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PROGRESS REPORT ON REGIONAL DATA BANK WITH SPECIAL REFERENCE  
TO COUNTRY PARTICIPATION

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## I. INTRODUCTION

1. The proposed Regional Data Bank comprises a non-numerical data bank in which information about documents will be stored and retrieved by means of indexes, key words and abstracts - an operation which will form the core of an information and documentation centre - and a statistical data bank which will produce tabulated compilations of numerical data on statistical subjects such as national accounts and external trade, at national, sub-regional and regional level.
2. This report outlines the origins, objectives, content and development firstly of the non-numerical and secondly of the statistical data bank indicating what preparations are in hand and in what way member countries can participate in making the Regional Data Bank an effective tool for the economic and social advancement of Africa.
3. Whereas the non-numerical data bank is a new undertaking requiring additional funds, the statistical data bank already exists in embryonic form and its expansion, involving a re-organisation of work at ECA headquarters and the incorporation of more up to date material from national sources, will entail only limited additional staff and other requirements.

## II. REGIONAL INFORMATION AND DOCUMENTATION CENTRE WITH DATA BANK

### A. Background

4. During a series of meetings held by the Executive Secretary with the Divisions of ECA in August and September 1975 it became evident that priority had to be given to increasing in quality, quantity and speed, the two-way flow of information between African countries and the Commission. This need had been identified earlier in the year and as a partial response a proposal for a regional information and documentation centre had been submitted to UNDP in September for consideration in the context of the inter-country programme for Africa 1977-81.

### B. Objectives: nucleus and regional network

5. This centre would be the nucleus of a network eventually reaching all parts of the continent through which information and documents collected and indexed centrally would be quickly retrieved and dispatched to governments and other interested organizations or persons throughout Africa. The service would also be available to members of the UN family sharing the new building in Addis Ababa, and other visiting or local administrators, advisers, research workers and students in the Ethiopian capital. Beyond the continent the centre would participate in the world information network serving other countries and international agencies as required.

C. Content

6. The information to be collected would stem mainly from non-commercial and often unpublished documents such as regional and country project proposals and reports; the body of literature connected with national planning in all its ramifications i.e. not only the main published development plans but supporting documents and especially evaluations; surveys and reports of missions; conference papers and other materials not readily accessible in libraries. Gradually the scope of the centre could be extended to embrace in more and more detail socio-economic data which can be so valuable an input to planning and decision making.

D. Acquisition of documents and country participation

7. Documents of interest to the Regional Centre originate mostly from international organizations and from governments. Whereas OCA would undertake an analysis of its own documents and the collection of documents on Africa emanating from UN agencies such as UNDP, UNCTAD, UNIDO, FAO, and other international or regional bodies such as the World Bank and OECD, member countries would have to cooperate by undertaking the responsibility of supplying to OCA regularly and speedily the relevant material originating in their countries.

8. Without the cooperation of member countries the regional centre will be still-born. It is up to each country to designate an institution which would bear the responsibility of channelling the documents or microcopies thereof - to OCA while that institution would receive in exchange replies to requests for information from the centre and any bibliographic or reference publications it may produce. Such a service could bring to the attention of planners administrations and writers in the field in one country the successes and failures experienced elsewhere, especially elsewhere in Africa.

9. The organization of National Information Systems (NATIS) has been a priority concern of UNESCO in recent years. Under the concept of NATIS much work has been done recently to encourage the systematisation and integration of national information networks in many countries. In Africa the concept has been discussed by documentalists and librarians notably in Tanzania and Tunisia, whilst Morocco set up its National Documentation Centre under the State Planning Secretariat in the Prime Minister's Office in 1968 and has been producing computerized serial indexes in various fields such as agriculture, public works and communications and planning.

10. Member states not already possessing National Documentation Centres could promote their development in order to keep themselves fully informed internally. These centres could then form part of an African region network with headquarters at the OCA whilst also forming part of international information systems. In such a manner information could flow freely and quickly as required.

