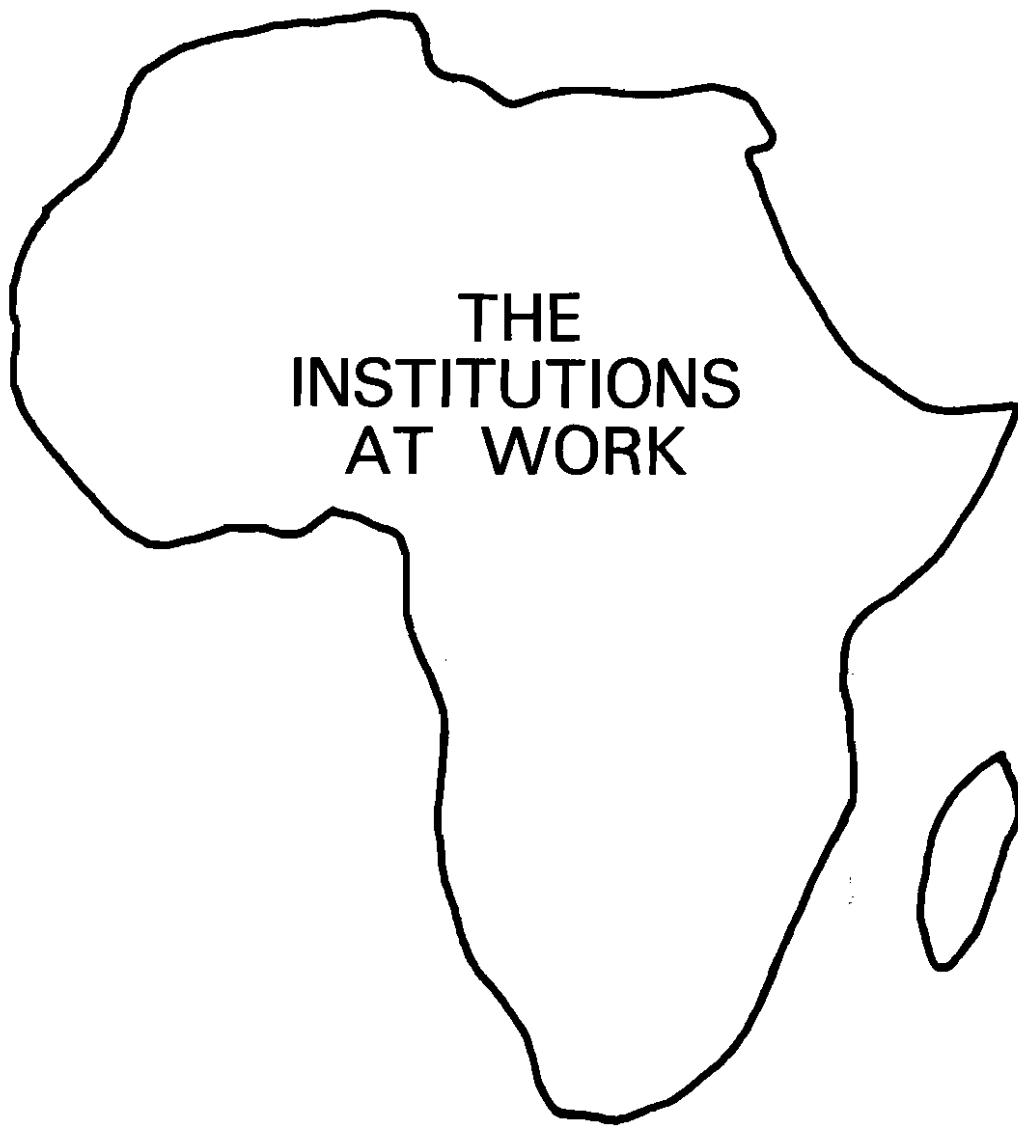




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UNITED NATIONS  
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# **BULLETIN OF ECA-SPONSORED INSTITUTIONS**



**JANUARY 1986**

**NO 2**

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# FOREWORD

This second bulletin of ECA-sponsored regional and subregional institutions comes at a crucial time in the development of African multinational institutions.

The Ad Hoc Committee appointed by the ninth meeting of the ECA Conference of Ministers to evaluate the multinational institutions sponsored by ECA and to make proposals concerning their continued usefulness and effectiveness and ways in which their activities could be better rationalized, co-ordinated, harmonized or integrated, has completed its work. Its final report is to be submitted to the eleventh meeting of the ECA Conference of Ministers which will be held in April 1985. It is expected that this evaluation by the Ad Hoc Committee will, among other things, reveal the weaknesses and strengths of the institutions. This should not only enable constructive steps to be taken to further enhance the importance of the role of the institutions in the economic and social development of the African continent, but also assist in the restructuring and reorganization of the institutions so as to make them more effective tools for development in their particular fields of activity.

Up to now, however, not many people within Africa itself, and indeed, within the governments of the African countries on whose urgings the multinational institutions were established, are fully acquainted with the activities of the institutions and what African Governments stand to gain from them. The not infrequent

changes in ministerial portfolios and in the assignments of senior officials within African Governments are partly responsible for this lack of information. The institutions themselves, however, have also long realized that they have a responsibility to make African Governments aware of the good work that they are performing and thereby, attract the political and financial support of African Governments which is so vital to the well-being and development of the institutions.

At the present stage of African development when nearly all African countries are stricken with drought and hunger and battling with the present economic crisis, the African multinational institutions have a special role to play in the economic survival and development of Africa. And it is at such a time that they must more than ever before, demonstrate their usefulness.

This second Bulletin entitled "The Institutions at Work" therefore comes at an opportune time. Whilst the activities of a few of the institutions like the African Development Bank are better known and well appreciated, the second Bulletin will also introduce to its readers the worthwhile activities being undertaken by many of the other institutions. For instance, very little is known of the repair and management services of sensitive and complicated survey equipment being carried out locally by the Regional Centre for Services in Surveying, Mapping and Remote Sensing based in

Nairobi, Kenya, for its member States at charges far less than the existing commercial rates obtaining abroad, thus enabling them to make substantial savings in scarce foreign exchange resources. Whilst we at ECA believe that the multinational institutions are crucial to economic and social development in Africa and indeed, that more of them are needed, the institutions must themselves prove their worth. I sincerely hope that

this second Bulletin will go a long way in promoting this.



Adebayo Adedeji  
Under-Secretary-General  
of the United Nations  
and  
Executive Secretary of  
Economic Commission for Africa

# FINANCIAL AND BANKING SERVICES

## The African Development Bank

The African Development Bank (ADB) has recently celebrated its twenty years of existence. Through these years, the institution has been an effective tool for economic co-operation and development in Africa. In its overall activities it has been closely associated with the development of African countries and participated in various global and regional deliberations about how Africa should approach the problems of its development.

### Objectives and role of the African development bank

The African Development Bank was established in 1963; its purpose is to contribute to the economic development and social progress of its African member countries both individually and collectively. This general purpose has also been adopted in the Agreement establishing the African Development Fund (1972) and the Nigeria Trust Fund (1976) which have been created to assist ADB in making a greater contribution to the economic and social development of the African continent. In order to achieve the above purpose and scope, ADB, ADF and NTF, which form the Bank Group, have a triple role which covers the financing of development projects and programmes, the provision of technical assistance and building of development institutions, and the mobilization of resources for development.

In order to carry out the activities implied in their respective roles, each of ADB, ADF and NTF has relied on its initial authorized capital or pledged subscriptions and on subsequent capital increases or replenishments. Borrowings have also complemented the resources of ADB as a major source of funds for financing

development. From 1963 to November 1982, membership of the ADB consisted only of African countries; by 1981 all 50 independent African countries had become members, and the authorized capital increased from the initial \$US250 million to \$US2,776 million.

In December 1982, the share capital of the Bank was opened-up to non-African (non-regional) countries and the authorized capital was subsequently increased from \$US2,776 million to \$US5,791 million, two-thirds of which is held by African (regional) countries. Twenty-three non-regional countries are members of ADB. Through successive replenishments the total effective subscriptions of the ADF have increased from the initial \$US89.5 million to \$US2,140 million in 1983. Negotiations for the Fourth General Replenishment of ADF resources for the period 1985-1987 have resulted in pledges amounting to FUA 1,441.3 million or about \$US1,372 million. Membership of ADF had increased from the initial 13 States participants together with ADB in 1972, to 25 States participants and the ADB in 1984. The resources of the NTF have been replenished once to increase from the initial contribution of \$US79.5 million in 1976 to \$US154.2 million in 1981.

### Priorities and activities

Under the ADB Agreement all regional member countries are eligible for development financing. In each of these countries the Bank can be involved in direct loans and in equity participation, or in guaranteeing the whole or part of loans made by others. However, taking into account the levels of development and resource endowment of each potential beneficiary country, the Bank has opted to pay special attention to those countries whose economic situations require

concessional funds. This consideration is one of the major reasons for the creation of ADF and NTF whose principal purpose is to provide such concessional funds.

With this targeting of the beneficiary countries in relation to their economic conditions, the Bank Group has moved to single out the poorest African countries as the principal group for the allocation of its resources, particularly those of the concessional type. Of the cumulative amount of \$US4,802 million committed by the Bank Group between 1967 and 1983, 60.2 per cent (including 82.9 per cent of the ADF commitments)

has been allocated to the category of countries with the lowest per capita income (table 1). The Bank Group provides financing for sectors of operations which are of high development priority to the country. The ADB Group has adopted to channel its resources to each country through the financing of projects and programmes in sectors of activities which can benefit the poorest people and help them meet their basic needs. This category includes activities which can improve the output of food and agricultural production, public utilities including energy, water supply and sanitation, transport and communications, industry, health and education.

Table 1: Cumulative commitments of the bank group  
by country categories;\* as at 31 December 1983  
(in percentage)

Country categories	ADB	ADF	NTF	Bank group
Category A	42.6	82.9	58.2	60.2
Category B	36.7	14.5	13.5	26.7
Category C	16.8	0.8	10.9	9.8
Multinational projects	3.9	1.8	17.4	3.3
Total (percentage)	100.0	100.0	100.0	100.0
Total commitments (in millions of dollars)	2,635.4	2,061.7	105.7	4,802.8

\* Countries in Category A are those whose 1979 per capita GNP was below or equal to \$US 400. Countries in Category B include those whose per capita GNP falls between \$US400 and \$780. Country Category C comprises those which have either temporarily renounced their rights to benefit from ADF financing or whose 1979 per capita GNP exceeds \$US780.

Since 1977, the allocation of the resources of ADB, ADF and NTF is effected on the basis of successive Five-year Operational Programmes which indicate the priorities of the Bank Group. During the 1977-81 period, the sectoral allocation of resources was as follows: agriculture, 28.2 per cent; transport 24.0 per cent; public utilities, 23.2 per cent; National Development Banks, 8.7 per cent; industry, 7.5 per cent; education, 5.3 per cent; and health, 3.1 per cent.

In accordance with its mandate and through flexible strategies, ADB Group has, during the past twenty years, helped establish educational and health infrastructures; increase their productive capacity in food and agriculture, industry, energy and in the production and distribution of clear water; it has also assisted in the establishment and running of better transport and communications links within and between countries in Africa. Furthermore, through the financing of multinational projects

Table 2: Cumulative commitments of the bank group  
by sector as at 31 December 1983  
(in percentage)

Sector	ADB	ADF	NTF	Bank group
Agriculture	21.0	39.0	21.0	28.7
Transport and Communications	22.8	25.0	30.0	23.9
Public utilities	32.0	19.2	27.8	26.4
Industry	19.8	1.0	2.6	11.4
Education & Health	4.4	15.8	18.6	9.6
Total (percentage)	100.00	100.0	100.0	100.0

The current 1982-1986 programme which is now under implementation emphasizes the necessity to strengthen the food and agricultural production and the transport and communications sectors as necessary major steps towards promoting economic development in Africa. As at 31 December 1983, 28.7 per cent and 23.9 per cent of the cumulative commitments had been respectively allocated to these sectors (table 2).

and through participation in building institutions of regional or subregional nature, the Bank Group has provided assistance to regional member countries for increased co-operation in the exploitation of their natural resources and for a wider exchange of views on issues of common interest in the area of economic and social development.

ADB Group's role in the implementation  
of the Lagos Plan of Action

In order to show its commitment to implementing the Lagos Plan of Action, the Bank Group decided to tailor its sectoral priorities to the sectoral priorities of the regional member countries as outlined in the Plan document. As stated in the Five-year Operational Programme (1982-1986) of the ADB Group (paragraph 3.28), this is clearly based on the priorities of the Plan and on its own previous experience.

