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ECONOMIC COMMISSION FOR AFRICA

Fourth Meeting of the Intergovenmental
Committee of Experts for Science
and Technology Development

Addis Ababa, Ethiopia, 18-22 November 1985

REPORT OF THE FOURTH MEETING OF THE INTERGOVERNMENTAL COMMITTEE OF EXPERTS FOR SCIENCE AND TECHNOLOGY DEVELOPMENT

I. ATTENDANCE AND ORGANIZATION OF WORK

Opening of the meeting

1. The fourth meeting of the Intergovernmental Committee of Experts for Science and Technology Development was held in Addis Ababa from 18 to 22 November 1985. Kenya as Chairman of the third meeting, chaired the opening session.

2. Mr. Tchouta Moussa, the Deputy Executive Secretary of the Economic Commission for Africa, delivered an opening statement. After outlining the basic principal factors needed to sustain Africa's economic take-off, he called on the Committee to consider what concrete, practical role science and technology could play in bringing about sustained development and growth on the African continent.

3. Science and Technology were crucially important to the search for ways out of Africa's economic and social crisis. He therefore urged the experts to devote serious attention to every item on their agenda: the suggestions and solutions coming out of the meeting should allow the problem to be followed up more efficiently in each country.

Attendance

4. Representatives of the following ECA member States attended the meeting: Algeria, Cameroon, Chad, Congo, Djibouti, Egypt, Ethiopia, Ghana, Guinea, Guinea-Bissau, Ivory Coast, Kenya, Libyan Arab Jamahiriya, Madagascar, Malawi, Mozambique, Nigeria, Rwanda, Senegal, the Sudan, United Republic of Tanzania, Tunisia, Zaire, and Zambia.

5. The following United Nations bodies, specialized agencies and other organizations were also represented: United Nations Conference on Trade and Development (UNCTAD), International Labour Organisation (ILO), World Intellectual Property Organization (WIPO), United Nations Educational, Cultural and Scientific Organization (UNESCO), World Meteorological Organization (WMO); International Livestock Centre for Africa (ILCA), and the International Institute for Tropical Agriculture (IITA).

Election of officers

6. The Committee unanimously elected the following officers:

Chairman:	Mr. Gaston PAYOM (Cameroon)
First Vice-Chairman:	Mr. C.W.C. PHIRI (Malawi)
Second Vice-Chairman:	Mr. Alpha NDIAYE (Senegal)
Rapporteur:	Mr. A. FARAH (Djibouti)

Adoption of the agenda

7. The agenda below was unanimously adopted:

1. Opening of the meeting
2. Election of the bureau
3. Adoption of the agenda and the programme of work
4. Matters arising from the report of the third meeting
5. Reports of the working groups of the Intergovernmental Committee, including their subregional activities during 1984-1985
6. New technologies and their implications on Africa's development strategy: some concrete project proposals
7. Current economic and social crisis facing Africa and some concrete project proposals on the role of science and technology
8. Mid-decade review of the implement ation of the science and technology chapter of the Lagos Plan of Action
9. Technical information as an aid to technological development: some project proposals on patent documents
10. Technical Co-operation between developing countries (TCDC): Development and demonstration of rural technologies for Africa
11. Mobilization of financial resources for science and technology
12. Terms of reference of the Intergovernmental Committee
13. Any other business
14. Adoption of the report and closure of the meeting.

II. SUMMARY OF PROCEEDINGS

Matters arising from the report of the third meeting (agenda item 4)

8. A representative of the secretariat drew the attention of the meeting to document S&T/IGCESTD/4/4, which contained a brief summary of the action taken with respect to the mid-decade review of the implementation of the Lagos Plan of Action, the activities of the Committee's Working Groups, and the review of the Committee's terms of reference. He also said that the report of the third meeting of the Committee had been presented to the Technical Preparatory Committee of the Whole, and that its conclusions and recommendations had subsequently been endorsed by the eleventh meeting of the ECA Conference of Ministers, held in April 1985.

