

# Chapter 27

## International co-operation and assistance

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### **Need for international co-operation and assistance**

#### *International scenario*

As nations prepare themselves to cope with the challenges of the twenty-first century, the main socio-political, economic and technological events at the international and regional levels that may influence national development perceptions, policies and plans, and the direction, strategies and policies relating to international co-operation and assistance, include:

1. The attainment of political independence by a number of countries. Most of them are classed as developing or Third World countries (TWCs), and several are in the least developed category. These TWCs have been attempting industrialization and socio-economic development through planned basic infrastructure and resource development, policy and institutional changes, and administrative reforms. Human resource development, research and development (R&D), technology acquisition and adaptation, and indigenous technology development for transforming natural resources to consumable products are among their principal concerns.
2. Large investment in R&D by industrialized countries, their adoption of strategies and institutional structures for applying research results to develop know-how, innovations, and products and services, and their vigorous efforts at marketing these through international co-operation arrangements, multinational firms and joint ventures in other countries, including TWCs. Related factors are the rapid progress of the information industry, which is pushing the move toward an information society and economy that are dependent on the capacity to generate and trade in information, know-how and knowledge (see Chapters 20 and 21).

3. The emergence of newly industrialized economies (NIEs) in Asia and Latin America offering vast market potential for goods and services, and sourcing of information technology components, skills and expertise, at competitive prices.
4. The break-up of the Soviet Union into independent states, the formation of the Commonwealth of Independent States (CIS) and the end of the cold war had an impact on the national structures, politics, economies, interrelations and co-operation among the CIS countries and on the relations of other nations with Central and Eastern Europe (see Chapter 5).
5. The establishment of several international organizations, such as the Specialized Agencies of the United Nations, and non-governmental organizations (NGOs) concerned with socio-economic development, science and technology, education, communications, the environment, woman and child welfare, population growth, housing, climate, health, peace, information, etc.
6. The formation of regional alliances between nations for co-operation and mutual benefit in the political, security, trade, economic, scientific, technological and culture domains: for example, the Non-Aligned Movement, European Union, Organization of African Unity (OAU), Organisation for Economic Co-operation and Development (OECD), Southern African Development Co-operation Conference (SADC), League of Arab States (LAS), Organization of Islamic Conference (OIC), Gulf Co-operation Council (GCC), Organization of American States (OAS), North American Free Trade Agreement (NAFTA), Caribbean Council of Ministers (CARICOM), Association of South-East Asian Nations (ASEAN), South Asian Association for Regional Co-operation (SAARC), Southern Africa Free Trade Agreement (SAFTA), Asia-Pacific Economic Co-operation (APEC) forum.
7. The rapid pace of developments in information technology, and more particularly the convergence and integrated application of computer, communications, electro-optics (CD-ROM family), audio and video technologies (see Chapters 15–18).

#### *Globalization and interdependence of nations*

Nations are becoming increasingly interdependent, be it for raw materials, expertise and skill, finance, technology, trade, or markets for goods and services (see Chapter 22). Because of this, a national activity or programme often acquires regional or international dimensions, a process which is also facilitated by the rapid development of communications.

#### *Imbalances in development capacity*

Development focused on socio-economic goals has to use the products, processes, practices and knowledge based on science and technology, and guided by political, legal and administrative reforms, policies and norms. Therefore, all nations need the capacity to generate, collect, organize and use national information and to access at affordable cost appropriate scientific and technological knowledge and expertise. The TWCs are more severely handicapped in this regard and hence in providing for the basic needs of their people. They must of necessity obtain know-how and expertise from developed countries. It has been reported that in 1965 TWCs paid about US\$400 million to acquire technology from developed countries; in 1975 the amount was US\$1.2 billion, in 1985 some US\$6.1 billion, and by 1995 over US\$10 billion. Another reason for the high cost of acquiring know-how is that information systems and expertise in TWCs have been weak and have not been effectively capturing, processing, accessing and

exchanging information generated domestically, even though such know-how may be more relevant and adaptable and less expensive.

Developments in information technology are permitting access to a wider range of information resources globally. But libraries, information centres and archives in TWCs are still lagging behind. The affordability and mastery of information technology for providing more value-added products and services to a growing and demanding user population are critical problems.

#### ***Role of international/regional organizations***

The role of international and regional organizations and of international co-operation and assistance in bridging the gap is twofold: facilitating information flow in science, technology and related fields from developed countries to TWCs, so that the latter may obtain information at affordable cost; and enhancing national capacity and strengthening the infrastructure of TWCs, enabling them to negotiate, choose from and integrate external information with that generated internally for effective application and exchange.

Responding to the need and call for information support to national development plans, their implementation and management, international intergovernmental organizations (IGOs), such as the United Nations and its Specialized Agencies or the World Bank, as well as NGOs, have provided technical and financial assistance to TWCs for several decades. Some examples are given below.

#### ***The United Nations and its Specialized Agencies***

The United Nations, and more particularly some of its Specialized Agencies such as the Food and Agriculture Organization (FAO), UNESCO, the United Nations Development Programme (UNDP), the United Nations Industrial Development

Organization (UNIDO) and the World Health Organization (WHO), have been assisting, directly or indirectly, the development of libraries, information systems, archives and resource-sharing in TWCs for over four decades, as well as the development of international co-operative information systems. United Nations Regional Commissions have been similarly involved. Further, they have set up information systems to aid planning and management of their own programmers, projects, field missions, etc., mostly in TWCs. Thus, a wide range of useful information on TWCs and the relevant programmes is available in these systems. They respond to requests from member states and from personnel on technical assistance missions in the field.