ADB was established with much the same objectives as the Plan (Compare the Preamble of ADB's Statutes and that of the Plan). In pursuing the achievement of these objectives, the Bank and its two affiliates are contributing to the implementation of some of the specific actions called for by the Plan. For the first two years of implementation of the second Five-year Operational Programme, the ADB Group has allocated about 30.3 per cent of its resources to agriculture as against 22.2 per cent to transport and communications, 28.7 per cent to public utilities, 6.2 per cent to industry, and 12.6 per cent to health and education.

In addition to financing agricultural projects, the Bank Group demonstrates its interest in agricultural development in a variety of other ways. A symposium on the food crisis in Africa was organized in Tunis to stress the importance of the food problem and the need for firm action. ADB has also actively participated in the drafting of a paper on "Progress and Critical Issues Affecting the Food Strategy in Africa" which was presented at the Tenth Ministerial Session of the World Food Council in Addis Ababa. Because of the close association between drought and the food crisis, the Bank has recently established a Task Force which is investigating ways by which

the Bank Group can increase the impact of its operations, particularly in resolving the causes of the crisis.

The financing of transport and communications has been pursued in line with the objectives of the United Nations Programme for the Transport and Communications Decade in Africa (TCDA) which covers the period 1978-1988. In this sector, the Bank Group has been particularly interested in financing trunk and rural roads, which are intended to provide support for national agricultural strategies. In addition, aware of the importance of transport and communications for the promotion of trade between African countries and with the rest of the world, consideration has always been given to the financing of road networks linking two or more countries. Between 1978 and 1983 the Group committed \$US1,047 million to transport and communications projects, or about 15.4 per cent of the amount secured for the first phase of the TCDA. However, because of the nature of the requests for financing received from borrowing countries, only a few of the projects financed have been part of the TCDA. Altogether, 31.6 per cent of the funds committed by the Bank Group were allocated to TCDA projects.

In the field of energy, the ADB Group has underscored the need to help member countries finance projects which aim at reducing their dependence on imported oil products. In the past four years the Group has financed several projects in this sector including electric power.

The other sectors such as human development, industry, natural resources, science and technology, etc., which the Lagos Plan of Action has singled out as needing special attention, have also received special support from the ADB Group's activities.



Apart from providing direct financial support to member countries in conformity with the objectives of the Lagos Plan of Action, the Bank has co-operated with other African institutions and organizations in various activities. Of particular interest is the Bank's participation in meetings with ECA, OAU and other regional institutions to prepare the groundwork for the establishment of the proposed African Monetary Fund. In this regard, ADB provided staff to participate in the preparation of the feasibility study. In addition, ADB is co-operating with ECA and IDEP to examine the possibility of developing country-economic models useful in analysing the economies of African countries. Also, ADB has actively participated with ECA and OAU in the preparation of an extensive study on the external debt of African countries.

### **The African Centre for Monetary Studies**

The African Centre for Monetary Studies is an International Institution which was established by the Association of African Central Banks (AACB) comprising Central Banks throughout Africa.

The establishment of the Centre is the direct result of the resolution adopted by the OAU Assembly of Heads of State and Government at their meeting in Addis Ababa in May 1973. At that meeting, the Heads of State among other decisions requested the Association of African Central Banks to consider the establishment of an African Centre for Monetary Studies.

Following that decision, the Assembly of Governors of the AACB at their Third Regular Meeting held in Lagos in August 1973 appointed a Study Group comprising two Directors of Research from each of the subregional

committees of the AACB. The study group appointed a fact-finding mission comprising representatives from each of the four Subregional Commissions. The terms of reference of the fact-finding mission was to visit similar institutions outside Africa and obtain information regarding their structure, financing arrangements and operations, and provide other relevant information which would facilitate the work of the Study Group.

The report of that mission and other matters relating to the establishment of the African Centre for Monetary Studies were discussed by the Study Group in a series of meetings in 1974 and 1975. At the conclusion of their deliberations, the Study Group produced a Draft Statute defining the objectives, organization, structure, and operations of the Centre; criteria for the location of the Centre; proposals relating to financing of the Centre; and a provisional budget.

The recommendations of the Study Group were discussed at the Fourth Regular Meeting of the Assembly of Governors held in Kinshasa in August 1975. At that meeting the Governors agreed to establish an African Centre for Monetary Studies, appointed a Governing Council to run the Centre, approved the Budget of the Centre and decided to locate the Centre in Dakar, Senegal.

The Centre commenced operations on 1 January 1978. The period between August 1975 when the Governors decided to establish the Centre and the 1 January 1978 when it actually began work was occupied with the preliminary arrangements and the search for a highly qualified and experienced African economist to run the Centre. It was officially inaugurated on 1 June 1978 by Mr. Abdou Diouf, the then Prime Minister of the Republic of Senegal, now the President.

## ACTIVITIES OF THE CENTRE DURING 1983

### Research and Training

#### 1. Research

The 1982/1983 research programme approved by the Governing Council was launched in the second quarter of 1981. However, the initial stage of the programme really started only during the last five months of 1982. By the end of the year, the five studies which had reached an advanced stage at the time of the last Governing Council meeting, were almost completed and were to be finalized in the first half of 1984. The studies are the following:

(a) The feasibility study of the African Monetary Fund presented in two volumes:

- (i) The African Monetary Fund: Adjustment problems in African countries, proposed facilities and conditionalities;
- (ii) The African Monetary Fund: Currency arrangements in the AMF framework: a proposal;

(b) Capital markets and development in Africa;

(c) Exchange rate structure in Africa;

(d) Exchange rate problems in creating a Central African Clearing House;

(e) Possible solutions to African balance-of-payments problems.

Two of these studies i.e. "Exchange rates problems in creating a Central African Clearing House" and "Possible solutions to African balance-of-payments problems" were almost completed at the beginning of the year.

However, these studies had to be up-dated in the course of the year

to reflect recent developments on the economic scene in Africa and around the world.

#### Studies entrusted to consultants

In our 1982/1983 programme, three studies were undertaken by UNCTAD and ECA consultants under UNDP technical assistance. The studies are:

(a) "The external debt of African countries and development," undertaken by UNCTAD consultants. The study has been completed and the final version has been received by the Centre;

(b) "Exchange rate fluctuations," undertaken by ECA.

(c) "Border trade in Africa," is also being undertaken by ECA. The Centre received the ECA consultants who came on a mission, discussed the various aspects of the topic with them and made recommendations with a view to improving the analyses and the conclusions.

#### 2. Training

The Centre's training programme acquired a new and significant component in 1983. In addition to its interbank-exchange and seminar programmes, the basic courses were introduced for the first time, namely, National Accounting and Financial Programming, and Statistics and Research Methodology. Participation in the interbank-exchange programme declined somewhat. Only one of the two planned seminars was held while the second one was postponed to the first semester of 1984.

Arrangements for the installation of simultaneous translation equipment financed by UNDP reached an advanced stage. The Assembly of Governors approved the hiring of two full-time interpreters. They will be assigned to service the Centre's basic training course and also help in the translation

of symposium and seminar papers, and other publications of the Centre.

Participation in the Centre's training programmes by member central banks and international organizations which made guest speakers available to the Centre, was extremely high and encouraging.

(a) Basic courses

Two basic courses, Statistics and Research Methodology, and National Income Accounting and Financing Programming were held in two sessions. Two groups of participants were admitted to the programme. The first group had their courses running from 23 May to 31 July 1983 taking Statistics and Research Methodology (French), and National Accounting and Financial Programming (English). The second group's programme ran from 5 September to 11 November 1983 offering Statistics and Research Methodology to the English-speaking group and National Accounting and Financial Programming to the French-speaking group. A total of 28 participants drawn from 13 member central banks participated in this programme. In addition to the Centre itself, three member central banks, and three international organizations provided lecturers to service the newly introduced basic courses.

(b) Seminars

During the year, as mentioned earlier, the Centre held only one of the two seminars planned for the year. This was on "External Debt Problems of African countries in the 1980s" which was held in Tunis, Tunisia, from 12 to 23 September 1983. It was attended by 61 participants drawn from 23 member central banks and international organizations. Guest lecturers were drawn from the University of Yaounde, the Bank of Egypt, UNCTAD, the IMF, the World Bank, the Paris Club and Cleary Gottlieb, Stean and Hamilton Law Firm.

The second seminar scheduled for 1983 on "Exchange Control and Economic Development of African Countries" could not be held principally due to lack of volunteers to host it. It was, however, deferred to the first semester of 1984.

(c) Interbank placement

The enthusiasm about this programme that was demonstrated during the first two years of its introduction was not repeated in 1983, ostensibly because of the hardening of the economic situation in the countries of member central banks. Fewer people participated in the interbank-exchange programme in 1984.

**The West African Clearing House (WACH)**

Established in June 1975 with its headquarters in Freetown, Sierra Leone, the West African Clearing House is a multilateral clearing mechanism comprising nine member Central Banks which cover 15 States of the West African subregion. They are:

1. The Central Bank for West African States - BCEAO - which serves the States of Benin, Burkina Faso, the Ivory Coast, Mali, the Niger, Senegal and Togo;
2. The Central Bank of the Gambia;
3. The Bank of Ghana;
4. The Central Bank of the Republic of Guinea;
5. The National Bank of Guinea-Bissau;
6. The National Bank of Liberia;
7. The Central Bank of Mauritania;
8. The Central Bank of Nigeria;
9. The Bank of Sierra Leone.

## Structure

The supreme governing body of the West African Clearing House is the Exchange and Clearing Committee which comprises the Governors of member Central Banks.

It is aided in its task by the Exchange and Clearing Sub-Committee comprising not more than two representatives appointed by the Governor of each member Central Bank.

The day-to-day running of the Institution is in the hands of an Executive Secretary, assisted by a Deputy Executive Secretary.

## Objectives

The objectives of the West African Clearing House are:

(a) To promote the use of the currencies of the members of the Clearing House for subregional trade and other transactions;

(b) To bring about savings in the use of the foreign reserves of the members of the Clearing House;

(c) To encourage the the members of the Clearing House to liberalize trade among their respective countries; and

(d) To promote monetary co-operation and consultation among the members of the Clearing House.

## How the system operates

The procedure is that the commercial bank which is effecting a customer's payment order in favour of another individual in another country in the subregion, delivers the order to the Central Bank in its one country which, in turn, notifies the Clearing House and at the same time sends the order to the Central Bank in the beneficiary's country. The Central Bank in the benefi-

ciary's country, on receiving the order, credits the beneficiary's commercial bank which will, in the final analysis, effect payment to the beneficiary and at the same time notifies the Clearing House. The latter then credits the Central Bank in the beneficiary's country and debits that of the country in which the sender resides. The procedure varies slightly in respect of transactions under Letter of Credit. In this regard, the great advantage for the exporter is that he is paid immediately upon presentation of the proper documents to his commercial bank.

## Unit of account

Apart from the BCEAO member countries, all of which accept the CFA Franc as legal tender, each of the other member countries of the Clearing House has its own currency. To circumvent the problems posed by the multiplicity of currencies with varying exchange rates, a common unit of account, the West African Unit of Account, which is equal to one Special Drawing Right of the IMF was adopted. Through this unit, the relative values of the various national currencies are determined.

## Problems encountered by the WACH

Apart from some rather minor difficulties which have gradually been eliminated, the main problem which the clearing mechanism encountered in the early years of its existence was that of getting the banking system, which is not unknown for its conservatism, to accept a novel way of channeling subregional transactions. This problem was compounded by the fact that the commercial banks, the initiators of all transactions through the clearing system, enjoyed closer working relationships with banks overseas of which they are a part, than with similar institutions within the subregion.

Another problem which continues to hamper the smooth flow of transactions

is that of communications. Because of the poor communications network linking countries in the subregion, the speed with which transactions were supposed to be affected under the new system, considering the proximity of the subregional capitals to each other, has not always been realized.

#### Use made of the clearing facility

It must be said at the outset, and regrettably so, that only a small percentage of the subregion's total current account transactions are channelled through the clearing system. The reasons for this situation are many and varied. Basically, countries within the subregion are all primary producers with only fledgling industries which, often, find it difficult to satisfy domestic demand, let alone have a surplus for export to neighbouring countries. Their economies are overseas export-oriented, with little scope for intra-trade. Furthermore, given the traditional attitude of the majority of the economic operators towards the banking system, it can safely be assumed that a substantial proportion of transactions with the subregion (difficult to quantify) does not go through official banking channels.

