storage, handling and communication of information. What is even more important, is the information-handling capability offered by some of the new technologies which has increased enormously and, as a consequence, the potential for meeting the needs of users has increased proportionately and must certainly be taken into account when national information policy is being formulated.

6. At present, the situation is, and will continue to be, dynamic: it must therefore be constantly monitored. International networks are coming into being and are beginning to spread from the industrially developed to the developing countries. This trend will be accentuated as new communication technologies, such as fibre optics and satellites are more widely used. Access to world-wide information systems will then become easier, but it will have to be secured through deliberate policy decisions. At the same time, advances in micro-processing and high-density storage make it increasingly convenient, even in small countries, to access locally produced files of information. These two trends increase the feasibility of providing ready access to regional databases. These databases of common interest may be produced jointly by the countries of a given region. This is an important issue to be discussed during the elaboration of national information policies.

7. There is nowadays a growing awareness of the fact that the convergent advances in the technologies of the fields of computers, audio-visual media, and telecommunications have a marked impact on all societies and that this impact will accelerate the present evolution of the world system. The most striking feature of the emerging 'information-oriented' society is the rapid progress of technology and the attendant introduction of innovative information and communications systems. These advances affect all major sectors and have changed people's ideas of the role of information in contemporary society. Thus, information and communications have become, to an unprecedented degree, part of the preoccupations of policy-makers in the social, economic and cultural fields, both at national and international levels. Therefore, a major concern in the elaboration of national information policies is to develop strategic interventions designed to ensure that the emerging information society contributes to national development everywhere, removing the present global imbalances and inequities.

### III. For whom are the guidelines intended

8. The guidelines are intended for use primarily by information planners as well as by information specialists concerned with the formulation and implementation of national information policies and plans. They may be useful to information-related policy-makers in government agencies or non-governmental bodies engaged in elaborating national information policies and plans for the attention and final endorsement of Government.

9. In general, as far as high-level decision-makers or 'politicians' are concerned, the imperative need is to find how best to convince them that information is an indispensable and basic resource for effective development planning and to win them over to recognize the need for incorporating information planning into national development plans. In this connection, the implications of recent advances in information and communications technology, particularly in the field of microcomputing and telecommunication networking,

provide the opportunity for presenting a powerful case as to the imperative need for formulating national information policies and plans. The mass media could also be mobilized to sensitize all levels of the society as to the importance of information for various activities and to its effective use.

10. However, even where the importance of information services is appreciated by high-level decision-makers, the need for a coherent and systematic national information policy and plan may not be appreciated. In the absence of information policies and plans, incorporated or closely geared to development plans, the utilization of relevant information may be haphazard with the result that decision-making tends to be ad hoc because it is not backed by all the relevant information that could have been mustered. Hence the importance of general guidelines which would enable the formulation of information policies, plans and strategies and facilitate their adoption nation-wide, at all the levels of development decision-making.

#### IV. What kind of guidelines are required

11. Owing to the diversity of socio-economic circumstances in various countries, the guidelines need to be relatively general and adaptable for use in countries at different levels of economic and social development and in various cultural contexts. It does not seem realistic to expect that the integral text of the guidelines would be appropriate for any one country as it stands, but at least parts of it should find application in individual countries. It has also been considered as important that the mode of presentation of the guidelines be sufficiently simple (without necessarily being too simplified with loss of content), so that they can be readily followed by as many people as possible, who may be involved, in one way or the other, with national information policy and planning or in implementation activities.

12. Due to the rapidly changing information situation brought about, principally, by advances in information and communications technology and also, to some extent, by the variations in the economic fortunes of many countries - not necessarily for the better - it is important that information policies and strategies be periodically reviewed for such modifications as may be necessary in the light of changing conditions. The guidelines should, in this connection, make proposals for alternative approaches or options, where relevant. The guidelines may have to be modified to reflect changing conditions. It also follows that no one set of guidelines can be prepared for all time.

13. For greater effectiveness the guidelines would have to be backed by case studies of experience of countries which have been relatively successful (the case studies should include not only successes but also pitfalls that could be avoided) in organizing national information services answering to national development goals. It would also be desirable to undertake studies in certain key-areas in order to obtain pertinent information, currently lacking, which would be of value to planners, e.g. comparative analyses of the proportion of the total national budget devoted to the provision of information services and its sectoral breakdown.

14. It is generally considered as being of little benefit to produce guidelines, distribute them in some habitual way and then wait for 'feed-back' as to their acceptance by Member States. Obviously, a more desirable practice would be, especially in cases of guidelines dealing with such broad and important issues as national information policy and planning, to organize in a systematic manner, appropriate meetings for their review at the national and regional levels, possibly with the help of Unesco.

GUIDELINES ON NATIONAL INFORMATION POLICY,  
SCOPE, FORMULATION AND IMPLEMENTATION

Executive Summary

Corrigendum

- STEP 1 - Determine the overall framework for the project (paragraphs 1-14)
- STEP 2 - Define the scope of the needed national information
  - A. Assessment of information needs (paragraphs 15-21)
  - B. Means designed to satisfy information requirements (paragraphs 22-44)
  - C. Promotion of the effective use of information (paragraphs 45-50)
- STEP 3 - Formulate a national information policy
  - A. Prepare a basic policy statement (paragraphs 51-57)
  - B. Establish policy making procedures (paragraphs 58-71)
  - C. Establish a policy making organization (paragraphs 72-87)
- STEP 4 - Implement the information policy (paragraphs 88-121)
- STEP 5 - Develop a national information coordinating organization (paragraphs 122-155)

## THE SCOPE OF A NATIONAL INFORMATION POLICY

The pre-requisite to the elaboration of a national information policy is essentially to identify the main information requirements of society, particularly in relation to national development goals, and its objective is to ensure that these requirements are met as fully, promptly and conveniently as available resources allow. This implies that the elaboration of a national information policy comprises:

the identification of the information requirements of society;

devising means to ensure that the identified requirements are met;

the promotion of the effective use of information sources.

The scope of the national information policy covers the different aspects of the provision of actual services to various users' communities, but it goes much further than this. It also includes manpower development (information specialists), the building-up of the necessary infrastructures and ensuring continuous adequate funding.

All members of society need information. The potential value of information is realized only when it is used. The ability of users to make effective use of information may be enhanced by user education and popularization of information services. Hence, the important part to be attributed to promotion activities within the scope of a national information policy. There should be a deliberate policy of creating information mindedness and raising community participation.

These various issues are covered in the following chapter in addition to a review of the organizational framework needed within which the various information services can operate and function effectively, being at the same time stimulated to undertake co-operative activities.

### I. Identification of information requirements

15. It is of fundamental importance that information requirements should be subordinated to the national development goals as in most countries information resources are limited. It is impossible to meet all the information requirements that can be identified in a society: one must necessarily be selective and have orders of priority in relation to national development goals, but also identify the level of services that has to be provided throughout the country. Investment in the provision of information, therefore, needs to be concentrated in areas of major economic and social importance.

16. Such a commitment normally leads to the sectoral development of information services, which, in the absence of an effective co-ordinating mechanism, generally implies a costly duplication of efforts. Sectoral services, though

in many instances adequate and efficient, tend to develop independently and their progress can be uneven; some sectors in priority areas progressing well and others not. In order to ensure that the information requirements in a given country are met in a coherent manner while respecting the priorities of national development, co-ordination should be foreseen. This becomes essential with regard to the infrastructural basic elements of any national information system such as the supply of general information services, the application of new technologies and manpower development which should be tackled on a nation-wide basis.

17. The assessment of development goals, and of their respective priorities for information purposes, must take into account all the complexity of the national planning process; there is no simple way round it. To approach the various planning organizations, obtain statements on their goals, choice of action, priorities and phasing arrangements, is a pre-requisite to determining the scope of a meaningful national information policy. The next step is to infer from the goals and priorities stated, the problems and situations that may require a significant use of information and to identify its possible user-groups; those which now exist as well as those which may exist in the future.

18. This step should be carried out with care since the attainment of any goal is likely to require the fulfilment of a great variety of information needs and to involve a wide range of users - from the most sophisticated professional and the general reader who has important tasks to perform in a particular sector, up to the farmer maybe illiterate who also has something to contribute and can be helped by relevant information. Also, it is to a certain extent a fore-knowledge of the future since neither the uses nor the users are likely to be perceived clearly at the time the development goals are set.

19. The task here is to state what types of information are needed to meet the requirements of various users within each sector of economic and social development (scientists, technologists, engineers; managers, administrators; educators, students; practitioners, consumers, farmers, etc.). This involves assessing the relative values to users, in a changing situation, of archives; library, translation and documentation services; information analysis and repackaging facilities; extension services, popularization programmes; referral services, experts' services, consultation bureaux; seminars, conferences, workshops; etc.

20. The task also includes ascertaining whether information is needed on current research, technical specifications, standards, patents, statistical data, graphs, maps, etc. The extent must be determined to which general information services (e.g. the national library, computing centre, government publishing house) should provide back-up to other more specialized sectoral services. Finally, since the situation is changing, and changing rapidly, the assessment has to be regularly up-dated and policy amended accordingly.

21. In addition to the requirements related to the information needed in the short and medium term for current national development goals, national funds should be available for the study of future long-term requirements. Therefore, when assessing information needs, a balance should be maintained between sectoral and general services, on the one hand, and between present and future needs, on the other. The level of service aimed for should also be defined beforehand.

## II. Means designed to meet information requirements

22. Policy issues which should be considered under this item include all aspects of the generation of information (e.g. publishing industry; legislation, such as patent laws and copyright; government support to oral tradition); the collection of information (e.g. acquisition of foreign publications); the distribution of information (e.g. national bibliographies, abstracting and indexing services, computerized information networks, document delivery systems), the organizational framework and the provision of resources (e.g. manpower, physical facilities and funding).

### Generation of information

23. Action along these lines will help to improve the generation of both published and unpublished information based on the recorded and processed local data. However, it is generally agreed that considerable information exists in oral tradition so that it is possible to give a wrong assessment of the value of recorded information opposite to unrecorded information. Thus, for instance, important oral traditional information exists on history, folklore and medicine. It should be part of the national information policy to cater for the collection, evaluation and storing of such information for potential users. Generation of information from traditional sources is one way of securing wider community participation. The existence and availability of both types of information, once generated, should be made widely known.

24. In many countries, the most prolific producer of domestic information is the government. One method of generating useful information relevant to development planning is to add a small sum to the cost of every important project so that on the completion, a brief appraisal on it is provided. This appraisal would include any problems encountered and an evaluation of the results achieved. Such information could be fed into the databank of an appropriate national documentation centre. It is also important for governments to have clearly defined policies with regard to classified information in particular regarding their declassification. There are several instances where the existence of vital information contained in classified documents get lost in course of time because there is no decision as to when they should be declassified. The result is that feasibility studies, surveys, recommendations by expert bodies and the like may be duplicated at needless expense.

25. In considering the generation of information it is essential to bear in mind that information is generated not only by government and public institutions but also by the private sector. It is not often possible to deliver information free-of-charge. However, experience has shown that where users' demands can be readily met, users are prepared to pay reasonable fees, the more so, if they realize that the charges can be used to improve the quality of information offered. A strong local publishing industry, bringing local information in local languages, is important in all countries and may be encouraged by legislation (copyright, taxation laws), the grant of subsidies by interested organizations, and by government support whenever necessary, e.g. to enable the production of adequate reading material to the newly-literate.

### Collection of information

26. Obtaining information materials from other countries in addition to those produced locally, is an important and complex task. Information from abroad is usually expensive and difficult to collect, although it may bring real economic and other benefits. Its acquisition by purchase, exchange or inter-

national assistance requires adequate organizational measures and sustained financing. The acquisition of publications from other countries is affected by import agencies, transportation, the postal system, customs and foreign exchange regulations and several other factors.

27. The introduction of computerized services and telecommunications has added a new dimension to the access to information networks worldwide. They require special attention from all countries, in view of information-related planning, because of their enormous potential, and also because of the legal problems they raise. Although they are publicly accessible by means of international telecommunications, the cost is often prohibitive, which hinders their use, especially in developing countries where the situation is aggravated by the lack of adequate information infrastructures needed for their full exploitation.

#### Distribution of information

28. All countries need an effective system for the distribution of information from both local and foreign sources, to both direct users and all kinds of depositories, through booksellers, subscription agents and other local distributors including electronic mail offices. It is also necessary to ensure that the existence of the information materials is regularly announced.

29. The record of the publishing output of a country is its national bibliography; it is used at regular intervals and provides complete descriptions of all documents published in the country. The essential basis for the national bibliography is the practice of legal deposit which must be firmly enforced if it is to be effective. National bibliographies and legal deposit do not normally cover the information unpublished, orally transmitted or computer-generated. Records of these categories of information are often inadequate and should be improved. A systematic approach should be developed within the framework of activities known as 'Information on information', in this respect also, to make them better known.

30. Many users need more detailed information on the contents of documents than that which is provided in bibliographies. This need is met by abstracting and indexing services which to an increasing extent are able to substitute for the original document at least for certain categories of uses and users. Many of them are international in scope and operating in the industrialized countries. Such services were originally published in conventional format, later they became also available in computerized form and now a considerable number are available only in computerized form.

31. There is no point in providing bibliographic listings if users cannot obtain copies of the documents they need through some kind of document delivery system, apart from the distribution systems just referred to. Documents are, as a rule, delivered through libraries and documentation centres, which should possess a good selection of basic works and heavily used materials. However, certain documents required by users will not be available in any library or documentation centre in the country and must be sought abroad. National, regional and international co-operation is therefore an essential foundation for effective document delivery.

32. Significant guides to information sources of all kinds (directories of national sources of information, research in progress, inventories of facilities and of experts) form the basis of referral services. Interlinked, these local and national referral centres, linked to the corresponding international centres, would make up the global referral network envisaged by the United Nations.

### Organizational framework

33. The functions of recording data, generating information, producing documents, distribution, storing and retrieving them, involve a wide variety of institutions, including: research institutes, educational institutions, statistical agencies; records units, archives, museums; printers, publishers, booksellers, subscription agents; abstracting and indexing services, bibliographic agencies, libraries, documentation centres, information centres; computer centres, software houses, telecommunication agencies; broadcasting stations, extension and advisory services, popularization programmes; etc. Such a proliferation of institutions concerned with information is to be found in all countries.

34. Information policy at the national level should be concerned with establishing the conditions for the effective management of information by providing a sound organizational framework within which the various institutions can operate, as well as adequate resources for them to function effectively. No single type of organizational framework is suitable for all countries. The pattern will vary indeed according to local conditions.