Reports of the Working Groups of the Intergovernmental Committee, including their subregional activities during 1984-1985 (agenda item 5)

9. A representative of the secretariat presented a progress report on the holding of working group meetings in the Eastern, Southern, Central, Western and North African subregions. In line with recommendations by the second meeting of the Committee, ECA had identified convenor countries for the five subregions, namely: Ethiopia, Zambia, Cameroon, Togo and Egypt. Of the five, only Ethiopia had been able to host a meeting, for the Eastern African Working Group, in November 1984. A joint ECA/OAU mission had been mounted to the capitals of all the other convenor countries, and had made the relevant authorities aware of the importance of the Working Groups: all had consented to host their respective meetings. Unfortunately, so far, no further meetings had taken place.

10. The representative of Kenya, speaking on behalf of the delegations of the East African subregion, stated that, having reviewed the situation since the first Working Group meeting, those delegations recommended that (a) national institutions and expertise should be identified, and be used as focal points; (b) a time frame and action plan should be established to carry out the recommendations of the previous Working Group meeting; (c) in view of the economic problems facing all the member States, the activities to be carried out should be listed in order of priority after establishing what financial resources and manpower were available; and (d) the next Working Group meeting should take place in 1986.

11. Speaking on behalf of the Southern African subregion, the representative of Mozambique stated that the subregion's Working Group had not met because the relevant information had not reached the institutions concerned. It was therefore decided that the institutions must be identified. The delegations proposed that the Working Group should meet in February or March 1986, to identify manpower and training needs whilst discussing the role of science and technology in development and to give priority to food self-sufficiency and relevant technologies including those concerned with new and renewable sources of energy.

12. The representative of Chad, on behalf of the Central African subregion, stated that Cameroon was to host the subregional Working Group meeting during the first half of March 1986. All countries of the subregion would send papers to Cameroon in line with the guidelines, and concrete project proposals and recommendations would be made after examination of profiles prepared by the ECA secretariat. The delegations also felt that the ministries dealing with science and technology should be involved: a recommendation to that effect would be submitted in due course.

13. The representative of Guinea-Bissau said that the delegations of the West African subregion had noted that (a) there was a marked discrepancy between theory and practice in science and technology; (b) co-ordination was required in order to avoid duplicating activities carried out by other institutions; (c) the Working Group should be aware of activities by other subregional Working Groups; (d) member States should take precautions against the pilfering of

their research by non-African countries; (e) national authorities should give active support to research and development in line with the directives of the Lagos Plan of Action; and (f) there was a need for an information network.

14. Speaking on behalf of the North African subregion, the representative of the Sudan stated that the North African delegations could not take a decision on the issues concerned while experts were absent. It was expected that when the Egyptian expert arrived the Committee could be given a better idea of the state of preparation of the proposed Working Group meeting.

15. During the ensuing discussions, all speakers said it was important for the Working Groups to recommend specific projects in a few selected priority areas, decide how to carry them out and suggest means of funding them. The absence of a focal point in many member States was commented upon. The majority of speakers agreed that it would be desirable if Ministers of science and technology could meet on a regular basis. The Committee took note of the fact that except in the Easter African subregion the Working Groups had not met, and decided to draw up a recommendation urging their convening and urging all member States to attend their respective meetings.

New technologies and their implications on Africa's development strategy: some concrete project proposals (agenda item 6)

16. A representative of the secretariat introduced two documents: EDECO/ST/1/116/85, the report of the African Expert Group meeting to assess the implications of new technologies for the Lagos Plan of Action, and S&T/IGCESTD/4/8, on new technologies and their implications for Africa's development strategy, and a proposed advance technology alert system for Africa (ATAS Africa). The latter document dealt with recommendations by the Expert Group to which the Committee was expected to respond. The representative stressed that advances in new technologies were made essentially to assist the societies and countries where the technologies were being developed; they were not normally meant to be of direct relevance or immediate interest to developing regions such as Africa. Nonetheless, biotechnology, microelectronics, new energy technologies, material sciences and remote sensing could find applications in the African countries. A lively discussion ensued on the recommendations contained in document EDECO/ST/1/116/85.

17. On the establishment of an African remote sensing society, the debate revealed a strong concern about the likely duplication of efforts by existing African institutions in remote sensing, the proliferation of institutions in this field and the additional burden on member States. The secretariat explained that the society was being proposed rather as a professional forum to facilitate an exchange of views among experts in the various aspects of remote sensing and to popularize remote sensing techniques, without interfering with or duplicating the work or mandates of existing remote sensing institutions. The Committee eventually agreed that it was up to the experts in remote sensing to study the question.