#### ***International and regional co-operative information networks***

IGOs and NGOs have established and/or are supporting co-operative information systems, global or regional, in selected disciplines and, more broadly, in socio-economic development areas (for example, FAO, the United Nations Environment Programme (UNEP), UNESCO, the Consultative Group on International Agricultural Research (CGIAR), the International Development Research Centre (IDRC) and the World Bank). They may generally be categorized as follows:

Type 1: Decentralized input of data by designated national centres, centralized processing and generation of information products, and decentralized access to and/or production and use of information and information products (for example, International Nuclear Information System (CINIS), International Information System for Agricultural Sciences and Technology (AGRIS), International Development Information Network on Research in Progress (IDIN), Current Agricultural Research Information System – South-East Asia (IDIN-ASIA).

Type 2: Mainly centralized collection, processing and preparation of databases, and provision of information products and services. National and regional centres may obtain the products/services to provide national and subregional services (for example, International Center for Living Aquatic Resources Management (ICLARM)).

Type 3: Systems and centres operating independently but with common areas of interest, and exchange of information and data (for example, International Chemical Information Network (ChIN), Pan-African Geological Information system (PANGIS)).

Type 4: Programmes providing a framework for co-operation and co-ordination of information activities in and among participating countries and for supporting such activities and specialized subnetworks (for example, Regional Network for the Exchange of Information and Experience in Science and Technology in Asia and the Pacific (ASTINFO), Programme for Co-operation in Information for Latin American and the Caribbean (INFOLAC), Asia-Pacific Information Network in Social Sciences (APINESS), International Agricultural Research Centres Network (IARC-NET)).

Type 5: A combination of two or more of the above types.

An example of a United Nations Regional Commission effort is the Pan African Development Information System (PADIS) created in 1980. It is hosted by the Economic Commission for Africa (Addis Ababa, Ethiopia), with support from UNDP, IDRC, UNESCO and the African Development Bank, and is centred around national, subregional and regional information systems and networks, to which all members voluntarily contribute information and share their information management experiences. PADIS has assisted several African countries

in information infrastructure development, training of personnel, provision of hardware and software, application of common standards, etc.

### *Regional alliances*

A regional alliance requires information support for effective co-ordination and co-operation in various sectors of the participating countries. Areas of common interest in regional alliances and on which information is required by the co-operating entities include: market status for products and services; trade opportunities; customs, duties, taxes, etc.; technologies and innovations available; natural resources; expertise and skilled human resources available; banking and other financial services; status of infrastructural components such as energy, water, communications, transport and warehousing; demographics; public health, epidemiology and health legislation; inter-country travel rules and visas; existing bilateral and multilateral agreements and contracts; ongoing development projects and programmes; national development plans and priorities; national policies in various sectors; laws on resource-sharing, transborder data flow, patents, trade marks, intellectual property, etc.; and various kinds of political, social and cultural information.

These information requirements have promoted the development of general and sectorial information systems and networks in the co-operating countries and at the secretariat of the alliance. For example, in Asia in the fields of agriculture, trade, water, health, sanitation, fisheries, environment, technology transfer, gender issues, etc., such information systems are operational.

### **United Nations Specialized Agencies**

#### *UNESCO*

UNESCO has been assisting Member States to develop their library and information infrastructures since the early 1950s. Its activities have been carried

out under several programmes and administrative units.

#### *Funds*

Projects and activities are financed from UNESCO's regular budget, made up of the yearly contributions by Member States, and from extra-budgetary sources. The latter consist mainly of Funds in Trust placed with UNESCO by Member States or another organization (for example, the Arab Fund). World-wide campaigns for a specific purpose can mobilize funds (see box). The UNESCO Participation Programme is another source. UNDP-financed projects executed by UNESCO have dramatically decreased since 1992 as a result of the United Nations General Assembly Resolution 44/211 (1989), which sets a new framework for co-operation assistance among UNDP and the United Nations Specialized Agencies.

#### *Implementation*

National projects are usually requested and implemented after approval by the respective governments and in collaboration with appropriate local organizations.

Various co-operating mechanisms – including, up to 1995, subventions – have existed between UNESCO and a number of international associations concerned with libraries, archives and information systems and services, such as the International Federation for Information and Documentation (IFID), International Federation of Library Associations and Institutions (IFLA), International Council for Social Science Documentation (ICSSD), International Association of Technical University Libraries (IATUL), the Association des Universités Partiellement ou Entièrement de Langue Française (AUPELF), and with other IGOs – for example, the Arab League, International Council of Scientific Unions/Committee on Data

### The Bibliotheca Alexandrina project: a grand scheme

The ancient city of Alexandria, one of the glories of antiquity was, at the beginning of the third century B.C., the birthplace of the great plan to build a library: the Bibliotheca Alexandrina. It would be a vast storehouse of learning, in the lineage of the Lyceum of Aristotle, sublimating Alexander's dreams of empire into a quest for universal knowledge. Unhappily, it was destroyed by a fire which ravaged the port of Alexandria more than 2,000 years ago.

