

THE REGIONAL CENTRE FOR TRAINING IN AERIAL SURVEYS, ILE-IFE, NIGERIA
(UNDER THE AUSPICES OF THE UNITED NATIONS ECONOMIC COMMISSION FOR
AFRICA)

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PRESENTATION

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1. INTRODUCTION

The history of the Regional Centre for Training in Aerial Surveys, Ile-Ife, Nigeria may be said to date back to the First United Nations Cartographic Conference for Africa held in Nairobi, Kenya in June 1963, at which a resolution on the need for cartographic centres was adopted. The essence of this resolution was vividly portrayed by the Meeting of Experts on Regional Centres for Training in Photogrammetry, Airborne Geophysical Surveys and Photo-interpretation held in Addis Ababa in October, 1964 through highlighting:

- (a) the adverse effects on the planning and execution of development programmes of the inadequate state of surveying and mapping services in many African countries;
- (b) the need for extensive and intensive use of modern aerial survey techniques as the only effective means of coping with the ever-increasing demands on the survey potential of African countries;
- (c) the serious handicap arising from the acute shortage of personnel with adequate training in the necessary techniques; and
- (d) the dependence of most African countries on institutions abroad for training their personnel in aerial surveys.

Following a communication sent to all member and associate member Governments of the United Nations Economic Commission for Africa (.U.N.E.C.A.) by the Executive Secretary of the Commission, requesting Governments to indicate their interest in establishing and hosting the training centre, offers were made by a number of African Governments. Thereafter, an E.C.A. Mission visited the candidate countries and inspected the sites. A consideration of the Report of the Mission at a meeting of Experts led to the recommendation that one of the

Centres should be established in Nigeria. After some consultations, a meeting of interested parties was held in Lagos from 16 to 19 November 1970 and was attended by eight member and associate member States and by six donor countries. The necessary instruments were drawn up and by August 1971 the Governments of Benin, Ghana, Nigeria and Senegal signed the agreement for the establishment of the Centre and became its founding Participating Members. The first meeting of the Governing Council of the Centre was held in Ile-Ife, Nigeria from 19-23 June 1972 and was attended by Members of the Council from all participating Governments except Benin. The meeting recommended, among other things, that the official opening of the Centre should take place in October 1972, and that courses in training in photogrammetry be started in the same month. The Centre was officially opened by the Executive Secretary of the E.C.A. on 21 October 1972, while normal lectures, bilingual in English and French, were started on 26 October 1972.

2. OBJECTIVES OF THE CENTRE

The objectives of the Centre include:

- (i) the provision of theoretical and practical training in the field of aerial surveys, with a view to satisfying the manpower needs of African countries;
- (ii) the conduct of seminars and workshops, with a view to providing opportunities for exchange of information, experience and development of skills;
- (iii) the conduct of research and studies in the field of aerial surveys, with particular reference to the peculiarities of the African environment and specific African needs; and
- (iv) the provision of advisory services on aerial survey problems to the governments of Member countries and their Agencies.

3. ADMINISTRATION

The Centre is administered by a Governing Council, comprising the Executive Secretary of the E.C.A. (as Chairman), a Representative of each

of the Participating Countries, another Member appointed by the host Country and the Director of the Centre (as Secretary), as well as by a Working Party. The role of the Working Party is supplementary to that of the Governing Council.

4. ADMISSIONS

Admissions to the Centre are open to candidates from all African countries on the condition that such candidates have satisfied the entry requirements. Candidates for any course in photogrammetry and photo-interpretation must have satisfactory stereoscopic vision. In order to be qualified educationally to undertake the courses currently run in photogrammetry, candidates from the English-speaking countries of Africa need to be in possession of, at least, the General Certificate of Education (Ordinary Level), or West African School Certificate; while candidates from the French-speaking African countries need to have successfully completed the "LA CLASSE DE SECOND, C ou D ou E ou F". In either case, the subjects passed in these examinations should include mathematics, physics and geography.

Candidates are expected to cause completed application forms to reach the Director of the Centre through their respective Governments not later than the first day of May of the year of commencement of study at the Centre, accompanying the forms with the following:

- (a) certificate of good stereoscopic vision;
- (b) certificate of medical fitness in the format of the form designed for medical examination of United Nations Officers;
- (c) statement of support by candidate's financial sponsor;
- (d) three passport-size photographs of the candidate; and
- (e) photo-copies of candidate's certificates and credentials.

Successful candidates are expected to report at the Centre by mid-September of the year of admission.