E. Computerised information retrieval

11. How closely each document would be **scrutinised** to yield information would depend on the availability of funds. In principle each document would not only be identified by a bibliographic description but would be indexed by its key words and subject matter and an abstract would be prepared. To ensure that the collection remains relevant documents would be assessed in terms of their useful life and a disposal or review date would be encoded from the beginning.
12. To achieve this detailed analysis and **storage** of data the Regional Centre will in all probability make use of an existing computer, if a feasibility study endorses the proposal.
13. A break-through in information retrieval for Africa could be achieved if the **ECA Computer** could be linked to the International Computing Centre (ICC) in Geneva which stores and can supply data from a growing number of international agencies. Since 1971 the following organisations have joined the ICC: UNO, WHO, UNDP, UNICEF, ILO, WMO, UNRISD, UNEP, GATT. This year the ICC will have a telelink to New York and to UNDP in Cairo.

F. Transmission of information by air-mailed copies or microfiche

14. One of the most important aspects of the proposed data bank would be that information identified as relevant could be copied on paper if only a few pages are needed, or filmed and reduced to a micro-fiche. The copied pages or the **microfiche** can be posted by air mail to the enquirer in an ordinary envelope. Since at least 60 pages can be filmed on one microfiche air mail costs would be minimal. Microfiche reading facilities are becoming increasingly available in large libraries and documentation centres so that at least the university libraries in member countries should already possess microfiche reader-printers. If an enquirer is out of reach of a microfiche reader he could obtain a hard copy either directly from the Regional Centre or from the nearest reader-printer in his own country.

G. Other work of the Regional Centre.

15. It would be the business of the Regional Centre not only to answer individual enquiries but to act as a centre of information about developments in the field of documentation on the continent. Surveys of existing data processing facilities and suggestions for their coordination would be required as a first step. Inventories of microfilm equipment and lists of documentation centres in each country should also be made and kept up to date. The Centre could assist in on-the-job, if not theoretical training of documentalists in collaboration with existing schools of library and information science, and could produce bibliographies of documents, directories of institutions and other publications in response to identified demand.

#### H. Recent activities and developments

16. A study is being made of the performance of a parallel computer-based operation, the Centro Latinoamericano de Documentacion Economica y Social (CLADES), established at the Headquarters of the Economic Commission for Latin America in Santiago, Chile, in 1971.

17. Requests for a consultant to undertake a three-month feasibility study with bilateral assistance are meeting with a favourable response and it is likely that an expert will begin work in the second half of this year. One of his tasks will be to suggest ways of achieving a coordinated information system at ECA Headquarters linking the Library, the Regional Data Bank and other ECA units providing information services. Preparations for the feasibility study are underway. Data on documents to be indexed, current documents indexes, information on users and existing documentation or library services in or on Africa in the socio-economic field are being assembled. A bibliography of literature on documentation, with special reference to information retrieval in developing countries is being assembled.

18. ECA is expected to obtain a computer with a memory of at least 40k by the end of the year. Computer time would thus be available for the relatively modest needs of the Centre.

19. The possibility of a slow data link with the ICC in Geneva is being studied both in Addis Ababa and at United Nations Headquarters. Technically it would not be difficult nor very expensive to make use of the existing telecommunications facilities which presently link ECA with the Palais des Nations, Geneva. The latter will itself be linked to ICC this year.

20. The reprographic equipment needed for the production and reading of microfiches and for copying documents will fortunately be available through a donation of such equipment by the Netherlands and Belgian Governments to the Africa Trade Centre at ECA. During 1976-7 six reader printers will be presented to the Trade Centre for its sub-regions and could thus equally be used in six African countries for reading fiches sent by the Regional Documentation Centre.

21. With the computer, the telecommunications link and the photographic equipment already accessible, costs for equipment are not likely to be high. The consultant due in some months' time will estimate these and other capital as well as recurrent costs and staffing proposals and will revise the request submitted to UNDP. If funds for the initial stages become available from this or other sources, systematic preparatory work could begin next year provided also that member countries participate by designating their national centres for the regional network, pending the establishment of a fully fledged National Documentation Centre, where these do not already exist. It should become a matter of high priority to establish and finance such national centres equipped with photographic and copying machines so that the exchange of information between institutions and persons can be speeded up and intensified.

### III. STATISTICAL DATA BANK

#### A. Background

22. In a parallel development, with older roots within the ECA, the idea of a bank for purely numerical data began to take shape. The collection, analysis and publication of statistical information had been undertaken by the ECA Statistics Division from its inception but with the general increase in sophistication of the tools of economic analysis there was pressure for a broader spectrum of data to be made available at regional level. Whilst acknowledging that the principal responsibility of a national statistical office is to provide a domestic data service which will assist the planning of economic and social development, administration and current budgeting, and for use by the private sector it is becoming increasingly apparent that a substantial number of the countries in Africa cannot individually produce the kind of statistics required in situations where concerted regional action is necessary. Two examples are trade negotiations with the European Economic Community and problems arising from the increase in oil prices which have both required special regional compilations of information.

