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ECONOMIC COMMISSION FOR AFRICA
Meeting of Experts on Regional
Centres for Training in Photogrammetry
and Airborne Geophysical Surveys and
for Interpreting Aerial Surveys
Addis Ababa, 21-31 October 1964

REPORT AND RECOMMENDATIONS OF THE MEETING

* For participants only

REPORT AND RECOMMENDATIONS OF THE MEETING

1. The Meeting of Experts on Regional Centres for Training in photogrammetry and airborne Geophysical Surveys and for Interpreting Aerial Surveys was convened at Africa Hall, Addis Ababa from 21-29 October 1964. It was attended by experts from seventeen Government Members of ECA and observers from six countries outside Africa and from UNESCO; the list of participants is given in Appendix 4 to this Report.
2. Mr. A.F. Ewing, Officer in Charge, delivered on behalf of the Executive Secretary of the Economic Commission for Africa, the opening address the text of which is reproduced in Appendix 5.

Officers of the Meeting

The Meeting elected the following officers

Chairman:	Mr. R. Oluwole Coker (Nigeria)
Vice-Chairman:	Mr. Selim Benghachame (Tunisia)
Rapporteur:	Dr. A.M. Wassef (UAR)

A g e n d a

The Meeting adopted the following agenda :-

1. Report of the secretariat on consultations with governments and review of the proposals received.
2. Consideration of the need of African countries for photogrammetric mapping and airborne surveys and for specialized personnel in these techniques.
3. Consideration of the general scope, work programmes of the centres
4. Consideration of the requirements for the operation of the centres
 - (a) Technical facilities, servicing staff, financial requirements
 - (b) Organization, administration and means of finance
5. Consideration of further preparation work for the establishment of the centres.
6. Recommendations and Report.

Report of the Secretariat on Consultations with Governments

3. Dr. Tchang presented the report on the consultations with governments on the Establishment of Regional Centres for Training in Aerial Surveys (E/CN.14/CART/108). The replies of the Governments to the ECA and the statements made by experts strongly emphasized:

- (a) In many African countries the surveying and mapping services, despite significant developments achieved in recent years, were not yet adequate to meet the rapidly increasing demands for maps and surveying work of various governmental departments concerned with development planning and execution;
- (b) Both the extensive and the intensive uses of modern air survey techniques were the only way to cope with these increasing demands on the survey potential of these countries;
- (c) The acute shortage of personnel with adequate training in these techniques was a serious handicap;
- (d) Most of the African countries still depended on institutions abroad for training a few members of their staff; and
- (e) In view of the limited availability of experienced personnel and equipment in African countries, the in-service training would unavoidably lead to delay in production work.

Need for the Establishment of Training Centres in Africa and the General Scope of the Centres

4. The urgency of the need for training facilities in Africa to supply the required personnel in adequate numbers was strongly emphasized by the African delegations and the establishment of centre(s) for such purpose was unanimously supported.

5. Support for this proposal was also expressed by the Observers, in particular:

- (a) The Observer from the Netherlands informed the Meeting that his Government would assist the ECA project of establishing training centres in Africa. This assistance would include advice on the planning, service of member staff of ITC, scholarships and fellowships, and equipment;

(b) The Observer from Italy stated that Italy would contribute to the preparation of courses, with the services of some experts, to train personnel and might supply a second order plotting machine;

(c) The Observer from Czechoslovakia said that Czechoslovakia would on request from ECA assist by sending experts to the training centre(s);

(d) The Observer from France stated that the needs of Africa were immense and that France would also help when the details of the projects including the programme and site were worked out.

6. The Meeting expressed its appreciation for the interest in the ECA projects expressed by the observers.

7. In addition, the Meeting was also pleased to be informed that the Director, Surveying and Mapping Branch, Department of Mines and Technical Surveys, Canada was ready to receive twelve high-ranking officials of the cartographic services of African countries for a six week seminar to be held in Ottawa. The best time would be mid May to end of June.