35. Stimulation and monitoring of co-operation activities undertaken by the existing institutions is likely to be the most practical solution of organizational problems in many countries, involving as it does the establishment of some kind of co-ordinating mechanism. Effective co-ordination can only be achieved on the basis of common objectives within the framework of the overall information policy. The establishment of a suitable co-ordinating mechanism may require legislation in order to reinforce the spirit of co-operation among those involved.

### Provision of resources

36. To ensure that the organizational framework for the provision of information functions effectively, the institutions involved must be supplied with adequate resources: manpower, physical facilities and funds which constitute the national information infrastructure.

37. Manpower. The most important resource is manpower. No matter how generously physical facilities and money are provided, they can only be effectively used if an adequate number of properly qualified persons are available. The range of skills required is wide and not confined to any one profession. It embraces the expertise of: authors, publishers, booksellers; records managers, archivists, librarians, information scientists, extension workers, advisers and consultants; computer specialists, telecommunications engineers, audio-visual specialists, broadcasters and many others - in short, all those who are involved in the process of generating and communicating information.

38. Two particular profiles of expertise in relation to information activities deserve special attention: first, there should be sufficient intermediaries (or extension personnel) who can interpret highly technical materials into forms assimilable by the general user who needs this information; secondly, there is an increasing demand everywhere for information-related planners, therefore training programmes in the planning of information systems should be instituted for suitably-qualified personnel.

39. The specific problems associated with the provision of manpower are those of attracting suitable candidates, offering opportunities for vocational education and ensuring adequate remuneration, status and career prospects. The

stimulation and support of research in information science is equally necessary in order to improve the quality of services and to deepen the understanding of the information problems of society by the specialists concerned.

40. Physical facilities. Adequate physical facilities (buildings, furniture and equipment) especially those needed in the use of modern information technologies, must be provided in order to enable information specialists to carry out their work properly. This includes preparing plans and technical specifications for the facilities, identifying sources of supply and ensuring that the facilities and equipment are suitably installed and maintained. However, the dangers of considering computerized facilities as an end in itself or a panacea to all problems of information should not be overlooked. This requires sound expert judgement.

41. New advanced techniques for handling information have made an extremely rapid progress in recent years, especially in the field of microcomputers. The advent of the microcomputer is unanimously recognized as a revolutionary development with far-reaching implications for information planning. Microcomputers have the important feature of modularity, on the one hand and versatility on the other. They can readily interface with intermediate systems and be linked in local and regional networks. Their introduction raises some general policy questions, e.g. whether the new information technologies should be regarded as simply providing more effective tools for the implementation of information policies, or whether they should be seen as an important factor influencing the formulation of this policy.

42. The prevailing trend towards ever less expensive storage, smaller and cheaper computers and simpler albeit more versatile working methods suggests that this technology is moving much closer than ever before to meeting the needs of tremendous numbers of users all over the world. Thus, to keep abreast of new developments in this field is of vital importance for all countries and assistance should be sought, when needed, in this respect from relevant international organizations, especially of the United Nations system.

43. Funding. A further important policy objective is to ensure that adequate and reliable funding is available for both investments and recurrent expenses made to support the desired level of information provision and infra-structural building-up. It is also important to keep a satisfactory balance of financial responsibility between different sources of financing.

44. Lack of money is often seen as the main obstacle to the improvement of information provision and the necessary infrastructure, particularly in developing countries. It would be more accurate to say, however, that it is the will to spend money on information instead of on some other activity which is lacking, rather than the money itself. A society which has announced its commitment to improving information provision can do so, if it wishes, by allocating to that objective means which might otherwise have been spent in other ways. Thus the choice between competing demands for limited resources is a political decision.

### III. Promotion of the effective use of information

45. It may be appropriate at this stage to briefly outline some basic issues which warrant the promotion of information use. All members of society need

information. It is a truism, though too often overlooked, that the potential value of information is realized only when it is used. All members of society use information, both information orally transmitted and recorded, either directly or indirectly through intermediaries. The usefulness of an item of information depends on its relevance to the needs of the person making use of it. Information which is relevant to the needs of users may be used either to add to their knowledge or to help them solve problems.

46. All members of society use information to make decisions, many of these decisions necessarily related to societal development. In acknowledging the importance of providing information for decision-makers, therefore, it is necessary to recognize that this applies, not only to those making decisions at the higher levels, but to all those involved in the life and development of the community. Information is not only a basic resource for decision-making and problem-solving, it is also the key to the effective exploitation of other resources, since society cannot make effective use of resources about which it knows too little. Information, therefore, is rightly considered as a basic resource for development.

47. The ability of users to make an effective use of information depends upon their general attitude towards information, i.e. upon their awareness of its importance for their various activities, upon their knowledge of the existence of relevant information sources and services, their familiarity with the techniques for accessing sources and, sometimes also, upon their linguistic and intellectual capabilities. All of these may be enhanced by the education and training of users in schools and universities as well as 'on the job', but also through popularization and demonstrations, stressing the potential uses of information and announcing the existence of relevant services and the creation of new ones.

48. The foregoing implies that user education has to be organized at different levels. At the school level, consideration should be given to the possibility of incorporation of relevant materials on user education into some traditional subjects in the school curriculum. Since user education in schools has to rely primarily on the school teacher, the training of teachers or specialists in user education is an issue of the outmost importance, requesting among other instruction manuals on user education for teachers.

49. 'User education' is vital to all countries because information is at present seriously under-utilized and because it has to be conveyed to many different users at different levels of understanding. User education is, therefore, an essential component of the national information policy, which should ensure that it is organized properly and adapted to the intellectual and emotional capabilities of various categories of users. It appears, in retrospect, that in building-up information systems in most countries, the emphasis has been placed on the supply of information services, and too little importance has been attached to the mobilization of the anticipated demand.

50. Mobilization of the demand for information is an exceedingly difficult task and few countries, if any, can claim to have tackled it satisfactorily. It involves teaching prospective users the basic skills of finding and handling information, acquainting them with the sources of information they need in their various activities, updating researchers and practitioners, announcing new services, as well as generally stimulating the habit of seeking information and using it effectively. It also entails integrating the users into the

systems so intimately as to enable them to readily evaluate the services they are offered. In this respect it is important that in the generation, transmission and usage of information, the individual obligations of the generator, the intermediary and the user have to be spelt out so as to promote information use more effectively.

## FORMULATING A NATIONAL INFORMATION POLICY

In national information policy-making, practical solutions which take full account of existing realities should be devised and existing policies and practices carefully examined in order to bring them into close harmony, either within a national information policy or as an integrated set of national policies relating to information. Three aspects are of interest here:

- a basic policy statement;
- policy-making procedures;
- establishing a policy-making organization.

The national information policy must be endorsed at the highest possible level if it is to be effectively implemented. This should be the responsibility of the national legislative body, the council of ministers or the appropriate local equivalent authority.

The active involvement of the user-communities in the whole process of information-related policy-making is an indispensable condition to its successful achievement.

In the following chapter the main issues in formulating a national information policy are examined bearing in mind, however, that it is not possible to provide a universal prescription suitable for all cases, since the best solution for any given situation will depend on local circumstances.

Unesco's experience suggests a possible procedure for formulating national policy - which is by no means the only one possible procedure, but is given as a basis for reflection. Policy-making is a dynamic and interactive process involving a chain of activities relating to objectives, priorities and implementation, followed by those concerning the evaluation of results which in turn are fed-back into the policy-making mechanism. Therefore, from time to time, a special committee or other collegiate body could be set up and given the task of re-formulating the national information policy in the light of new requirements.

Finally, it should be noted that the term 'policy' usually means basic principles or assumptions on which a programme of action is based. Alternatively 'policy' is sometimes defined as a 'general plan of action'. Here it is used in a broad sense and includes plans and strategies, though in the text this broader usage is made more explicit by speaking of 'policy and planning' when appropriate.

I. Basic policy statement

51. Such a statement is generally made in broad terms to enhance its chances of general acceptability and minimize the need for frequent revisions as circumstances change. It is a general framework within which the responsibilities for ensuring the provision of all kinds of information services are assigned. In the statement, the need for the effective co-ordination and for the establishment of some kind of co-ordinating mechanism should be recognized and the fact that information provision must be planned in accordance with national development goals should be stressed - thus a basis for the formulation of the national information plan as an integral part of national development plans would be provided.
52. All activities relating to the provision of information in any country are already being carried out in accordance with some kind of policy. In some cases, formal statements of national information policy have been made. In others, official policies affecting the provision of information are set out in existing legislation, for example with regard to legal deposit or public library service. In many other cases, policy is established by custom, or, in the case of individual units in the information field, implied in the broader policies of the respective parent organizations such as a research council, a university or an industry. A corpus of existing policies, all relating in varying degrees to the provision of information, can thus be found in every country.
53. The adoption of a basic policy statement makes it possible to evaluate other policies affecting the provision of information. Questions such as - which sectors of the community are likely to be affected by this policy? to which types of information and information services does it apply? does it ensure the effective and economic use of resources? how does it serve national development objectives? - are asked.
54. The value of such a statement lies not only in the text itself, but also in its implications, since by emitting it, the government or some other relevant national authority acknowledges the importance of information and accepts the primary responsibility for ensuring information services to all members of society. Filling gaps in the existing system by promoting appropriate services in hitherto neglected areas is to be clearly advocated in such a statement.
55. Although such a basic policy statement would be only meaningful if linked to a realistic plan of action, in many instances such a statement has been the starting point for activities aimed at gradually establishing or improving a national information system over the time.
56. The extent to which existing practices serve the basic information objectives outlined in the statement should be evaluated. This will make it possible to assess the measure in which such existing practices conform to or diverge from the principles adopted for the provision of information and set out in the basic policy statement. Weaknesses in the existing framework should be identified, i.e. those areas where existing practices are in conflict with one another; aspects of information provision not adequately covered by existing services should be ascertained and remedial action taken.

57. The evaluation of existing policies and practices should provide a basis for the elaboration of measures designed to bring them into a harmonious whole and direct their course in accordance with the chosen information policy. This also means that in monitoring and evaluating the effectiveness of information policies in relation to national development goals, it would be desirable to have widely accepted indicators which would facilitate assessment of the impact of information services in the different sectors of the socio-economic system.

## II. Policy-making procedures

58. The elaboration of an information policy involves three basic steps.

- determining the existing information situation;
- assessing the policy implications of this situation;
- formulating a policy based on this assessment for endorsement by the relevant authority.

### Determining the existing information situation

59. The formulation of a realistic policy must be based on a careful study of the existing information situation. The types of information needed for the various kinds of uses and users and the extent to which existing services can meet these needs should be clearly indicated. This study, leading to a grasp of the existing situation, is a professional responsibility requiring co-ordinated efforts by information specialists in various fields in co-operation with the groups of users concerned.

60. Any survey of existing services for the provision of information should be undertaken in parallel with the related survey of requirements. It should indicate precisely the range of services offered, the extent to which they are used and their use pattern, including the types of users and their geographical distribution. The survey should distinguish between services which, as a rule, are provided nationally and those available in other countries.

61. While much of the data sought in these surveys can be supplied by the relevant information specialists, it should be collected and assessed by independent investigators who will need also to consult the users of the services surveyed, first to corroborate or amend the information suppliers' statements on use, and second, to investigate the reasons invoked for the inadequate use of the non-use of these services. It is best to consult users about their requirements and their use of existing services at the same time.

62. This initial study must be complemented by further studies of the situation, taking into account future requirements and possible extensions or modifications of the services, if it is to provide a reliable basis for the formulation of information policies. This is also a professional responsibility to be performed either by institutions or by groups of information workers at the operational level. Such studies should be conducted by the organizations concerned or in close association with them. The choice depends on the location of suitable experts and on other local factors. These studies should also be conducted in close consultation with users.

### Assessing the policy implications of the situation

63. The data collected in the course of surveys of requirements and services should be pooled and, as far as possible, matched in order to get a true picture of the situation. This can lead to a variety of conclusions, depending on the circumstances. At one extreme, information requirements can be largely met by existing services, provided that the users are taught to make an effective use of such services and that the service staff is reinforced in order to cope with the increased demand; at the other, the existing services are of the wrong kind, or are so badly provided that users, having little confidence in them, are unlikely to make further use of them. However, such extreme situations are probably rare.

64. The situations most likely to be found are those where the existing services cater, sometimes well, to certain requirements, but need to be extended, strengthened or perhaps reorganized, in order to meet the full range of user requirements. For example, a national documentation centre may supply documents, but be unable to interpret their contents; it may attempt the analysis and consolidation of information but may not have enough subject expertise to do it effectively for practitioners or decision-makers at various levels. The findings of the study may reveal a need for a new, more effective service responsible for the interpretation and 'repackaging' of information (to be carried out by subject specialists connected with a research institute) or, alternatively, subject experts may join the existing documentation centre.

65. In some countries such an assessment of policy implications of the existing information situation may be difficult to make, either because of a lack of the necessary skills, or because reliable estimates of the potential value of untried services may be hard to secure. Most such countries would benefit from help from experts and from wider exchange of experiences and they would appreciate such an assistance. When foreign experts are called upon they will find it advantageous to proceed with the assessment jointly with staff with local knowledge and experience.

66. Technical assistance agencies at the international level can also help by commissioning specialists, with experience in the management of information services, to analyze and comment on national statements of information requirements before the latter are made final and relevant action is taken. The regional pooling of expertise can also be useful, particularly in a region with varied conditions and experiences.

67. It should be possible to summarize in writing the experiences of various countries in their attempt to identify their information requirements in rapidly-developing situations. This kind of write-up could be widely circulated and possibly discussed at national and/or regional seminars attended by delegates from all the interested countries. They could tackle either the whole process of information policy formulation or concentrate on some crucial point, e.g. the assessment of policy implications of the recorded information situation, which seems to be the most intricate issue for many countries.

### Formulating an information policy

68. Those responsible for the provision of information and who have the authority to obligate resources for its implementation should be involved in the

formulation of the information policy. This will require agreement within the government and the latter's interaction with other institutions. The national information policy must be endorsed at the highest possible level if it is to be implemented successfully. This should be the prerogative of the national legislative body, the council of ministers or the appropriate state equivalent. The legislative body responsible for endorsing a national information policy exists in all countries, as do institutions, professional groups and information specialists capable of carrying out studies of the existing situation.

