



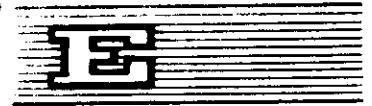
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PAF-AFRICAN DOCUMENTATION AND INFORMATION SYSTEM : PROGRESS REPORT

PAN AFRICAN DOCUMENTATION AND INFORMATION SYSTEM - PROGRESS REPORT

I. INTRODUCTION

A. The System

The Pan-African Documentation and Information System (PADIS) was designed in response to repeated clear requests of African countries in the framework of the ECA Conference of Ministers in 1979, 1980 and 1981 (Resolutions 359 (XIV), 377 (XV), 413 (XVI) respectively).

The main objective of PADIS is to serve African Countries by establishing a co-ordinated approach to the:

- Identification and collection of all African information resources,
- Development of an efficient system for the utilization of information produced for and by ECA member States,
- Promotion of information sharing in the African region through the establishment of various network nodes and subsystems.

PADIS, which is concerned with both numerical and non-numerical information, is a decentralized system designed to serve the increasing information needed to support development activities in Africa.

The PADIS sectors of activity are the following:

- (a) Bibliographic reference services, designed and implemented either by or in collaboration with competent organizations, services and centres at the regional, subregional and national levels.

PADIS-DEV, the economic and social development information system, falling completely under the supervision of PADIS/CCO;

PADIS-COM, the collection of bibliographic complementary files prepared in collaboration with regional, subregional and national institutions and documentation centres; it will receive contributions from existing international co-operative information systems like FAO/AGPIS, UNIDO/INTIB, IAEA/INIS, ILO/ILIS as far as African information is concerned;

- (b) Descriptive inventory services, designed by PADIS in collaboration with UNDP, TCDC and competent regional institutes and centres. It contains two major PADIS components:

PADIS-PPOM, a project definition and control system intended as a referral information system for on going projects, know how and research activities, implemented in collaboration with TCDC;

PADIS CORE, a common register of African institutions, organizations and specialists;

- (c) Numerical data bank services, designed in order to set up an integrated logical infrastructure for the creation of sectoral and intersectoral numerical data banks concerning Africa. It contains the following components:

PADIS-TECH the technical numerical data bank system covering all technological numerical data available in Africa (mineral resources, industrial data, description of available commodities, etc.),

PADIS-STAT, the pan African statistical data bank concerning the social and economic development of the continent;

- (d) The PADIS telecommunication network for system interconnexion and on-line information dissemination throughout the African continent, PADIS-NET:

PADIS-NET, will make available to African users information that cannot be covered by the other PADIS components (e.g. the scientific and technical information produced in the industrialized world) by telecommunication interconnexion with existing international networks.

- (e) The PADIS integrated system for administrative management, the PADIS ADMIN component:

PADIS-ADMIN has been designed in order to cope with the administrative need of Africa in general, and of ECA in particular, including computerized management system for personnel, finance, general services, medical services, library, stock keeping, budgeting, etc.

B. Programme implementation phases

The programme implementation phases are the following:

(a) Phase I (1980-1981). Creation of the PADIS Central Co-ordination Office (CCO) at the ECA headquarters, setting up of basic PADIS methodology including input and output standards and the PADIS thesaurus for the PADIS-DEV and PADIS-COM components; installation of the PADIS/CCO computer centre with an HP 3000 (2 M/byte in the CPU) and the MINISIS information storage and retrieval software; preparation of a PADIS index (DEVINDEX) and issue of a preliminary test version covering development information on Africa; training of personnel and users; design of a telecommunication link between ECA and existing data bases in the industrialized world, through the EURONET network via an interconnection with the ESRIN centre of Frascati (PADIS-NET);

(b) Phase II (1982-1984). Implementation of integrated pan-African data bases and data banks, including pan-African files concerning sectors like transport, energy, education, etc.; training at collaborating centres including identification of experts and organization of technical assistance at subregional levels; installation of computer facilities in the subregions and design of a telecommunication network (PADIS-NET extension) interconnecting these centres by using satellite technology; design of PADIS input output centres, interconnected with CCO at the national level, equipped with local computers and ground satellite communication stations; organization of a training plan for participating centres; design and implementation of a powerful computer centre for CCO with 4 16 M/byte of core memory and about 10 Gbytes of peripheral memories, allowing the storage at CCO of all files relevant to Africa and a complete PADIS-NET management and control;

(c) Phase III (1985-1989). Installation in all African countries of the PADIS system and network including input/output and information storage devices at the subregional, national (member states) and user level (ministries, institutes, universities, companies, etc.); integration of user files in PADIS coming upto PADIS standards; full exploitation of a telecommunication satellite system for the extension to all African countries of the PADIS NET component; organization of local information input systems and procedures in order to achieve good coverage of the information produced in Africa; organization of training programmes at the national level in the information storage, retrieval and data transmission fields.