8. The Observer from UNESCO referred to the work of the International Conference on Research and Training in Africa in Relation to the Study, Conservation and Utilization of Natural Resources, convened jointly by UNESCO and ECA in Lagos in 1963 and reported the discussion of the Toulouse Conference of UNESCO on Principles and Methods of Integrating Aerial Survey Studies of Natural Resources for Development. Both Conferences emphasized the urgent need for training African specialists in the various sciences and techniques. In particular, note was taken of the following recommendation of the Toulouse Conference: "The Conference, conscious of the great importance of an adequate knowledge of natural resources, particularly in developing countries, for the balanced and co-ordinated development of these resources, and noting the need expressed at the Conference by representatives of the Food and Agriculture Organization of the United Nations (FAO) and the United Nations Economic Commission for Africa (ECA) for suitable training for key personnel responsible for the organization and

execution of integrated studies of natural resources for development proposed, recommends that UNESCO, in consultation with FAO, ECA and the other competent international agencies, examine the possibility of establishing, within a developing environment, an International Training Centre, or Centres, to train team leaders and other key personnel for all interested countries, in the concepts, methods, techniques and practical operation of resource surveys and assessment programmes, extending to the initial economic and sociological implications of further resource investigations." The Meeting discussed the relationship between the Toulouse recommendation and the ECA proposal and concluded that the two types of centres would be complementary.

9. As regards the establishment of the research and training institutions proposed by the Lagos Conference, the Meeting recommended that ECA should continue to co-operate closely in the implementation of this proposal.

10. The Meeting also recommended that UNESCO, in co-operation with ECA should undertake a survey of existing facilities in Africa for training in economic geology, applied geophysics and allied disciplines.

Formation of Technical Drafting Groups

11. The Meeting agreed that training facilities were required in Africa in all three fields; photogrammetry, photo-interpretation and airborne geophysical surveys; and proceeded with the examination of the details concerning the setting up of appropriate training centres. It was agreed to use the Annex to Document E/CN.14/CART/107 as a framework for the discussions.

12. The Meeting, in order to facilitate the working out of the technical aspects of the proposal, appointed three Technical Drafting Groups each to consider one type of training centre. The groups were requested to study the following questions taking into account the views expressed in the general debate.

- (a) the required qualifications of trainees at each level;
- (b) appropriate syllabus, duration of training period, and size of class;

- (c) nucleus training staff;
- (d) initial capital expenditure and running cost;
- (e) possible financing sources.

Reports of the Technical Drafting Groups

13. The Reports submitted by the Technical Drafting Groups were considered and adopted after slight amendment. They are reproduced in Appendix 1 - 3.

14. The Meeting invites the attention of the ECA to the findings of the Technical Drafting Group as regards qualifications of trainees, syllabus and duration of courses, the optimum sizes of classes, staff requirements and equipment. The Meeting further recommended that ECA should take the necessary steps to obtain the additional technical details to establish an operational plan.

Sources of Finance

15. The Meeting endorses the following proposals of the Technical Drafting Groups on financing:

- (i) For capital expenditure
 - (a) Contribution from the host country
 - (b) UN Sources
 - (c) Bilateral arrangements through ECA
 - (d) Contribution from Foundations
- (ii) For the running cost
 - (a) Subventions from member countries of ECA
 - (b) Grants from International Organizations, through bilateral arrangements and from public and private corporations
 - (c) Fellowships and scholarships through international channels and bilateral arrangements
 - (d) Students fees

and recommends that ECA should approach the above mentioned bodies with the view to obtaining their assistance in financing the establishment of the centres.

16. As regards sites, the Meeting recommends for further assessment and final choice the following: Mali, Senegal, Nigeria; Congo (Léopoldville) for Airborne Geophysical Surveys, Cameroun (for Photogrammetry and Photo-Interpretation); Kenya, Ethiopia and Sudan. Suitable sites for each type of centre in North Africa to be selected by the E.C.A. on the basis of further examination.

