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REGIONAL SEMINAR ON SCIENTIFIC  
AND TECHNICAL INFORMATION POLICY

22-25 October 1986, Colombo, Sri Lanka

Final Report

NA-197

organized by  
Natural Resources, Energy and Science Authority  
of Sri Lanka (NARESA)  
in co-operation with  
General Information Programme and UNISIST  
United Nations Educational, Scientific  
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The Regional Seminar on Scientific and Technical Information Policy was held from 22-25 October 1986 in Colombo, Sri Lanka.

The meeting was opened by Dr. R.P. Jayewardene, Director-General, Natural Resources, Energy and Science Authority (NARESA). The keynote address was delivered by Prof. Willie Mendis, Vice Chancellor, University of Moratuwa and followed by opening remarks by Mr. V. Montviloff, the Unesco representative and by Mr. S.J. Sumanasekera Banda, the Deputy Secretary General of the Sri Lanka National Commission for Unesco.

#### Election of Officers

Dr. Jayewardene, Director-General, NARESA, was elected as Chairman of the meeting and Ms. Matsumara (Japan) as Vice Chairman. The Rapporteur of the meeting was Ms. A. Edwards (Australia) with Ms. A. Hissink (New Zealand) as Deputy Rapporteur.

#### Presentation of the outcome of the national Seminars on national information policy

The Unesco representative made some general observations on the national seminars, saying in particular that Unesco has been encouraging during the past three years its Member States to formulate national information policies in order to establish a co-ordinated national information programme which would serve as an overall framework for the implementation of various information activities. To this end, Unesco was providing the countries with some guidelines on the development of information policies which emphasized first the formulation of a basic information policy statement and secondly the establishment of a policy-making procedure and measures for implementation. Unesco/PGI has conducted so far seminars in China, Malaysia, Nepal, Philippines, Sri Lanka and Thailand in 1986 and was planning six more such seminars in the Asian Region in 1987. In addition Unesco in 1985 commissioned

Ms. Luwarish (Indonesia) to make a comparative study of the national information policies (NIP) in Asian countries.

This work showed that most countries had

- no NIP guidelines ;
- no legislation basis for NIP ;
- no organization to advise and co-ordinate activities ;
- no long term and short term plans for information activities ;
- no national policy on training of information workers and few experts to do so.

In resource sharing, most countries had national bibliographies, many had national union catalogues but the lists of research in progress were not so well developed and few specialized information centres existed. In resource management most countries had national interlending activities and legal deposit laws, but no training in networking or data base development. Sources of finance for information activities were provided in most cases by the governments, and no periodical assessments of those activities were carried out.

During the discussion that followed the scope of information was defined as specialized information particularly scientific and technical information and data. It was also recognized that the widening gaps existing between developing and developed countries and between urban (metropolitan) and rural areas, were inevitable and difficult to bridge.

The reports on national information seminars were then presented to the meeting and some were distributed to the participants.

#### Thailand :

The National Seminar on National Information Policy was organized by the National Research Council of Thailand (NRCT) under the auspices of Unesco on 8-9 September 1986 in Bangkok, Thailand.

The National UNISIST Committee drafted a national information system project and submitted it to the previous government for their approval (1985). The objective of the project is to establish a concrete national information policy including a mechanism to implement it in time to catch up with the advancement in the information. Since the change of government, the project has been kept in abeyance by the National Security Council which will submit the revised draft to the present Cabinet for consideration.

The NIP Seminar brought together 29 representatives from government decision-makers, national libraries, documentation centres and archives, and the end-users.

The NIP resolutions were adopted point by point and the recommendations were made to the Thailand UNISIST Committee for improvement of the NIP draft, and to the government.

#### **Philippines :**

Held in September 1986, the Seminar included librarians, archivists, information scientists, lawyers and telecommunication experts.