The use made of the Institution is also affected by the exchange control regulations enacted by certain States in an effort to conserve their meagre foreign exchange earnings, particularly in the ever-worsening economic situation in which the developing countries find themselves. Notwithstanding these constraints, member banks have, generally speaking, sought, whenever they could, to channel their eligible transactions through the clearing mechanism. The figures for transactions for the last five-year period only give an overall picture of their participation as, for reasons of brevity, analysis of the figures cannot be provided. They, however, bear eloquent testimony to the increasing use made of the mechanism

in spite of adverse economic trends which considerably slowed down the movement of transactions in 1981/1982. These have picked up again as shown by the figures for 1982/1983 and there is every possibility that those for the current year, 1983/1984, will be the highest ever, since the Clearing House started its operations.

In spite of this initial success, the Exchange and Clearing Committee has however not relented in its efforts to gain full acceptance of the system by economic operators throughout the subregion. In pursuance of this, the Executive Secretary was mandated, in 1983, to organize seminars in the various countries of member banks of the West African Clearing House. This is mainly to ensure that wide publicity is given to the activities of the Institution within the subregion. A programme of seminars was thus drawn up and so far, seminars have been held in Abidjan, Accra, Monrovia, Sierra Leone and Guinea. The rest of the countries in the subregion would have been covered by early 1985.

#### Advantages

The more obvious advantages to be derived from the clearing system are the interim financing which minimizes the frequency of settlements in foreign exchange between Central Banks. Remittance charge are cut down, which in turn reduces the cost of financing trade between members.

#### Members' contributions

The West African Clearing House operates on a budget to which all member Central Banks contribute according to a well-defined formula.

The only other source of funding the Institution once benefited from was through the UNDP programme of assistance initiated in 1977 and which came to an end in 1982.

The assistance received within the framework of this programme was used in financing:

(a) The organization of seminars;

(b) The financing of study tours to various institutions in Asia, Europe and Latin America;

(c) The acquisition of equipment.

It must finally be pointed out that the West African Clearing House works in close co-operation with other regional and subregional organizations like the African Centre for Monetary Studies, the United Nations Economic Commission for Africa and the Economic Community of West African States.

<u>YEAR</u>	<u>TOTAL TRANSACTIONS*</u>	<u>AMOUNT SETTLED</u>	<u>AMOUNT CLEARED</u>
1978/79	74,286,266.10	59,673,026.71	15,613,239.39
1979/80	108,349,431.67	87,030,012.48	21,316,492.27
1980/81	167,650,305.25	138,289,865.48	29,360,439.77
1981/82	143,211,988.13	114,291,775.25	28,920,212.88
1982/83	158,310,039.42	143,899,128.74	14,410,910.68

\* In West African Units of Account.

## EARTH RESOURCES SERVICES

### The Regional Centre for Training in Aerial Surveys

#### I. Establishment

Following resolution 164 (VIII) OF the Conference of Ministers of ECA held in 1963, the Regional Centre for Training in Aerial Surveys, Ile-Ife was established in 1972 under the auspices of ECA by four African countries namely Nigeria, Ghana, Senegal and Benin.

Four other countries adhered later on, bringing the total number of participating countries to eight. They are Mali and Burkina Faso in 1980, Cameroon in 1983 and the Niger in 1984.

#### II. Objectives

The Centre was established with the following objectives:

(a) Provision of theoretical and practical training in the field

of aerial surveying, particularly in photogrammetry, photo-interpretation and airborne geophysical surveys;

(b) Conducting seminars and workshops with a view to providing an opportunity for the exchange of information and experience in the field of aerial surveys;

(c) Provision of advisory services, upon request, in aerial surveys to the Governments of member States of ECA as well as their Agencies.

#### III. Activities of the Centre

##### 1. Teaching

Courses are run in English and French. Until 1982, courses were exclusively based on the training of technicians and operators in photogrammetry and 265 students have been trained in those two courses.

In addition to photogrammetry, a photo-interpretation course for the use of aerial photographs in population census had been organized for 19 students in January 1983.

The photo-interpretation courses for geology, forestry and soil sciences did not follow immediately as scheduled due to lack of candidates with the required qualifications.

In January 1985 the technologist's course in photogrammetry will start with five students and will last 16 months while four students will undergo the photo-interpretation courses for soil sciences and geology.

Efforts are being made in order to increase the students intake.

## 2. Conference and seminar

With a view to providing an opportunity for the exchange of experience in the field of aerial surveys education, the Centre organized, from 15 to 18 August 1982, in collaboration with the International Society for Photogrammetry and Remote Sensing, a Conference on Photogrammetry and Remote Sensing Education; and a seminar whose theme was "Impact of Aerial Surveys on National Development" following immediately from 18 to 22 August 1982.

## 3. Consultancy services

Some plotting jobs were carried out by the Centre for Nigerian companies. Though not yet important, those jobs enable the Centre to be known in the Nigerian market.

## 4. Future programmed activities

It is envisaged in the work programme approved by the Governing Council, to provide the following courses in the near future:

- (a) A course in Remote Sensing

which must in the first instance merge with photo-interpretation courses;

- (b) A course in Cartography; and

- (c) A course in Aerial Photography.

The following activities should be equally undertaken:

- (i) Consultancy/advisory services for African countries in an intensive manner;
- (ii) Organization of workshops, seminars, symposia, etc.

## IV. Lecturing staff

In addition to lecturers and technical instructors (four Francophones and six Anglophones) including the Director and the Deputy Director, nine new lecturers and technical instructors have been offered appointment by the Centre in September 1984.

These new lecturers will greatly help not only in teaching activities, but also in the elaboration of new syllabuses.

## V. Physical development

With a view to providing necessary accommodation facilities for present and future activities of the Centre, the Governing Council has recently approved the Master Plan for Physical Development together with the implementation of the first phase of constructions including:

- (a) Two 2-story blocks to house lecture rooms, laboratories staff offices and library;

- (b) A student hostel to accommodate 30 students; and

- (c) The necessary infrastructural facilities.

The estimated cost of this first phase amounts to \$US1.4 million and the host country Nigeria has granted the sum of \$US384.00 to the Centre.

#### VI. Statement of financial contribution

Out of the total amount of financial contributions due to the Centre since its inception, 78 per cent have been paid so far by participating countries (not taking into account the 1984/85 contributions just communicated to countries).

Efforts are being made in order to obtain payment by member countries of arrears of financial contributions amounting to \$US1 million, and to that effect a trip to member countries has just been rounded up with assurances given by most of the countries to pay at least part of their arrears in early 1985.

#### VII. Problems

1. The Centre continues to make an effort in order to attract more African countries. Even if countries are still showing interest (i.e. adhesion of Cameroon in 1983 and the Niger 1984) there is still a lot to achieve on this matter.

2. Switzerland is the only donor country assisting the Centre. Efforts are still being made towards other countries but no concrete result has been achieved so far.

### **Regional Centre for Services in Surveying, Mapping and Remote Sensing**

#### Background of the Centre

In September 1963, during the first meeting of the United Nations Regional Cartographic Conference for Africa, it was emphasized that surveying and mapping were essential tools for

natural resources inventory and development. At that first conference, the inadequacy or absence of service in cartography and remote sensing was identified as one of the factors militating against natural resources development in Africa. It was therefore resolved that Centres to render services in these fields to African countries should be established on the African continent.

Consequently on the initiative of the United Nations Economic Commission for Africa (ECA) and at the invitation of the Government of the Republic of Kenya, a meeting was convened in Nairobi from 16 to 20 September 1974 to discuss and agree on the action to be taken in order to establish at least one centre that would render services in surveying and mapping. Agreement was reached to locate one such centre in Nairobi, Kenya. By March 1975, five member States including Kenya, Uganda, the United Republic of Tanzania, Malawi and Somalia had signed the Agreement establishing the Centre. By the end of 1981, four other countries i.e., Comoros, Lesotho, Swaziland and Zambia had also joined the Centre. Sudan was admitted in May 1984.

#### Objectives

The objectives of the Centre are:

(a) To provide services in the field of surveying, mapping and remote sensing including in particular, but not limited to aerial photography, photogrammetry and orthophotomapping, photo-interpretation and remote sensing, airborne geophysical survey and electronic computation, first order geodesy, cartographic services, multicolor printing and the checking, calibration and maintenance of surveying, mapping and remote sensing equipment;

(b) To provide training for nationals of the contracting parties in surveying, mapping and remote sensing;

(c) To carry out studies and



research in surveying, mapping and remote sensing;

(d) To make available to the contracting parties data and results of the studies, research and tests carried out by the Centre; and

(e) To provide advisory services upon request on problems relating to surveying, mapping and remote sensing to member States of the Economic Commission for Africa and their agencies.

#### Governance of the Centre

The Centre has a Governing Council, the Chairman of which is the Executive Secretary of UNECA. The Governing Council is assisted in its work by the Technical Committee. The Executive of the Centre is the Director-General who is responsible to the Governing Council for the operations of the Centre.

The Governing Council is composed of members from countries that have adhered to the Agreement Establishing the Regional Centre for services in Surveying, Mapping and Remote Sensing.

#### Development

In an effort to meet increasing cartographic and remote sensing needs, the Centre has been able to develop over the years, technical Departments that are capable of rendering the specialized services. These Departments include:

- (a) Remote Sensing;
- (b) Geodesy;
- (c) Map Production; and
- (d) Instrument Repair and Maintenance.

The activities of the Centre will therefore be described under each Department.

#### Activities

##### (a) Remote sensing

The Department of Remote Sensing provides training in the application of remote sensing techniques to:

- (i) agriculture,
- (ii) forestry,
- (iii) water and mineral resources,
- (iv) environmental monitoring and
- (v) transport engineering.

The training courses which are designed to give a theoretical and practical introduction to remote sensing by satellite are discipline-oriented. During the last five years, over 600 participants from 23 African member States have attended the courses (see annex 1)

Apart from training, the Remote sensing Department also provides at cost, satellite imagery to member States. It archives world-wide coverage of satellite imagery and responds to an average of 850 requests a month. In addition to photo laboratory equipment, the Department also houses photo-interpretation and analysis instruments which are used for both teaching and project work.

##### (b) Geodesy

The main activities of the Geodesy Department include:

- (i) Provision of ground control for photomapping using doppler methods;
- (ii) Co-ordination of the Africa Doppler Survey (ADOS) project which aims at establishing a network of more than 200 zero order points and eventual

unification of African geodetic networks and datum;

(iii) Examination and analysis of the Eastern and Southern African Subregional Geodetic Networks for purposes of strengthening;

(iv) Establishment of calibration based in each of the countries of member States;

(v) Study of existing cadastral and hydrographic problems of the subregion for the purposes of improving the provision of the much needed data;

The provision of ground control, the study of geodetic networks, cadastral survey techniques and the updating of hydrographic charts and training is an on-going activity.

#### (c) Map Production

The main activities in map production consist of:

(i) Evolving methods and techniques of rapid production and revision of small scales (1/2,500,000 - 1/1,000,000) map coverage badly needed for resources planning; Landsat imagery is used as an up-to-date source of detailed information. Already 3 sheets on Kenya, 3 on the United Republic of Tanzania, 2 on Uganda and one on Zambia have been produced;

(ii) Due to lack of adequate facilities in a number of countries the Centre has undertaken to print for them some of their maps. A total of 55 maps of 500 copies each, have been printed for Kenya, the United Republic of Tanzania, Uganda, and Zambia during the last six months alone;

(iii) Training of cartographers: In order to introduce Cartographers from National Survey Organizations to new techniques of map production, the Centre through the Department of Map Production, conducts training of at least two courses a year.

#### (d) Engineering

The Engineering Department carries out repairs and maintenance of optical and electronic survey equipment for member States. During the last 12 months the Department repaired a total of 322 instruments as shown in table I.

#### Development of the permanent site

The Centre embarked on the development of its permanent headquarters, at the beginning of March 1984. The construction of the first stage of Phase I is estimated to cost \$US770,000. The new accommodation will provide approximately one and a half times the present floor space of 1,000 sq.m.

Table I. Instruments repaired between June 1983 and June 1984

Country	No. of optical instruments	No. of electronic instruments	Centre's cost of Repair \$US	Commercial Cost \$US	Replacement value \$US
Kenya	207	16	49 923	100 000	2 493 000
Tanzania	92	6	77 500	152 000	1 550 367
Uganda	21	-	12 130	24 260	521 300
Swaziland	2	-	442	885	4 450
Seychelles	1	-	800	1 600	5 517
	322	22	140 795	278 744	4 354 634

### Technical assistance

The Centre received the first technical assistance from USAID which supported mainly the establishment of the Remote sensing facility for the Eastern and Southern African Subregion. The assistance worth \$US2,364,000 was originally for the period 1979 to 1984, but has now been extended to September 1985. Since then technical assistance has been

received from IDRC (Canada), UNDP, EEC, India, and France as indicated in table II.