69. The experiences of a number of countries show that the initiative for policy formulation and planning often came from professionals in the field. That is to say, in the initial or preparatory phase, it is the professionals who set the ball rolling. At the appropriate stage, the relevant government authorities are approached and their endorsement solicited. In some cases, however, those involved in the policy formulation and planning process may need to be organized into special task forces or research teams for this purpose, and eventually be reinforced by foreign experts, preferably within the same region, or by experts from other countries with a knowledge of similar national development problems.

70. In view of the rapidly changing circumstances, it may be useful for Member States to re-examine, from time to time, their respective information policies since policy-making is a dynamic and interactive process consisting of a chain of actions, such as the setting up of objectives and choosing priorities, the implementation of relevant activities, as well as the evaluation of results. These, in turn, are fed-back into the policy-making mechanism. Therefore, from time to time, a special committee or other collegiate body could be set up and endowed with the task of re-formulating the national information policy in the light of new requirements.

71. The following paragraphs suggest one possible procedure for formulating a national policy. It is intended to give an example because it is not the only one possible. Indeed, many Member States, including all those which have set up national focal points, have already started to establish their own policy-making procedures, which may differ from that outlined here.

### III. Establishing a policy-making organization

72. One possible procedure is to create an ad hoc committee representing organizations with a major interest in national information policy and the government departments concerned or their local equivalents as well as the most important user groups.

73. It is important at this stage to determine exactly the interests which should be included in the committee. The main borderline interests would be: advisory services, information services in the management field and the mass media. With regard to the broad scope of the national information policy, it is often impracticable to be comprehensive at the start. Therefore, it may be wise to confine the membership initially to societal interests in science, technology and industry and, when co-operation between these organizations is achieved, to extend it to include the information services for other fields, i.e. agriculture, transport. However, information services in management, especially those dealing with public records, such as in education and health, should be given full attention from the beginning.

74. Whenever possible, the committee should be kept small - not more than 10 to 12 members: if it has to be bigger, it should delegate its work to task forces wherever practicable. The committee will need to be based on a suitable organization and, from the outset, will have to be provided with sufficient staff and resources if it is to play an effective part in policy-making.

75. Once such an ad hoc committee is set to work, it is in a good position to supervise the surveys of information requirements and of the existing services, already mentioned. The committee can also initiate the elaboration of a medium-term plan and budget for the provision of information until such time as a permanent policy and planning body is established. If such a permanent organization already exists, the ad hoc committee should give guidance for the further development of information activities.

#### Tasks of the policy organization

76. The first task of the committee will be to decide on the extent to which the provision of information is to be centralized and in which way it is to be decentralized among the co-operating organizations. If decisions have already been taken in this respect, the committee could review them. If the provision is decentralized, the committee will have to see whether the budgets for current and future activities should also be decentralized and, if not, to what extent central control should be exercised over them.

77. Much of the earlier controversy on the centralization versus decentralization of information services has proved to be of a purely academic nature and was often pointless. Information practices in the majority of countries have shown that the natural tendency is to opt for the decentralized provision of information with a more or less strict co-ordination of the planning and the execution of certain programmes of nation-wide interest. Thus, for instance, centralization could be of advantage for general support services, for standardized systems design and specialists' training.

78. Given a certain amount of decentralization, the committee will then have to ensure that each information responsibility is clearly given to one organization or distributed among several. Responsibility for information services in specific fields, e.g. agriculture, medicine, industry, transport, is normally easy to allocate. So is the responsibility for national bibliography and archives or the government publishing and official statistics.

79. The procedure is less straightforward for services based on scientific disciplines, for example, chemistry or biology, especially where information analysis and consolidation is required, since analysis calls for subject expertise. In such a case, the information service might be best located with the experts, wherever they may be: a research institute, a university department, a relevant industrial laboratory or even an advisory office.

80. A key consideration is whether new organizations should be created for policy-making, planning and the monitoring of implementation at various levels, or whether these responsibilities should be entrusted to existing organizations, possibly strengthened and upgraded and perhaps reorganized for the purpose, or whether the policy and planning functions, and perhaps others should be retained by the ad hoc committee and its supporting staff. On the basis of available evidence, it would seem that the creation of initial working groups or ad hoc committees which give way to, or end up as, permanent advisory or planning bodies appears to be the most common pattern met so far.

81. If the committee is to be superseded, the crucial decision at this stage is whether a new policy organization should be created or an existing one designed to undertake policy and planning functions. A problem of equal importance is whether the policy organization should be given operational as well as policy responsibilities, or should it be part of an existing institution with operational responsibilities, such as a national documentation centre. There are arguments for and against these courses of action.

82. A link with operations can keep planners more knowledgeable about the activities with which they are concerned, but operational centres, however wide-ranging, tend to be regarded as less independent and less impartial, lacking the necessary detachment and objectivity required in taking decisions than an institution which is not involved in operations. In some countries there may be no debate on this issue; an operational centre may exist which commands such wide support that there is no real alternative. In others, the situation may be less clear and it is difficult to give advice without knowledge of local conditions.

83. Several countries make their policy organization responsible for research and for the financing of experiments with new information technologies. Such an organization may also be accepted without difficulty as the best location for courses, seminars and demonstrations designed for professional staff and users.

84. If such a policy organization is created or designated, with guidance from a representative advisory or steering committee, it can obviously become the 'national focal point' mentioned earlier (see PREFACE). If no such organization can be created or designated, it would be best for the existing ad hoc committee and its supporting staff, to retain the focal function on a permanent basis. The choice must depend entirely on national circumstances, though external advice can help to assess the practicality of alternative courses of action. The most important is for the mechanism to work well and command respect.

#### Role of information users

85. Again, it should be emphasized that the best solution in any given situation will depend on local circumstances. It is not possible to provide a universal prescription suitable for all countries. Whatever solution is adopted, however, it should ensure that those responsible for recommending and formulating information policy are working in concert with information users, either by inviting their representatives to sit on information advisory and steering committees, or by co-opting them to membership of the main policy and planning body.

86. As it has already been said, the consultation of users in the course of studies devoted to the identification of information requirements is only part of the procedure. Most requirements are usually determined by involving professionals working in the field of information provision. While this is obviously a sensible procedure, there is an inherent risk that professionals might become oblivious of users' virtual needs. That this is not merely a theoretical risk, there is evidence that all over the world there are many information services, known to be professionally impeccable but under-utilized. This is very often the case in developing countries which have invested heavily in them at the expense of other pressing problems.

87. With respect to many such deplorable failures resulting in considerable financial loss and deep frustration of users, it is now seen as indispensable that the users be involved not only in the assessment of needs, but fully integrated in the whole process of information policy-making and planning. In this way, they will become increasingly aware of the existence and value of information, familiar with the functioning of information services, partly responsible for their effectiveness and capable of evaluating their performance. By 'stimulating demand' in this manner and ensuring critical feed-back, a procedure often neglected, a possible way is found for effectively and economically providing information at the national level.

## IMPLEMENTING INFORMATION POLICY

When a realistic national information policy has been formulated on the basis of a thorough assessment of the existing situation and in accordance with the national development goals, priorities must be assigned to the various policy provisions, and resources for their implementation allocated accordingly. This requires planning. Planning is the means of attaining the overall policy objectives and involves the selection of suitable strategies to attain these objectives within a given period of time. The aspects of interest here are:

- planning and setting priorities;
- preparation of programmes;
- preparation of budgets;
- establishing a planning mechanism.

Any of the major constraints on planning - existing information provision, available resources, user needs - may change during the planning period. This requires that plans be flexible and subject to modification at any time during the period covered by the plan, though remaining consistent. It also indicates that planning is a continuous process and not an exercise which is completed when the plan document is prepared.

Setting priorities for information provision in accordance with national needs raises several complex questions which will have to be answered in due course. Commitment to long-term planning for information provision should be accompanied by measures designed to ensure periodic reviews and adjustments of programmes. The various options offered at the stage of implementation of the national policy and programming and budgeting issues are considered in this chapter.

It is also suggested that the performance of all the complex tasks relating to the implementation of the policy could be greatly facilitated by the establishment of a permanent planning mechanism which may be parallel to, or integrated with either the policy-making mechanism or a co-ordinating mechanism for information provision, or both.

### I. Planning and setting priorities

88. Implementing a national information policy is generally admitted to be the most important aspect of the entire process of information policy-making and planning with the objective of meeting national development goals. It is at the same time a complex and continuous activity and not an exercise which could be finalized in any given amount of time. Therefore, it is not necessary to wait for the formulation of a perfect and comprehensive national policy before initiating action.

89. Many important operations can be undertaken even in the absence of an all-embracing policy and plan, people have to be encouraged to do something once it is known to be worth doing either by way of laying the basis of a national infrastructure for information services or meeting certain important information demands of society. Furthermore, experiences of other countries can be drawn upon in the early phases of one's own implementation. It is a common wisdom that doing something is better than doing nothing.
90. Thus, when a realistic national information policy has been formulated - in accordance with national development goals and on the basis of a thorough understanding of the existing situation - the various policy provisions must be assigned priorities, and resources for their implementation sought and allocated accordingly. This requires planning. It involves the selection of suitable approaches to attain the policy objectives within a given period of time.
91. Any of the major factors usually taken into account in planning - existing information services, available resources, user needs - may change during the period covered by the plan. Therefore, plans must be flexible and subject to modification at any time while keeping their own internal consistency. Planning is a continuous process and it is not completed when the plan document is prepared. However, the other tendency should be avoided too, i.e. changing plans all the time: rigid plans are bad, inconstant plans are bad as well.
92. There is general agreement, based on world-wide evidence, that plans made for the implementation of adopted national information policies vary considerably from country to country. It is axiomatic that information planning must serve a nation's perception of its significant information needs and that such needs will vary widely. There is no such concept as 'global planning', which is generally considered as impractical even undesirable. In drawing up guidelines for national information policy implementation, it must be recognized that accommodating to the planning activities of different countries is a necessity. This applies not so much to the technical aspects of information services, but rather to their integration into the economic and social structures of the countries.
93. In compliance with the general planning methodology and the specific modalities adopted by the different countries, the preparation of plans which are intended to implement the provisions of the national information policy is a professional task requiring the combined efforts of planners and information specialists in various fields, and which should thus be performed at the information-relating professional co-ordinating level. Equally important is the involvement of users' representatives in all stages of the planning process.
94. It is generally agreed, in many countries that participation of users should be given special attention, preference being given to continuous informal monitoring rather than dependence only on formal evaluative studies, though users' consultation through questionnaires and at meetings is considered as useful. This is particularly important when assigning priorities to various sectoral information services which should directly cater to user needs, even if it is generally admitted that national priorities assigned to different sectors and user groups are largely derived from the priorities established elsewhere in the overall national development planning process.

95. Once finalized, the plans for the implementation of the information policy must be approved at the relevant government level in the same way as are approved those concerning other fields of national activity and which serve public purposes. This requires the co-ordination at the inter-ministerial or some other equivalent level, both of government and other interests throughout the country. The implementation of the approved plans must rest with individual institutions at the operational level through the execution of their programmes and projects.

96. It is equally possible for a government or a national legislative body to formulate and endorse an information policy and then leave its implementation to the institutions concerned without further guidance or support. Such a procedure, however, carries a considerable risk and implies the existence of a fairly well developed national information infrastructure, i.e. all the human, material and financial resources devoted to the provision of information. But even then, most institutions would need additional resources to implement a new policy.

97. Very often, there will not be enough resources available to implement all new policy provisions simultaneously. Again, priorities must be established in order to distribute the available resources among those involved in the implementation of the national information policy, even if those concerned carry out this implementation on their own, in accordance with their own plans and programmes. Thus, planning at some level and over limited time spans is an essential and inescapable necessity, if only to ensure the appropriate budgetary allocation.

#### The time element

98. In planning, the time element is very important. Limited resources make it imperative to calculate in advance their optimal distribution, hence establishing priorities over a given period of time is essential. Further, in relation to timing, setting priorities for the provision of information according to national needs raises several questions such as: what constitutes a proper balance between priorities accorded respectively to short-term and long-term planning? The provision of information for scientific research, for instance, requires the former, while long-term planning is usually necessary for information provision in economic development.

99. The rapidity of technological change in the area of information-handling and the present uncertainties as regards funding militate against long-term planning. Under these conditions, long-term plans with their inherent lack of flexibility could be the cause of failure because of the inability to adapt to change they entail. Therefore, countries should not be committed to long-term plans for the provision of information unless these are accompanied by measures ensuring periodic reviews and prompt adjustments of the programmes to changing circumstances, remaining of course basically consistent. On the other hand, participation in co-operative international information programmes requires continued financing over a period of time, and hence necessitates the long-term planning of resources.

100. The general opinion is that short-term planning is not useful, unless it is conceived as part of a medium-term or long-term plan. Therefore one solution to this dilemma would be to prepare a medium-term programme and budget, covering a period of up to five or six years and devise steps which can be taken during this period in order to implement a national information

policy. Starting small and extending gradually may be advisable in some cases, but this is not to be considered as a rule. Namely, there are instances where it is more productive to pool forces and means in a considerable effort at the start which is likely to have a nation-wide impact and attract important financial support more easily.

#### Provision of information

101. It has been repeatedly stated that the provision of information being subordinated to national development objectives must serve to attain these broader national goals. The implementation of national policies for the provision of information to development will cover:

- information generated within the country; this is a resource for which national funds have already been expended and it is necessary to ensure its availability in order to meet national needs in accordance with development priorities;
- information available outside the country; this information should be suitably selected, acquired and organized so that it may also be used to meet national needs in accordance with development priorities; access to computerized information services abroad should be ensured whenever it is considered to be advantageous;
- international co-operative activities, undertaken under bilateral, regional and international programmes with special reference to the benefits to national development accruing from such activities, especially those concerning the exchange of information on solutions found for specific national problems.

102. A first step would be to identify those categories of information that are best obtained from national sources or, possibly through regional co-operation. Much of the economic, social and cultural information required for development falls into these categories; it can range from financial data to information on social attitudes to technological change.

103. Although setting up national information services of this kind can be costly in terms of money and scarce professional skills, the recent advances in the new information technologies, especially microcomputing, make it easier to set up databases locally, even for small countries. These technologies should be introduced as soon as possible, with a strict observance of priorities, and the assignment of responsibility for each technology. Essential services include national and local statistics, inventories of current research, records of domestic publications, community information services and referral services, including directories of information facilities, experts and services, all of which should be widely publicized.

104. A second step is to find out systematically if a better use could be made of resources available outside the country, such as the remote consultation of collections of literature, considered as an alternative to building-up large national stocks of expensive books and journals; printed abstracting and indexing services, and computer-based searches of databases; information analysis and data centres, including those being set up with the support of international agencies.