The Egyptian Government, in co-operation with UNESCO, has decided to build a new library in Alexandria to endow this part of the world with an important focal point for culture, education and science.

The cultural context is no longer what it was under the Ptolemies or the Caliphs. This project has three aims: to foster a spirit of openness, to explore the fields of knowledge and to make knowledge accessible. It is an ambitious challenge, since the project expresses powerful values which are different yet complementary: by openness is meant a broader cultural outlook and the acceptance of other cultural and scientific criteria than those of local tradition; at the same time, the desire for deeper exploration means the desire to dig down towards our roots, to rediscover in the past the reasons for the choices made today and the options for tomorrow; lastly, the

challenge of accessibility calls for total commitment by all partners and the mobilization of the most modern techniques.

Alexandria was predestined for this role: in ancient times a meeting-place of civilizations, it is today at the crossroads between the West and the Middle East.

The purpose of the scheme is to restore to Alexandria a crucial means of conducting research into Mediterranean cultures and science, and spreading knowledge of these by establishing an institution whose influence will extend throughout the region thanks to the quality of its services and the importance of its collections. The intention is not to construct a building resembling the great library as it might have been, nor is it to try to reconstitute the ancient collections. Rather, the aim is to transpose the ancient world to a modern setting by providing a special centre for knowledge and education which makes use of every modern technique known to us today.

For example, the future library will be fully computerized and its catalogue will gradually become available for consultation in the universities of the region. Alongside its special collections on Mediterranean civilizations, it will house large collections on science and technology, environmental problems and economic development.

The transfer of knowledge and of skills is the key to all sustainable development and well-being. UNESCO is tireless in its efforts to facilitate this transfer.

Thanks to the generosity of the United Nations Development Programme (UNDP), UNESCO, in co-operation with the International Union of Architects (IUA), organized an international competition in which 1,300 architects took part. The project to construct a building that will also house an international school of information sciences is thus taking shape.

Strikingly beautiful in its architecture and yet altogether functional, this building will be shaped like a long cylinder 160 metres wide with the top truncated at an angle. The angle of the roof will counter the harmful effects of sea spray and allow the upper storeys of the library to enjoy natural light (see Chapter 19 for an architectural brief of the building).

Throughout the world, this project has aroused the interest and enthusiasm of all those in favour of development. Anxious to win support at the highest level for this ambitious undertaking, Mr Federico Mayor, Director-General of UNESCO, at the invitation of the Egyptian Government, decided to establish an International Commission for the Revival of the Ancient Library of Alexandria.

(ICSU/CODATA) and the European Union – and NGOs – for example, IDRC and the World Federation of Engineering Organizations (WFEO). Several aspects of the Records and Archives Management Programme are implemented in collaboration with or through the International Council on Archives (ICA) (see box, pp. 368–9).

Regional programmes requested by several countries in a region, such as ASTINFO and INFO-LAC, have also been implemented. As Executing Agency, UNESCO has implemented UNDP-financed projects requiring large, sustained funding. The École des Sciences de l'Information, Rabat, Morocco, the Postgraduate Course for Training of Science Information Specialists in South-East Asia at the University of the Philippines in Manila, and the Arab Regional Information Systems Network (ARISNET) are examples. Roberts (1988) lists these projects.

UNESCO also assists by preparing and disseminating norms and standards, vocabulary tools and guidelines for information work and service. Some of these are prepared in consultation with the International Standards Organization (ISO). CDS/ISIS software for mainframes, and Micro ISIS for microcomputers, both developed by UNESCO, are distributed together with related manuals free of cost to non-profit institutions. Similarly, the statistical software package, IDAMS, is now being made available. Books and manuals prepared by or in consultation with experts and made available to library and information science schools by UNESCO are well appreciated.

International and regional seminars, short courses, and workshops supported by UNESCO and organized in collaboration with national, regional or international organizations have, among other things, enabled information professionals to exchange experience and information for co-operation.

Chapter 21 describes more precisely the new

orientations provided to UNESCO by its governing bodies – the General Conference and the Executive Board – as well as the activities being implemented or planned by the Secretariat in relation to the development of information and communications technologies and information highways.

#### *United Nations Industrial Development Organization (UNIDO)*

UNIDO has set up a technology-transfer information system (BITS) to respond to queries. It has also assisted TWCs to develop a national register of technology agreements, information centres and services for small industries, as well as playing a role in training industrial information personnel.

#### *United Nations Food and Agricultural Organization (FAO)*

FAO, besides developing AGRIS and the Current Agricultural Research Information System (CARIS), has assisted TWCs, for example in Africa and Latin America, to develop their agricultural information infrastructure and human resources, and provides AGRIS and CARIS databases on CD-ROM, etc.

#### *United Nations Environment Programme (UNEP)*

UNEP, through its INFOTERRA programme, has developed large databases on the environment through the co-operation of centres around the world. Databases in specialized areas such as desertification are provided free of charge to the centres concerned. Technical assistance and training are also provided. The related HABITAT programme on human settlements provides similar facilities and makes available the UNDMS (Urban Data Management) software.