In addition, the Centre has continued to receive logistic support from the Economic Commission for Africa (ECA), which has played a central role in securing the above technical assistance.

Also the Centre has run training courses supported by FAO, UNESCO, UNEP and ESA (European Space Agency).

Table II. Technical Assistance Provided by Donor Countries or Agencies

Donor country/ agency	Amount \$US	Period	Programme being supported
USAID	2 364 000	1979-1985	Development of Remote Sensing trainer user facility.
UNDP	750 000	1983-1986	Supply of equipment and field vehicles for the geodesy programme
IDRC	195 000	1983-1984	Photo-mapping project
EEC	400 000	1984-1985	Feasibility study for satellite ground receiving and processing station
FRANCE	100 000	1983-1984	Establish courses run in French for Francophone African member States
INDIA	17 500	1984	To study cartographic and remote sensing needs of member States

The Centre would like to take this opportunity to thank ECA for rallying other Agencies' support.

#### Programme of work for 1984/1985

The programme of work for the remainder of 1984 and for 1985 has been prepared to implement the Lagos Plan of Action through technology transfer and the laying of the basic infrastructure necessary for the development of road, rail, and telecommunication. The basic network which will be established through ADOS will provide the ground framework necessary for such projects as Trans-African Highways, railways or telecommunication links.

#### Programme 01: Administrative and Library Services

The Administration Department will continue to provide services to the other technical departments. In particular, the Library Services which in addition to providing normal reference services will also disseminate information on and distribute satellite imagery to various clients in countries of member States.

#### Programme 02: Engineering

The provision of maintenance and servicing of survey equipment from member States will continue to receive priority. It is planned to increase the capacity of the Department so that the number of pieces of equipment repaired is increased from the present 322 to 600 a year. The turn over will also be cut down to a maximum of two weeks. Visits to member States will also be increased so that each country is visited at least once a year not only to service equipment but also to determine their future needs. The Department of Engineering, like all the other Departments, is gearing itself to develop greater self-reliance through revenue generating services.

To enable national cartographic organizations to carry out instrument inspection and minor repairs it is intended to train at least one technician for each country. The technicians will be attached to the Engineering Department for a few months, where they will undergo intensive practical training.

#### Programme 03: Remote Sensing

The main goal during the first part of 1985 will be to mobilize donor support for the programme. USAID which has been providing technical assistance to develop the remote sensing facility has expressed strong desire to have other donors participate in further development of the Department. Approaches to various donor agencies are also envisaged.

Training and user activities will continue and with the support of such United Nations bodies as FAO, UNEP, UNESCO, WMO etc. joint disciplinary oriented courses will be mounted.

Participation in projects where remote sensing input is needed will continue. The Department is, therefore, expected to be involved in a number of country projects.

#### Programme 04: Geodesy and Topographical Surveys

The Geodesy Department will be involved in the co-ordination of the final part of field observation and will have established a fully operational computing Centre. In conjunction with other computing Centres in West Africa, USA and France (IGN) a start will be made on initial ADOS network adjustments.

As part of the ADOS programme two training courses on Doppler Survey and network adjustments have been planned to be conducted during 1985. Other post-ADOS courses are envisaged

to train nationals on the use of ADOS data to improve their geodetic networks.

Other activities that will have started before the end of 1984 and continue beyond 1985 will include the establishment of calibration bases, the co-ordination of the proposed hydrographic charting, introduction of modern techniques in cadastral surveys and provision of ground control for photomapping.

#### Programme 05: Mapping

Through technical assistance received from both UNDP and IDRC the photomapping programme will attain a high capability. It is envisaged that the Mapping Department will be able to produce from the present four topo sheets a year to six or seven sheets a year.

The map re-printing programme will also be accelerated to about 30 maps a year (of 500 copies each).

#### Programme 06: Development of a permanent site

With the expected completion of the development of the first stage of Phase I, the Centre envisages to set aside a fund so that other phases

can be embarked upon. In this way, the Centre will be able to get additional space to cater for the expansion of its facilities.

#### Conclusion

The Centre's role and its services have begun to have a great impact on the member States, especially in areas of cartography and remote sensing. It is hoped that this will influence many more member States to indicate their spirit of commitment by becoming signatories and honouring their statutory obligations. It is only this level of commitment that will attract donor agencies and rally their support. Otherwise some of them will continue to adopt a "wait and see" attitude. With the combined moral, material and financial support from both the African member States themselves and donors, the Centre will be able to expand its capability, which will enable it to render more services. As they are aimed at inventorying and development of the countries' natural resources, the Centre is going to play a greater role in their economic and social development and in the implementation of the Lagos Plan of Action in the Natural Resources Sector.

T R A I N I N G  
Number of trained participants by discipline and country of origin  
March 1979 - June 1984

Country	Agric./ Land Use	Agronomy (French)	Forestry /Range	Hydro- Geology	Carto./ Geodesy	Transport engineer- ing	Teaching with remote sensing data	Total
Botswana	20		3	1	3		2	29
Burundi	8	4		7	1			20
Comoros	1	1			2			4
Ethiopia	4				2	6	3	15
Kenya	49	15	11	18	22	33	5	180
Lesotho	2			3		3		8
Liberia				3		2		5
Malawi	2		3	1		3		9
Madagascar	2	2		3	1	2		10
Mozambique	2			4		2		8
Nigeria				2				2
Rwanda	8	6		3	1	2		20
Ghana				1				1
Somalia	1		2	1			2	6
Sudan	9		5	5	7	13	3	42
Swaziland	1		6	1	2	11		11
Tanzania	28		28	8	8	24	12	135
Tunisia				4				4
Uganda	5		7	5	5	13	8	57
Zambia	2		5	8	3	12		31
Zimbabwe	11		2	3	2	5	2	27
Total	155	28	72	83	53	129	38	634

**NOTES:** In addition, two training courses were conducted in French for Francophone countries and had the following participants:

(a) Basics of remote sensing technology: four from Burundi, one from Comoros, two from Madagascar, and six from Rwanda;

(b) Geological applications: Burundi, three; Zaire, two; Guinea, two; Chad, two; Gabon, two; Senegal, two; the Niger, two; Ivory Coast, one; and Central African Republic, one.

### **The Eastern and Southern African Mineral Resources Development Centre**

The ESAMRDC continues to render services in mineral fields of activity in accordance with requests made by participating governments. These services, however, vary from one country to another, often reflecting the level of mineral resources development in the respective countries. In all the projects that it executes, the Centre's major guideline is to supplement available national facilities.

Analyses of the type of requests submitted by governments demonstrates that a great number of them deal with various aspects of exploration. Of recent, however, there are indications of definite evolution in this field - requests are getting better defined and more specific. It is believed that this has come about as a result of improved contacts and regularized working relationship between the Centre and the technical personnel of the member States.

Among the projects implemented by the Centre are:

The Industrial Minerals of the United Republic of Tanzania, Ethiopia and

Uganda were investigated for possible use of these raw materials in the establishment of mineral-based industries, with the aim of creating import-substitute products and the saving of foreign currency. The outcome of the recommendations of the study is gratifying - for example, Ethiopia is engaging a consultancy service to undertake a complete feasibility study of Soda Ash and Bentonite deposits of Lake Chitu, with the aim of not only satisfying local demand but also opening up an export market. Similarly, the United Republic of Tanzania has commissioned an in-depth study of its gypsum and magnesite deposits and has undertaken bulk sample analysis of its unique carbonatite deposit.

Metallic Deposits: The reappraisal by the Centre of Tin/Tungsten mineralization in three selected mixes in Uganda has generated renewed interest in the prospect. In fact, the Government of Uganda is in the process of negotiations with potential investors for detailed investigation of the area to determine the best method of exploiting the deposit.

Earlier the Centre had made an evaluation of the Kilembe Copper Mine of Uganda, both in the field and through the study of existing data. The Uganda Government has reported that on the basis of the Centre's work, together with others, the EEC has made a credit grant available to Uganda to conduct a feasibility study to investigate the possibility of reopening the mine which has a huge cobalt by-product.

In Ethiopia, evaluation of the Copper/Zinc prospects around Asmara was made, and the recommendations of the Centre has assisted the government in negotiations with possible investors and bilateral donors.

Based on the evaluation and assessment by the Centre of the Liganga iron ore, the Government of the United

Republic of Tanzania decided to delay investment in the project until an adequate feasibility study was undertaken.

The encouraging results of field surveys by the Centre and subsequent analytical findings regarding gold occurrences around Lake Victoria, Tanzania, has set-up a mobile pilot plant to evaluate gold output from the prospect.

Training: The ESAMRDC sponsored four geoscientists from the subregion to attend a one-month course in Professional Development Training Seminar in mineral economics at McGill University. The Centre, also, in co-operation with the International Union of Geological Sciences, International Institute for Resources Development, UNESCO, and UNECA organized and conducted a multinational course on Modern Methods of Capture, Storage, and Evaluation of Geological, Geochemical and Resources Data attended by representatives of nine countries of the subregion. At country level, geochemical workshops were conducted in the United Republic of Tanzania, Ethiopia, Mozambique and Uganda while a sub-regional, multinational geochemical workshop was conducted in Arusha for professional level geoscientists.

On the other hand, the Centre has arranged two-year fellowship programmes for four geologists from member countries for a course on Quaternary Geology in Belgium.

Documentation: With contribution from the United Nations Africa Trust Fund, the ESAMRDC has established a Reference Library and Documentation Unit which boasts the latest professional journals and magazines and modern, up-to-date reference books and literature. The library serves all geoscientists in the vicinity.

At this juncture, it should be mentioned that the UNDP has finally agreed to maintain a presence in the

operations of the ESAMRDC beyond the end of 1983. Their assistance will continue in the form of consultancy services, training, etc.

Finally, negotiations between the ESAMRDC and the EEC have at last resulted in the issuance of invitations by the Centre for the redesigning of the ESAMRDC's essential laboratories - which are expected to be financed by the European Development Fund (EDF).

### **The African Regional Remote Sensing Council**

The African Regional Remote Sensing Council, with headquarters at Bamako, Mali, was established in 1979 as a result of the desire of African States to use the most up-to-date technology for the better exploration, development and monitoring of their natural resources.

As part of a chain of African multinational institutions devoted to the discovery and assessment of natural resources, the Council was conceived as an instrument that would perform the vital function of directing and co-ordinating the development and assessment of the natural resources of the region by means of remote sensing.

#### Organs:

The Conference of Plenipotentiaries, Supreme Organ;

The Board of Directors;

The Technical Advisory Committee;

The Secretariat;

The Regional Management Committees (3).

#### The Regional Remote Sensing Centres:

- (i) Cairo for North Africa (not yet regionalized);



- (ii) Ile-Ife in Nigeria;
- (iii) Kinshasa for Central Africa (in the process of being regionalized);
- (iv) Nairobi for East and Southern Africa;
- (v) Ouagadougou for West Africa.

#### Actual member States

Algeria, Benin, Burkina Faso, Cameroon, Comoros, the Congo, Egypt, Ghana, Guinea, Ivory Coast, Kenya, Liberia, Mali, Mauritania, the Niger, Senegal, Sierra Leone, the Sudan, Togo, Uganda, the United Republic of Tanzania, Zaire, Zambia and all OAU member States are potential members.

#### Objectives

- (a) To co-ordinate and harmonize member States' policies in remote sensing;
- (b) To promote the use of remote sensing for the inventory, exploration, exploitation and management of the natural resources of Africa;
- (c) To encourage the establishment in Africa of receiving, processing, training and remote sensing users assistance Centres;
- (d) To promote and encourage co-operation between member States on the one hand and the African Remote Sensing Council and co-operating countries and organizations on the other hand.

#### Execution of 1983-1984 programme of work

##### 1. Introduction

The secretariat of the Council is a co-ordinating, harmonizing and promoting organ of the activities of the other organs of the Council

and should not be considered as a Centre for training or execution of projects.

Its programme of work is decided by the Conference of Plenipotentiaries through recommendations and resolutions.

##### 2. Strengthening of the structures of ARSC secretariat

The secretariat has:

(a) Recruited a temporary Administrative and Financial Assistant and a second driver;

(b) Modestly continued to equip its offices.

##### 3. Assistance to member States

Since its poor resources were insufficient to carry out this mission, the secretariat continued to have relations with co-operating countries and organizations to negotiate technical and financial assistance for member States.

The objective of this assistance will be the organization of informative seminars, the request of training scholarships, consultants' services and the equipment of national remote sensing units.