105. Both steps call for the creation of an infrastructural network of archives, libraries, documentation and information centres, which linked together can provide users, wherever they may be, with direct or indirect access to both domestic and foreign sources of information. The network should, above all, ensure that national and 'core' foreign sources of information are held at appropriate and easily accessible locations; that there exist effective lending and copying, eventually also electronic mail arrangements; and above all that knowledge of information sources is imparted through active dissemination, retrieval and referral services; and that due attention is paid to increasing the users' awareness of the value and availability of information, in particular through community information services which would respond directly to information demands and not merely refer the users to documents.

#### Information on information

106. The creation of world-wide referral facilities which would enable users, especially in developing countries, to obtain information related to their specific needs, regardless of its location and across national boundaries, is the objective of the proposed Global Network of Scientific and Technological Information. The concept of the Global Network has been approved at the UN Conference on Science and Technology for Development, held in Vienna in 1979.

107. Since that date, the concept of the Global Network has been further elaborated within the framework of the UN Administrative Committee on Co-ordination. It has been agreed that the Global Network should be established in stages, the first being the gradual introduction of its referral function. This function would mainly cover, at the international level attempting to become as comprehensive as possible, the activities which are sometimes designated by the expression 'information on information'. Further stages of the Global Network would include the provision of substantive information, which pre-supposes a sound information infrastructure at national levels. The creation of national nodes and links between national information services and the Global Network is strongly advocated.

108. The compilation of a global directory of major information services in the world, including a detailed subject index, was agreed to be one of the first activities of this network. Countries were invited, either to set up national nodes or to make provision in their national information programmes for their participation in information exchanges through the future Global Network. Here, it should be reiterated that only a viable national information system will enable individual countries to benefit from information exchange programmes and services established at the international level.

#### II. Preparation of programmes

109. Based on the assumption that, in most cases, the preparation of the programmes is decentralized, each organization which has been assigned responsibilities, whether for information services or for support activities such as education and research, should be invited to prepare, in consultation with user groups, draft programmes covering these activities for the medium-term. There may be one programme for each branch of industry and one for each of the main social areas: health, housing, education, etc. The programmes of university, college, school and public information facilities, libraries and archives can be included.

110. Each programme involving information services should state clearly what new services are to be created, what improvements are to be made to existing services, and what support activities are proposed on a subject basis as distinct from a general basis. Programmes for support activities should indicate the new training courses to be run, improvements to old ones, demonstrations to be held, research projects to be undertaken, and specific investments to be made in the new information technologies.
111. All programmes should be fairly realistic in size, but at the preparatory stage can be somewhat larger than the budgets will finally allow since there is advantage in being able to reduce the size of the proposed programmes in case of budget restrictions. It should be emphasized that cuts in programmes resulting from budget restrictions can be reviewed and handled as a problem of phasing the programmes over a longer period.
112. Next, the responsible organizations are asked to submit their programmes to the national policy committee or some other co-ordinating body and so benefit from one another's experience in elaborating and presenting a programme; suggest where individual programmes can be improved; identify areas where co-operation between organizations may be helpful; secure central support at a higher level, for realistic estimates of expenditure.
113. In most cases, it would be advantageous if the policy committee or co-ordinating organization could also take some of the following actions: harmonize the various programmes and present them coherently as a combined programme; exercise control over the final size and shape of the combined programme, secure a desirable balance between priority activities, avoid wasteful duplication of work and widen the potential use of specific services; present the combined programme to the respective budget authorities with a single justification based on the generally accepted arguments concerning the importance of information to socio-economic and cultural development.
114. The preparation and review of these programmes for the implementation of the chosen policy concerns the available resources and, though time-consuming, should be regarded as a good managerial practice, since it can stimulate sound thinking, forward vision, clear expression of ideas and forceful argument in support of proposals. All this work is particularly meaningful if senior administrators are to become convinced of the importance of building effective national information services.

### III. Preparation of budgets

115. Each draft programme for information activities should be accompanied by a statement of the estimated expenditure and, where appropriate, income. The annual cost of each activity in the programme will depend on the charges made and on the length of the period over which the total cost is to be spread. Costing should be done with care, and should include professional and support staff, purchase and maintenance of equipment, travel, meetings and the various overheads.
116. Some countries may have difficulties in choosing the proper costing procedure and, though much useful information has been published, e.g. on the average cost of the different information handling procedures (indexing, storing, retrieving, repackaging, etc.), the prices of books and periodicals, and the cost of accessing computerized data bases, such information is fragmented and

widely scattered in the literature. Therefore, it might be useful to undertake some compilation of results and comparative studies in this respect, perhaps regionally or at the international level.

117. The final stage of the elaboration of the programme for the implementation of the chosen policy concerns the available resources for the draft programmes. This is done through the preparation of annual or biennial budgets and possibly five or six-year working capital budgets. Budgeting can be either entirely decentralized, in which case each information programme has to compete with programmes of other kinds for its financing, or it can be centralized, at least so far as government funding is concerned. A country which has a national plan for economic development is more likely to budget in a centralized way than one which has no such plan.

118. Another approach to budgeting is worth mentioning. The provision of information could be regarded as an overhead item of expenditure on the activities to which the information relates - whether they be research, industrial production or social service. Once regarded as an overhead, information can be costed as a percentage of total expenditure and programmes can be elaborated within the limits of the funds provided.

119. The main difficulty lies in determining what this percentage should be. Even so, the possibility is worth examining. Each industrial enterprise, each research institute and each public service should be able to express its expenditure on agreed categories of information as a percentage of total expenditure. If further study suggests that these percentages form a coherent pattern, the pattern could be made widely known, discussed and eventually incorporated in guidelines for national information policy-making.

#### IV. Establishing a planning mechanism

120. The performance of all the complex tasks relating to the implementation of the information policy could be greatly facilitated by the establishment of a permanent planning mechanism which may be parallel to, or integrated with, either the policy-making mechanism or a co-ordinating mechanism for information provision, or both.

121. In view of the difficulty of separating, in practice, the functions of policy-making and planning, on the one hand, and the functions of implementation, including interactive evaluation, on the other hand, the most practical solution in many countries has been to locate all these functions within the same organizational structure. This structure has been named: the 'national focal point' or similarly. Such a national information co-ordinating organization is either independent or part of a government department or of an existing professional institution, as is more often the case. In the following chapter the main features of this kind of organizations are examined, though it is not possible to be exhaustive owing to the innumerable local factors influencing the final organizational structure to be adopted.

NATIONAL INFORMATION CO-ORDINATING ORGANIZATION

Formulation of the national information policy, planning, and the harmonization of all information activities usually necessitate the establishment of an appropriate co-ordinating mechanism which could be named 'national focal point', as proposed by Unesco in the UNISIST programme, or else the national information co-ordinating organization, a denomination which may be proposed.

Unesco's Member States were invited by the General Conference in 1972 to establish national focal points or to designate existing organizations as such in order to guide, stimulate and co-ordinate the development in information resources and services.

Unesco's Member States have had varied results in implementing these recommendations put forward by the General Conference of Unesco. Some confusion was generated by the establishment in several countries of multiple 'focal points' for participation in various international information systems. It is obvious that the term 'national focal point' used in this connection does not reflect the central overall co-ordinating role and that the term 'national information co-ordinating organization' might better reflect the responsibilities of the latter in the formulation and implementation of the national information policy.

The principle functions of this organization would be: policy formulation, the preparation of plans for its implementation and the co-ordination of operational activities involved in the execution of these plans.

A suitable location must be found for the co-ordinating organization. It is almost impossible to draw up detailed guidelines in this respect for general use. In many countries the chosen location is likely to be a government department responsible for policy-making, such as the planning agency or the prime minister's office.

Another possible solution, adopted in several countries, is to locate the co-ordinating body in an existing institution with operational responsibilities, such as a national documentation centre.

Yet another possibility is to endow a committee or some other similar group with the overall co-ordinating responsibility, establishing its executive secretariat at the same time as a permanent information co-ordinating organization.

## I. Historical

122. The Member States of Unesco were invited by the General Conference in 1972 to establish 'national focal points' by either creating new organizations for this purpose or by designating existing ones to act as such with a view to guiding, stimulating and co-ordinating the development of national information resources and services. Basic guidance on the location and functions of the national focal points were given in the letter of the Director-General to Member States in 1973 (CL/2297).

123. In implementing the recommendations contained in the above-mentioned documents, Unesco's Member States have obtained varied results. The difficulties encountered by the various national focal points established to date have been caused either by the low priority assigned by the governments concerned to information functions in general, or by the inappropriate designation and location of the focal point in the government structure or that of some other service, or again by the lack of support given to information services.

124. The experience of some countries, however, revealed that the existence of strong sectoral information interests provokes considerable resistance to any attempt at co-ordination, this resistance being based on different conceptions of information priorities, on vested interests or sheer inertia. Experience also showed that, as financial resources become more and more scarce, sectoral policies tend to give way to co-ordination, which suggests that one of the strong arguments in support of co-ordination is the cutting-down of costs, but even where funds do not present a problem, scarce manpower can become a serious constraint and makes co-ordination a necessity.

125. The establishment in several countries of multiple 'focal points' for participation in various international information systems also generated some confusion. These focal points act as national input centres for entering locally produced information into the specialized international information systems, operated under the auspices of various United Nations agencies (e.g. AGRIS/FAO: INFOTERRA/UNEP, etc.) and/or as the local output point for the retrieval of information from their databanks to be used in the country.

126. It is obvious that the term 'national focal point' used in this connection does not reflect the central overall co-ordinating role and that the term 'national information co-ordinating organization', although more cumbersome, might better reflect the responsibilities of the proposed organization in the formulation and implementation of the national information policy.

## II. Functions

127. The main functions of such an organization would be, as stated earlier in this document, to initiate the formulation of policy, to prepare plans for its implementation and to co-ordinate and monitor the operational activities involved in the execution of these plans, in accordance with the objectives of the national information policy.

128. Initially, the proposed organization could supervise the assessment of national information requirements and of existing services and resources, including the use of foreign information resources.

129. It would then proceed to distribute responsibilities for specific, sectoral and general information services to appropriate institutions and begin to elaborate a medium-term plan and the first programmes and budgets or, alternatively, to elaborate programmes for new activities not yet covered by the existing services.

130. The co-ordinating organization should, further, monitor the performance of institutions that have been given specific responsibilities for operational or support services. It should identify gaps in existing information services and take remedial measures.

131. It should also take steps to render information users at all levels, including those at government level, increasingly aware of the role played by information in socio-economic and cultural affairs.

132. Further, the proposed organization should support the national information infrastructures by promoting appropriate legislation and adequate financing, recruiting qualified manpower and facilitating the application of new information technologies.

133. It should also promote co-operation between all types of information services in the country by offering technical advice, encouraging the application of norms and standards and the introduction of modern methods of information handling.

134. One possible way of doing this is to publish a newsletter or similar bulletin, and distribute it widely. This publication could cover information on advances in the information field, recent progress in computerized services, forthcoming meetings, educational opportunities, sources of technical assistance and how to approach them, etc.

135. The co-ordinating organization might also produce or commission the production of guides to information sources, inventories of abstracting and indexing services, lists of journals, directories of document collections and databases in the country and abroad, inventories of experts and facilities, in short, all guides that are usually resorted to when dealing with 'information on information'.

136. The organization should also endeavour to systematically explore the possibility for information services acquiring information sources on preferential terms from abroad, either on an exchange basis or by purchase or by access to computerized information networks.

### III. Location

137. A suitable location must be found for the co-ordinating organization. However, it is almost impossible to draw up for general use detailed guidelines for its choice, which normally depends entirely on local circumstances.

138. In some countries the chosen location is likely to be a government department responsible for policy-making, such as the planning commission of the prime minister's office. Other departments could be envisaged too. However, the choice of a department is difficult because information is important to several departments - culture, education science; economic affairs, industry and agriculture; the social departments such as health and welfare, etc. This is made obvious everywhere by the proliferation of the sectoral information activities carried out by the various government departments and ministries.

139. This does not necessarily mean that an existing national focal point or co-ordinating committee, already located in a scientific/technological department or institution could no longer exercise its information planning and

co-ordination functions, but it does suggest that such a body should consider adopting a broader basis for its activities than hitherto. It is probably best for such an institution to start co-ordination in areas of its own competence or mandate, and then, if successful, attempt to persuade others to accept the idea of a co-ordinated programme being in everybody's interest.

140. Another possible solution, adopted in some countries, is to locate the co-ordinating body in an existing institution with operational responsibilities, such as a national documentation centre, and either having it as a separate unit attached to the centre, or making it a component part of the centre itself. In either case, there are arguments against this choice, on the grounds that the institution with policy, planning and co-ordinating functions should be independent of operational work in order to remain unbiased in its monitoring functions.

141. Others consider an institution providing general information services, such as the national library or the national documentation centre, as representing by vocation the national focal point, its co-ordinating terms of reference being either implied or explicitly stated. In some countries there may be no debate on this issue, in others, the situation may be so confused as to delay effective action. In any case, it is difficult to offer guidelines without local experience and knowledge.

142. Among other possibilities, one has materialized in several countries, namely the devolution upon a committee or some other similar body of the over-all co-ordinating responsibility. At the same time, this committee's executive secretariat would be established as a permanent information co-ordinating organization, reporting to the committee's chairman. The co-ordination role is envisaged here mainly as an activity for central stimulation and guidance which would perhaps be more acceptable, particularly if the membership of the committee is representative of the various institutional and professional interests of the country.

143. 'Co-ordination' consisting mainly in stimulating and facilitating voluntary co-operation is usually considered as an advantage by each and every co-operating institution. However, there is a certain disadvantage in adopting such a loose connotation of the term co-ordination, namely the protracted time taken to reach decisions in the absence of a consensus when there are diverging interests, often aggravated by misunderstandings. But the advantages in having all the interested protagonists involved in the provision and use of information willingly and actively co-operating and sharing resources, outweigh this probably minor disadvantage.

144. There is also another difficulty inherent in all attempts at setting up 'representative' committees, it is that of making such committees suitably representative and at the same time seeing to it that they remain of a manageable size. This can be remedied to some extent by establishing on a temporary basis ad hoc sub-committees or task forces for specific purposes.

145. In the case of the first two possible locations mentioned earlier for the co-ordinating organization (a government department or a national information agency), much would be gained by setting up an advisory or steering committee of an inter-sectoral or professional character (preferably both) which would supervise and guide the formulation and implementation of policies and plans, leaving the day-to-day aspects of co-ordination to the body designated as the national co-ordinating organization. Consultation with user groups should become a regular practice, both for the committee and the co-ordinating organization.