5. STAFFING

The administrative and academic head of the Centre is the Director, who bears the responsibility for the organisation, direction and

administration of the Centre in accordance with the policies and decisions of the Governing Council.

The other academic staff of the Centre are generally either employed by the Centre, or are provided by the Participating and Donor Countries under technical assistance programmes. The Donor countries in this respect so far include the Governments of Canada, Finland, Switzerland and The Netherlands.

Presently, all the administrative staff of the Centre, except the Director, are employed by the Centre.

6. TEACHING STRUCTURE AND EXAMINATIONS

Teaching in the Centre is structured as follows:

Lectures

Each lecture deals with:

- the definition of objectives;
- the basic concepts;
- the theoretical basis and methodology;
- the development of the subject-matter; and
- illustrations.

Practical Activities

Practical Activities concern:

- operational training;
- individual laboratory work; and
- group laboratory work.

Programme-related Field Trip

A programme-related field trip lasting for, at least, four days, is usually organised every session.

Examinations

Each normal course terminates with an examination. The latter is generally so oriented as to assess the students' knowledge in the course disciplines, with reference to the set objectives of the subject-matter.

7. FINANCIAL MATTERS

The financial requirements of the Centre are generally met through contributions by the Participating Countries. Each annual budget of the Centre is apportioned between the Participating Countries in accordance with the United Nations formula for financial contributions in respect of the affected countries.

As at the time of preparing this paper, the fees payable per student in respect of the courses offered in photogrammetry stood as follows:

(i)	Tuition	N700.00	(US \$ 1260.00)
(ii)	Lodging	N200.00	(US \$ 360.00)
(iii)	Feeding	N1460.00	(US \$ 2628.00)
(iv)	Programme related field trip	N 200.00	(US \$ 360.00)
(v)	Books and materials	N 100.00	(US \$ 180.00)
(vi)	Deposit	N 100.00	(US \$ 180.00)
(vii)	Insurance	N 20.00	(US \$ 36.00)
(viii)	Student Union Fee	N 4.00	(US \$ 7.00)
		N2784.00	(US \$ 5011.20)
		=====	=====

A number of fellowships for studies at the Centre are made available by some countries and international organisations. Prominent among the Donors are the Swiss Technical Co-operation, The Netherlands Government and the Commonwealth Fund for co-operation. Details of such fellowships may be obtained from the Director of the Centre. Candidates wishing to utilise United Nations fellowships are advised to apply through the United Nations Development Programme (UNDP) liaison officers in their respective countries.

8. TECHNICAL ASSISTANCE

In addition to the secondment of staff to the Centre and the offer of fellowships to the students of the Centre as stated in sections 5 and 7 of this paper, the Centre has so far received offers of equipment from the Governments of Canada, Switzerland, The Netherlands and United Kingdom.

9. ACHIEVEMENTS

At the time of its inception, the Centre offered the photogrammetric course at the Technician's level only. After a detailed analysis of the problems of, and facilities in, a majority of African countries in raising manpower in the field of photogrammetry, the Centre started from the 1974/75 academic session to offer a second course in photogrammetry at the Operator's level.

As at this moment, the Centre had successfully trained 109 Photogrammetric Technicians from 19 African countries (namely: Algeria, Benin, Burundi, Central African Empire, Ethiopia, Ghana, Ivory Coast, Libya, Malawi, Nigeria, Rwanda, Senegal, Sierra Leone, Somalia, Sudan, Uganda, Upper Volta, Zaire and Zambia), as well as 27 Photogrammetric Operators from 9 African countries (namely: Algeria, Ghana, Kenya, Niger, Nigeria, Senegal, Sierra Leone, Somalia and Zaire).

Through a special arrangement, whereby the problems of each student receive adequate attention of the staff, it has so far been possible to achieve an average success score of 97% of the total in-take of students.

In addition to the high rate of successes recorded for both courses offered, the Centre is pleased by the highly encouraging feed-back it continues to receive from the Sponsors of the past students on their impressive performances.

The plan of the Centre for raising its own academic staff with a view to ultimately becoming self reliant in staffing has begun

to yield results. The first of the candidates to undergo training under a special scheme for raising teaching staff for the Centre completed his course and joined the staff of the Centre in November, 1977. Since then two others have completed their M.Sc. programme under the scheme and joined the staff of the Centre. Nationals of Benin, Nigeria and Senegal have so far benefitted from this scheme.