##### 4. Assistance to regional Centres

Since the regional Centres of the African Remote Sensing Council are autonomous, the activities of the secretariat dealt with:

##### For the Nairobi Centre

(a) The sensitization of member States of the subregion so that they officially support the project of the receiving and satellite data processing station and whose feasibility study will be financed by the EEC;

(b) The participation in the Centre's activities and meetings in order to make sure they meet the objectives determined by the African Remote Sensing Council.

For the Ouagadougou Centre

(a) The organization of the selection of candidates to different positions;

(b) The participation in the Centre's activities and meetings to make sure they meet the objectives determined by the African Remote Sensing Council.

For the Kinshasa Centre (in the process of being regionalized)

(a) The assistance in the elaboration and presentation of the requests for assistance submitted to co-operating countries and organizations;

(b) The sensitization of Zaire national authorities for the effective starting of the regional activities.

For the Cairo Centre (not yet regionalized)

The relations with the responsibilities of the Centre in order to investigate the ways and means of the regionalization of the activities of this Centre.

5. Development of co-operation with co-operating countries and organizations

In order to develop its administrative and technical capacity on the one hand and to promote its co-operation with the international community on the other hand, the secretariat:

(a) Participated actively in the GOSS (Group of the Operators of Spot Station) meeting, the Fourth Conference of the Chief Executives of the ECA-Sponsored Institutions, the AAC Fourth Council and in the PATU First Administrative and Technical Conference;

(b) Continued its relations with co-operating countries and organizations as well as with satellites operators to negotiate the assistance necessary to its development on the one hand and to be acquainted with the present and future developments of aerospacial remote sensing technics on the other hand.

6. Difficulties encountered

(a) Structural difficulties

(i) The actual structure of the African Remote Sensing Council which does not explicitly endow the secretariat with the power to manage the subsidiary organs, prevent it from fulfilling effectively its mission of co-ordination and harmonization of the activities of the different regional Centres;

(ii) The overlapping of the attributions of the Council with those of certain other organizations prevents its development as wished by member States.

(b) Financial difficulties

The non-payment of contributions by many member States hampers the realization of the programme of work of the Council.

## African Association of Cartography

Despite its meagre means, the African Association of Cartography has never ceased since its founding, in:

(a) Demonstrating to the African Governments the need to hasten their cartographic programmes;

(b) Giving a new impulse to the training of specialized manpower at every level in the field of the geographical sciences;

(c) Contributing to the completion of priority programmes as defined by OAU, ECA and the AAC Council;

(d) Promoting bilateral co-operation between African sister countries.

Four main projects are included among its priorities and which are models of regional projects. These are:

(a) The OAU project of the international hydrogeological map of Africa which is to be co-ordinated by the AAC. This major undertaking aims at achieving a better application and a better co-ordination of the policies of African countries on the development of the ground water resources existing in all African countries and for fighting against drought and desertification;

(b) The African Doppler survey (ADOS) project. This is a major undertaking concerned with the establishment of a continental geodetic network of the order zero, using satellite geodesy. At the present time the AAC is co-ordinating an African data processing consortium created under its sponsorship (composed of the Institut national de cartographie, Algeria, the Office de la topographie et de la cartographie, Tunisia, and the Institut géographique de la Côte d'Ivoire, the Ivory Coast) to act as the second computing centre

for ADOS observations. The AAC has successfully organized a post ADOS training course in Yamoussoukro;

(c) AAC in collaboration with ECA is carrying out an appraisal of manpower needs in cartography and remote sensing in Africa and computing as directory of related training institutions in Africa;

(d) AAC in collaboration with ECA prepared a working document for a meeting of a group of experts on standardized specifications for topographic mapping in Africa;

(e) The AAC is represented in the regional organizing committee for the Year of Cartography in Africa which will be celebrated in 1986.

The membership of the AAC at present is as follows:

### AAC Members

Institut national de Cartographie .....	Algeria
Institut national de Cartographie.....	Benin
Institut de géographie	Burkina Faso
Service géographique	Cameroon
Service topographique	Central African Republic
Institut géographique Geodetic of department authority - - - - -	Congo
Ethiopian mapping agency	Egypt
Cadastre et service topographique - - - -	Ethiopia
Survey department - - -	Gabon
Service topographique et géographique - - - - -	Ghana
Institut géographique -	Guinea
Cartographic committee survey - - - - -	Ivory Coast
Liberian cartographic service - - - - -	Kenya
Surveying department of Libya - - - - -	Liberia
	Libyan Arab Jamahiriya

Institut national de  
geodesie et de  
cartographie - - - - - Malagasy  
Service topographique - - Mauritania  
Service géographique - - Morocco  
DINAGECA - - - - - Mozambique  
Service topographique et  
du cadastre - - - - - Niger  
Federal survey department  
service géographique  
national - - - - - Senegal  
Survey department - - - Sudan  
Service topographique - Togo  
Office de la topographie  
et de la cartographie Tunisia  
Department of lands and  
surveys - - - - - Uganda  
Survey and mapping- - United  
Republic  
agency - - - - - of Tanzania  
Institut géographique - - Zaire  
Survey department - - - Zambia

#### AAC Associate members

##### 1. African institutions

Cadastre - - - - - Algeria  
Ecole nationale des  
Sciences geodesiques  
d'Arzew - - - - - Algeria

SETHYCO - - - - - Algeria  
Cadastre - - - - - Congo  
Regional centre for  
services in survey-  
ing, mapping and  
remote sensing - - - Kenya  
Regional training  
centre to aerial  
levelling techniques  
of Ile-Ife - - - - - Nigeria  
Etude Assane Diouf - - Senegal  
ARDH Institute - - - - United  
Republic  
of Tanzania

##### 2. Non-African institutions

Terra Survey - - - - - Canada  
Institut géographique  
National - - - - - France  
Societe française de  
stereotopographie - France  
KLM Aero carto - - - - Netherlands  
Geokart - - - - - Poland  
Royal Institute - - - Sweden

# INDUSTRIAL DEVELOPMENT AND SERVICES

## African Regional Centre for Engineering Design and Manufacturing

The African Regional Centre for Engineering Design and Manufacturing is one of the youngest ECA-sponsored institutions and created to offer institutional assistance in industrial development. The Centre has its very specific field of activities, namely, in assisting member States in building up capabilities in machine design, manufacture and maintenance in respective countries.

The Centre to-date has 23 African countries as members spread over all the subregions of the continent and those are:

Algeria	the Niger
Benin	Nigeria
Burundi	Mali
Burkina Faso	Rwanda
Comoros	Senegal
Congo	Sierra Leone
Egypt	Sudan
Ghana	the United Republic of Tanzania
Guinea	Togo
Kenya	Zaire
Liberia	Zambia
Morocco	

### Membership map of Africa

The Centre has taken all steps possible in its major five fronts of operation, namely, organization build-up, construction of its own office, hostel and workshops, training, machine design and promotion of national Centres and activities are at different stages of progress as given below.

### Staff build-up

From the very beginning the Centre has maintained an international character of recruitment. Senior personnel are selected by an international panel

consisting of Egypt, Kenya, Nigeria, Zaire and ECA. This has resulted in centres having on board today (1 Nov. 1984) nationals of eight countries of Egypt, Ethiopia, Ghana, Guinea, India, Nigeria, the United Republic of Tanzania and USSR.

The recruitment process is continuing particularly for the posts of Directors of Divisions, senior Design Engineers, Production Engineer, Bilingual Secretary and others. Member States have been requested to send applications of their suitable candidates to the Centre (PMB 19, UIPO, Ibadan, Nigeria) or to ECA, Addis Ababa.

### Construction

Thanks to the continued support of the host government of Nigeria the Centre received the legal rights for a large plot of land of 73 hectares (180 acres) on 22 February 1983. On the same day the Centre signed a contract with a consortium of architects, engineers and quantity surveyors for the design of Phase I buildings and workshops

### Plan of permanent site

His Excellency, Alhaji Shehu Shagari, the then President of the Federal Republic of Nigeria, laid the foundation stone on 1 August 1983 thus commencing a \$US9 million construction programme of the Centre's Phase I consisting of:

1. Main office block - 2,400 sq.m.
2. Hostel block - 36/72 participants
3. Experimental testing and Development Laboratory 2,500 sq.m.
4. Machine workshop
5. Fabrication workshop
6. Foundry workshop
7. Forging workshop.

Today in three months after signing of contracts some buildings already are visible over cleared ground level. All the three main contractions have started work. Soon the subcontractors for structurals, mechanical and electrical suppliers will commence their supplies. The construction is scheduled to be completed during the second half of 1984.

#### Workshop machinery

With regard to workshop machinery international co-operation, particularly from UNDP and the Government of India have been available. Six machine tools and 13 other machines are being granted by UNDP and India respectively along with accessories. The Centre is also procuring a limited number of machines from its meagre resources.

#### Training

Although it occupied only temporary premises ARCEDEM has already conducted two training courses in which four African countries and seven others respectively participated. These courses were predominantly meant for design and manufacturing processes of industrial machines and components based on locally available materials and manufacturing possibilities.

The participants were given specific tasks of design and how each component should be industrially made. The machine tools were to be determined and established by the participants keeping the parameters of quantity and costs in view.

Although the responses of member States were encouraging, the absence of the Centre's own hostel and workshop in 1983 and 1984 has restrained the number of participants. Once the Centre's hostel opens on 2 May 1984 these two fundamental difficulties will be over and the Centre will take more and more participants both for design and manufacture.

Countries which sent their participants for these two training courses are:

<u>First Course</u>	<u>Second Course</u>	
<u>Sept.-Nov. 1982</u>	<u>July-Aug. 1983</u>	
Nigeria	Benin	Kenya
Sierra Leone	Guinea	Nigeria
the Sudan	Mali	Togo
United Republic of Tanzania	Ghana	

These training courses were free of cost to the member States i.e. the Centre paid for travel, lodging, boarding and pocket money. The training course was for three months. Longer courses are planned when the Centre has its own hostel and office block and its own workshops. UNDP and UNESCO funded these courses, IITA of Ibadan provided hostel facility and work place at subsidized rates.

#### Machine design activities

After recruitment of mechanical engineers and draftsmen from African countries to work in the Centre's design office, ARCEDEM commenced its machine design and design adaptation work particularly in the agriculture sector. Today on the Centre's drawing boards one may see the working drawings of:

(a) Rice mill equipment for husking of paddy for import substitution;

(b) Farm trailor for rural use;

(c) Agricultural implements including animal-drawn ones, cocoa harvestors;

(d) Irrigation pumps for small plots of lands for rural use.

All these designs will be sent when fully developed, to member States to promote entrepreneurship and indigenous production.

### Promotion of national centres for design and manufacturing

In association with ECA and UNIDO, ARCEDEM organized in EIDCC, Cairo (October-November 1983) a one-week workshop, attended by 14 African countries, to promote national centres for design, manufacture and maintenance of capital goods so that the enormous task of developing of capability in this most vital field is spread over into member States. The national centres when identified and up-graded will form with the regional centre, ARCEDEM, a network of centres with linkages with other relevant regional and national centres.

This network when developed will enable it to avoid duplication of efforts by various centres as of now, dissemination and sharing of expertise, co-ordinated work programme for development of one product after the other for indigenous production fulfilling the tempo of self-reliance progressively.

### Member States and other supports

With the above construction and engineering programmes in hand, ARCEDEM deserves and requires for its early and rapid growth the support of member States both financially and morally. The contributions of member States should now flow in remittances so that the good achieved in its work programme is not impeded due to want of funds and other inputs from member States. The ARCEDEM pledges its commitment to serve its member States in every way within its humble capacities.

### **The African Regional Organization for Standardization (ARSO)**

### Development of African Regional Standards

The Lagos Plan of Action has entrusted ARSO with the important task of elaborating African Regional Standards for products of interest to Africa. In fulfilment of this mandate, ARSO

has been carrying out preparatory activities aimed at determining priority areas and establishing ARSO Technical Committees (ARSO/TCs) to be responsible for the preparation of African Regional Standards in their respective fields of competence. Consequently, the first meetings of the eight ARSO/TCs were held in October 1983 at the ARSO headquarters in Nairobi, Kenya, and 128 Draft African Regional Standards (DARS) in the following fields were adopted for subsequent approval by member States as African Regional Standards.