The Pan American Sanitary Organization, WHO's Latin American and Caribbean office, has assisted the regional environment and sanitation net-

## Three non-governmental organizations: FID, ICA and IFLA

### The International Federation for Information and Documentation

The International Federation for Information and Documentation (FID), founded in 1895, is the leading international professional association of institutions and individuals who are developing, producing, researching and using information products, information systems and methods, and are directly or indirectly involved in the management of information.

FID promotes the idea that information is a critical resource needed by each and every one of us (at the international level, the regional level, the national and organizational levels). It empowers us because it enables us to:

- Improve competitiveness in business and industry, and within national economies.
- Advance the frontiers of science and technology.
- Strengthen possibilities for development and enhance the quality of life wherever possible.
- Improve the ability of decision-makers to make appropriate decisions.
- Stimulate educational strategies and lifelong learning.
- Make expression possible in all of the information society, for example, in the arts and humanities.

FID's membership structure is based on the philosophy of building bridges and creating networks between many different groups and professions in the information, knowledge and communication sectors. To date, FID has members in ninety-three different countries in all regions of the world.

All FID members are encouraged to participate in the activities of any of the fifteen different committees and Special Interest Groups (SIGs) that FID has established. Each committee and SIG focuses on a different aspect of expertise within the information sector ranging from information for industry to fundamental research in information, and education and training to environmental information. FID also has an extensive network of regional commissions.

The FID Website, called the FID Knowledge Forum, can be visited at <http://fid.conicyt.cl:8000>, and gives an extensive description of the organization.

### The International Council on Archives

The International Council on Archives (ICA) is a non-governmental organization dedicated to promoting the preservation, development, and use of the world's archival heritage. ICA's mission is 'the advancement of archives through international co-operation'. Founded just under fifty years ago, it brings together national archive administrations, professional associations of archivists, regional and local archives, other organizations and individual archivists. It has around 1,450 members in over 170 countries and territories worldwide. Outside Europe and North America, membership is grouped into ten regional branches. Members other than national archive administrations may also belong to sections, which bring together institutions and individuals with common professional interests. ICA's wide-ranging programme includes publications and conferences, a range of professional materials produced by its sections and committees, and initiatives to promote archival development, both in the developing world and in the emerging democracies of Central and Eastern Europe. The

organization works in close co-operation with UNESCO, the Council of Europe and other international organizations. There is a full-time secretariat, based in Paris, but the main effort comes from ICA's network of dedicated members and contacts throughout the world, who give their time and their professional expertise freely.

The ICA Website can be visited at:  
<http://www.archives.ca/ica/>

## **The International Federation of Library Associations and Institutions**

### **Objectives**

The International Federation of Library Associations and Institutions (IFLA) is a worldwide, independent organization founded in 1927 to provide librarians around the world with a forum for exchanging ideas and promoting international co-operation, research and development in all fields of library activity. IFLA's objectives are:

- To represent librarianship in matters of international interest.
- To promote the continuing education of library personnel.
- To develop, maintain and promote guidelines for library services.

### **Structure**

IFLA is a federation of 154 associations, 935 institutional members and affiliates, 180 personal affiliates, and 15 bodies with consultative status in 135 countries. IFLA has consultative status A with UNESCO, associate status with the International Council of Scientific Unions, and observer status with the World Intellectual Property Organization (WIPO) and the International Standards Organization (ISO).

The Council, that is, general members' meeting, is IFLA's highest organ.

The Executive Board consists of an elected President and seven elected members, with the Chairperson of the Professional Board serving as an ex officio member.

The Professional Board is composed of the Chairperson from each of the eight divisions, plus a Chairperson elected from the outgoing Professional Board by the incoming PB members.

IFLA works through two kinds of unit: the professional groups of thirty-two sections and twelve Round Tables grouped in eight divisions for type of library or library activity; and the four core programmes, whose activities intersect the interests and concerns of all libraries and their users, plus a fifth core programme for ALP.

The policy matters of IFLA are conducted by the Executive Board. The professional programme as overseen by the Professional Board includes that of all professional groups and core programmes which are: Advancement of Librarianship in the Third World (ALP), Universal Availability of Publications (UAP), Universal Bibliographic Control and International MARC (UBCIM), Preservation and Conservation (PAC), and Universal Dataflow and Telecommunications (UDT).

The work of IFLA headquarters in The Hague is complemented by Regional Offices located in São Paulo, Bangkok and Dakar and by Core Programme Offices located in Frankfurt (for UBCIM), Boston Spa (for UAP), Ottawa (for UDT) and Paris (for PAC), with Regional Offices for PAC in Washington, D.C., Leipzig, Caracas, Tokyo and Canberra.

The IFLA Website can be visited at:  
<http://www.nlc-bnc.ca/ifla/>

work (REPDISCA) (Red Panamericana de Información en Salud Ambiental). Also, fifty-seven medical libraries in the region are co-operating in cataloguing the national health papers from seventeen countries; the records are then collated at the BIREME centre in Brazil for the Literatura Latino-Americana e do Caribe em Ciências da Saúde (LILACS) CD-ROM database, distributed periodically.

Funded by UNDP, FAO and the World Bank, CGIAR has supported the networking of CGIAR specialized research centre information systems around the world, and training of national agricultural information personnel.