10. CURRICULUM DEVELOPMENT

The Centre has remained alive to the aspirations of African countries and has noted their desire that it should turn out in adequate numbers and appropriate levels the manpower required to meet their needs in aerial surveys.

The efforts of the Centre to fully appreciate the real requirements of African countries in the field of aerial surveys have not been limited to the despatch of specially prepared questionnaires. The Centre has been conducting an on-the-spot assessment of the situation. The first in the series of such visits was the tour of ECOWAS countries undertaken between 13 February and 17 March 1978.

With the data already at its disposal, the Centre has been enabled not only to realise the need to increase the in-take of its students, but also to determine the orientation of its curriculum development.

Based on a detailed analysis of the established needs and conditions of African countries in the field of photogrammetry, as well as a desire to take into account the new developments in the discipline, contents of the two photogrammetric courses currently offered by the Centre had been substantially increased. The duration of these courses has consequently been increased to two years with effect from the 1978 in-take.

As photo-interpretation has been identified as being highly favoured by the established direction of curriculum development, the

Centre has virtually concluded arrangements for starting a new course in photo-interpretation. By the time of writing this paper, the drafting of the programme for the initial course had been completed and the recruitment of the necessary staff was virtually concluded. In the absence of unforeseen circumstances, the initial course in photo-interpretation would have been started by the time of presentation of this paper.

The Centre intends to introduce the Engineer's course in photogrammetry at its earliest convenience. By this, an opportunity would have been created for the students, who have successfully completed the Photogrammetric Technician's Course, to be trained further at the Centre.

In appreciation of the increasing impact of remote sensing on the enhancement of development of countries, particularly as a tool for instantaneous global monitoring of changes of various features and phenomena of considerable dimensions, it is envisaged that a course in Aerial Photography and Remote Sensing will be started at the Centre sooner than later. Already, it is ensured that the students of the Centre, under the present programmes of study, receive introductory lectures in aerial photography and are acquainted with the various possibilities of application of satellite technology.

Realising the need to conduct research and studies in the field of aerial surveys, with particular reference to the peculiarities of the African environment and specific African needs, the Centre had set up a research group among its academic staff. This group is currently engaged in establishing a priority list from identified topics of research interest within the limits of its highly limited resources. In addition to research activities, this group has responsibility for offering advisory and consultancy services in aerial surveys to interested African governments and their agencies.

11. PHYSICAL DEVELOPMENT

For obvious reasons, curriculum development is almost unimaginable without physical development. Consequently, the Centre had embarked upon a physical development programme. The latter is being phased out over a five-year period.

The Centre had started on the first phase of this programme by the time of writing this paper.

12. CO-OPERATION WITH OTHER INSTITUTIONS

The Centre recognises the mutual benefit derivable from co-operation with other relevant Institutions, particularly through:

- (a) the mutual sending of Visiting Lecturers between the Institutions for defined periods;
- (b) the mutual exchange of literature on defined fields;
- (c) the execution of joint research projects in areas of common interest;
- (d) the organisation of programme-related excursions between the co-operating Institutions with a view to enabling each Institution to familiarise its students in a practical sense with the activities of the other in selected fields; and
- (e) mutual participation in seminars, symposia and workshops.

Beneficial mutual co-operation has already been established between the Centre and such Nigerian educational Institutions as the University of Ife, Ile-Ife, and the Federal School of Surveying, Oyo.

The opportunity offered by the tour of some African countries by the Centre's delegation, as mentioned in paragraph 2 of section 10, was used to explore the feasibility of establishing mutual co-operation with the educational Institutions of the countries visited. The contacts made in this regard are still at the stage of consolidation.

Outside the African continent, the Centre has established meaningful scientific co-operation with the International Institute for Aerial Survey and Earth Sciences (ITC), Enschede, The Netherlands, and the Institut Geographique National (IGN), Paris, France.

13. CLOSING REMARKS

The Regional Centre for Training in Aerial Surveys, Ile-Ife, Nigeria may be seen not only as a practical realisation of a long cherished dream to train African personnel in aerial surveying under the African environment with its attendant benefits, but also as a practical measure towards a reduction in the already high incidence of "brain drain".

As there is a likelihood of not covering all matters of interest to Participants and Observers at this Congress in this paper, I seize this opportunity to declare my willingness to hold individual discussions with interested Persons/Organisations after the presentation, or to answer to any enquiries on the Centre addressed to:

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P.M.B. 5545,
Ile-Ife,
NIGERIA.

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