#### IV. Structure

146. The structure of a national co-ordinating organization will depend to a large extent on local circumstances, but it should be staffed by full-time professional staff from the outset.

147. Sometimes doubts are raised on the usefulness of such a permanent structure on the grounds that it consumes resources which otherwise could be used for operational purposes. Shortage of funds, and of suitable people, is likely to keep the staff small. This is not a serious problem, provided that they are competent. A small team usually has a higher output per person than a large one, and it can always delegate specific tasks to other organizations or to consultants, including consultants from abroad. The staff will certainly need technical advice, but this is best obtained from specialists whose primary employment is elsewhere.

148. Taken as a whole, the staff must be well motivated, able to keep up-to-date on a wide range of topics and to plan and control studies, must show initiative and have good writing and linguistic capabilities. Experience in information work need not be considered as a prerequisite to recruitment. However, the staff should include at least one fully trained information specialist with recent experience of service work in the information field.

149. The rest of the staff should be chosen from the widest possible range of candidates with intellectual and administrative ability. When only two or three professionals are needed, in the beginning, there is an advantage in taking one able administrator on secondment for a limited period who, if sufficiently motivated, might be transferred permanently to information work.

150. It is important that each staff member of this organization should have a status in the administrative and professional hierarchy commensurate with their functions. The chief officer should have the same rank as that of the members of other policy-making committees. He should report directly to a high-ranking officer such as the head of a government department or the chairman of the responsible commission or committee.

151. The co-ordinating organization should be required to prepare its own programmes and budgets, indicating the priority activities on which effort is to be concentrated during the prescribed period of time; the functions to be delegated to other organizations, particularly the sectoral information services, and the results to be achieved. In the elaboration of the budget, a distinction must be made between the internal expenditure and delegated (contract) expenditures, as well as between national and foreign (international) sources of financing.

#### V. Links with other organizations

152. The national information co-ordinating organization should be encouraged to maintain close contacts with all the national sources of information and the international sectoral 'focal points' mentioned earlier (see paragraph 126) established in the country, as well as with the national nodes of the future Global Network of Scientific and Technological Information (see paragraphs 107, 108).

153. This organization could easily provide secretarial services to other permanent or ad hoc committees set up in the country in the field of information and dealing with local, regional or international issues. One of these committees could be the PGI-UNISIST National Committee, as described in the Annex.

154. An important role of this organization would be to promote regional co-operation. This would entail taking part regularly in regional meetings, initiating and maintaining working contacts with other national information systems in the region, suggesting co-operative projects, especially with a view to up-dating the education and training of information-related specialists working in the region.

155. The co-ordinating organization could also be considered to represent the Member State concerned at intergovernmental organizations and conferences dealing with information matters, notably Unesco and its General Information Programme (PGI).

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ANNEX

PGI-UNISIST NATIONAL COMMITTEE

In order that a fruitful co-operation may develop between Unesco/PGI-UNISIST and Member States, and to ensure the latter's optimal participation in Unesco's information programmes, Member States were invited by the Director-General of Unesco to set up National Committees, first for UNISIST in 1972, and later in 1976, also for PGI, and which were then named the PGI-UNISIST National Committees (UPNC).

In the documents emitted by Unesco Secretariat in pursuance of the relevant decisions taken at the seventeenth (1972) and nineteenth (1976) sessions of the General Conference of Unesco, it has been stated that the broad function of a UPNC is to advise the national information co-ordinating organization and other interested organizations in Member States on all aspects of participation in Unesco's information activities. This would entail:

- participating in the work of the Intergovernmental Council for the General Information Programme (PGI including UNISIST);
- participating in the periodical UNISIST Intergovernmental conferences and other meetings related to PGI and the other information programmes of Unesco;
- liaison with the different units in Unesco organizing information activities, and assessment of the effectiveness of co-operation with these units;
- the monitoring of the progress achieved, and whenever necessary disseminating the information so gained, and promoting relevant follow-up action; conversely monitoring national achievements and communicating them to Unesco;
- responding to Unesco/PGI-UNISIST initiatives (supplying information, conducting surveys, expressing opinion on specific issues, submitting names of experts, undertaking specific short-term or long-term activities, co-operating in regional projects) and taking national initiatives as a contribution to PGI-UNISIST;
- advising Unesco on means and methods of developing and strengthening links with national information systems in Member States, especially with a view to assisting the developing countries to set up modern information services.

Since Unesco/PGI-UNISIST calls for a partnership between governments and the various communities of users and information-related specialists, the membership of the UPNC should represent all these groups of interests in the country. In some instances, it may be best to call on outstanding individuals to represent users and information specialists but, in general, it would seem preferable to call on official representatives of institutions

who would represent their interests, since the primary function of the UPNC is to publicize Unesco's activities and encourage the institutions concerned to take part in these activities.

It would probably be best to place formal responsibility for this committee with the government department or the national agency dealing with Unesco affairs, which would provide secretarial service to the committee. Alternatively, the secretariat for the committee could be provided by some other suitable organization such as by the national information co-ordinating organization mentioned earlier.

The UPNC should meet before each meeting of the Intergovernmental Council for PGI and each UNISIST Intergovernmental Conference as well as at an appropriate time before the General Conference of Unesco. Apart from these, it should be convened only as frequently as business requires, avoiding however to overload the committee with detail or with activities which could be dealt with without having to call a full meeting of the committee.

SCIENTIFIC & TECHNICAL INFORMATION

SERVICES IN SRI LANKA

( an Overview )

Prepared by

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to be presented at

UNESCO - NARESA

NATIONAL SEMINAR ON

SCIENTIFIC & TECHNICAL INFORMATION

POLICY

20 & 21 October 1986

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## INTRODUCTION

This paper is written to document the issues that are related to Scientific & Technical information Policy in Sri Lanka. There can be some aspects not covered in this paper. Main purpose of the paper is to provide basis for discussions at the UNESCO-NARESA National Seminar on Scientific and Technical information Policy which will be held on 20 & 21 October 1986.

The paper records my personal views. Due to lack of time I could not varify certain facts given in the paper. I invite the participants of the National Seminar to correct any inaccurate or incorrect statements.

The paper does not include any recommendation. The Seminar is expected to make recommendations relating to National S & T information Policy.

86.10.14.

N.U. Yapa  
NARESA.

## 1. Scientific & Technical Information Policy

- 1.1 Sri Lanka has no policy for Scientific and Technical information. STI Policy is influenced by several other policies such as Science Policy, Information Policy and Industrial Policy. None of these policies are clearly defined.
- 1.2 Attempts had been made by NARESA, SLAAS, IFS, Ministry of Planning to formulate a national Science policy.
- 1.3 Industrial policy decisions are taken by several Ministries such as Industrial & Scientific Affairs, Housing & Construction, Small Industries, Textiles.
- 1.4 In the field of libraries, the Sri Lanka Library Services Board, being the Authority responsible for advising the Government, is expected to formulate policies relating to Library personnel, Library education and Library development.
- 1.5 Sri Lanka National UNISIST Committee functions as a Working Committee of NARESA. It advises NARESA on matters relating to Scientific & Technical information.
- 1.6 Ministry of Education is responsible for establishing policies affecting school libraries.
- 1.7 University Grants Commission is responsible for the policies concerning University libraries.
- 1.8 Ministry of Local Government takes the responsibility for policy making affecting public library development.
- 1.9 CINTEC is the policy making body for information technology.
- 1.10 Department of External Resources implement Government policies relating to development of library resources and training of library personnel with foreign assistance.
- 1.11 In the field of telecommunication, the Department of Telecommunication imposes policies.
- 1.12 It is evident that Scientific and technical information policy is not defined. Responsibility of making a national policy is not assigned to a single organization.

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## 2. Users

- 2.1 User groups - Users of scientific and technical information could be broadly categorized into Decision-makers, Research workers, Students, Development workers and the general public.
- 2.2 Decision-makers - who need information for planning R & D activities, resource development, provision of facilities for R & D work.
- Decision-makers occupies managerial positions in public and private sector organizations.
  - They need locally generated information. Statistics relating to production, services and manpower, data relating to cost, performance, etc. are required by them.
  - They usually collect information by themselves. Little attention is given by research libraries to satisfy needs of this category of users.
- 2.3 Research Workers - who need information on new processes, products and findings, relating to all areas of scientific and technical knowledge.
- They are attached to R & D organizations, mainly to the Research Institutes.
  - Recent Survey reveals that there are 3300 Scientists, and 4400 Engineers in Sri Lanka. However, only a small section of this population is seems to be responsible for generation of new information.
  - This category needs information, depending on the subject, from foreign sources as well as from local sources. The subject interest covers a wide range, but the user population per subject is low.
  - Research and Special libraries give high priority to satisfy the needs of this category of users.
- 2.4 Students - who need information for improving their knowledge. They generally do not apply the information assimilated by them.
- Students in schools, technical colleges and Universities are included in this category.
  - They need basic information on scientific subjects which are generally satisfied by books.
  - School libraries, technical college libraries and university libraries pay attention to the information needs of the students. However, in acquisition of information material more emphasis is given to cover the subjects taught at the institution and to provide material relating to examinations.

- 2.5 Development Workers - who engaged in production or services for earning. This category is designated "development workers" as their work contributes to the economic development of the country.
- Farmers, Fishermen, Small industrialists, falls into this category.
  - They need scientific and technical information to improve their efficiency and productivity.
  - Their information needs are looked after by extension services operated by the Public Sector Organizations. Libraries pay very little attention to their problems. This is mainly because of difficulties in transferring the information received by libraries direct to the Development Workers without shaping it to suit them.
  - Industrial Development Board, Department of Agriculture, CRI, TRI & RRI operates extension services.
  - No integrated extension information service is available in the country.

- 2.6 General Public - scientific and technical information need to be supplied to the general public to improve the quality of life. Information relating to health, nutrition, energy, environment, etc. need to be disseminated for this purpose.
- Ministry of Health and some public sector organizations attempt to disseminate scientific information needed by the general public. Mass media such as Newspapers, radio and TV are used effectively. Exhibitions, poster/essay competitions, public meetings are also used to create awareness.
  - Community information Centres in some countries are established for this purpose.
  - No properly organized scientific information service for the public exists in the country.

Information services and systems in the country should be developed to provide information required by all categories of information users. It is observed that most of the Library and Information Systems in the country concentrate on Research and Study needs of the users.

### 3. Subject Coverage

- 3.1 Subject coverage in provision of information should be done in accordance with the development plans of the country. Industrial countries should have more facilities to provide industrial information services. Similarly, a country based on agricultural development should pay more attention to agricultural information.
- 3.2 No proper study has been done to identify the main subject areas of the development plans of Sri Lanka.
- 3.3 Information services are inadequate with respect to certain subject areas. For example, the country has a well established textile industry, but no library or information centre with a comprehensive and upto date collection of textile information is available.

### 4. Standardization

- 4.1 Standardization of procedures, practices, processes and products is necessary to make independently developed systems compatible. Transfer and exchange of data and documents are possible only if standardization is practiced.
- 4.2 Sri Lanka Standards Institute is the official body for standardization.
- 4.3 Sri Lanka National Library Services Board should play a leading role in formulating standards for library activities. Special Committees appointed by the National Library Services Board are responsible for defining standards for libraries, library practices and library products.
- 4.4 Standardization of production of books is vested in the Sri Lanka Book Development Council.
- 4.5 Sri Lanka National Library Services Board has established a bureau to provide ISBN for local publications.

### 5. Scientific Statistics & Data

- 5.1 Department of Census and Statistics conducts national surveys to collect statistical data.
- 5.2 ARTI maintains a data bank on agriculture. Central Bank of Sri Lanka also collects statistics relating to economic development.

- 5.3 Each ministry collects statistics relating to production, manpower and services.
  - 5.4 Departments such as Survey General, Meteorology, Irrigation, Geological Survey also collect statistics but such statistics and data are not available in organized documents.
  - 5.5 NARESA collects statistics and information relating to scientific research and manpower.
6. Library Cooperation and Networks
- 6.1 It is realized by Librarians that they cannot provide effective services without the help of other libraries. Library cooperation is required for resource sharing and development.
  - 6.2 Networks are formed to systematize library cooperation.
  - 6.3 In science and technology, with SLSTIC as the Coordinating Centre, a network named SLSTINET has been formed. SLSTINET has launched several resource sharing programmes. Meetings are held to discuss common problems, review joint programmes etc. SLSTINET Newsletter is published to disseminate current news on SLSTINET.
  - 6.4 AGRINET has been formed by 24 agricultural libraries. SLSTIC serves as the Network Centre until an agricultural library, probably the Central Library of the Department of Agriculture, takes over the responsibility.
  - 6.5 RERINET has 15 libraries interested in Renewable Energy resources. SLSTIC which has special interest in renewable energy, has assumed the responsibility of serving as the Network Centre.
  - 6.6 HELLIS has been developed as a branch of a regional network. Administrative responsibility of the network is vested in the Ministry of Health and operations are handled by the Dept. of Labour (Occupational Hygiene Division).
  - 6.7 National Water Supplies & Drainage Board has initiated action to form a network on community water supply and sanitation. It was proposed to form two new networks: Industrial information with IDB and Environmental Sciences with CEA, as focal points. Law libraries have established a network with the University of Colombo Library as its Centre.

6.8 The Networks are organized as informal groups. These networks have no funds (except for HELLIS) and no authority to implement the decisions. Success of the networks solely depends on the voluntary cooperation of the librarians participating in the network.

7. Local Publications

- 7.1 Publications are the main sources of information. Hence, improving information services depends largely on the availability of publications. Facilities should be provided for the generation of publications locally.
- 7.2 The Act of Parliament No. 52 of 1979 of intellectual property, protects the copy-rights of the published documents. There are certain shortcomings of the act which make it less effective as an instrument for protecting the author's right.
- 7.3 Sri Lanka Book Development Council has been established in 1972 to promote publication work. Sri Lanka National Library Services Board has launched a book development programme to help authors.
- 7.4 It is felt that there is a dearth of science books for laymen in local languages. NARESA has started a project to promote publishing supplementary reading material. Many publishers look forward to publish science books for general public in Sinhala. Science writing for the public needs improvement.
- 7.5 Local scientific journals are mainly published by professional associations who do not have full-time editors. This has caused interruptions and delays in publishing scientific journals. Printers give low priority to scientific journals as such publications bring them low profits.
- 7.6 NARESA established a press with the view of providing printing services to scientific organizations at low cost.
- 7.7 A proposal was made few years ago by an Unesco Consultant that the journal publishing should be reorganized to make it more effective. Amalgamation of certain journals was suggested.
- 7.8 Prices of locally produced books have escalated mainly due to the increase of price of printing paper. No tax concession is given for the imported printing paper.