23. As a result of sustained discussions the United Nations Statistical Office is producing new recommendations on standardised Statistical Series to the use of Less Developed Countries in Programmes of Economic and Social Development and in conjunction with these, is developing revised economic and social indicators.

24. There will therefore be guidance for the co-ordinated collection and compilation of data at both national and international levels. The principal concern with respect to the development of a regional statistical data bank is how international recommendations should be implemented under African conditions.

#### B. Availability and special problems of African statistics

25. These regional data collection and compilation activities have to be considered in relation to the overall international reporting arrangements. The general position is that, because the United Nations is organized on a subject basis, its specialised agencies are responsible for collecting data in their own fields, while more general topics are handled by the United Nations Statistical Office. Until recently the regional economic commissions did not collect data except for certain limited purposes. The need for more up-to-date information is now resulting in some change in these arrangements and it is likely that there will be a reasonable degree of decentralisation to the commissions in data collection within the general constraint of maintaining proper international co-ordination. This co-ordination also involves the statistical activities of other agencies such as the European Economic Community, the World Bank and the I.M.F.

26. The implications of the foregoing remarks for a regional data bank are firstly that, while the development of the bank will be guided by formal statistical systems, particularly those relating to national accounts and social statistics, it also has to accommodate a large quantity of more general basic series. Secondly the bank must be able to receive information from both national sources and the international data system and will itself supply some material to the latter.

27. The main source of material for a regional data bank being the African countries themselves the availability and special problems presented by African statistics must be examined. Although the situation improves year by year, most countries are still lacking up to date statistics on national accounts, balance of payments, manufacturing production and health facilities.

28. The principal deficiency in African statistics concerns the household sector and this is related to the lack of field survey organisations. Households are the suppliers of labour and other inputs to production and the improvement of human well-being is the ultimate aim of development. Inter-related data are therefore needed on employment and other productive activity, household income, structure, consumption, and a wide variety of other topics. Efforts are being made to develop a comprehensive regional programme for the improvement of household statistics.

29. The organisation of a Regional Data Bank is thus not simply a matter of collecting information and compiling it in an accessible form. The first requirement is to ensure that the basic data are available and this calls for a determined effort on the part of countries of the region supported by appropriate technical assistance.

#### C. Action needed by African statistical services

30. For national statistical services to improve their performance there are immediate objectives which do not call for any great increase in existing statistical resources, and there is the longer term development which requires expansion of data collection and processing capabilities and possibly the introduction of better methodology. The requirements can be expressed in a few fairly simple groups of activities:

- (1) Co-ordination and acceleration of all national data collection and publication, which can be achieved without significant additional resources.
- (2) Improvement of external trade statistics with respect to both timeliness and coverage.
- (3) Fulfilment of current commitments with respect to population censuses and implementation of necessary follow-up operations.
- (4) Rationalisation and expansion of direct data collection from households and establishments through the development of permanent field survey organisations, with the objectives of securing continuing supplies of integrated economic, social and demographic data, and extending the coverage of statistics of industry, prices, etc.
- (5) Standardisation of national accounting arrangements, improvement of data on particular components, and the more active use of national accounts for the examination of economic trends and problems on an up-to-date basis.

31. If African countries can take action along the lines suggested above a regional statistical data bank can serve as a very useful tool in assisting economic and social development. Without such an effort the data available at regional level will be too incomplete and too out-of-date to be effective.

D. The existing regional statistical service

32. It is now necessary to give a brief account of current activities at regional level before going on to a discussion of the development and content of the bank. The ECA statistical programme has two objectives: (1) development of African statistical organisations and (2) provision of a regional statistical service. The following remarks concern the regional statistical service which provides the basis for a data bank operation.

33. Reasons for establishing such a service have been mentioned earlier. Current work comprises the preparation of regular publications, conduct of statistical studies intended to assist in filling some of the more important data gaps, and responses to ad hoc requests for information.

34. Apart from special processing operations undertaken in connection with national accounts estimates and external trade statistics the store of statistical data at ECA is of a general purpose nature. Its sources are national publications, regular international questionnaires, material collected through ad hoc country visits and questionnaires, plus periodicals, etc. published in industrialised countries.