The final users of the system are the national documentation information centre (NIDCs) created by African countries at the national level, as provided for by the PADIS programme.

The implementation of such a programme will require a budget of about \$US160 million, and will be financed by both African countries and international and bilateral co-operation agencies.

The structure of the project is based on the following geographical subdivisions:

- NADIS for North Africa;
- SADIS for Southern Africa;
- CADIS for Central Africa;
- EADIS for East Africa;
- WADIS for West Africa.

The PADIS programme will be implemented gradually by extending the system throughout the African continent, via the PADIS subregional offices in order to cover all ECA member countries.

Phase I started on 1 January 1980 with the installation of the first structure of the PADIS/COO at ECA headquarters in Addis Ababa.

The system was officially inaugurated on 30 January 1981 in the presence of Ethiopian authorities as well as representatives of African and non-African countries and of international organizations. Phase II started on 1 January 1982.

II. COMPONENTS OF THE SYSTEM

A. Co operation aspect

The PADIS components are implemented through co operative efforts at the following levels:

- (a) International, or global, co operative arrangements (I), mainly in the framework of the international co operative information systems sponsored by United Nations agencies and other multilateral systems;
- (b) Regional co-operation among African countries (R), sponsored mainly by the Economic Commission for Africa or by other regional or subregional organizations;
- (c) National co operative efforts (N), in the framework of African national information systems, sponsored in principle by the African Ministries for Planning, but also by the Ministries of Economic Affairs, Science and Technology, Industry, Education, Trade, etc.

B. Bibliographic reference services

1. PADIS DEV

The PADIS development information reference file was created by PADIS/CCO during phase I of the project. More than 2000 references of African documents have been analysed and stored in the PADIS computer system. These references concern original documents available on microfiche also produced by PADIS/CCO.

At the international level (I), PADIS DEV is being built-up in co operation with the following organizations:

- UNDESA/DIS, the Development Information System of the United Nations, Department of International Economic and Social Affairs;
- ECA (Economic Commission for Western Asia);
- ESCAP (Economic and Social Commission for Asia and the Pacific);
- ECLA (Economic Commission for Latin America).

At the regional African level (R), PADIS DEV is being built-up through the following efforts:

- PADIS/COO Document Analysis Section
- SDD, the ECA Social Development Division
- SERPD, the ECA Socio Economic Research and Planning Division
- IDEP, Institute for Economic Development and Planning
- NESADOC, Réseau Sahélien d'information et de Documentation Scientifiques et Techniques
- ADB, African Development Bank
- Regional Arab Information Network for the Social Sciences
- ECOFAS, Economic Community of Western African States

At the national level the PADIS DEV file will be integrated with the contributions supplied by the NIDCs of the African countries, as far as development information is concerned.

2. PADIS COM

The PADIS complementary files concerning references to scientific and technical documents of interest to the African continent (PADIS COM) will be prepared in collaboration with specialized agencies, regional organizations and NIDCs.

At the international level (I), PADIS COM is going to be built-up from the following contributions:

- The FAO/AGRIS system on agricultural information (AGRIS-Africa);
- The ILO/ILIS system on labour information (ILIS-Africa);

- The IAEA/INIS system on nuclear science, (INIS-Africa).
- The UNIDO/INTIB, UNIDO/INDIS and UNIDO/TIES systems on industrial information (INTIB-Africa);
- The UNESCO/SPINES system on science and technology policy

At the regional level (R), PADIS COM is now prepared to receive the following inputs:

- ARCT/ARCTIS, the African Regional Centre for Science and Technology Information System, Dakar, Senegal.
- LAW Africa, the Information System for African Legislation, Regulations, Agreements, Treaties and other legal texts (ECA, Office of the Senior Legal Adviser);
- TF Africa, the Trade and Finance Information System on Africa (ECA, International Trade and Finance Division);
- POPIN-Africa, the African Information System on Population Activities (ECA, Population Division and the Regional Institutes for Population Studies);
- HABITAT Africa, the African documentation system on human settlements (Human Settlements Section of the Joint UNIDO/ECA Industry Division, in collaboration with UNCHS, Nairobi);
- INDUSTRY-Africa, the Industrial Development Information System (Joint ECA/UNIDO Industry Division, in collaboration with UNIDO).

At the national level (N), contributions are expected from the NIDCs of African countries which will centralize sectoral information generated within the country. The following centres are ready to co-operate:

- CENADI Benin
- CND Morocco
- CND Tunisia
- CND Senegal
- NLI, National Library of Nigeria
- The National Archives of Zimbabwe
- NIDC, the Sudan
- Egypt

The following African countries have established or are establishing NIDCs that will act as national counterparts to the PADIS system: Morocco, Algeria, Tunisia, the Libyan Arab Jamahiriya, Egypt, the Sudan, Ethiopia, the United Republic of Tanzania, Zambia, Zimbabwe, Zaire, the Congo, Nigeria, Benin, Guinea, Senegal, Mauritius.