#### *Asia-Pacific Population Information Network (POPIN)*

Population growth and related issues are of concern to all countries, especially the TWCs. Population planning relates to the economy as well as social and cultural aspects, and hence a wide range of data and information is required at the national and international levels. The United Nations POPIN project, a global population information network, is designed to provide worldwide access to and dissemination of information upon which to base national, regional and international population policies. POPIN has introduced electronic technology and the POPIN gopher.

#### *Asia-Pacific Centre for Technology Transfer (APCTT)*

Initiated by the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP, Bangkok) in the 1970s, with inputs from UNIDO, UNDP, etc., APCTT has assisted in training personnel in the provision of value-added services to small and medium-sized enterprises in the region, in addition to providing information to queries from its own information facilities, UNIDO, etc.

### **Other intergovernmental agencies**

#### *The World Bank*

Usually the World Bank provides assistance for information system development as part of a larger project. For example, in Indonesia as part of the project for improving higher-education facilities begun in 1988, libraries in some forty-five universities and higher education centres received substantial financial support. More recently, the Bank has assisted the development of a postgraduate course in library science in Indonesia. The newly created InFodev programme, which brings together private and public funding, supports projects related to telecommunication reforms, information infrastructure and information systems.

#### *The European Commission (EC)*

The EC has assisted the development of selected libraries and information facilities in the least developed countries of Africa, the Pacific and the Caribbean region (ACP countries) within the framework of the Lomé Agreement. In particular through the Technical Centre for Agricultural and Rural Cooperation (CTA), it has supported the development of agricultural information services through meetings and training sessions. The EC's support for networking in Europe is mentioned below.

#### *Agence de la Francophonie (ACCT)*

Created in 1970 in Niamey (Niger) under the name Agence de Coopération Culturelle et Technique (ACCT), the Agence de la Francophonie (ACCT) assumes, since 1991, the secretariat of all the political authorities of the Francophonie, namely the Conférence des Chefs d'État et de Gouvernement Ayant le Français en Partage (also known as the Francophone Summit), the Conférence Ministérielle de la Francophonie (CMF), the Conseil Permanent de la Francophonie (CPF), the Conférences Ministérielles Permanentes (Conférence des Ministres

de l'Éducation (Confémen) and Conférence des Ministres de la Jeunesse et des sports (Conféjes) and the Assemblée Internationale des Parlementaires de Langue Française (AIPLF). ACCT is the principal operator for the Francophone Summit; the other operators include the Agence Francophone pour l'Enseignement Supérieur et la Recherche (Aupelf-Uref), TV5, the Université Senghor d'Alexandrie and the Association Internationale des Maires et Responsables des Capitales et Métropoles Partiellement et Entièrement Francophones (AIMF).

The first meeting of the heads of state and government was held in Paris in 1986 and was followed by summits every second year: Quebec (1987), Dakar (1989), Chaillot (1991), Mauritius (1993) and finally Cotonou (1995); Hanoi will be the host of the 1997 Francophone Summit.

At the very first meeting, the Francophone Summit agenda identified information and documentation as a priority for the sustainable and democratic development of its member states. ACCT was, therefore, mandated to develop the necessary programmes and activities as well as the co-ordination mechanisms with the other francophone operators concerning the harmonization and the complementarity of programmes in this area.

ACCT has always maintained a library and archives service aimed at providing information resources to its staff; the library, established as a service of the École Internationale de Bordeaux (EIB), extended in recent years into the Centre International Francophone de Documentation et d'Information (CIFDI). The programme known as the Centres de Lecture et d'Animation Culturelle (CLAC) was designed to foster the implementation of library services in rural areas in developing countries; as of 1996, well over 144 CLACs were operating, mostly in Africa and in the Indian Ocean region.

The first Francophone Summit gave birth to a programme, the Banque Internationale d'Informa-

tion sur les États Francophones (BIEF), aimed at developing national information policies and systems and reinforcing national information institutions such as national archives, libraries and documentation centres, specialized information networks, and public and school libraries. The BIEF is a programme of the Agence de la Francophonie operating from Canada; BIEF is well implemented in the forty-nine member states and operates a wide network of national information institutions as well as a number of databases. The BIEF programme supports the implementation of information and communication technologies in developing countries and focuses its efforts on reducing the technological gap between the information-rich and the information-poor. BIEF's annual budget for 1995 was more than C\$800,000.

In the academic sector, AUPELF-UREF concentrates on higher education and research-related activities. Scientific and technical information is one of eight major programme units (*grands titres de programme*), grouping activities such as scientific and technical publishing (books and periodicals), support for the production of documents using new information technologies, and production and access to databases. It is worth noting that ten sites are already operational within the REFER (Réseau Électronique Francophone pour l'Éducation et la Recherche [Francophone Electronic Network for Education and Research]), and are connected via the Internet. The 1994-95 budget for the Scientific and Technical Information Major Programme Unit was more than C\$12 million. The Cotonou Summit, mentioned earlier, adopted a resolution on the information society which emphasizes the importance of linguistic and cultural diversity, proposes to develop francophone content on the information highways, recommends linkages of Web sites in developing countries and encourages member states to enhance co-operation between their information institutions. As a result, the Summit adopted the programme and

budget proposed by ACCT in these areas (see Chapter 21).