E. Development of a regional statistical data bank

35. The remarks made earlier suggest the following areas on which a regional statistical data bank should concentrate:

- National accounts (including external transactions, public finance and prices)
- External trade
- Industrial statistics
- Other economic statistics (initially agriculture, transport and communications)
- Social and demographic statistics
- Specialised data.

It is not proposed to set up data bases in these subject areas; they are simply a convenient grouping for looking at what needs to be done in building up the bank.

36. The first question is the bank's content and a preliminary specification has been attempted. The bank comprises existing manual and computerised files and those which ECA would like to develop during the next few years. The specifications are intended as a working document and modifications are in progress to reconcile the files with those of the United Nations Statistical Office.



37. The second question requires an examination of the current position and future arrangements with respect to each of the subject areas. This is in progress and only a few points are noted below.

#### National accounts

38. There is a continuing cycle of operations which provides for the gradual refinement and expansion of data during the year following that to which figures relate. African countries are beginning to show an interest in the operation and around 10 are supplying estimates of GDP growth rates soon after the end of each year. Activities at ECA are linked with those on similar data at United Nations Headquarters, FAO, IBRD and IMF. It may be hoped that exchange of material between these agencies will gradually improve the quality of the estimates but the main point of interest is of course better participation by African countries.

39. The development of an adequate computer filing system for national accounts data, provisional estimates and other related material is regarded at ECA as a central and guiding factor in the establishment of a successful data bank because it will be the principal means of devising procedures for ensuring the internal consistency of economic information put into the bank. There is no doubt that this will be the principal and continuing problem in the operation. It is not too difficult to put all available information on magnetic tape, even from a wide variety of sources, but it is not at all easy to edit and cross-check the material assimilated so that the outputs of the bank for different purposes present a reasonably cohesive picture of what is happening in Africa.

#### External trade

40. Three agencies are concerned with the international processing of African external trade data: the United Nations Statistical Office, the Statistical Office of the European Economic Community and ECA. IMF and FAO are also active in the processing of trade data, but for more specialised purposes which are not considered here. EEC deals with material from its associated member states and sends copies of the resulting tapes to the United Nations Statistical Office. ECA and the United Nations Statistical Office share the processing of data from the remaining countries of the region. That handled by ECA is published in Foreign Trade Statistics for Africa, Series B, while that of the United Nations Statistical Office appears in Commodity Trade Statistics, Series D, together with the material supplied by EEC.

41. The regional data bank will need a complete set of available annual commodity trade data on magnetic tape when a suitable computer is installed. This will be achieved through the following arrangement. ECA is systematically sending the punch cards for all the material it processes to the Geneva branch of the United Nations Statistical Office. There the card records are transferred to tape which is added to the global data store. ECA will eventually receive copies of these tapes plus those for other African countries. A crude calculation suggests that there will be about 100 reels of tape for all available African data starting from 1960.

42. The position described above can be conveniently summarised in terms of data outputs. For commodity trade data the basic work of the United Nations Statistical Office, EEC and ECA will continue with little change but ECA will be able to include the details for all countries in the regional data bank. How this material will be published by the two United Nations agencies and at what level of detail is still a matter for consideration, both have printing problems. ECA will aim at comprehensive and up-to-date information on the direction of total trade which will involve an extension of its existing Series A publication. In addition there are regional requirements for data on terms of trade, commodities of special importance, intra-African trade, etc. Only the first of these will require special filing arrangements. For the publication of such summary and analytical data the October 1975 session of the Conference of African Statisticians agreed that a new Series C publication on African trade statistics will be required. The format for this has already been prepared.

#### Specialised data

43. An attempt is being made to develop sectoral deflators for use in connection with the national accounts estimates. It has so far proved practicable to do this for 18 countries: the work has to become more comprehensive and continuous this year so that the results can be used in the existing computer system.

44. African countries are now showing an increasing interest in household surveys and these should provide a great deal of new material for the regional data bank. Some work has already been carried out manually on patterns of private consumption expenditure. Income distribution statistics is another topic of special interest. Filing arrangements for household data of many kinds will need careful development and this task has yet to be tackled.

#### F. Location and timing

45. The implication that the regional data bank will be located at ECA Headquarters in no way precludes the participation of other African agencies interested in informatics. It will probably transpire that some aspect of the bank's development will present more formidable difficulties than currently foreseen and some sharing of the work could have significant advantages.