The government recognizes information as a national resource in national development efforts. It will require full support and effective implementation of programmes and activities along S&T information. It will promote efficient methods of resource management involving the various sectors and agencies in local and foreign resource sharing that are cost-effective in an evolving and changing Philippine society. The Philippines should actively participate and contribute in selective areas of reciprocal and mutual co-operation agreements to derive optimal benefits from regional and international information programmes, systems and services that facilitate information exchange and resource sharing.

**Malaysia :**

Following the Seminar on NIP held in October 1984 which included librarians, information scientists and literacy experts, a Task Force was established to implement the recommendation on NIP, which will propose to the Minister of Culture for approval in November/December 1986 a ten point policy. Included are : scope and objectives of the policy, nationwide library provision, access to information, sharing of resources, conservation, manpower requirements, education and training and mechanisms for implementation.

The National Library of Malaysia is the Secretariat for the NIP.

Revisions to the National Library Act 1972 will make adequate provision for the present.

**China :**

Held in April 1986, the NIP meeting identified the importance of information as a national resource for socio-economic development and the essential leadership role of the government. It was considered that existing networks will be more effective and efficient when co-ordinated under NIP. Four discussion groups prepared a series of recommendations. The final plenary session produced eight recommendations which included assessment of information needs, funding, manpower development, international co-operation and a national STI system.

The results of the seminar emphasized the close involvement of NIP and STI with overall national development. The methodology of the Seminar was a useful framework for further similar efforts in China. The final recommendations have been put to the 7th National STI Conference in October which will result in a programme.

**Australia :**

The Department of Science published and distributed nationally a discussion paper on NIP in November 1985 and in December 1985 a seminar was held to bring together representatives of the many segments of the community involved in NIP. STI was identified as one of a number of activities which needed further attention and a workshop and study have been held on STI. A Cabinet Submission is to be presented in November/December 1986 incorporating proposals for Government supported Guidelines on NIP and the creation of an advisory body to Government on NIP issues.

**India :**

This country is considering the question of whether it should have a policy. It has already a series of policies on related topics - Science, Technology, Computers, Education, etc. The developing library and information policy may be able to be used for NIP. Implementation mechanisms will be difficult and it may be better to merely identify desirable goals. On the plus side, the government is committed to widespread applications of computer technology. The Seventh 5-Year Plan currently under implementation includes Science and Technology Plan. This S&T plan gives considerable emphasis to development of S&T information systems development.

**Indonesia :**

A different approach has been followed by Indonesia. In 1985 the Indonesian National Research Council and the USA National Academy of Sciences signed a bilateral agreement to stimulate and support the development of the S&T community in Indonesia through access to information and expertise and co-operation. A Workshop on the development of a network of STI services for Indonesia was held in June 1986, the results of which have been submitted to the Minister of State for Research and Technology. The recommenda-

tions include the development of national data bases in science and technology and a differential scale of user fees. Major difficulties with implementation include adequate funding, legal support related to national information programmes and lack of R&D funds in universities.

**Korea :**

The National Infrastructural Computer Network legislation has been formulated to establish the National Computer Board and Information and Telecommunication Promotion Association in 1985. These new bodies will be in charge of constructing the five main national networks of administration, education and research, financial and banking, national and defence and national securities.

A 15-year long-term plan for the Information Network Service is being formulated under the control of the Ministry of Science and Technology.

**New Zealand :**

The National Library of New Zealand has drafted a preliminary NIP. At the next New Zealand Library Associations Conference in February 1987, a plenary session will be held to discuss this issue.

New Zealand is going through a period of rapid change with greater emphasis on a free market economy, and many government departments becoming corporations and being expected to provide services on a cost recovery, user pay system. There is therefore a blurring of the once traditional distinction between public and private sectors.

A review of the role of government in Science and Technology, and the place of S&T in the country's economic and social development is being undertaken. The National Library, The NZ Library

Association and Chief Librarian of DSIR made submissions on the need to have an information policy relating to S&T policy.