C. Descriptive inventory services

1. PADIS PROM

PADIS PROM is the project management component of the System to be used for the definition and control of on going research, existing know-how and development projects.

At the international level (I) PADIS PROM will receive the following contributions:

- TCDC/INRES- Technical Co-operation Among Developing Countries/Information Referral System
- FAO/CARIS- FAO Current Agricultural Research Informations System
- UNIDO/INTIB- UNIDO Industrial and Technological Information Bank
- UNESCO/TRUSP- International Data Base on Research projects and Studies in Science and Technology Policy

At the regional level (R), the contributions will be the following:

- CAFRAD/ANAI- African Training and Research Centre in Administration for Development
- CODESRIA Council for the Development of Economic and Social Research in Africa.

At the national level, NIDCs will set-up referral and project control systems.

2. PADIS CORE

A common register of African institutions, organizations and specialists will be prepared by PADIS, with international, regional and national co-operation.

At the international level (I): UNDP/TCDC and the Organization for Economic Co-operation and Development (OECD) International Development Information Network Data Base;

At the regional level (R): CODESRIA and the Association for the Advancement of Agricultural Sciences in Africa (AAASA); and others;

D. Numerical data bank services

1. PADIS TEND

PADIS-TEND is the Technical Numerical Data Bank component.

At the international level (I) World Intellectual Property Organization (WIPO), International Trade Centre (ITC), and the UNCTAD/GATT Secretariat;

At the regional level (R):

- TEND-MINRES, the African mineral resources data bank (ECA Natural Resources Division);
- TEND-ACDB, the African commodities bank (ECA International Trade and Finance Division);
- African subregional patent associations

At the national level (N):

- Consolidation of nationally generated information by the respective competent government ministries and agencies.

2. PADIS-STAT

At the international level (I), statistical series of African interest will be collected by PADIS by using the following inputs:

- GATT, Geneva
- United Nations Statistical Office, New York

At the regional level (R):

- ECA Statistics Division

At the national level (N):

- NIDCs in co-operation with national statistical offices

E. The PADIS telecommunication network (PADIS-NET)

At the international level (I):

- System's interconnexion with EURONET

At the regional level (R):

- Pan-African network of information transfer by using telecommunication satellites

At the national level (N):

- NIDCs interconnexion

F. The PADIS administrative management system

PADIS-ADMIN will be implemented. At the regional level (R) by

- ECA
- CAFRAD
- Eastern and Southern African Management Institute (ESAMI)

At the national level (N):

- Business administration and management institutes.

III. Progress made during phase I

A. Work programme for phase I (1980-1981)

The main activities envisaged for the implementation of phase I of the PADIS programme were:

- Establishment and strengthening of the Central Co-ordination Office consisting of the Document Analysis Section, Computer Operation Section and Reprographic, Maintenance and Printing Unit;
- Acquisition and installation of a suitable hardware configuration;
- Acquisition and installation of suitable software and its modification to meet African requirements;
- Provision of training for PADIS/COO and other ECA staff;
- Development of norms, standards and adequate document analysis procedures;
- Development of input worksheets;
- Preparation of the first six issues of DEVINDEX-Africa;
- Design of complementary (sectoral) bibliographic files;
- Design of numerical files;
- Preliminary studies on the PADIS data transmission network;
- Promotion of the creation and/or the participation of national, subregional and institutional information and documentation centres (NIDCs);
- Installation of reproduction equipment and the provision of microfiche and photocopy services;

B. Progress Report for Phase I (1980-1981)

Since its creation in January 1980, the PADIS Central Co-ordination Office (PADIS/CCO) has expanded considerably both in scope and in technical competence. At present, CCO consists of the Computerized Documentation Section, the Computer Operations Section and the Reprographic, Printing and Maintenance Section. CCO employs 30 staff members of which nine are professionals, fifteen semi-professionals and six secretarial and clerical.

An HP 3000/III computer configuration with a 2 megabyte core memory and 240 megabyte peripheral memory (2 disc drives and 2 tape drives) was installed in 1980 in accordance with the recommendations of a study team taking into consideration compatibility requirements with other systems and the availability of suitable software. Other equipment installed includes 24 interactive terminals, 6 line printers and a high performance photo reproduction machine. The high efficiency achieved from and the limited repair and maintenance work required on these equipment justifies their acquisition elsewhere.