46. The national accounts estimates involve almost continuous work and existing data has to be transferred to magnetic tape as soon as the new equipment is available.

47. Arrangements for supplying the bank with commodity trade data have already been explained and can probably be implemented fairly quickly. However ECA must be prepared to continue its share of the processing of standardised external trade statistics appearing in its Series B publication which again means a rather speedy programme revision exercise. A somewhat similar consideration applies to the direction of total trade published in Series A but in this case ECA has to transfer all its own material to tape and devise means of extending the coverage. Calculations on terms of trade and the production of summary and analytical data for the new Series C will have to be organised after the basic work on commodity and aggregative data is proceeding satisfactorily.

48. The transfer of industrial statistics to tape and revision of the related programmes are not expected to present problems. A useful file of social and demographic statistics can also be established in the early stages of developing the bank. Other topics mentioned in the preceding section of this paper but not here will probably have to continue mainly as manual operations for a little time to come.

49. From the foregoing comments the general position appears to be that the data bank operation can produce useful results in a limited number of subject fields without undue delay. However the development of the bank must be unhurried and very systematic to provide for even workloads on the staff concerned and to ensure the internal consistency of the data accumulated. There will therefore be no immediate prospect of using the bank for very general purposes, e.g. automatic production of the African Statistical Yearbook. This could be one of the aims after say 2-3 years of development activity.

#### G. Uses of the Statistical Data Bank

50. The earlier sections of this report have devoted considerable space to statistics at national, regional and global levels which are regarded as the essential components of an international data system. Emphasis has been placed on national responsibility in producing data for the entire system.

51. Demands for information at all three levels are acute and there is no doubt that the Regional Data Bank is a very necessary project. When it becomes clear that a body of internally consistent regional data is being systematically and successfully compiled its existence will create new demands for information. It is not possible at this stage to foresee how these demands will affect the format of existing publications and methods of dissemination.

52. What is important is the ability of the bank to meet new demands from its basic data store. A great deal of foresight is needed in deciding the kinds of information to be put into the bank and it is for this reason that a careful consideration of the subject matter is necessary.

53. On a continuing basis it may be expected that the bank will serve as a source of general information about Africa with increasing emphasis on the analysis of economic and social structures and trends. In particular it must be able to supply data in support of any concerted action contemplated by the region and be of help in identifying new problems and development possibilities.

#### IV. ACTION NEEDED ON THE PART OF MEMBER COUNTRIES TO COLLABORATE WITH THE REGIONAL DATA BANK

##### A. Regional Information and Documentation Centre (paras 7-10, 21)

54. (a) Member countries should work towards and support the establishment of a National Documentation Centre as the coordinating and directing body of a national information network.

(b) The National Documentation Centre or another institution designated to act temporarily in lieu of a National Documentation Centre, should participate in the network of the Regional Centre by exchanging government documents or microfiches thereof, for information and microfiches of documents retrieved on request from the data base of the Regional Centre, which would also supply any occasional or regular reference material it may produce.

(c) The National Documentation Centre, or its substitute, should receive major official documents in multiple copies in order to be able to supply the Regional Centre and any international centre with which it may be linked.

(d) The National Documentation Centre should be equipped with copying and micro-fiche reading equipment and, if possible, with a microfiche camera.

B. Statistical Data Bank (paras 30-31)

55. The activities which need to be undertaken nationally to strengthen statistical services and facilitate collaboration with the Regional Data Bank are repeated in summary below:

- (a) Co-ordination and speeding up of all national data collection and publication.
- (b) Improvement in the timeliness and coverage of external trade statistics.
- (c) Fulfilment of current commitments with respect to population censuses and implementation of follow-up operations.
- (d) Rationalisation and expansion of direct data collection from households and establishments through the development of permanent field survey organisations, with the objectives of securing continuing supplies of integrated economic, social and demographic data, and extending the coverage of statistics.
- (e) Standardisation of national accounting arrangements, improvement of data on particular components, and the more active use of national accounts for the examination of economic trends and problems on an up-to-date basis.

56. Arrangements envisaged for the Regional Data Bank will not affect existing procedures for the collection of material by the United Nations data system as a whole. The regular questionnaires issued by the United Nations Statistical Office and specialised agencies will continue to serve as a major source of data while information collected by the Regional Centre will be of a supplementary nature.