Given that the country is undertaking structural economic change away from a predominantly agricultural economy to a manufacturing and service economy, many department, such as DSIR and the Ministry of Agriculture and Fisheries are accelerating and introducing even more programmes on the transfer of technology.

It is anticipated that the S&T report will be available in November.

#### Japan :

The vertical structure of Japanese society prevents adequate co-ordination of library and information activities. The national library and information network operates only in the academic community under the auspices of the Ministry of Education, Science and Culture. Japan is encouraging the production of local databases. In 1986 the National Centre for the Science Information System (SIS) was founded and programmes started. Privatization of the telecommunication system has produced a more competitively-priced system. The Committee for Educational Reform commissioned by the Prime Minister reviewed the entire education system with particular emphasis on training for information specialists and some new courses are expected to be developed to train more people in specific areas such as software.

#### Sri Lanka :

On 20-21 October 1986 a two-day National Seminar on Scientific & Technical Policy was held at NARESA. Participants included librarians, STI users, decision-makers and computer experts. Working Groups discussed topics such as acquisition and information, manpower

development and library co-operation. Four working groups made a series of recommendations on information activities which included identification of NARESA as the central body for national co-ordination for NIP.

#### Review of information policy and transborder data flow

Mr. Karl P. Sauvart from the United Nations Centre of Transnational Corporations presented his paper on the development and economic aspects of the transborder data flows in the international services.

During the discussion it was queried whether NIP decisions were made in Cabinet or in transnational corporation (TNC) boardrooms as the economy of the latter often determined the former. The needs of the people often conflict with those of the TNCs. The reply was that the TNC often did determine NIP in the absence of a NIP. It was suggested that ASTINFO should play an active role in this standardization process, since at present the interests of the region are not sufficiently represented in this process. It is essential for countries to resolve conflicts over TBDF by means of compromise. The economic dependence which may result from one-way flow of data services was seen as more important than any cultural influencez.

It was also said that because there were no standards for the exchange of text and data for the character codes of many major languages of the region English was used.

The difficulties in India were described : that is it is not possible to borrow money to create a data base or an information service. A limited marketplace for information has developed as users have to be trained to recognize their needs and how to meet them. The resulting one-way flow of data must be equalized, for without a solution, such developing countries will be pawns in a new type of power game. It was suggested that the development

of unique data bases, local to particular countries, would provide developing countries with a product to be used for exchange. For instance, the Sri Lanka Coconut Research Institute is developing a unique information source of interest to other countries and this can be developed without a complex infrastructure. It will be necessary to be selective in identifying opportunities and market objectives for exploitation.

The work China is now carrying out in developing appropriate technology data bases was also mentioned as an example of such unique data bases.

In exchanging data between developing countries in the region, the view was expressed that this region is more difficult as it has such a non-homogeneous mix of developing and developed countries as well as nations which are a mix of both. It was suggested that the criteria for developing data bases may be quite different in developing and developed countries, for example the basis for charging for the use of systems may vary in different countries.

The development of mixed data bases with overseas and domestic content which could be saleable abroad was recommended.

It was also suggested that the whole issue should be politicized as that will bring it to the attention of decision-makers and finance providers.

Mr. Sauvant supported this proposal and mentioned the inclusion of services in GATT discussions this year for the first time and the importance of that for NIP.

Mr. Sauvant said that because TBDF was a new area there was a scarcity of documentation and this is one task which Unesco could undertake. National case studies under the guidance of UNCTC also provided the opportunity for assessing the documentary resources within a country.

Dr. Istvan Sebestyen presented his paper on the technical, legal and political aspects of transborder data flows.

In the discussion concern was expressed that waiting for development of international standards took too long - countries have to start operation now. Dr. Sebestyen agreed with this statement and pointed out that in many fields of interest international standards exist already (at least in a fairly advanced form) and suggested that when necessary draft standards could be used in the interim.