<u>Field</u>	<u>Number of DARS adopted</u>
Basic and General Standards	44
Agriculture and Food Products	33
Building and Civil Engineering	3
Mechanical Engineering and Metallurgy	7
Chemistry and Chemical Engineering	8
Textiles	24
Transport and Communications	9
Total	128

The development of African Regional Standards is expected to make the following impacts towards the realization of the objectives of the Lagos Plan of Action:

(a) Facilitate the development and expansion of intra-African trade;

(b) Provide a basis for rationalization of imports into Africa and for making exports from the region to be competitive in international markets;

(c) Contribution towards the realization of the industrialization objectives of the region;

(d) Assist in the integration and co-ordination of transport and communications infrastructures in the region; and

(e) Contribute towards rapid integration of the various economic sectors of the African region as stipulated in the Final Act of Lagos.

#### Training programmes

During the past two years, ARSO has been, in co-operation with other organizations concerned, actively engaged in the operation of training programmes on standardization, quality control, certification and metrology. The training schemes were aimed at up-grading the skill and knowledge of personnel involved in standardization and related activities in member States. These training programmes included the following:

(a) A Basic Training Course on Standardization, Quality Control and Metrology organized for the benefit of English-speaking member States and held in February/March 1982 in Freetown, Sierra Leone, where 38 participants from 17 African countries attended;

(b) A Specialized Training Workshop on Certification held in June 1983 in Mauritius and attended by 41 participants from 13 English-speaking member States; and

(c) A Basic Training Course on Standardization, Quality Control and Metrology organized for the benefit of French-speaking member States in August 1983 in Lome, Togo, where 21 participants from eight African countries attended.

The conduct of such training programmes has been found to be an essential factor in fostering the development

of national machineries in member States for standards formulation, quality control, certification, metrology, inspection and testing activities.

#### Technical assistance to member States

The services rendered and technical assistances given by ARSO to member States during the past two years included, inter alia, the following:

(a) Sponsorship of participants from member States to attend the various training programmes organized by ARSO (see (a) above);

(b) Soliciting the support of international organizations to sponsor participants from African countries to specialized training programmes on standardization and related subjects held in countries outside the region;

(c) Providing information, documentation and other logistic support to member States for use in the establishment and strengthening of their national standards and measurement programmes;

(d) Undertaking missions and surveys in over 16 African countries with a view to advising the Governments concerned on the initiation and development of standardization, quality control, certification and metrology activities at the national level; and

(e) Mobilizing external support and assistance to improve the standardization activities of member States.

In executing its technical assistance programmes to member States, ARSO has promoted, as stipulated in the Lagos Plan of Action, the application in member States of the integrated approach to standardization by advocating the combined operation of activities in standards formulation, quality control, certification, inspection, testing and metrology under the national standards body of each country.



A lecture being given by the ARSO President at the ARSO Training Workshop on Standardization, Quality Control and Metrology held in August 1983 in Lome, Togo, where over 20 participants from eight French-speaking African countries attended.

A senior official of the Government of Mauritius awarding certificates to participants of the ARSO Training Workshop on Certification held in June 1983 in Mauritius.

Group photograph of over 40 participants from 13 African countries who attended the ARSO Training Workshop on Certification held in June 1983 in Mauritius.

The Secretary-General of ARSO lecturing at the Training Workshop on Standardization, Quality Control and Metrology held in February/March 1982 in Freetown, Sierra Leone. Thirty-eight participants from 17 English-speaking African countries attended the Workshop.

### **African Institute for Higher Technical Training and Research**

The African Institute for Higher Technical Training and Research (AIHTTR) was established in 1979 with its headquarters in Nairobi, Kenya, for the express purpose of assisting member States to acquire and develop an adequate technical manpower capability. In accordance with the demands of the Lagos Plan of Action and the Final Act which African States adopted a year later, AIHTTR embarked on a number of initiatives designed to encourage the acquisition and sustenance of technical manpower. In the meantime the membership of the Institute increased to 13: Ghana, Kenya, Zaire, Mali, the Niger, Senegal, Burkina Faso, Liberia, Chad, Uganda, Lesotho and Nigeria.

The Institute has concentrated its programme of activities around short-term and medium-term workshops

and seminars in close collaboration with national scientific and technical institutions of a number of member States. Such programme activities have been targeted at practising engineers, scientists, technologists, technical trainers, and educators as well as middle- and high-level technicians. Twenty-three States have so far benefited from these workshops and programmes.

A number of United Nations bodies such as the ECA, UNDP, UNESCO, WHO, HABITAT and other international organizations have collaborated with the Institute in the form of funds and expertise input. The workshop/seminar programmes offered covered the following specific courses: educational technology, urban environmental monitoring and measurement techniques, and drinking water treatment and waterworks management.

During the biennium 1984-1985 the Institute wishes to:

(a) Widen the scope and depth of medium-term training programmes in collaboration with member States, the United Nations system, and other relevant international organizations in the fields of:

- (i) Electromechanical tooling and instrumentation;
- (ii) Water supply engineering;
- (iii) Thermal energy;
- (iv) Video tapes production and application techniques;
- (v) Farm machinery;
- (vi) Electrical motor design and construction.

(b) Intensify collaboration in course programme design and programme intensification with complimentary ECA-sponsored institutions such as ARCEDEN, ARSO, and ARCT;

(c) Solicit member States' political and material support;

(d) Prepare financial backing for the construction of the first phase of the capital development complex on the 300 acre land donated by the host country, the Republic of Kenya.

### **The African Regional Centre for Technology (ARCT)**

#### Background information

##### Address:

Postal: BP 2435 Dakar, Senegal  
Location: Route de Ouakam x Canal  
IV, Dakar

Telephone: 22.77.11/12/13  
Telex: 3282 CRATEC SG.

##### Status:

Intergovernmental

##### Sponsorship:

United Nations Economic Commission  
for Africa (ECA) and Organization  
of African Unity (OAU)

##### Objectives:

(Paraphrased):

(a) Development and use of technology within the African region;

(b) Strengthening of technological capabilities of its member States; and

(c) Promotion of the use of technologies suitable for the socioeconomic development of the African region.

##### Date of establishment:

November 1977; Became operational  
in January 1980.

#### Member States (29):

Algeria, Benin, Burundi, Cameroon, Cape Verde, Egypt, Equatorial Guinea, Ethiopia, Ghana, Guinea, Guinea-Bissau, Kenya, Liberia, Mauritania, Mauritius, Morocco, Mozambique, the Niger, Nigeria, Rwanda, Senegal, Sierra Leone, Somalia, the Sudan, Togo, Uganda, the United Republic of Tanzania, Zaire and Zambia.

#### Account of activities

A previous issue of the Bulletin (No. 1 April 1983) contains an account of the activities carried out by the Centre between 1980 when the Centre became operational and 1982. Since then, the Centre has made several significant strides in its growth towards becoming an institution fully capable of performing its functions.

As before, the work of the Centre comprised three technical programmes:

(a) Information and documentation;

(b) Technological Consulting Services; and

(c) Training.

Between 1982 and 1984, as in previous years, each of these programmes continued to lay emphasis on the following three priority areas:

(a) Promotion of indigenous and other technologies in the food sector, particularly for the reduction of post-harvest food losses;

(b) Promotion of indigenous and other technologies in the energy sector, with particular emphasis on biomass technology; and

(c) Development of national capabilities in technology policy and planning.

Activities carried out between 1982 and 1984 under the three technical

programmes in these priority areas included the following:

(a) Promotion of indigenous and other technologies in the food sector

- (i) ARCTIS: Strengthening of ARCTIS, the Centre's Information System;
- (ii) Publications: Including the Centre's Rosters/Directories of science and technology institutions and consulting organizations in Africa, 1983, the Centre's Roster of African science and technology experts and activities;
- (iii) African Techno-development: (the Centre's Bulletin) and several studies carried out in the food area;
- (iv) Demonstration units: Identification and strengthening of national R & D institutions and demonstration units for food-related scientific and technological activities.

(b) Promotion of indigenous and other technologies in the energy sector

- (i) Activities conducted in this sector fell in areas similar to those given in the preceding section for the food sector;
- (ii) Missions to demonstration units to provide on-the-spot advisory and technical services on biomass technology, including plant construction.

(c) Development and Strengthening of national capacities in technology policy and planning

- (i) Publications: Including Annotated directory of African

national science and technology focal points, 1984;

- (ii) Workshops: Three on technology development and transfer in 1983 and 1985; and two on technology policy and planning for the informal sector (1983 and 1985).

(d) Other activities

Two meetings organized jointly with the United Nations Financing System for Science and Technology for development (UNFSSTD) on International Co-operation for African Technological Development, the first in December 1983 in Dakar, Senegal, and the second in November 1984 in Rome, Italy. Joint training activities with the International Centre for Insect Physiology and Ecology, the Food and Agricultural Organization, the German Foundation for International Development, the World Intellectual Property Organization, and the World Bank on technologies for postharvest food loss reduction, the informal sector, the patent system, and the choice and management of technology development.

**Industrial Property Organization**

The Industrial Property Organization for English-speaking Africa, ESARIPO, was created in 1976. Its members currently number 11 out of the 19 independent English-speaking African States. Since 1981, its office has also been home to the Patent Documentation and Information Centre for English-speaking Africa (ESAPADIC), set up in response

to a resolution adopted at the time of ESARIPO's establishment.

The work programme of ESARIPO currently includes:

(a) Helping member States to improve their industrial property infrastructure and introduce modern industrial property legislation;

(b) Helping member States to prepare and carry out development-oriented programmes to increase the use of patent documentation;

(c) Helping member States to use patents, and the technological information they contain, to achieve their development objectives;

(d) Encouraging innovation, and links between innovators and productive systems;

(e) Encouraging co-operation among member States on technological information and industrial property;

(f) Assisting national industrial property offices in the promotion of local research and innovation, the provision of advice and financial support for needy inventors, and the promotion of innovation and patent information as means of tackling national development needs;

(g) Helping member States to set up the national centres for science and technology for development called for in the Lagos Plan of Action, and create or strengthen national technology information centres;

(h) Helping member States to develop training programmes for technologists as well as engineers;

(i) Helping member States to acquire appropriate technology under conditions compatible with the strategy for the self-reliant development of local scientific and technological capacity

set forth in the Lagos Plan of Action; and

(j) Helping member States to develop low-cost technology for use in agriculture, rural industry, rural transport and power generation.

Most of this programme is to be put into effect by ESAPADIC, ESARIPO's "shop window".

The ESARIPO Council at its sixth session, in 1982, adopted a Protocol on patents and industrial designs under which member States can use ESARIPO to check patent applications for novelty, inventive step and industrial applicability, issue patents for successful ideas, and administer the patents and industrial designs in other countries that have adhered to the Protocol. The Protocol came into force in April 1984 and now operates in Ghana, Kenya, Malawi, the Sudan, Uganda and Zimbabwe; the other ESARIPO States are expected to adhere to it shortly. The Protocol offers ESARIPO member States an important means of pooling their resources for technical tasks.

#### Substantive activities in 1985

The 1985 plan of action for ESAPADIC was scheduled for discussion and adoption by representatives of UNDP, ESARIPO and WIPO (the executing agency for the ESAPADIC project) in mid-December 1984. It would include activities rolled over from 1984, if any, as well as new projects.

For its own activities ESARIPO will draw on ESAPADIC staff and consultants, and on expert staff from WIPO. In 1985 the organization will offer practical training to national institutions concerned with industrial property and technology transfer, concentrating on the application and potential benefits of the Protocol on Patents and Industrial Designs. It will continue to amass information

and acquire information retrieval aids for ESAPADIC, to classify and microfilm patent documents from ESARIPO member States, and to build up search files and computer research aids. It will also prepare training materials, organize training courses and offer advisory and support services to its member States.

ESARIPO is still growing as an organization, and still taking on staff.

At the moment, its development is hampered by its limited membership, by tardy payment of subscriptions by its existing members, and by a lack of financial and other assistance. If, however, it can carry out its intended tasks effectively it should in future be able to generate enough income from its activities to reduce and eventually dispense with contributions by its member States.

## ECONOMIC DEVELOPMENT, PLANNING AND MANAGEMENT

### African Institute for Economic Development and Planning

The African Institute for Economic Development and Planning (IDEP) was established in March 1962 under resolution 58 (IV) of the Council of Ministers of the United Nations Economic Commission for Africa (ECA). IDEP is a bilingual, pan-African institution, the activities of which complement those of ECA, OAU and ADB. There are three major inter-related activities, namely: training, research and consultancy services. The Institute also organizes conferences, seminars and workshops and the proceedings from these are published and disseminated throughout Africa.