### **Other international agencies**

#### *International Development Research Centre, Canada (IDRC)*

Among the NGOs, IDRC is one that has had for a long time a separate division with budgeted programmes for the development of information systems and services. IDRC's mission is 'empowerment through knowledge' for coping with the complex challenges facing TWCs. The centre is directed by an international Board of Governors and is funded by the Government of Canada.

IDRC has provided direct financial and technical assistance to a number of information-related projects in many developing countries and regions of the world, and has supported, some in co-operation with IGOs, regional organizations and NGOs, international co-operative development information systems and networks.

AGRIS is one of the early international co-operative information systems which received IDRC support. At the regional level, AGRIASIA, for example, received financial and technical support for its establishment and operations. In the mid-1970s, IDRC initiated DEVSIS (Development Science Information System) at the national, regional and global levels, and supported the national/regional collection, bibliographic control and dissemination of development literature.

IDRC began supporting, often in association with other agencies such as UNESCO, the development of information science schools. IDRC and UNESCO carried out a feasibility study, identifying host universities in western and eastern Africa, and then funded the provision of equipment, postgraduate training for several staff members, hiring of teachers from other countries, fellowships for students from African countries, etc., for the African

Regional Centre for Information Science (ARCIS) at the University of Ibadan in Nigeria and the School for Information Science Africa (SISA) at the University of Addis Ababa in Ethiopia, both started in 1990. Other agencies, such as the Swedish Agency for Research Co-operation with Developing Countries (SAREC) and the Norwegian Agency for Development (NORAD), both in Scandinavia, later provided student fellowships to study at these schools. IDRC conceptualized and initiated in 1993 the Consortium of African Information Science Schools, in collaboration with ARCIS, SISA, the Department of Library Science at the University of Botswana, and the École des Sciences de l'Information in Morocco.

#### *German Foundation for Development (DSE)*

DSE has supported short courses, workshops and seminars for training and updating library and information personnel, mainly in Africa. The meetings are organized either at an institution in Africa or one in Germany (or elsewhere in Europe) and cover a wide range of topics, including formulation of national policies.

#### *ODA and the British Council*

The Overseas Development Administration (ODA) is part of the United Kingdom Foreign and Commonwealth Office. It does not normally support individual book and library projects, preferring to provide support for these when they form a part of a larger development project.

The British Council is an organization independent of the British Government and administered by a board. However, its funds are in large part from government allocations. The Council has a long history of involvement with the development of library and information services and with book aid. It also operates British Council libraries in some 110 countries around the world, with its services targeted

primarily at the academic community, postgraduate students and senior administrators. Over the past seventeen years it has suffered successive budget cuts which have made it less able from its own resources to fund library and information services development, and it has increased its work as an overseas arm of the ODA.

### *Scandinavian agencies*

The Danish International Development Agency (DANIDA) has supported Danish information specialists as advisers for library system development (for example, the improvement of the Nepal National Library jointly with UNESCO) or as resource persons in training programmes. The Swedish agencies, SAREC and the Swedish International Development Agency (SIDA), have provided fellowships to library and information personnel in Africa, for instance, to study at SISA. SAREC has supported journal subscriptions and collection development in some African academic libraries. The Norwegian agency, NORAD, has provided similar fellowships.

### **Other bilateral aid and co-operation arrangements**

Several countries in Europe (Denmark, France, Germany, Norway, Sweden and the United Kingdom) as well as the United States provide bilateral aid – some through government departments and others through NGOs – to the library and information field. Assistance may be built in as part of a larger development project in another country, or be directly for library and information services development. A large number of such aid and co-operation arrangements exist, a few of which are briefly described here.

#### *Africa*

From 1989, the Board on Science and Technology for International Development (BOSTID),

Washington, D.C., a major unit of the United States National Research Council, introduced a programme to bring information technology into Africa. The African situation had been studied in association with African counterparts, facilitating the planning and execution of such aid programmes.

In 1987, the American Association for the Advancement of Science (AAAS) launched the Journal Distribution Program (later merged with the Project for African Research Libraries), providing current subscriptions to over 200 serials for research institutions in Africa. This action is now being continued by several projects involving the use of CD-ROM and related technologies to provide information access to primary and secondary literature. The University of Zambia Computer Centre electronic mail service links 200 sites nationally, and a full Internet capability is foreseen with a leased line to South Africa. AAAS is providing assistance to the University of Zambia to facilitate online searching.

#### *Mexico*

An objective of the Transborder Library Forum, which brings together American and Mexican librarians annually, is to discuss common interests such as resource-sharing, collection development and literacy programmes, and to consider long-range programmes on ways to link United States and Mexican libraries electronically.

#### *Papua New Guinea*

A co-operation arrangement between the Department of Library and Information Studies at the University of Papua New Guinea and an Information Management Group of the Faculty of Science and Technology at Deakin University, Victoria, Australia, affords the former online access to courses on computer applications as well as related tutorials and examinations.

### *United Kingdom/United States*

Writers and their Copyright Holders (WATCH) is a database prepared jointly by librarians from the United Kingdom and the United States using the Internet. The objective of the project is to provide information on copyright holders free of charge for use by anyone with access to the Internet. Its increasing use reflects its value to publishers, information professionals, scholars, students and literary agents.