17. The Meeting recommends that E.C.A. should take the following steps:

- (i) Conduct a final enquiry designed to clarify and supplement the reports of the Technical Drafting Groups, including:
 - (a) the actual needs for training at each level by all African countries,
 - (b) evaluation of the factors relevant to the suitability of sites which have been or may be proposed by African countries,
 - (c) determination of sites in the light of (b) and on the basis of expert advice.
- (ii) Conduct a pilot training course to test the problems and conditions of establishing the centres recommended,
- (iii) Undertake negotiations with contemplated host governments,
- (iv) Approach international, national and private bodies with a view to obtaining assistance for the establishment of the recommended centres,
- (v) Undertake the preparation of a charter for the centres,
- (vi) Prepare an operational plan to bring the centres into being.

RECOMMENDATIONS

1. Considering that the training centre or centres must extract the maximum benefit, in all fields, from the experience of all similar specialized agencies,

- Considering that for several years many countries have recommenced the teaching of English and French in their schools,

- Considering, finally, that bilingualism in English and French is one of the bases for building African Unity,

- RECOMMENDS the ECA to study the possibility of commencing such bilingual instruction if it is decided to establish a single centre.

2. The Meeting having carefully and fully considered the importance of and urgent needs of the African continent for maps and aerial photographs for the development of her natural resources now hereby resolves that the ECA should as a matter of urgency proceed to establish one or more training centres for photogrammetry and photo-interpretation.

3. The Meeting

(a) stressing that the natural resources of the African continent cannot be fully explored and exploited for the benefit of her peoples in particular and mankind in general without geology and applied geophysics;

(b) appreciating the economic, academic and social advantages of locating the training centres in these disciplines in close proximity to those of the stated disciplines of cartography, photogrammetry and photo-interpretation;

(c) recalling that the recent International Conference on the Organization of Research and Training in Africa in relation to the study, conservation and utilization of the Natural resources convened jointly by UNESCO and ECA in Lagos has recommended the establishment of Research and Training centres in various parts of Africa in various scientific disciplines for the purposes of facilitating and accelerating the exploitation of her natural resources.

4

RECOMMENDS

- (a) that ECA should explore the possibility of collaborating with UNESCO and other international agencies in establishing an integrated training and research institution for the training of specialists and technicians in economic geology, applied geophysics, and allied disciplines.
- (b) that, to this end, UNESCO, in collaboration with ECA and other agencies concerned should undertake and complete investigation of existing facilities in Africa by the end of 1965 to provide data for determining the location and scope of such an institution.

4. The Meeting,

Referring to the United Nations Regional Cartographic Conference, Nairobi (Resolution No.10),

- Having Taken Cognizance of the report of the Conference on Principles and Methods of Integrating Aerial Surveys of Natural Resources for Potential Development, held under the aegis of UNESCO at Toulouse (France) from 21 to 28 September 1964, which provided that "UNESCO, in consultation with FAO, ECA and the other competent international agencies, examine the possibility of establishing, within a developing environment, an International Training Centre, or Centres, to train team leaders and other key personnel for all interested countries, in the concepts, methods, techniques and practical operation of resource surveys and assessment programmes, extending to the initial economic and sociological implications",

- RECOMMENDS ECA to collaborate with UNESCO to expedite the establishment of a Centre in Africa

5. The Meeting

- Noting the urgency of finalizing the preparation for the establishment of the ECA Training Centre(s)

- RECOMMENDS, that ECA should take the necessary steps to complete the compilation of the relevant data in time to become available to the forthcoming Meeting of Experts on the establishment of Joint Centres for Specialized Services in Surveying and Mapping to be held early in 1965.

6. The Meeting

- Expresses its heartfelt thanks to the Government of Ethiopia for the excellent arrangements it has been so good as to provide for the organization of the Meeting of Experts on Regional Centres for Training in Photogrammetry, and Airborne Geophysical Surveys and for Interpreting Aerial Surveys and for the hospitality afforded to the participants.

7. The Meeting of Experts

MINDFUL of the volume of work necessary to prepare and organize the Meeting, as well as to provide secretariat services,

THANKS the ECA for placing at its disposal the facilities and personnel that allowed to bring its work to a successful conclusion in the best of conditions.