#### The training programmes

According to its mandate, the primary purpose of the Institute shall be the training of specialists and senior officials of institutions and government ministries in Africa responsible for economic development and planning. The orientation of the training programme is tailored to suit African conditions and satisfy the needs of African policy designs. The training programme cycle has a duration of two academic years and has three interrelated components leading to an M.A. degree in Economic Development

and Planning. The components of this cycle are:

1. The Nine-month Basic Programme in Development and Planning;

2. The Three-month Specialization Programmes:

- (a) Industrialization in Africa;
- (b) Energy and Development in Africa;
- (c) Human Resources Development and Manpower Planning in Africa;
- (d) Agriculture and Rural Development in Africa;

3. The Six-month Research Training Programme.

Each of these three programmes is self-contained. Programmes (2) and (3) are open both to IDEP trainees who have successfully completed the preceding programme and to new candidates who have the requisite background and qualifications.

1. The Nine-month Basic Programme in Development and Planning

The following are the main study areas:

(a) Economic development and structural change: theories and strategies; history and political economy of Africa;

(b) Macro-economic analysis and demand management; national accounting; money and banking; public finance;

(c) Quantitative methods of economic planning and policy design techniques: model building and computer application; project analysis;

(d) Comprehensive and regional economic planning;

(e) International economics: trade, finance and economic integration.

## 2. The Three-month Specialization Programmes

These programmes focus on specific sectors at regional, subregional and country levels of the African economy. Four options are available, and each of the options is supplemented by a workshop for discussion of case studies, student and staff research papers. The various options and their course contents are as follows:

### (a) Industrialization in Africa: Strategies, Policies and Projects

#### (i) Structural and macro analysis:

- a. Industrial development, planning and policy design;
- b. Industrial organization and management: public sector, private sector and small-scale industry;

#### (ii) Quantitative techniques of industrial planning:

- a. Mathematics, statistics and econometrics;
- b. Model building;
- c. Computer application;

#### (iii) Sectoral analysis:

- a. Technology policies and planning;
- b. Other sectoral and country studies;

#### (iv) Project analysis:

- (a) Micro-economic planning and design of industrial projects.

### (b) Energy and Development in Africa

#### (i) Methodology of energy planning at both sectoral and project levels;

#### (ii) Energy resources and utilization in Africa:

- a. Mineral and non-mineral resources;
- b. Conventional and non-conventional resources;

#### (iii) Energy pricing, consumption and demand forecasting in Africa;

#### (iv) Energy conservation strategies and policies in Africa;

#### (v) Energy infrastructure and logistics in Africa;

#### (vi) The legal framework of the energy industry in Africa.

### (c) Human Resources Development and Manpower Planning in Africa

#### (i) Global and macro analysis:

- a. Demography: fertility, mortality, population growth, migration and basic needs;

- b. Investment in human capital: education, training, skills and techniques;
- c. Macro-economics: employment, wages and incomes policies;
- (ii) Structural analysis:
  - a. Manpower Planning: industrial and sectoral allocation;
  - b. Regional planning: spatial allocation of population in relation to other resources;
- (iii) Others:
  - a. Organizational and institutional aspects;
  - b. Managerial procedures.
- (d) Agriculture and rural Development in Africa
- (i) Resources for agricultural development:
  - a. Land, water, labour and energy systems;
  - b. Secondary and tertiary inputs;
  - c. Policies and policy instruments;
- (ii) Internal demand and external trade:
  - a. Domestic consumption and distribution;
  - b. Pattern and direction of external trade;
  - c. Policies and policy instruments;

(iii) Agricultural project evaluation at national, regional and subregional levels;

(iv) Overall agricultural and rural development planning:

a. Sectoral planning (agriculture);

b. New settlements and master plans.

### 3. The Six-Month Research Training Programme

Under this programme, research trainees work on their M.A. theses under professional guidance and supervision. The normal entry requirement for this stage is the successful completion of the nine-month and three-month programmes and an aptitude to undertake empirical research.

The programme is also open to African planners and specialists who wish to do research under the auspices of IDEP on particular problems of interest to themselves or their sponsored institutions.

Trainees who successfully complete the Nine-month Basic Programme will be awarded Post-Graduate Diploma. Those who successfully complete one of the Three-month Specialization Programmes will be awarded Certificates of attendance while trainees who successfully complete, in addition to the above, the Sixmonth Research Training Programme will be awarded the M.A. Degree in Development and Planning.

### Research activities

Activities in the field of research are, on the one hand, geared towards the production of necessary inductive research inputs intended to serve as supportive teaching material to the various training programmes. They are particularly related to the following

fields: manpower resources, energy, agriculture, economic co-operation and integration. On the other hand, they tackle the major policy planning and design requirements of the African countries individually as well as collectively. The results of the different research works are published for dissemination throughout the entire continent and the rest of the world to reach a wider audience.

#### Advisory services

The Institute puts its research and planning capacities at the disposal of the African countries and institutions as well as regional and international organizations. Services which are provided by the Institute in this regard range from preparation of small-short-, medium- and long-term plans and strategies to sectoral policies, projects, etc. The activities also cover the preparation of terms of reference, evaluation, etc. of studies to be undertaken externally. In this regard, IDEP is an African in-house consultant.

### **The African Centre for Applied Research and Training in Social Development**

The African Centre for Applied Research and Training in Social Development (ACARTSOD) was established in 1977 by the Conference of African Ministers of Social Affairs under the auspices of the Economic Commission for Africa (ECA) and the Organization of African Unity (OAU) in Tripoli as a centre for advanced studies and the training of higher level manpower in the social development field.

ACARTSOD's primary objective is to promote and co-ordinate applied research and training activities in the field of social development at the regional and subregional levels in Africa, and to help evolve and implement new approaches and priorities.

It provides training for high-level personnel; organizes training courses and seminars; undertakes applied research for the production of indigenous teaching and reference materials, undertakes research aimed at promoting rural development programmes; provides assistance to national universities and social work institutions in the field of training, and initiates and maintains relations with other centres, institutions and organizations with similar objectives in Africa and in other parts of the world.

#### Report on ACARTSOD for 1982-1983

Although the African Centre for Applied Research and Training in Social Development was established in 1977, it did not come into operation until 1981 when the first Executive Director was appointed. The period 1981-1982 was devoted to organizing the headquarters of the Centre, in drawing up a programme of work, preparing the rules and regulations governing the Centre, and of preparing for a meeting of the Governing Board of the Centre. In July 1982, Dr. T. Peter Omari of the Social Development Division of the Economic Commission for Africa was seconded to ACARTSOD as Executive Director ad-interim.

In 1982, the Governing Board approved the programme of work of the Centre for the biennium 1982-1983 which consisted of the following:

#### (a) Research

- (i) Two research projects: Survey of Social Development Research and Training Institutions in Africa; Comparative Study of Social Security Systems in Africa;
- (ii) Evaluation of Social Development Strategies in Africa in light of the Lagos Plan of Action.



(b) Training

- (i) National training programmes: two in the Jamahiriya;
- (ii) Subregional training programme: one in the Cameroon for French-speaking West African countries;
- (iii) Regional training programmes: Workshop on the Mass Media and African Society; Workshop of Social Aspects of the Industrial Development Decade in Africa.

(c) Institutional development

- (i) Establishment of Reference Library and Clearing-house;
- (ii) Setting up of social data bank in co-operation with PADIS;
- (iii) Setting up research and co-operation arrangements with international organizations.

(d) Publications

- (i) Publication of Newsletter twice a year;
- (ii) Preparation and publication of co-operative Social Abstracting service;
- (iii) Publication of material from survey of Social Development Research and Training Institutions in Africa;
- (iv) Publication of Study of Social Security in Africa.

During the 1982-83 biennium, the following activities were carried out with indicated results:

(a) The Survey of social development research and training institutions in Africa continued. In December

1983, the Directory of Social Development Research and Training Institutions in Africa was completed and was published as Research Series No. 1;

(b) The Comparative Study of Social Security in Africa continued during 1982 and 1983.

(c) CODESRIA was commissioned, during 1983, to prepare a paper on 'Evaluation of social development strategies in light of the Lagos Plan of Action' for a Seminar to be organized in 1984;

(d) One national training programme for the Jamahiriya was organized in Tripoli in May 1983 for 31 directors of social welfare institutions from nine municipalities of the Jamahiriya. The report of this training course is available in Arabic;

(e) In July 1983, a training course was organized in Yaounde, Cameroon for 36 senior social development officials from the following French-speaking West African countries: Benin, Burkina Faso, Cameroon, the Congo, Guinea, the Ivory Coast and Togo. The lectures for this course have been edited as

Social Planning and Administration in Africa: Problems and Methods of Approach, and published in 1983 as Training Series No. 2;

(f) During November 1983, the Centre acquired a computer with peripherals and software which is expected to support the research programme, establishment of the Reference Library, record-keeping and the accounting work of the Centre. The word processing facilities should also facilitate the correspondence, mailing and other secretarial duties at the Centre when used in conjunction with its Data Base software. As a result of ACARTSOD becoming a participating institution of PADIS, its computer system is in the process of upgrading to that of the Hewlett-Packard HP 3,000 computer

so that it can be compatible with the PADIS equipment at ECA in Addis Ababa for purposes of research and exchange of information;

(g) From 1-5 November 1983 ACARTSOD organized a workshop in co-operation with ECA, OAU and UNESCO on the Mass Media and African Society. It was attended by administrators, practitioners and experts in the mass media of the following 20 countries: Benin, Burkina Faso, Burundi, Cameroon, Ethiopia, Gambia, Ghana, Guinea, Lesotho, Liberia, the Libyan Arab Jamahiriya, Mauritania, Mauritius, Morocco, Nigeria, Senegal, Sierra Leone, Swaziland, Tunisia and Zimbabwe. The report and recommendations of the workshop is available as: ACARTSOD/TR/WMM/Rpt.

(h) In November 1983 UNESCO Governing Council approved an Agreement of co-operation with ACARTSOD as one of the measures of widening the Centre's network of co-operation arrangements with international organizations. It has also maintained active co-operation with a number of other institutions and international organizations including CERDAS, CODESRIA, ALECSO, IPS, International Institute of Labour Studies/ILO and the Dag Hammarskjöld Foundation;

(i) The following publications were issued during 1983:

- (i) ACARTSOD Newsletter, Vol.1 No.2 (Vol.1 No.2 in early 1984);
- (ii) After Lagos What? by Prof. Adebayo Adedeji, General Series No.1 (October 1983);
- (iii) Social Implications of the Lagos Plan of Action, General Series No. 2 (October 1983);
- (iv) Directory of Social Development Research and Training Institutions in Africa, Vol.1, Research Series No. 1 (December 1983),

- (v) Social Planning and Administration in Africa, Research series No. 2.

The Third Meeting of the Governing Board of ACARTSOD was held in Addis Ababa, from 6 to 8 October 1982. The Fourth Meeting of the Governing Board was expected to have been held in October or November 1985 in connection with the Fourth Meeting of the African Ministers of Social Affairs. The venue of AMSA iv could not be determined early enough for this Meeting to have been held during 1983. The Fourth Meeting of the Governing Board was therefore to be held in October 1984.

During 1983 the Technical Advisory Committee was constituted. A meeting of the Committee was to be organized during October 1984 to discuss the orientation and long-term programme of work of the Centre.

Governmental support: The following 25 member States have signed the membership agreement: Algeria, Benin, Burkina Faso, Burundi, Cameroon, the Central African Republic, Egypt, Equatorial Guinea, Ethiopia, Gabon, Gambia, Ghana, Guinea, Kenya, Liberia, the Libyan Arab Jamahiriya, Mali, Morocco, the Niger, Senegal, Sierra Leone, the Sudan, Togo, Uganda and Zaire. However all the Centre's activities including training courses, seminars and workshops are placed at the disposal of all ECA and OAU member States whether they have signed the Agreement or not.

Host country support: The Libyan Arab Jamahiriya has continued to contribute its quota to the budget of the Centre. It has recently completed renovations to the Headquarters premises of the Centre which made available to the Centre during 1983 facilities to house six staff on the premises, offer an auditorium and conference facilities and generally improve the physical facilities of the Centre.

Further negotiations will be carried out with the Secretariat of Social Security of the Libyan Arab Jamahiriya to renovate the existing 'B' Building to enable it provide accommodation to participants attending training courses, workshops and seminars to be organized at the Centre. In addition to the above, the Secretariat of Social Security recently seconded one of their staff to the Centre as Liaison Officer to serve between the Centre and Governmental and other agencies in the Jamahiriya.

Work programme of ACARTSOD for the 1984 - 1985 biennium

The following is the draft work programme of ACARTSOD for the next biennium.