18. The Committee considered the other four recommendations, namely: Upgrading selected institutions in Africa for research and development in tissue culture techniques; setting up pilot plants for producing single cell proteins (SCP), using molasses, cassava and other locally available substrates; surveying exisitng facilities in Africa for the industrial production of vaccines, hormones, antibiotics, etc., using new biotechnological techniques; and establishing regional and subregional institutes for training and for potential application of microelectronics technology. Questions were raised about whether most African countries and institutions had an adequate base from which to embark on such specialised activities. It was felt that action should rather be directed towards assisting institutions to assemble the necessary multidisciplinary teams to handle such issues in the immediate future. It was also considered essential for each country to set up a unit to follow up developments in new technologies and assess their impact on national programmes.

19. The Committee made a detailed review of the project proposals for setting up an advance technology alert system. It generally welcomed the project, subject to the incorporation of the following observations in the final document to be placed before the donnors:

(a) Under short-term objectives, to add a new paragraph, reading "To assist member States to set up focal points which would work exclusively on ATAS";

(b) Under outputs, item (h) to read: "Well-informed experts in technology assessment", instead of "trained specialists in technology";

(c) Western Africa to be included among the countries to be visited by the consultants;

(d) The project to envisage the use of questionnaires as a means of assessing the existing situation in member States and individual countries' priorities.

Current economic and social crisis facing Africa and some concrete project proposals on the role of science and technology (agenda item 7)

20. With reference to this item on the agenda, a representative of the secretariat presented document ST/IGCESTD/4/7 and pointed out that the approach adopted in it was different from the approaches taken in other agenda items; the action plan proposed by the secretariat was based on the Committee's contribution to the recommendations on economic issues adopted by the twenty-first Ordinary Session of the Assembly of Heads of State and Government of the Organization of African Unity, held in Addis Ababa from 18 to 20 July 1985. It was up to the participants, therefore, to make concrete proposals aimed at applying science and technology to the search for solutions to the crisis affecting the member States of ECA.

21. The representatives of Chad, Madagascar, Senegal, Rwanda, Guinea-Bissau, Kenya and Djibouti presented very informative reports on the measures undertaken by their respective countries to establish a solid foundation in the area of

science and technology. They stressed the necessity of mobilizing, at national level, all the action and resources required to carry out the recommendations and resolutions stemming from chapter V of the Lagos Plan of Action, which had been reaffirmed at the twenty-first Ordinary Session of the Assembly of Heads of State and Government of OAU, devoted to African economic issues. Such a concentration of national effort would require not only better co-ordination of national activities, but also fuller exploitation of the human resources and facilities available locally. Other delegations, namely Nigeria and United Republic of Tanzania, as well as international organizations or institutions including UNCTAD, UNESCO, ILO and IITA, submitted notes to the secretariat, highlighting these ideas.

22. The Committee took note of the statements and proposals of the representatives mentioned above and called on participants, when they returned home, to draw up specific projects for the development of science and technology, putting particular emphasis on national capability; once the project profiles were ready the secretariat should be notified so that it could follow them up. A detailed report on the subject should be submitted to the Intergovernmental Committee at its fifth meeting, scheduled for November 1986.

23. With reference to proposals for a common plan of action at the subregional, regional and international levels, the Committee agreed on the necessity of strengthening existing institutions and organizations with a view to improving their efficiency and integrating them into the national effort. Thus, one speaker informed the Committee that his country was in the process of setting up a small national engineering centre, which would serve as the local counterpart to the African Regional Centre for Engineering Design and Manufacturing (ARCEDEM). The Committee declared itself unanimously in favour of subregional, regional and international co-operation in the exchange of scientific and technological information and the development of new technologies. Clearly, the establishment and development of these sectors depended upon the creation of infrastructure and facilities and the training, both at country and at secretariat level, of staff to co-ordinate and promote such co-operation.