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- 7.9 New printing techniques are not widely exploited. Low cost, easy to operate and less complicated printing processes are now available.
- 7.10 No proper book distribution scheme exists. It is observed that books published by certain institutions are not properly distributed although there is high demand for such books.

#### 8. Acquisition of Local Publications

- 8.1 The legal deposit law ensures deposit of locally printed publications atleast in four libraries. Certain clauses of this law need revision.
- 8.2 Non-book material is not governed by a legal deposit law.
- 8.3 Scientific films, Video recording, etc. are not included in the preservation programme of the National Archives. No scheme for acquisition of such material for preservation is available.
- 8.4 Grey literature has become an important information source. These deal with narrow and specific subjects and are produced in limited numbers. Hence become non-available soon after they are issued.
- 8.5 SLSTIC maintains a repository of scientific documents. Reports are acquired through personal contacts. A classified Index is maintained for the reports collection. SLSTIC attempts to make the collection comprehensive.
- 8.6 Some libraries which provide national information services attempt, to build collections of grey literature on subjects interested to them. The Coconut Information Centre collects reports on coconut and Dept. of Agriculture collects agricultural reports.
- 8.7 Many libraries complain that acquisition of Government publications has become increasingly difficult due to the inefficiency of the Government Publications Bureau. No central organization exists for the sale of publications of the public sector institutions.

#### 9. Acquisition of Foreign Publications

- 9.1 Sri Lanka heavily depends on foreign scientific publications. Atleast 80% of the books votes of research libraries are used for importing books and periodicals.

- 9.2 No co-publishing Scheme which enables a foreign publication to printed and published locally at low cost, exists. (Negotiations were made by a Publisher in Pakistan to print NTIS publications locally to bring the prices down; this was not successful).
- 9.3 Books and periodicals are purchased individually by libraries. This has caused unnecessary duplication of material. SLSTIC worked out a plan for purchasing major abstracting journals by scientific libraries, according to a cooperative scheme. This Scheme is operated on voluntary basis. Attempts were made by libraries in the Agricultural Information Network to rationalize agricultural journals. This project has made very little progress.
- 9.4 No concessional postage is provided for books and educational materials. The Publishers Association has appealed to the Government to fix special postage for books.
- 9.5 Sri Lanka Standards Institute maintains a comprehensive collection of standards of various countries. Special indexes are also maintained.
- 9.6 Registrar of Patents has a collection of foreign Patents obtained through WIPO; patent search facilities are also available.
- 9.7 UN and International Organizations send their publications to libraries. Many libraries serve as depositories for these publications. Exploitation of UN publications is poor mainly due to less accessibility of these publications.
- 9.8 Libraries receive large number of publications on exchange and as gifts. Many of these are not properly used as libraries tend to discard the publications irrelevant to them. These publications could be collected and redistributed among relevant libraries.

#### 10. Bibliographies and Indexes for Local Publications

- 10.1 Sri Lanka National Bibliography is compiled by the National Library Services Board. This contains books and reports published in the country. However, it covers only publications received under the legal deposit.
- 10.2 A National Bibliography is not available for non-book materials, such as motion pictures, Video/Audio cassettes, maps.
- 10.3 Sri Lanka Standards Institute periodically issues handbooks listing Sri Lanka standards.

10.4 SLSTIC compiles an index- Sri Lanka Science Index- which records scientific reports, conference documents, newspapers & periodical articles.

## 11. Inter-library Loans

- 11.1 Inter-library loans has become a very practical way of satisfying user needs when documents are not available in a library.
- 11.2 Some librarians are reluctant to lend books to other libraries. Fear of losing books by the borrowing library or while the books are in transition, high cost of postage, difficulties in packing are some reasons. Certain administration regulations prevent lending books to other institutions.
- 11.3 SLSTIC serves as the Switching Centre for inter-library loans. It borrows books from one library to be lend to another library. Books not available locally are borrowed from foreign sources, especially from BLLD.
- 11.4 With regard to periodicals, many libraries prefer to send photocopies. SLSTIC provided photocopying machines to leading scientific libraries in 1982 using part of the funds provided by UNDP (Now most of these machines are not functioning).
- 11.5 On exchange basis many libraries provide photocopies free of charge.
- 11.6 Using its international links SLSTIC approaches foreign information centres to obtain photocopies of documents that are not available locally.

## 12. Union Catalogues

- 12.1 Union Catalogue facilitates better utilization of resources of libraries. Inter-library loans, subject specialization, rationalization of acquisition, promotion of standardization, provision of island-wide current awareness services are some advantages of a Union Catalogue.
- 12.2 SLSTIC, compiles an Union Catalogue of Scientific and technical books (UNICAST). Only 30 libraries, out of 93 in SLSTINET, participate in the Project. Certain libraries do not send entries regularly.

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- 12.3 CDI compiles a Union Catalogue of Books on Development Sciences which is known as UNIDEV. This Catalogue is maintained as an author catalogue, and hence could be used to locate a book only by author. Sri Lanka National Library Services Board intends to organize a national Union Catalogue which would incorporate both UNIDEV and UNICAST.
- 12.4 SLSTIC maintains a Union List of Scientific and Technical Periodicals to record holdings of the SLSTINET. CDI plans to compile a Union List of Periodicals relating to development sciences. HELLIS speculates to compile a Union List of Health Science periodicals.

13. International Links

- 13.1 A library which functions as a national information centre for a given subject attempts to establish links with international information systems and centres, relating to the subject concerned. These libraries collect, analyse and transfer local information to the network Centres. The library access the network Centre to obtain information from other focal points. This has proven a very effective method for the exchange of information.
- 13.2 It is observed that the National focal points are appointed without considering the capabilities of the organizations.
- 13.3 Libraries which function as nodal points of scientific information systems are given below:

UNISIST & ASTINFO	- SLSTIC
RINSCA	- SLSTIC
CRRERIS	- SLSTIC
NTIS	- SLSTIC
AGRIS	- Dept. of Agriculture
INIS	- Atomic Energy Authority
INFOTERRA	- Central Environmental Authority
HELLIS	- Ministry of Health
DEVSIS	- CDI

Cont'd ...

- 13.4 Librarians contact their foreign counterparts to obtain information and documents. SLSTIC has contacts with National Information Centres in Asia such as INSDOC, BANSDOC, PASTIC, PDIN etc. These information Centres are contacted to obtain photocopies of documents originated in those countries. SLSTIC operates photocopy procurement service for SLSTINET. BLLD has become the most contacted library for photocopies. However, cost of procurement of photocopies from BLLD is becoming increasingly expensive. Dept. of Agriculture undertakes provision of photocopies of documents listed in AGRINDEX in case a User's attempt to obtain copies from other sources fail.
- 13.5 Sri Lanka has no on-line facilities. IFS and the Arthur C. Clarke Centre speculate in establishing on-line links with ESA/IRS on-line services. SLSTIC has been provided linking facilities with ASEARNET of AIT.
- 13.6 Having no on-line facilities the requests for computer database searches are sent by post to foreign libraries which have online facilities. Print outs of computer searching are sent to the local libraries. SLSTIC is offered facilities to use on-line search services of the National Library of Australia.

14. Information Technology

- 14.1 There is an anxiety in libraries to use modern information technology for information storage and retrieval and for library services.
- 14.2 Not more than 2-3 libraries use computers for library activities. Many libraries look forward to acquire micro-computers for libraries. Less expensive micro-computers and DBMS have encouraged them.
- 14.3 Main problem associated in utilization of computer technology by libraries is lack of trained librarians who are conversant in computerized information systems.
- 14.4 Training facilities to learn computerized library & information systems are limited. Sri Lanka Library Association has organized a regular course on Computers in Libraries. This course aims at providing basic understanding of Computers.
- 14.5 Unesco has promoted database management systems for library applications using micro-computers. Superdoc, IV+V, CDS/ISIS are supported by Unesco.

- 14.6 It is necessary to coordinate Computer activities of libraries. If Librarians use different software systems it would be difficult to integrate them at a later stage.
- 14.7 CINTEC advises public sector organizations in acquisition of computer facilities. It has created a several user groups to obtain feed-back.
- 14.8 It is observed that the existing telecommunication services need improvements. Reliable and appropriate telecommunication systems are required for data transmission. Computer networking would not be viable until data communication facilities, such as packet switching is made available. This has become the main impediment to obtaining online search facilities.
- 14.9 A few libraries use microforms. Facilities are available in the country for microfilming documents. Equipment supply and maintenance facilities are also available in the country.
- 14.10 Facsimile transmission could be used to transfer images. This could be used for transferring articles, catalogue entries etc. Internal telex services could be established to send messages. This could be used for sending inter-library loan requests. Study of using such technology for library services would be useful.

15. Library Profession

- 15.1 Sri Lanka Library Association is the professional association for librarians, documentation officers, information officers etc.
- 15.2 The Designations in the library profession are used without considering the work content, responsibility or qualifications. The designation "Librarian" is loosely used for any person who is in charge of any kind of library. This is not true with most other professions.
- 15.3 The Librarian is considered as an administrative person by certain organizations. Some R & D organizations consider librarian as a technical officer.
- 15.4 The Librarian is made responsible for loss of library material. Some organizations consider that the Librarian's responsibility is similar to the responsibility of a store-keeper. This concept has adversely affected library services.
- 15.5 Out of the organizations that pay professional allowances to their employees only a few pay professional allowances to librarians.

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16. Library Education

- 16.1 Several organizations are engaged in training and education of library personnel
- 16.2 Sri Lanka Library Association conducts a professional course in 3 languages at 4 Centres. A person who completes the Course is eligible to become a member of the Association and considered as a professional Librarian.
- 16.3 University of Kelaniya has a Department of Library & Information Science which offers graduate and post-graduate courses in Library and Information Science.
- 16.4 University of Colombo, Faculty of Science offers a course leading to Diploma in Library Science.
- 16.5 Sri Lanka National Library Services Board conducts a postal course for the benefit of library personnel in remote areas.
- 16.6 SLSTIC, National Library Services Board, Ministry of Educational Services, and Ministry of Local Government conduct Seminars/Workshops for librarians.
- 16.7 National Library Services Board has appointed a Education Committee to advise on matters relating to library education. However, the Board has no powers to enforce its decisions.
- 16.8 The qualifications offered by various educational institutions are not standardized. This had lead to confusions in recruitment of library personnel.
- 16.9 Librarians rarely get opportunities to travel abroad to follow training and educational programmes or to attend Conferences. Librarians get low priority in Schemes for selection of persons for foreign education.
- 16.10 Regular courses for education and training of para-professionals are not available.
- 16.11 Librarians feel the need of a post-graduate institute for Library Science.

Some comments on UAP National Seminar

Upali Amarasiri

Deputy Director

Sri Lanka National Library Services Board

Some Comments on UAP National Seminar

(Upali Amarasiri, Deputy Director, Sri Lanka National  
Library Services Board)

Sri Lanka has been represented both at the International and Regional level UAP meetings from the inception. The International Congress on UAP, which was held in Paris in 1982 and the Asia/Oceania regional meeting on UAP held in New Delhi in 1985 were attended by Officials of the Sri Lanka National Library Services Board.

At the regional meeting in New Delhi it was decided to hold national UAP meetings in each country of the region as an initial step in the introduction of a concrete programme at the national level.

The national meeting on UAP in Sri Lanka was held on the 24th and 25th of September 1986 at the NARESA Auditorium under the auspices of the Sri Lanka National Library Services Board.

The Seminar was attended by a number of groups and organizations which are closely linked with the national UAP field. The 37 participants were from the Publishing and Bookselling industries, Librarians, Representatives from professional associations, the Sri Lanka National Book Development Council, the UNESCO National Commission for Sri Lanka, Ministries of Education and Cultural Affairs and the Sri Lanka National Library Services Board (list of participants annex I).

The Seminar comprised of four sessions with each session being devoted to the discussion of a major aspect of the UAP Programme. e.g. Book Production, Book Selling, National Acquisition, Inter Library loans, Retention, Assessing the availability etc. a number of papers relating to these aspects were presented at the Seminar. (Programme of the Seminar annex 2).

Twenty four resolutions were adopted at the concluding session of the Seminar aimed at removing some of the present obstacles regarding the availability of publications in Sri Lanka (Resolutions of the Seminar. annex 3).

An important outcome of the Seminar was the awareness created among the participants regarding the UAP concept. During the Seminar a large number of obstacles in the availability of publications were identified. The participants agreed that a joint effort is required to overcome these obstacles.

## Annex 1 - Participants

### Publishing & Book Selling fields

Godage, S.	Proprietor, Godage Brothers Ltd.
Jayatilake, K.	Proprietor, Pradeepa Publishers. President, Sri Lanka Book Publishers Association
Jayasinghe, Y.	Pubudu Printers & Publishers
Samaranayake, H.	Manager, Publishing Division, Lake House Investments Ltd.
Saputanthri, K.	Proprietor, Samanala Printers & Publishers
Silva, Sri Lal	Asst. Manager, Lake House Book Shop
Walataraarachchi, J.W.	Manager, K.V.G. Silva Book Shop, Bambalapitiya
Wickramage, P.	Proprietor, Piyavi Publishers

### Library Field

Athukorale, S.	Chairman, SLNLSB
Amārasinghe, N.	Director, SLNLSB
Amarasiri, M.S.U.	Deputy Director - SLNLSB
Dodawatte, D.G.S	Librarian, Polytechnical Institute, Colombo 10
Fernando, H.N.J.	Asst. Librarian, SLNLSB
Gunaratna Banda, H.M.	Librarian, SLNLSB
Gunasekera, L.D.V.	Librarian, SLNLSB
Gunasekera, T.D.D.	Asst. Director, SLNLSB
Jayatilake, M.P.	Librarian (Actg.), Matara University
Jayawardana, M.D.H.	Librarian (Actg.), Public Library, Colombo
Jayaweera, (Mrs.) J.	Development Officer, Centre for Development Information

Morayas, (Mrs.) F.U.S.	Senior Asst. Librarian, Museum Library, Colombo
Munasinghe, (Mrs.) I.	Librarian, SLNLSB
Nammuni, (Mrs.) S.S.	Documentalist, NARESA
Perera, Miss S.C.	Library Assistant, ELNLSB
Peiris, N.	Publications Officer, SLNLSB
Punchi Banda, G.M.	Librarian, SLNLSB
Ranasinghe, P.	Asst. Librarian, Kelaniya University
Ratnayake (Mrs.) D.	Librarian, Kandy Public Library
Senadeera, N.T.S.A.	Librarian, Peradeniya University
Soyza, Miss S.	Librarian, Museum Library
Tilakaratna, (Mrs.) D.M.	Asst. Librarian, SLNLSB
Vidanapathirana, P.	Senior Asst. Librarian, Sri Jayawardenapura University
Yapa, N.U.	Director Information, NARESA

Sri Lanka National Book Development Council

Jayawardena, N.	Secretary (Actg.), SLNBDC
Gunasekera, L.	Member, SLNBDC

Sri Lanka National Commission for UNESCO

Sumanasekera Banda, S.J.	Deputy Secretary General, SLNCU
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Ministry of Cultural Affairs

Jayawardena, S.	Additional Secretary
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Annex 2 - Programme

24.09.86

SESSION - 1 Chairman - Mr. S. Athukorale, Chairman, S.L.N.L.S.B.