### **Aid to Eastern and Central Europe**

In recent years several assistance and co-operation programmes, particularly from the countries of Europe, the United States, IGOs and NGOs, have been initiated with a view to modernizing libraries and information and telecommunication infrastructures in the countries of Eastern Europe and the former Soviet Union. The destruction of and/or damage to information resources resulting from the conflict in Bosnia and Herzegovina has also generated international assistance to recover lost resources. In the many co-operation and assistance programmes, several United States foundations and international agencies have been involved. The Soros Foundation, established by George Soros in over twenty countries of Eastern Europe, the Ford Foundation, the Pew Charitable Trusts, the Rockefeller Brothers' Fund, the MacArthur Foundation, the German Marshall Fund of the United States and the Mott Foundation are examples. Since the 1990s the East European Program Mellon Foundation (MF) has amounted to about US\$8 million per year. There have been also substantial provisions by USAID, the US Information Agency, the World Bank, the European Union and several West European governments through the TEMPUS and PHARE programmes.

MF, with its long-standing interest in Eastern Europe, focused on aid to Hungary, Poland, the

Czech Republic and Slovakia. The foundation supported donations of books and journals from various United States libraries, with some publishers providing low cost or free subscriptions to some journals. Support for automating library operations in Eastern Europe is another MF contribution in Hungary, Poland, the Czech Republic and Slovakia. MF also assisted in improving telecommunications and overcoming United States regulations on communication with Eastern Europe.

The United States National Library of Medicine (NLM) has a programme for providing medical research libraries with computers, electronic mail, CD-ROM materials and access to MEDLINE. The NLM is also funding the Central Asian part of the Journal Distribution Project of the AAAS. In the Russian Federation, the United States Library of Congress, within its programme of support to parliamentary libraries, is assisting in training staff, providing computers, the TINLIB Integrated Library System, CD-ROM towers and dial-up Internet facilities.

The National Aeronautics and Space Administration (NASA), as part of the National Science Internet (NSI) and in collaboration with the National Science Foundation, the International Science Foundation (ISF), etc., is developing a high-speed fibre-optic cable network, with a link to Moscow for connecting various academies and university institutes and departments. Libraries will be able to use this network. The ISF is already supporting an electronic network programme, based in Kiev (Ukraine), used mainly for training.

The International Research and Exchange Board is creating a library/archive computer communication network for electronic mail service among selected libraries in Moscow and St Petersburg and those in the United States. Several institutions in Western countries are actively involved in modernizing the Russian State Library in Moscow. The Russian National Library in St

Petersburg, a copyright library and the location of several special collections, is receiving international assistance, and is co-operating with British institutions in preparing a machine-readable catalogue of incunabula, etc.

The Science and Technical Information Network, Karlsruhe, in Germany, is assisting in the delivery of documents from Europe and the United States through fax and mail to libraries in Eastern Europe. PUBWATCH, set up in 1990 to promote co-operation between the book industries of Eastern Europe and the former Soviet Union, on the one hand, and those of the West on the other, sponsors educational events in the former Eastern bloc, publishes guides to Western book publishing and a quarterly newsletter, *PUBWATCH Update*, and mobilizes support from Western agencies.

PRECES (Patents from the Region of Central and East-European States) is a new CD-ROM in the ESPACE family carrying information on patents from Bulgaria, Hungary, Poland, Romania, the Czech Republic and Slovakia. It uses the Jouve PATSOFT technology, and data preparation is by the Hungarian company ARCANUM Databases. It is expected that ten discs will be produced per year.

The modernization and use of information technology in the larger libraries of Latvia since the early 1990s have received external assistance. Together with specialists from the Royal Library of Sweden and the University of Lund, the VTLS system has been implemented. Several training courses on CD-ROM and the Internet were organized. Funds to supplement the national budget have been provided by IREX, the United States Congress, the Soros Foundation, LIBER, NORDINFO (Nordic Council of Ministers), and the Government and Bibliotekjest of Sweden. National bibliographies on CD-ROM have been received free of charge from the United States Library of Congress, Germany, Denmark and others.

Following the 1992 Law of Public Libraries of

the Republic of Estonia, public library development has been assisted through co-operation with the Nordic countries.

Several projects and services were supported by the British Council in the libraries of Romania for collection development, information provision, human resource development and study scholarships in the United Kingdom.

In 1991 a group of British book and paper conservators worked on a project to extend international aid in materials and training to the library conservation community in Romania. A European Art Conservation Trust was formed which collaborated with various Romanian bodies for this purpose.

The National and University Library of Bosnia and Herzegovina was destroyed during a bombardment in 1992. UNESCO has started a technical assistance programme for revival of the library.

### **Co-operation among countries of Europe**

In Europe, co-operation among academic and national libraries and documentation centres, for example in inter-library lending, the development of common cataloguing norms and the compilation of bibliographies has been in evidence since before this century. The early associations contributed to co-operation in various fields of library, documentation and archives management, and led to the formation of IFLA and FID. Their programmes are now global in scope.

The concept of a united Europe established the need for an information system that would help to realize and support such a union. Section DG XIII of the European Union continues to play a key role in the design and development of a European network. ESA/IRS, the EURONET project, the many databases that are interconnected and accessible online, the telecommunication links, the formulation and adoption of common norms and standards, R&D in information, etc., have all been important co-operative contributions.