<u>Mid-decade review of the implementation of the Science and Technology Chapter of the Lagos Plan of Action</u> (agenda item 8)

24. This agenda item was considered on the basis of document S&T/IGCESTD/4/5, presented by a representative of the secretariat who reminded the meeting that the Secretariat's plans to review of the implementation of the science and technology chapter of the Lagos Plan of Action had been reported at the third meeting of the Intergovernmental Committee. Following the meeting, questionnaires on the specific action called for in chapter V of the Lagos Plan of Action had been distributed to the Governments of all ECA member States. Simultaneously, the secretariat had requested the relevant United Nations bodies and agencies and intergovernmental African institutions to indicate their contributions to the national, subregion and regional activities. By the opening of the fourth meeting of the Committee, 15 countries and 13 organizations had responded, and these

responses formed the basis for the tables attached to the paper. Rather too few replies were received from the member States for a comprehensive review, and efforts would continue to elicit the remaining responses.

25. The representative of the secretariat then reported on the main findings from the replies already received in relation to the eight programmmes in the science and technology chapter. The information was very useful to the member States in demonstrating the activities in other countries, and for assessing their own achievements in relation to the Lagos Plan of Action.

26. A lively debate then followed. Several representatives questioned the mechanism of questionnaire distribution; the formal channel used by the United Nation in general was subject to inordinate delays, since communications passed through several government channels before reaching the appropriate agency. Similarly, since science and technology activities were scattered among various ministries and institutions, the mechanics of collecting data and information posed many problems for the agency responsible for completing the questionnaire. Some speakers felt that the phrasing of a few of the questions did not facilitate clear responses. Other difficulties related to the lack or inadequacy of statistics and data on activities in science and technology and on the resources allocated to them. The secretariat was asked to examine these issues and to request member States which had not yet replied to the questionnaire to do so as soon as possible..

27. The Committee, while noting the achievements to date in implementing the science and technology chapter, urged those Governments which had not done so, to complete and return their questionnaires. It also agreed to contact the Association of African Universities and urge its contituent members to devote their scientific and technological expertise and capabilities to tackling the priority problems facing their respective countries by realistic means.

28. In conclusion, the representatives of ILO, UNESCO, UNCTAD,IITA and WMO supplemented the information given in part II of document S&T/IGCESTD/4/5 by outlining the activities in science and technology undertaken by their respective organizations during 1985, and the representative of the International Livestock Centre for Africa described the major themes of that organization's activities.

Technical information as an aid to technological development: some project proposals on patent documents (agenda item 9)

29. A staff member from the secretariat presented document ST/IGCESTD/4/9 and pointed out that the term "intellectual property" covered both copyright and patent rights. The latter usually included patents (inventor's certificates and utility models), industrial drawings and models, trade marks, trade names, appelations of origin and rights over new plant varieties. He hoped that the Committee would pay more attention to the scientific and technological information contained in patent documents.

then introduced document BIG/283 on the role of patent information in technological development. After explaining the importance of using the information disclosed in patent documents he expressed agreement with the ideas set out in technical note ST/IGCESTD/4/9. WIPO was more than willing to co-operate with ECA and the African States who so desired, especially in drawing up legislative frameworks covering intellectual property and in the free training of African personnel, at the request of their Governments, in contract negotiations relating to patents or to technological transfer. On a question from the Committee on progress in the revision of the Paris Convention, he said that progress was being made in spite of the problem relating to the granting of licences.

Technical Co-operation between Developing Counties (TCDC): Development and demonstration of rural technologies for Africa (agenda item 10)

31. Background note ST/IGCESTD/4/10 was presented by a staff member from the secretariat, who pointed out the advantages to be gained from such co-operation, quoting, as an example, the collaboration between ECA and the Indian Government in the sphere of appropriate technology. Representatives were invited to visit the demonstration on appropriate technology in the ECA compound and it was stated that a similar centre was being established in Dakar, with Indian financial assistance. India had also allocated 25 study grants to ECA, to be assigned at the request of member States.

32. Interest was shown in this project and the secretariat of ECA was congratulated on the initiative which, it was hoped, would be extended to benefit almost all member States. ECA should spare no effort to promote such co-operation. Several representatives expressed an interest in applying Technical Co-operation among Developing Countries (TCDC) and hoped that such co-operation among African countries could prove possible.

33. The Committee also recommended that the African Regional Centre for Technology (ARCT), whose activities had been thought most useful, should draw up a statement of its programmes and methods so that the results could be evaluated. Furthermore, it should direct efforts to the training of executives and African managerial staff, which was a prerequisite for the growth of inter-African co-operation.

Mobilization of financial resources for science and technology (agenda item 11)

34. A member of the secretariat introduced the report on this item (ST/IGCESTD/4/11), and read out the recommendations proposed for mobilizing financial resources at the national, regional and international levels.