- 11.00 - 12.00 - 'Universal Availability of Publications'  
an introduction  
- Mr. Upali Amarasiri, Deputy Director, S.L.N.L.S.B.
- 12.00 - 12.30 - Discussion
- 12.30 - 13.30 - Lunch

SESSION - 2 Chairman - Mr. K. Jayatilake, President, Sri Lanka  
Book Publishers Association

- 13.30 - 14.15 - 'Printing and Publishing in Sri Lanka'  
- Mr. Henry Samaranayake, Manager,  
Publication Division, Lake House Investments Ltd.
- 14.15 - 15.00 - 'Book Selling & Distribution in Sri Lanka'  
- Mr. Sri Lal Silva, Asst. Manager,  
Lake House BookShop
- 15.00 - 15.15 - Tea
- 15.15 - 16.15 - Discussion

25.09.86

SEESSION - 3 Chairman - Mr. N.T.S.A. Senadeera, Librarian,  
University of Peradeniya

- 9.00 - 9.45 - 'National Acquisition Programme'  
- Mr. T.D.D. Gunasekera,  
Assistant Director, S.L.N.L.S.B.
- 9.45 - 10.00 - Discussion
- 10.00 - 10.15 Tea
- 10.15 - 11.00 Inter Library loan Services in Sri Lanka  
- Mr. H.M. Gunaratna Banda  
Librarian, S.L.N.L.S.B.
- 11.00 - 11.15 Discussion
- 11.15 - 12.00 - Responsibilities of the professional Associations  
in 'Availability of Publications'.

SESSION - 4 Chairman - Mr. S.J. Sumanasekera Banda,  
Deputy Secretary General, UNESCO National Commission for  
Sri Lanka

13.00 - 13.45 - 'Responsibility of the National Library in UAP'  
- Mr. N. Amarasinghe, Director, S.L.N.L.S.B.

13.45 - 14.30 - 'Responsibility of the Sri Lanka National Book  
Development Council'  
Mr. N. Jayawardena, Secretary  
S.L.N.B.D.C.

14.30 - 15.00 - Discussion

15.00 - 15.15 - Tea

15.15 - 16.15 - Assessing the Availability in Sri Lanka

### Annex 3 - Resolutions

- \* Setting up of a National Committee of UAP
  - \* Commencement of Research projects on various aspects of UAP
  - \* Introduction of the UAP Concept in the curriculum of Library Science Programmes
  - \* Reassessment of activities of the National Book Development Council and Sri Lanka National Library Services Board
  - \* Provide training facilities for employees of printing and publishing industries
  - \* Request the Sri Lanka Rupavahini Corporation for a monthly programme on new publications
  - \* Request the Ministry of Posts & Telecommunications for special facilities for mailing books
  - \* Take necessary steps to improve the present Legal Deposit law in the country
  - \* Publishers should provide information on their forthcoming books to the SLNLSB. SLNLSB should include them in the National Bibliography
  - \* Booksellers should agree on a common policy on discount on books
  - \* Programme for the effective control of government publications
  - \* Programme for the effective control of grey literature
  - \* SLNLSB to commence work on the National Union Catalogue
  - \* SLNLSB to summon a special seminar on national Inter-library lending
  - \* To request the Ministry of Posts and Telecommunication for special telecommunication facilities for Data Transmission
  - \* MARC programme should be developed to suit Sri Lanka
  - \* Formulate a National Policy on Retention and Conservation of publications
  - \* The South Asia Association of Regional Cooperation (SAARC) to be requested to adopt a common programme on UAP in the region
  - \* IFLA should be requested to recognise Sri Lanka as the regional centre of UAP
-

## GENERATION & COLLECTION OF INFORMATION - GROUP A

Generation and collection of Scientific & Technical Information should be considered as the prerequisite for an organized National S & T Information Policy. Identification of information requirements, identification of information users and their requirements and generation of information are the main sections of this area. We realize the absence of an accepted national science policy and the absence of a coordinating mechanism for S & T information policy in Sri Lanka. There is a need for

- i) identification of information requirements of S & T users
- ii) integrated S & T extension information services for development workers and
- iii) scientific information services to the general public.

The major constraints for the generation of information are lack of incentives for local publishers and inadequate bibliographical control of government and international S & T publications.

Therefore we make the following proposals,

### A. Identification of Information Requirements

- i) To set up S & T information Coordinating Committee in order to define the areas of priorities for S & T. SLNLSB, NARESA and National Archives, should act as coordinating mechanisms in the field.

### B. Information Users

- i) That surveys and studies regarding user requirements should be carried out by the Library Authorities, relevant Professional Organisations and Higher Education Institutions.
- ii) To identify, analyse and repackage S & T Information in order to meet the requirements of development workers at the grassroot level.

- iii) That the existing Public Library network should be strengthened to provide an organised Scientific and Technical Information Services for the public.

C. Generation of Information

- i) That the publishers should be given more incentives such as reduction of import taxes on printing papers and printing machinery to improve the Standard of Local S & T Publications.
- ii) That the present legal deposit law should be revised to include non-book material.
- iii) That the "gate-keeping" function of scientific editors in the generation of information should be recognised and that international standards and norms should be enforced in producing local S & T journals.
- iv) A National Acquisition Policy should be formulated.
- v) That all unpublished primary documents of S & T generated in public offices to be identified immediately & referred to the National referral Centre.
- vi) That cooperative acquisition programme should be introduced for foreign S & T Journals.
- vii) That all local UN deposit libraries should send bibliographical information to a National documentation Centre.
- x viii) That telecommunication facilities for data transmission should be introduced.
- ix) All consultancy reports of researchers, experts on S & T and development should be deposited at the report depository.
- | x) To provide incentive to Scientists and Technologists to publish their work.

Distribution of information in Sri Lanka is both inadequate and uneven not only compared to large industrialized countries but at the national level even with developing countries like say, Korea and India. The total information available in developed countries is very much larger in volume than that available in Sri Lanka. Further, the available information is unintegrated and not organically interlinked with each other, and with say, users.

The Committee recommends that a proper study be made of

- (a) existing Centres which provides information and library facilities as to their content, scope, coverage of disciplines, as well as, service provided to users.
- (b) the information gathering and usage systems including perceptions of users of the available facilities and their modes of functioning.

So that the existing STI Network could be evaluated and when necessary strengthened.

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The possibility of providing information services by key organisations in the sectors be explored and where necessary to introduced and/or strengthened. A greater interface be made of users and information services, by for example extensive and internet interactions between users, specially through their professional organisations.

Efforts be made to study current advances in information technology and a cost/benefit analysis be made of this technology and where necessary, such technology to introduced.

Special mention be made of computer usage for processing of information and of accessing data bases. Attempts be made to standardise, where necessary, compatibilities of such systems to facilitate easy exchange of information between organisations either through discs or a telephor

A study be made of the feasibility of accessing central data bases (to be adopted if feasible) taking into account the following

"real time" access to data

1. priority areas that require internet
2. comparative costs of other channels such as micro forms.

3. Comparative costs of leasing a link, packet switching, access off peak to existing international leased lines, telelink to data base and exchange of data tapes and discs.

4. existing facilities under international cooperation agreements

5. increasing Sri Lanka's competitiveness and bargaining power taking into consideration similar facilities in other countries in the region

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To study the need for and when necessary  
institute data bases at a national and/or regional level  
for S & T information where the nation or the region  
specialises and/or possesses centres of excellence such  
as in crop research (rubber, coconut, tea etc). The possibility  
possibility of exchanging tapes and discs be actively  
followed in such cases.

The possibility of accessing on or off-line  
regional data bases and information networks such as  
R N A M in Bangkok be explored.

The relevant overseeing authority, once established  
should follow a policy of locating information especially  
grey-material, organising it, and where necessary declassifying  
it, so that easy access occurs.

A study should be made of the greater use  
of patent information and creating an awareness of  
the value of patent information.

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Each information center study the possibilities  
of user profiles in order to provide specific need  
oriented services and provide SDI services.

Adequate and intensive use to made of  
man media for dissemination of S & T information specially  
in the fields of agriculture, health, education and  
industries. It is noted that current efforts in

these fields are at times pedantic and/or  
followed accompanied by contrary messages of disinformation  
such as say happened in the case of pesticides information

Better use of workshop/seminar involves to  
stimulate interaction and exchange, between  
user and where possible direct producer of information

PTO

Sri Lanka has committed itself to a leading nation position and a commitment to the latest SOT. In this regard we need with a utmost concern and alarm, the current drastic clipping of information related budgets in universities and elsewhere. It is strongly recommended that a reasonable annual increase in budgetary provisions be made for the information areas, at least to keep with the recorded world increase of information which doubles every 7 (seven) years.

It is recognized that the information professions are a vital element in the present era, more especially so in developing countries where selective access to information is necessary. Due recognition should be made to developing the profession by higher emoluments, intensive training opportunities and the possibilities of professional contact and interaction with professional colleagues at the advancing edge of the profession.

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The seminar having noted that the information field in Sri Lanka is managed by Librarians, Information scientists, Documentalists and Archivists also notes that the largest category of these professionals is in the field of librarianship.

It further observes that especially the profession in Sri Lanka has two broad categories of personnel, at graduate and non-graduate levels and also that (a) a recognisable professional structure is not observable for information scientists in Sri Lanka, (b) that there are considerable variations in the qualification requirements at the points of entry, (c) that the salary structures of comparable personnel, intra-profession and inter-profession, has wide disparities, (d) a forward plan for the training, employment and use of such personnel especially with emphasis on modern technologies is not available, (e) and that the interaction between the information scientists and the users is inadequate.

The seminar having considered the foregoing from which the STI manpower is derived, Recommends that:

- (a) a survey of information personnel be carried out to assess the current and projected requirements of manpower, taking into account the changing patterns of growth in information technology.
- (b) Further, taking into consideration the identified manpower requirements, recommendations be made for an overall scheme of education and training and curriculum development for the different levels, leading to the establishment of an Institute of Library and Information Science affiliated to a University.
- (c) that guidelines be provided for the placement of library and information personnel on salary structures commensurate with their qualifications and comparable with employment conditions of other professionals, and
- (d) that programmes be initiated for user education at various levels with emphasis on SDI, local information systems, data bases, data banks and repackaging of information.

RECOMMENDATIONS OF THE WORKING GROUP ON NATIONAL & INTERNATIONAL COOPERATIONIntroduction

It is imperative that the effective formulation & execution of an Information policy for the sector requires the existence of a Policy making body endowed with powers, infrastructural and financial facilities. It is also essential that a definite area of activity be demarcated, with facilities for networking in order to create an impact. Hence the group recommends the following:

1. Establishment of a policy making body

The Working Group recommends

- 1.1 That NARESA as the organization responsible for the formulation & implementation of the Science & Technology policy of the country be vested with the responsibility for the formulation & implementation of the Scientific & Technological Information policy of Sri Lanka in concurrence with the Act No. 78 of 1981 of Natural Resources, Energy and Science Authority of Sri Lanka.
- 1.2 That NARESA establish a Standing Committee responsible for the formulation of the Scientific & Technological <sup>Information</sup> policy.
- 1.3 That this Committee be representative of the Organizations with major interests in Scientific & Technological Information and those organizations which are responsible for Library/Information services at the national level. Accordingly the following sectors and organizations should be represented:-
  - 1) Agriculture, forestry & fisheries, 2) Engineering
  - 3) Industry 4) Telecommunication 5) Archives 6) National Library
  - 7) Relevant Research Institutions, Universities & <sup>Other</sup> Organizations
- 1.4 That the membership of the Standing Committee be limited to 10-12 members.
- 1.5 That this Standing Committee be endowed with the necessary powers to create ad hoc Committees or task forces, whenever deemed necessary, in order to carry <sup>out</sup> specialized studies on varied sectors or aspects of S & T Information.

1.6 That NARESA as the parent organization responsible for the activities of the Committee provide the necessary Staff & infrastructure facilities, for the operation of the Committee.

1.7 That NARESA provide it with the necessary budgetary allocations for the effective realisation and monitoring of policies and programmes, payment of Consultants etc. for financing studies in the field etc.

## 2. Tasks of the Policy making (body) Committee

The Working Group recommends

2.1 That the Committee draw up a Corporate plan outlining its short term and long term objectives, activities, plan of action, financial and manpower requirements, constraints - if any.

2.2 That the Committee coordinate the activities of varied Specialised Information Centres, and evaluate and strengthen their services where and whenever necessary.

2.3 That the Committee sponsor research on information gathering and usage patterns of Scientists, research workers, entrepreneurs etc.

2.4 That the Committee establish <sup>as</sup> priorities and prepare <sup>as</sup> programmes for the promotion, ~~and~~ development <sup>&</sup> dissemination of STI in Sri Lanka.

## 3. Preparation of Programmes

The Working Group recommends

3.1 That the formulation of programmes be delegated to each specialised organization, who should take into consideration the user groups, their needs, new services, improvements, etc. in drawing up their programmes etc.

3.2 ~~It recommends~~ That activities be decentralized.

3.3 That the Policy Committee coordinate these programmes

3.4 That the Committee formulate & carry <sup>as</sup> out programmes deemed necessary for effective accessing, organization & dissemination of S & T Information to all sectors & categories of users.

4. Information on Information

The Working Group recommends

- 4.1 That SLSTIC in NARESA continues its activities on providing information on information and strengthens the services provided.
- 4.2 That the Committee draw up a code of <sup>practice</sup> places in relation to sharing of resources, use of material (eg. photocopying, inter-library loans etc.)
- 4.3 That the Committee undertakes the study of <sup>a</sup> standardisation of terminology and bibliographic formats used by Centres
- 4.4 That the Committee pays special attention to the accessing of grey (unpublished) literature, patents & theses and promote SLSTIC to maintain a Computerized index of theses.