During Phase I, essential software requirements for the statistical and documentation activities envisaged for the period have been met. The following software packages have been acquired at minimal or no cost to the Project: MINISIS- software package for bibliographic information storage, processing and retrieval; SPSS- Statistical Package for the Social Sciences which is a suitable tool for the storage and analysis of statistical and demographic data. ISEA - on line software for econometric analysis; IPACS- an on-line package for planning and budget control; TDP- text and document processor; and ASK data base interrogating and reporting software. CCO is currently studying suitable software available on the market for the management of its numerical files to be created during Phase II of its programme.

CCO has offered about six months of intensive training and one year of on-the-job training to its documentalists and data base managers in the creation, maintenance,

management and interrogation of computerized data bases. Moreover, several short training courses have been organized to staff members of the ECA Statistics Division, the ECA Socio Economic Research and Planning Division and the ECA Population Division. More recently a four week training programme has been organized for English-speaking African countries to enable them to use a new software designed mainly for handling census and survey data. Two workshops on documentation and microfiche techniques, respectively, were organized in collaboration with the Government of Zimbabwe (4-8 August 1981) and the African Development Bank (19-26 July 1981).

CCO had prepared the "PADIS Manual for Document Analysis" and a worksheet to prepare inputs. Both tools have been submitted to two international technical meetings and have been found satisfactory. The Economic Commission for West Asia and the Economic Commission for Latin America have expressed an interest in the adoption of these tools.

The Computerized Documentation Section has analysed and processed the first 2,000 records for the PADIS DEV component during phase I. The first issue of DEVINDEX-Africa, an index to documents on the social and economic development of Africa, has been published and widely circulated. The next four issues have been forwarded for publication. The Development Information System of the United Nations Department of International Economic and Social Affairs has provided CCO with a portion of its data base amounting to 3,500 bibliographic entries which are of relevance to African development. This data base is now available for on-line interrogation.

Satisfactory negotiations have been concluded with ILO and ACPIS for co-operation in the exchange of sectoral information concerning Africa. Accordingly, PADIS has acquired 40,000 bibliographic records from ILO which have been found relevant to African development. Thus, the first complementary (sectoral) file, ILIS/Africa (see above) has been created and is now available for on-line interrogation. The design of the following complementary files is under way: the African Regional Centre for Science and Technology Information System (ARCTIS).

Information System for African Legislations, Treaties, Agreements and other legal texts (LAW-AFRICA); Trade and Finance Information System on Africa (TF AFRICA); African Information System on Population Activities (POPIN AFRICA); and the African Documentation System on Environment and Human Settlements (HABITEM AFRICA).

ECA, with the collaboration of the Government of France, had conducted an intensive survey on the nature, structure and availability of statistical data in African countries. The recommendations resulting from this study form the basis for structuring the statistical file (PADIS-STMT) which is composed of country profiles and statistical data useful for projections and other time series analysis. PADIS-STMT will be operational towards the middle of 1982. The first draft for the design of the second component of the numerical files, PADIS-TEND, composed of numerical and technical data concerning resources, trade, production, commodities, patent information, etc. is under preparation.

PADIS, in collaboration with the European Space Research Institute of the European Space Agency (ESPIN/ESA) has concluded a preliminary study to identify the feasibility of installing a pan African satellite communication network with international linkages for tele data transmission of bibliographic and numerical information.

C. Progress made towards the creation of participating centres

In accordance with the objectives and work programme laid down for the first phase of the PADIS project, the creation of National Information and Documentation Centres has been accorded paramount importance and the results of efforts to stimulate the action of member States to this end have been very promising. The Central Co-ordination Office has submitted to all member States proposals for the creation of national centres. Consequently, the Government of Morocco has designated the "Centre National de Documentation" as a PADIS participating Centre; the Governments of Algeria, Egypt, the Sudan and Tunisia and considering the designation of established centres; the Governments of Benin, Ethiopia, Guinea and Nigeria are in the process of creating their centres. All remaining member States have been approached and positive discussions have been held.

At the time of writing a meeting was being organized to discuss modalities for the creation of the Southern Africa Development Information System which when established will become the first subregional pole within the PADIS regional network.

Discussions are being finalized with the ADB, the African Regional Centre for Science and Technology and CAFRAD for the creation of institutional participating centres. The Eastern and Southern Africa Management Institute (ESAMI), the African Regional Centre for Engineering Design and Manufacturing, and IDEP are being approached in an effort to enhance the participation of regional and subregional institutions which are both primary generators and users of information.

D. Design of descriptive inventory services

The preliminary design of a project management data base, which will give African users ready access to information on on going research, development projects and know how and skills available within Africa, is being finalized. Upon its completion the PADIS-PROM (Project Management) will be in a position to serve as the African component of the global TCDC Information Referral System being executed by UNDP.