(a) Social Development Research

- (i) Survey of Social Development Research and Training Institutions in Africa (continuous 1984/85);
- (ii) Comparative study of social security systems in Africa (on-going, 1984);
- (iii) Research into concepts, and theoretical basis for social welfare and the social sciences in Africa in the development context (1985);
- (iv) Preparation and publication of interdisciplinary teaching materials in the field of social development (1984/1985).

(b) Training

- (i) National training programmes: one in the Jamahiriya, (1984);
- (ii) Subregional training programmes: one for English-speaking countries of Africa (1984/85);

- (iii) Regional training programmes: Workshop on social aspects of the Industrial Development Decade in Africa in co-operation with ECA, OAU and UNIDO, (1984); Symposium on preparation of indigenous interdisciplinary teaching materials in social development, (1984/85); Two-month short course for senior personnel in social planning and administration (1985); Study tour by directors of social development training institutions (1985).

(c) Institutional development

- (i) Establishment of Clearing-house for the Mass Media and African Society, (1984/85);
- (ii) Setting up of social data bank in co-operation with PADIS and UNESCO, (1984/85);
- (iii) Setting up network of co-operation arrangements with International Organizations (on-going).

(d) Publications

- (i) Publications of Newsletter twice a year (on-going);
- (ii) Preparation and publication of Co-operative Social Abstracting Service (1984/85);
- (iii) Publication of material from Survey of Social Development Research and Training Institutions in Africa: on African Social Development Experts in Africa (Research Series, No. 2, 1984);
- (iv) Publication of Social Aspects of the Industrial Development Decade in Africa (1984/85);

- (v) Publication of Social Security Systems in Africa (Research Series, No. 3, 1984);
- (vi) Publications on social welfare and development in Africa (1984/85).

### **Regional Institute for Population Studies**

The Regional Institute for Population Studies (RIPS) was established in February 1972 as a joint effort between the United Nations and the Government of the Republic of Ghana with the aim of promoting and strengthening research and training in demography and related fields mainly in English-speaking African countries.

The ECA Conference of Ministers passed a resolution in 1980 converting RIPS into a subsidiary body of the Commission.

The Institute, working in close collaboration with the University of Ghana, offering degrees and diplomas of the University, has over the past 12 years provided two main courses of study: a 12-month graduate diploma in population studies, and a master of arts degree on the same subject. A third experimental course of study leading to the Ph.D. degree is also offered.

In the 1972-1983 period, some 300 students from all 22 English-speaking African countries, in addition to Papua, New Guinea, have gained admission into the Institute for graduate diploma. Two hundred and twenty-two have successfully completed the course while 24 are still in residence. During the same period 81 students have been admitted to work for the Master of Arts degree, and 33 have been successful. Two persons are working for the Ph.D. degree.

In addition to these main training courses three training programmes for middle-level personnel have been conducted in Liberia, Zambia and the United Republic of Tanzania as well as six workshops and seminars for 250 high-level officials. A training workshop on population information and documentation has also been run for 15 librarians and documentation has also been run for 15 librarians and documentalists from English-speaking African countries at ECA headquarters in Addis Ababa, Ethiopia.

Apart from providing advisory services to the United Nations and the specialized agencies, RIPS has responded to requests from the Governments of Ghana, Lesotho, Liberia, Nigeria, the Sudan and the Libyan Arab Jamahiriya; and in co-operation with ECA, has carried out five demographic surveys in Nigeria the results of which have formed the basis for planning the relocation of Nigeria's capital city at Abuja. RIPS has also supported work on, census analysis in Lesotho, Liberia, the Libyan Arab Jamahiriya and the Sudan.

More than 120 research projects have been completed recently, and work is in progress on 32 others.

Of more than passing interest in RIPS' trail-blazing research on fertility and mortality estimation, women's perception of menstruation, age at first birth, migration in West Africa, and on alternative education systems for African countries.

With regard to the last systems being evolved would enable African countries to double their university population within three to four years, decrease recurrent educational expenses by at least 25 per cent, multiply their secondary school population by six within six years, and ensure universal free primary education as well as mass literacy within the same number of

years while keeping educational expenditure within 6 per cent of the gross domestic product.

During the biennium 1984-1985 the Institute will concentrate on the core areas of training, guided research, the provision of ad hoc courses, in-service training and special courses, on the provision of advisory services, dissemination of information on population, publication of technical and applied research work mainly within English-speaking African countries.

Plans for the biennium foresee the admission for training of some 50 students for the Graduation Diploma in Population Studies; 20 students to the Master of Arts degree; and two students to the Doctor of Philosophy degree course.

With regard to ad hoc courses it is hoped to hold two short-term courses each not lasting more than two weeks for senior personnel; and three in-service training courses each lasting some six to eight weeks. It is expected through these means that some 200 people would receive training over the period.

In addition, the Institute will bring out four issues of RIPS' Newsletter; six issues of African Demography and four issues of Population Information and Documentation System for Africa (PIDSA) Abstracts; four issues of PIDSA Newsletter; two bibliographies on population documentation; 12 manuals on population information and documentation, and conduct two training workshops for an estimated 40 population information documentalists.

### **Institut de Formation et de Recherche Demographiques**

#### **Progress Report for 1983/1984 and Prospects**

On the whole the Institut de formation et de recherche demographique

(IFORD) had, a very active 1983/84 academic year in carrying out its two-fold objectives as a centre for training demographers and promoting research on population, despite some problems and a smaller measure of success in some aspects of its day-to-day programme.

In the area of training activities, a total of 45 students from 17 countries were enrolled at IFORD in the two-year diploma course and in the introductory course to research. One thousand four hundred and fifty-two hours of lectures were given during the two years of studies to the students in the eleventh and twelfth years.

During the 1983/84 academic year greater attention was devoted to the study of relationships between population and development in the training programme in line with user expectations and in the spirit of the Kilimanjaro Declaration on population.

One of the noteworthy events of the 1983/84 academic year was the demographic survey designed and carried out by students of the two-year diploma course. As a practical exercise, the students carried out the census of a town of 30,000 inhabitants that had just been made the capital of a new administrative province of Cameroon. The second event of note in 1983/84 was an intensive introductory course to demography and statistics for officials from the statistics departments in the various national administrations of the Comoros. About 30 middle-level officials were given six weeks of on-the-job training in the collection and analysis of population statistics. The course, which was carried out experimentally, is an example of the continuous training activities which the Institute's governing bodies have asked it to develop.

In the area of research activities, the topics dealt with during 1983/84 concerned the extent and structure of infant and child mortality and the

factors that cause it, urban growth, the implications of population growth on health policy, economic activity, migrations and the analysis of census data.

With respect to publications, issues of the Annales de l'IFORD, the Bulletin de liaison de demographie africaine and the series "Notes et Documents" were published.

The major problem encountered during the 1983/84 academic year was a combination of two events which have rather interrupted the smooth operation of the Institute. They are, first of all, the reduction by 19 per cent from January 1984 of the subsidy granted by the United Nations Fund for Population Activities (UNFPA), the Institute's main donor agency.

The second factor was the shortfall in contributions by member countries.

These two factors have forced the Institute to consider halving its activities from October 1984 onwards.

In the future, the volume of activities to be implemented will be determined by what solutions can be found to the problems of inadequate financial resources and the irregular payment of contributions.

In any case, it is clear that training, research and publishing activities can neither be developed nor expanded. The best that can be done is to maintain the levels of activity attained during the last two years.

## TRADE AND TRANSPORT

### Association of African Trade Promotion Organization

The Association of African Trade Promotion Organizations (AATPO) was established in 1974 but did not begin operations until 1977 when its first Secretary-General was appointed. The main objectives of AATPO were to foster the creation of contacts, to facilitate the regular flow of information among member States, and to organize meetings of African businessmen.

For these purposes AATPO consistently produced three publications 'FLASH', a bulletin designed to disseminate current news and development which affect intra-African trade expansion; 'African Trade Prospectives' - a series which indicate where intra-African trade co-operation existed; and the 'Directory of Trade Promotion Institutions in Africa' - a comprehensive guide to African institutions that

pertained to trade and its promotion. During the period under review AATPO participated in many purely African as well as international trade fairs both to promote itself and to contact African participants with a view to furnishing information to those, African and foreign, who were disposed towards developing business ties with their African counterparts.

In the context of trade promotion AATPO prepared country studies on Zaire, Nigeria and the Libyan Arab Jamahiriya while participating in numerous meetings, seminars and conferences. One of the most important of these was the Second Meeting of the Presidents and Secretaries-General of the African Chambers of Commerce which was held in Harare, Zimbabwe, in May 1982, and which was devoted to establishing a Federation of African Chambers of Commerce.

That effort culminated successfully in September 1984 at the headquarters of the Economic Commission for Africa when the constitution of the African Chambers of Commerce was formally signed in Africa Hall. The heads of delegations of the following countries deposited their instruments of accession and/or signed the constitution: Algeria, Benin, Burundi, the Central African Republic, Chad, Cameroon, the Congo, Djibouti, Egypt, Equatorial Guinea, Ethiopia, Gabon, Guinea, Guinea-Bissau, Mali, the Niger, Nigeria, Senegal, the Sudan, Tunisia, Zaire, Zambia and Zimbabwe.

Twenty-three countries having signed the document, the African Federation of Chambers of Commerce acquired legal personality.

### **Trans-African Highway Authority**

#### Summary of achievements, 1981-1983

pavement of the entire stretch of the Lagos-Mombasa Trans-African Highway rose from under 50 per cent to 55 per cent with two member States, Nigeria and Kenya, paving the entire highway section in their respective territories. The Trans-African Highway Authority (TAHA) is presently engaged in the area of removing legal and administrative barriers hindering movement of persons and goods across hoping that such an exercise will coincide, or better still, predate the actual completion of the Highway. TAHA member and associate member States are therefore negotiating the following draft Protocols:

- (a) Inter-State driving permit;
- (b) Harmonization of border post formalities;
- (c) Harmonization of road design and construction norms;

(d) Harmonization of vehicle weights and dimensions;

(e) Inter-State vehicle insurance scheme;

(f) Accession to international customs conventions by all TAHA countries;

(g) Accession to international trade conventions;

(h) Harmonization of road signs and accession to international traffic conventions.

While TAHA co-operates closely with Union douaniere economique en Afrique centrale (UDEAC), the Economic Community of West African States (ECOWAS), and the Yaounde MULOPE, it has a bilateral technical co-operation agreement with Belgium according to whose terms the latter is to second technical staff to TAHA and also sponsor an inventory study of the entire stretch of the Lagos-Mombasa Highway.

In 1985-1986 TAHA will undertake the following:

- (a) Highway inventory
  - (i) Preparatory activity and launching of inventory and data collection, processing, analysis, and proper storage of information obtained.
  - (ii) Establishment of a research and development committee and commencement of research and/or co-ordination of research already initiated on local road building materials on the use of modern technology such as remote sensing techniques in highway design, and generally on the transfer of technology to Africa in the field of highway engineering and construction.

(b) Project development

- (i) A detailed engineering study and/or co-ordination of such studies already initiated at the national level to improve and up-grade sub-standard or deteriorating section of the Highway;
- (ii) Feasibility and pre-investment studies of selected sections of the feeder roads of the Highway;
- (iii) Negotiation through the Governing Council with the co-operating industrial countries and financial institutions to mobilize funds for feasibility studies, detailed engineering design and improved projects.

(c) Facilitation

Action-oriented programmes for removing administrative and legal barriers to travel and trade along territories traversed by the Highway including:

- (i) Further consolidation of the Inter-State Facilitation Commission already established and commitment to form national committees to facilitate international travel and trade;
- (ii) Continued discussions and negotiations among member States on the already drafted Protocol on:
  - a. Inter-State Driving Permit;
  - b. Road Transport Permits;

c. InterState Vehicle Insurance Scheme;

d. Inter-State Transit Systems;

e. Conventions on the free movement of goods, persons and trade;

f. Border Post Currency Exchange;

g. African Highway Code;

h. Promotion of traffic safety, including the erection of uniform traffic signs, promotion of size and weight control measures and the establishment of highway patrols to discourage illegal axle loads and excessive speeds on the highway and its feeders.

TAHA continues to participate in conferences, meetings, workshops and training courses and is determined, through the Research and Development Committee, to initiate projects on local building materials, transfer of technology and encouragement of local road construction enterprises.

The Authority published 'Current Status' of the Lagos-Mombasa Trans-African Highway' each year showing the State of the road and the progress being made on the construction and pavement of the unfinished parts. Another publication - FLASH - keeps member and associate States aware of what the secretariat is doing at every stage.

A third publication called 'ROAD LOG' has been initiated and is to be up-dated yearly indicating where facilities (e.g. hotels, petrol stations, garages, etc.) are available along the entire stretch of the Highway.