It suggests

- 4.5 That the Committee <sup>promotes</sup> provides SLSTIC to develop its computerized <sup>services</sup> information sources in each sector in order to facilitate retrieval and accessing by use of varied descriptors or under varied permutations.
- 4.6 That the Committee encourages the SLSTIC to act as a Referral library <sup>Centre</sup> providing information on information.

It recommends

- 4.7 That the Policy Committee promotes User training programmes, and such others to establish linkages between users/producers & gate keepers of information in order to promote the optimum utilization of information.
- 4.8 That mass media & exhibitions be utilised for diffusion of S & T Information.

5. International & Regional Cooperation

The Working Group recommends

- 5.1 That the Committee establish the mechanisms to study the areas of excellence and specialisation in Sri Lanka in which data bases should be established eg. Tea, Coconut etc. in order to create Intra-regional networks and minimize <sup>our</sup> dependence on data bases of developed countries

- 5.2 That a programme be undertaken to promote existing linkages and networking systems with facilities for specific discipline oriented organizational participating.
- 5.3 That the possibilities of obtaining the assistance from International Organizations for promotion of networks be researched.
- 5.4 That the Committee study the possibilities of creating mechanisms for trans-regional data flows & data flows to & from developed economics.
- 5.5 That the Committee study the possibility of creating a Central Computerized data storage facility at the national library which receives data from other data bases - national & international. This Centre will function as nodal centre providing access facilities to users.

A NATIONAL SEMINAR ON  
SCIENTIFIC & TECHNICAL INFORMATION POLICY  
20 - 22 October 1986

Natural Resources, Energy & Science Authority of Sri Lanka  
47/5, Maitland Place,  
Colombo 7,  
SRI LANKA.

NATIONAL SEMINAR ON  
SCIENTIFIC & TECHNICAL INFORMATION POLICY  
(NARESA Auditorium)

P R O G R A M M E

20th October '86

9.30 - 10.30	Opening
10.30 - 10.45	Tea
10.45 - 11.45	General Discussion on National Information Policy
11.45 - 12.30	Instructions to working groups
12.30 - 1.30	Lunch
1.30 - 3.00	Working Group Discussions
3.00 - 3.15	Tea
3.15 - 4.15	Working Group Discussions

21st October '86

9.00 - 10.30	Working Group Discussions
10.30 - 10.45	Tea
10.45 - 12.30	Working Group Discussions
12.30 - 1.30	Lunch
1.30 - 3.00	Plenary Discussions
3.00 - 3.15	Tea
3.15 - 4.00	Recommendations
4.00 - 4.15	Closure

## PROCEEDINGS

The National Seminar on Scientific and Technological Information Policy was organized by the Natural Resources, Energy and Science Authority of Sri Lanka (NARESA) in collaboration with UNESCO, on the 20 - 21 October 1986 in Colombo, Sri Lanka. The Seminar was held at the NARESA Auditorium.

The main objectives of the Seminar were to sensitize national authorities on the need for and the elements to be included in a national information policy and to examine appropriate/relevant issues on national information policy and the problems thereof with particular reference to the country's social, economic, cultural and policy content.

About 30 persons representing government authorities, library and information systems and user groups participated in the seminar.

The meeting was opened by Dr. R.P. Jayewardene, Director General, NARESA. The Inaugural address was delivered by Mr. S. Athukorale, Chairman, National Library Services Board. Mr. Athukorale stressed the vital role played NARESA in S & T information activities in Sri Lanka. He said that the ultimate role of an information policy is an informed society. Mr. Sumanasekera Banda, Deputy Secretary-General, Sri Lanka National Commission for UNESCO, described the areas of UNESCO's activities in promoting the flow of S & T information at national, regional and international levels.

Next Mr. V. Montviloff, Programme Specialist, PGI/UNESCO outlined the objectives and expected outcome of the Seminar. He explained that UNESCO is emphasizing the vital necessity for setting up a information policy-making mechanism within each member country. The presence or absence of a national information policy could make a critical difference in networking with other countries e.g. in the ASTINFO network. He extended his heartfelt wishes, on behalf of the Director-General of UNESCO for the success of the deliberations of the Seminar.

The meeting then discussed the scope of information and information policy, as well as the seminar objectives. It was agreed that the programme for the technical sessions should;

- (1) Identify gaps & inadequacies in existing policies.
- (2) Identify gaps & inadequacies in plans for implementing such policies.
- (3) Necessary linkages for promoting the flow of S & T information.
- (4) Decide on an appropriate format for national information policy.

Dr. R.P. Jayewardene, Director-General, NARESA was Chairman of the plenary sessions. The Rapporteur of the Seminar was Mrs. N.R. Amarasuriya, NARESA.

The meeting then decided to break up into the following 4 working groups.

(1) Group A

Generation and collection of Information

Mr. M.S.U. Amarasiri (Chairman)  
Mrs. N.R. Amarasuriya  
Dr. Ravindra Fernando  
Mr. T. Kandasamy  
Mrs. M. Wijesinghe  
Dr. K.D.G. Wimalaratne

(2) Group B

Organization, Provision and Distribution of Information

Dr. S. Goonetilleke (Chairman)  
Mr. Y.R. Karunaratne  
Dr. R. Samarajiwa  
Mr. Dayananda de Silva  
Mr. K. Sugatadasa  
Mr. R.V.L. Wijewardana

(3) Group C

Manpower Development and User Education

Mr. G.P.S.H. de Silva (Chairman)  
Mrs. I. Corea  
Mrs. S.R. Korale  
Mr. J. Lankage  
Mr. W. Ranasinghe  
Mr. P. Vidanapathirana

(4) Group D

National and International Cooperation

Mrs. G.I. Unamboowe (Chairman)

Mr. N. Amarasinghe

Mrs. C.I. Kumaranayake

Dr. S. Liyanage

Ms. C.L.M. Nethsinghe

Mr. M.J.C. Perera

Dr. C.G. Uragoda

## CONCLUSIONS AND RECOMMENDATIONS

Sri Lanka recognizes Scientific and Technical Information as an important resource which is essential for social, economic and cultural development. Scientific and Technical resources should be acquired, developed, organized and utilized efficiently in order to achieve the goals of national Development plans.

### A - Generation and Collection of Information

Recognizing the inadequacies of the coverage of information collected and of the reporting of information on research in national development areas, the poor quality of S & T publications and large delays involved in publishing them locally, and the difficulties of reaching the users of STI, it is considered that incentives should be provided for an intensified generation and publication of indigenous STI, stronger information exchange & resource sharing programmes and better coordinated national acquisition policies.

It is therefore recommended that:

- (1) The existing public library network should be strengthened
  - (a) to popularize scientific & technical information and
  - (b) to provide information on available STI resources in the country;
- (2) All unpublished primary documents on science & technology generated in public offices (consultant reports, research studies, progress reports, etc.) be identified immediately & collected at a centralized location;
- (3) Scientists and technologists should be provided with more facilities and incentives to publish their works, especially in local publications;
- (4) The status of scientific editors in the generation of information should be recognized as a profession and international standards & norms be enforced in producing local scientific & technical journals;

- (5) Publishers be given more incentives through the reduction of import taxes on printing papers and printing machinery to improve the quality and number of local S & T publications;
- (6) Cooperative acquisition programmes be introduced through a national policy for foreign S & T literature (books & periodicals) to ensure that various libraries & special documentation centres acquire information most relevant to the needs of their specific users, in a rational manner;
- (7) Deposit regulations be better coordinated and that UN literature deposit libraries share their bibliographical information;
- (8) The present legal deposit law be enforced and revised to include non-print material (Audio-Visual materials, tapes, etc.);
- (9) Surveys and studies be carried out by the libraries, relevant professional organizations and Higher Education Institutions to identify user requirements, prior to introducing STI acquisitions.

#### B - Organization, Provision and Distribution of STI

Recognizing that provision and dissemination of STI in Sri Lanka is unsatisfactory because the concept of the need for information dissemination is not broadly recognized and information technology is not well developed, although they constitute an important component of and contribution to the national economy and should be supported & promoted.

It is therefore recommended that:

- (1) The possibility of providing information extension services by key organizations in the sectors be explored and where necessary to introduced and/or strengthened. The interface between users and information services should be expanded by, for example, promoting greater interaction between users, specially through their professional associations.

- (2) Efforts should be made to study current advances in information technology and a cost/benefit analysis be made of this technology and where necessary, such technology should be introduced.
- (3) Special mention should be made of computer usage for processing of information and for accessing data bases. Attempts should be made to standardise, where necessary, compatability of such systems to facilitate easy exchange of information between organisations either through discs or telephone.
- (4) A study should be made of the need for establishing national data bases or of the feasibility of accessing external data bases (to be adopted if feasible) taking into account the following:
  - priority areas that require virtual "real time" access to data.
  - comparative costs/other channels such as micro forms.
  - comparative costs of leasing a line, packet switching, access offpeak of existing international based lines, telexing the data base and exchange of data tapes and discs.
  - existing facilities under international cooperation agreements
  - increasing Sri Lanka's competitiveness and bargaining taking into consideration similar facilities in other countries in the region.
- (5) A study should be made of the greater use of patent information and creating an awareness of the value of patent information.
- (6) Sri Lanka having committed itself to a trending nation position and to the latest S & T, a reasonable annual increase in budgetary provision be made for the information areas, (at least to keep up with the recorded global increase of information which doubles itself every 7 (seven) years.
- (7) Efforts should be made to extend and strengthen National bibliographical control and services.

- (8) The need for a National Union Catalogue covering all subjects is recognized. The National Library should take initiatives to compile a national Union Catalogue by amalgamating the existing subject oriented Union Catalogues.
- (9) Inter-library loans have become a very practical method of satisfying user needs when documents are not available in a library. An inter-lending code of practice should be formulated to be followed by all information and library systems in the country.

#### C - Manpower Development and Users' Education

Recognizing that despite the recognized importance of having professionally trained and qualified information personnel for the efficient and effective management of the information resources, man power development has been inadequate and interaction between users and information scientists has also been insufficient.

It is therefore recommended that:

- (1) a survey of information personnel be carried out to assess the current and projected requirements of manpower, taking into account the changing patterns of growth in information technology.
- (2) Further, taking into consideration the identified manpower requirements, recommendations be made for an overall scheme of continued education and training, and curriculum development for the different levels, ultimately leading to the establishment of an Institute of Library, and Information Studies affiliated to a University.
- (3) that guidelines be provided by library services for the placement of library and information personnel on salary structures commensurate with their qualifications and comparable with employment conditions of other professionals.
- (4) that programmes be initiated for user education at various levels with emphasis on SDI, local information systems, data bases, data banks and repackaging of information, and

- (5) that interaction between users and producers of information be promoted.

D - National Coordination of and International Cooperation in STI Activities

Recognizing that Sri Lanka's development programmes have significantly increased the demand for relevant, reliable and timely STI for application in the different sectors of the national economy that it has become necessary to formulate an overall information policy and to establish a coordinating mechanism at the national level to avoid duplication of effort, waste of resources, and better services to the users and that it is equally important that Sri Lanka actively participates in regional & international information programmes that facilitate information exchange.

It is therefore recommended that:

- (1) A policy making body be established as follows:

- 1.1 NARESA as the organization responsible for the formulation & implementation of the Science & Technology policy of the country be vested with the responsibility of formulating & implementing a Scientific & Technological Information policy of Sri Lanka in concurrence with the Act No. 78 of 1981 of Natural Resources, Energy and Science Authority of Sri Lanka.
- 1.2 NARESA seeks ways of assigning this task to the PGI/UNISIST National Committee or any other appropriate Committee with a limited membership comprising representatives of organizations with major interests in Scientific & Technological Information (Agriculture, Industry, Telecommunications...) and those responsible for Library and Archives at the national level (national library; national archives; university libraries...)
- 1.3 The Committee be endowed with the necessary powers to create ad hoc Committees or task forces, whenever deemed necessary, in order to carry out specialized studies on varied sectors or aspects of S & T Information.

- 1.4 NARESA as the parent organization provides the necessary staff and infrastructure facilities, for the operation of the Committee and the necessary budgetary allocations (for the effective realisation and monitoring of policies and programmes, payment of Consultants, financing studies in the field, etc.)

Specific tasks be assigned to this policy making Committee such as

- coordinating the activities of varied specialised information centres, evaluating & strengthening their services where and whenever necessary;
- sponsoring research on informing gathering and usage patterns of scientists, research workers, entrepreneurs etc.;
- establishing priorities and preparing programmes for the promotion, development & dissemination of STI in Sri Lanka.

A plan of action outlining the Committee's short and long term objectives, activities, financial & manpower requirements and constraints should be drawn up

3. Programme formulation be delegated to each specialised organisation, who should take into consideration the user groups, their needs, new services, improvements, decentralization etc.
4. Development of mechanisms be continued and strengthened to possible information on information; it is further recommended
  - 4.1 SLSTIC in NARESA continues its activities on providing information on information and strengthens the services provided and improves their publicity.
  - 4.2 the policy making Committee
    - draw up a code of practice in relation to sharing of resources, use of material (eg. photocopying, inter-library loans etc.)

- undertakes a study of standardisation of terminology and bibliographic formats used by Centres
- pays special attention to the accessing of grey (unpublished) literature, patents & theses and promotes SLSTIC to maintain a Computerized index of theses.
- promotes SLSTIC to develop its computerized information services in each sector in order to facilitate retrieval and accessing by use of varied descriptors or under varied permutations.
- encourages SLSTIC to act as a Referral Centre providing information on information.
- promotes User training programmes, and such others to establish linkages between users/producers & gate keepers of information in order to promote the optimum utilization of information.
- considers compiling a directory of information resources in Sri Lanka.

4.3 mass media & exhibitions be utilised for diffusion of S & T information.

5. Regional & international cooperation be promoted by requesting the policy Committee to

- explore the possibilities of obtaining assistance from multilateral and bilateral organizations for the promotion of networks, and existing linkages and networking systems for specific discipline oriented organizations;
- study the possibilities of creating mechanisms for trans-regional data flows & data flows to & from developed economies.
- study the possibility of creating a Central Computerized data storage facility at the National Library which receives data from other data bases - national & international. This Centre will function as nodal Centre providing access facilities to users.
- establish the mechanisms to study the areas of excellence and specialization in Sri Lanka in which data bases should be established eg. Tea, Coconut, etc., in order to create Intra-regional networks and minimize our dependence on data bases of developed countries.

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