In 1989 a consortium of the national libraries in Denmark, France, Germany, Italy, the Netherlands, Portugal and the United Kingdom agreed to co-operate in exploring the potential of CD-ROMs as a means of distributing and using national bibliographic data. The project, divided into ten subprojects, was launched in January 1990. A specification of requirements for a common retrieval interface for bibliographic data, designed to meet the needs of four user groups (acquisition librarians, cataloguers, reference librarians and end-users) was formulated. A second result is the production of a pilot CD-ROM in UNIMARC, *The Explorers*, holding records of the national bibliographies of Denmark, Italy, the Netherlands and Portugal. Other major products are MARC to UNIMARC conversion tables and a multilingual interface.

SIGLE (System for Information on Grey Literature in Europe), set up in 1978 to improve control and access in all subjects, operates through the co-operation of national centres involved in the collection and dissemination of grey literature. In 1985, these centres formed the European Association for Grey Literature Exploitation (EAGLE).

Cranfield University Library in the United Kingdom and Delft University of Technology in the Netherlands are co-operating in the European Initiative in Library and Information in Aerospace (EURILIA), a full-text electronic aerospace information-retrieval and document-delivery project partly funded under the European Action Programme for Libraries.

The European Union's BIBDEL is a co-operative project for researching and demonstrating information technology-based library services to users located at a distance from the physical library. At the end of this project, developed jointly by the University of Central Lancashire in the United Kingdom, the University of the Aegean, Greece, and Dublin City University in Ireland, the partners will have a tool-kit of methods for dealing with remote

users of academic libraries.

GEDI (Group on Electronic Document Interchange) was formed in October 1990. In September 1991 it defined a mutually acceptable technical framework to facilitate Electronic Document Interchange between the GEDI partners. The GEDI framework is a de facto standard for such interchange; it encompasses existing ISO open standards and related products that facilitate compatibility and interoperability between the participants' library networks, and also offers greater functionality to end-users.

The Interlending Open Systems Network (ION) project, completed in 1994, outputs various products by the three partners: SDB/SUNIST (France), Pica (Netherlands) and LASER (United Kingdom).

Countries opting to integrate into the international services economy may need help in developing their service infrastructure. International economic co-operation is giving some attention to telematics and informatics. Information technology support is being envisioned within the scope of the Uruguay Round Multilateral Trade Negotiations on Services (see Chapter 21) and within the regional co-operation framework of African, Caribbean and Pacific countries *vis-à-vis* the European Union.

## Concluding remarks

### *Trends*

Given the rapid strides in information and communication technologies, assistance is increasingly directed at enabling TWCs to utilize these technologies. Under bilateral assistance we have mentioned some of the projects in Africa using CD-ROM databases. UNESCO, for instance, has been supporting the ADONIS project for the production and distribution on CD-ROM of some 450 frequently used biomedical journals in full text, with the co-operation of the publishers of the journals. Under the Universal Availability of Publications (UAP)

programme, implemented in collaboration with other agencies such as IFLA, UNESCO has been exploring the use of CD-ROM, especially as a means of assisting developing countries in collection-building and access to information and documents.

Use of networks and information highways such as the Internet and computer-mediated communication (for example, electronic mail) is encouraged, and assistance is provided for the organization of workshops, short training courses, etc. Sensitization of management and government authorities to the advantages and possibilities of the emerging technologies is being pursued by IGOs and NGOs. Children in schools are being encouraged and assisted to use information technology just as they do reading, writing and arithmetic, so that future generations will cope better in the emerging information age.

### *Impact*

Thanks to the efforts of IGOs and NGOs the information infrastructures in TWCs are being strengthened to enable better access at affordable cost to the vast range of information available. The overall impact on TWCs of information programmes run by international organizations, although it may vary in degree among them, in general is to strengthen national information infrastructures and enhance national capacity for information handling and services. The spread of such capacity among various segments of society is unequal, however, and is determined by several factors.

### *Constraints*

With over 75% of their population barely literate and living in rural areas with poor facilities for education and communication, conventional print-based information sources cannot be expected to be used extensively by many countries. Audio and video programmes and the emerging multimedia and telecommunication technologies are alternatives to

be tested, and international aid is needed in an increasing measure for this purpose.

There is a growing demand for information, and therefore for information systems and services, even in TWCs, and hence a need for more assistance. But IGOs, NGOs and others are constrained in their efforts owing to inadequacy of funds. The need to minimize duplication of effort among agencies and ensure better exchange of information and greater co-operation among them is evident, and efforts are now being made, including the formation of consortia of donors and/or beneficiaries.

In an ever-widening electronic information age, TWCs need to deal with intellectual property rights, transborder data flow, affordability and accessibility to the emerging information technologies, minimizing undue dependence on external data sources and technology and the resulting national vulnerability, social and cultural problems, etc. Technical and managerial knowledge needs to be developed to deal with such issues. Appropriate international assistance and co-operation policies, together with strategies at various levels, should be formulated and applied.

Sustainability of advancement in the electronic information age is another critical question for TWCs. International support for enhancing people's capacity to use electronic information may be available only on a short-term basis in many instances. It has been noted in the past that when such support is reduced or withdrawn the system, network or training programme performs poorly or totally ceases.

TWCs have not been able to market their information products and services widely (domestically or internationally). Will the information highways such as the Internet improve the situation? TWCs may have to concentrate on preparing specialized databases and value-added information products of interest at the international level. ■

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