Dr. Jayewardene, in closing the session, stressed the recognition of the need for greater usage of newly created local data bases. Governments cannot be asked to provide funds for creation of expensive systems which are then grossly under-utilized. Resolution of the problems of TBDF will allow easy use of such data bases internationally.

At the end of these deliberations the participants of the meeting prepared the following conclusions and recommendations :

#### CONCLUSIONS AND RECOMMENDATIONS

Recognizing that information is increasingly seen as a key ingredient of economic development, a crucial economic resource and a factor of production ;

Noting that the new information technologies open new opportunities and challenges at the national, regional and international levels;

Aware, in particular, of the fact that data resources, data goods (computer and telecommunication equipment, peripherals), data services (data processing, data bases, software, telecommunication services), the skills to utilize them and the research and development required to improve them are becoming a major focus around which economic activities are being re-structured ;

Considering that transborder data flow (or trade in data services) is acquiring central importance in international economic transactions, especially in trade in goods, trade in services and the activities of transnational corporations ;

Observing that there are still some technical, legal and political obstacles hindering the successful implementation of data services and TDF systems in the ASTINFO region ;

Realizing that some of these issues will be considered in the new round of multilateral negotiations in the framework of GATT ;

Recommend to government of the region to :

1. Promote awareness about the importance of information in general and data resources in particular for economic development ;
2. Provide resources, especially financial, commensurate with the central role of information and data resources in the development process ;
3. Take stock of their own information and data resources and needs for such resources, as a first step to formulation of national policies in this area ; in this context, government may wish to avail themselves of the experience gained by such organizations as Unesco and UNCTC in the field of information communication development and the conduct of country case studies on available information resources and services and on transborder data flows ;
4. Formulate and implement national data-resources policies and action programmes which take into account the broader context of socio-economic and industrial policies in which the importance of information is underscored, paying special attention to :
  - a. embrace and integrate sectoral policies on such areas as libraries, media, telecommunications, information, data services, science and technology, education and training ;

- b. strengthen national resources, especially in the fields of data collection, processing, storage, transmission and utilization ;
  - c. enhance particularly the availability of data services and resource sharing networks ;
  - d. provide adequate training to develop skilled human resources ;
  - e. educate users about the range and usefulness of available data resources, including through the provision of information on information resources ;
  - f. organize and utilize fully existing and potential local data, especially through the creation of data bases in areas in which the country has expertise or experience ;
  - g. develop information data resources for export ;
  - h. establish data communication links, to foreign information data resources (which include data bases) ;
  - i. use, as an alternative to accessing overseas data resources by means of data communications, acquisition of data resources in other forms (e.g. CD-ROM, tape services, etc.) ;
  - j. encourage LANS, and the use of personal computers to support access to distributed data base systems (local or foreign) ;
  - k. monitor and take into account existing international standards in ASTINFO activities and to endorse national inputs to the elaboration of internationally recognized standards, especially in the field of text and document exchange formats and promote their adoption and implementation ;
5. Pay special attention to regional co-operation possibilities and particularly, to the strengthening of ASTINFO as a regional endeavour to share information resources ;
  6. Encourage the growth of domestic data resources and work towards an international framework for trade in data services.

## Annex I

## TIMETABLE

22 October 1986	AM -	Opening session
	-	Presentation of the outcome of the national seminars on national information policies (PGI)
	PM -	Review of regional and international aspects of national information policies (PGI)
		Discussion
23 October 1986	AM -	Review of information policy and transborder data flow : developmental and economic aspects (presentation by consultant)
		Discussion
	PM -	Information policy and transborder data flow : technical, legal and political aspects (presentation by consultant)
24 October 1986	AM -	Visit to International Coconut Information Centre
	PM -	"
25 October 1986	AM -	Preparation of report and recommendations
	PM -	Adoption of report and recommendations
	-	Closure

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