35. The Committee noted that as the report did not present much of the information available in the countries visited, it could not properly examine policies on allocations for science and technology or the role of existing finance and investment institutions. Several speakers stressed the need to strengthen existing institutions rather than creating new ones. It was finally recommended that the report should be studied critically by member States and institutions

concerned, which would send their own proposals to ECA. ECA would then prepare a comprehensive report incorporating those proposals as well as the relevant proposals from the present report, and submit it for examination at the fifth meeting of the Committee.

Terms of reference of the Intergovernmental Committee (agenda item 12)

36. A representative of the secretariat introduced document S&T/IGCESTD/4/12 which highlighted the decisions taken by the Committee on the expansion of its terms of reference and the follow-up made by the secretariat in this regard. Following a discussion on the draft terms of reference the Committee decides to maintain its terms of reference as defined provided in ECA resolution 385(XV).

Other business (agenda item 13)

37. A representative of the secretariat presented an information document (S&T/-IGCESTD/4/13) on "Production of School Science Equipment" stressing that such equipment could be of local manufacture and could be exchanged among member States. He also stated that there were plans to hold a workshop on the subject in 1986. All participants welcomed this announcement, and requested the secretariat of ECA to do everything possible to ensure that more member States participated in this workshop.

38. The Committee felt that its meetings could be held in turn in other member States which expressed an interest and made a formal application to the ECA secretariat. The representative of Egypt stated that his country might be prepared to host the 1986 meeting, subject to confirmation in the near future. It was also recommended that the agenda of future meetings should be limited to a few items only so that more thorough and worthwhile discussions could take place.

39. Delegations were requested to follow up the recommendations made on each agenda item, and to keep the secretariat informed through regular correspondence of progress at the national level.

Adoption of the report and recommendations (agenda item 14)

40. Participants examined the draft report presented by the rapporteur, as well as the final recommendations. The Committee adopted them after effecting the necessary modifications.

Closure of the Meeting

41. The Chairman expressed his gratitude to the participants and to the secretariat for their valuable contributions to the success of the meeting. He then declared the meeting closed.

III. RECOMMENDATIONS

The fourth meeting of the Intergovernmental Committee of Experts on Science and Technology Development adopted the following recommendations:

The Committee recommends:

I. The ECA secretariat

1. To explore the possibilities establishing a conference of African Ministers responsible for science and technology with a view of harmonizing national policies on science and technology at the subregional and regional levels and fostering genuine scientific and tehnological co-operation in Africa; such a conference would ensure a better application of science and technology;

2. To pursue its work in collaboration with the Governments of India and other countries in identifying and carrying out pilot projects on appropriate technology in critical sectors;

3. To strengthen the Science and Technology Unit in the ECA secretariat in order to permit a more thorough follow-up of the Committee's resolutions and recommendations, to identify interesting experiences in technological matters and to publicize such information widely among the ECA member States;

4. To ensure that full use is made of Africa's human resources, by allowing competent African experts to undertake consultancy studies required by the ECA pursuant to the Lagos Plan of Action and in the preparation of technical papers in accordance with the Committee's mandate;

5. To involve member States as extensively as possible in the establishment of the agenda and the preparation of working documents for the Committee's meetings.

II. The Governments of ECA member States:

1. To devote more attention to practical ways of speeding up the attainment of the targets particularly those covered by chapter V of the Lagos Plan of Action on science and technology, which were adopted by the 21st ordinary session of the Assembly of Heads of State and Government of the Organization of African Unity held in Addis Ababa from 18 to 20 July 1985;

2. To do all in their power to ensure that the representatitves of their respective countries take part effectively in the different meetings of the Committee and the subregional Working Groups;

3. To reply as soon as possible, - if they have not already done so -, to the questionnaire sent out by the ECA secretariat about the evaluation of the measures taken to implement chapter V on science and technology of the Lagos Plan of Action;

4. To establish within the framework of existing national institutions, where appropriate, units to monitor the evolution of those new technologies which are liable to have a real impact on socio-economic development;

5. To pass national legislation to regulate the acquisition of imported technology and promote and protect endogenous technology, and to set up mechanisms in the field of intellectual property; international organizations specializing in this field could be consulted.

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